

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): March 24, 2023

Ribbon Communications Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

001-38267
(Commission
File Number)

82-1669692
(I.R.S. Employer
Identification No.)

6500 Chase Oaks Boulevard, Suite 100, Plano, Texas
(Address of principal executive offices)

75023
(Zip Code)

Registrant's telephone number, including area code: (978) 614-8100

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	RBBN	The Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 7.01 Regulation FD Disclosure.

On March 24, 2023, Ribbon Communications Inc. (the “Company”) announced that it has priced a private placement (the “Private Placement”) of 55,000 shares of the Company’s Series A preferred stock, par value \$0.01 per share (the “Preferred Stock”), at a price per share of \$970, and approximately 4.3 million warrants (the “Warrants”) to purchase shares of the Company’s common stock, par value \$0.0001 per share. The Private Placement is expected to close on March 30, 2023 (the “Closing Date”). The Company also announced that it has entered into an amendment (the “Amendment”) to its Company’s Credit Agreement, dated March 3, 2020, by and among the Company, Ribbon Communications Operating Company, Inc., the guarantors party thereto, the lenders party thereto, and Citizens Bank, N.A., as administrative agent for the lenders thereunder (as amended, the “Credit Agreement”), which, among other things, reduces the minimum consolidated fixed charge coverage ratio and increases the maximum consolidated net leverage ratio that the Company must comply with on a quarterly basis with the quarter ended March 31, 2023 through March 31, 2024. In addition, the Amendment replaces LIBOR with the Secured Overnight Financing Rate, or SOFR, as the alternative rate that may be used by the Company for calculating interest owed under the Credit Agreement. In connection with the Amendment, the Company has agreed to a prepayment of \$75 million of the principal amount outstanding on the Term Loan A under the Credit Agreement and the Company intends to use the net proceeds from the Private Placement, together with cash on hand, to pay down borrowings under the Credit Agreement. The changes included in the Amendment, other than the replacement of LIBOR with SOFR, will become effective upon such prepayment.

On March 24, 2023, the Company issued a press release in accordance with Rule 135c promulgated under the Securities Act of 1933, as amended (the “Securities Act”), announcing the pricing of the Private Placement and the Amendment. The full text of the press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

In connection with the Private Placement, management of the Company presented to certain investors an investor presentation, a copy of which attached as Exhibit 99.2 to this Current Report on Form 8-K and is incorporated herein by reference. The Company also provided certain investors with forms of the following documents in connection with the Private Placement, which are attached as Exhibits 99.3, 99.4, 99.5 and 99.6 to this Current Report on Form 8-K, respectively, and are incorporated herein by reference: the form of Securities Purchase Agreement, by and among the Company and each purchaser to be identified on the signature pages thereto, the form of Certificate of Designation designating the Preferred Stock expected to be filed with the Delaware Secretary of State on or prior to the Closing Date and the form of Warrants to be issued on the Closing Date (collectively, the “Form Transaction Documents”).

The information contained in this Item 7.01 and the attached Exhibits 99.1, 99.2, 99.3, 99.4, 99.5 and 99.6 are being furnished and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that Section. The information contained in this Item 7.01 and the attached Exhibits 99.1, 99.2, 99.3, 99.4, 99.5 and 99.6 shall not be incorporated by reference into any registration statement or other document pursuant to the Securities Act or the Exchange Act, unless it is specifically incorporated by reference therein.

Forward-Looking Statements

This Current Report on Form 8-K contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995, including without limitation statements regarding the expected closing of the Private Placement, anticipated proceeds from the Private Placement and the use thereof. The words “may,” “will,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “ongoing” or the negative of these terms or other comparable terminology are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including risks relating to the timing of the closing of the Private Placement, the changes included in the Amendment, other than the replacement of LIBOR with SOFR, becoming effective and the expected terms of the Form Transaction Documents and the expected filing or issuance thereof, as applicable, and risks described under the caption “Risk Factors” in the Company’s Annual Report on Form 10-K for the year ended December 31, 2021, which is on file with the SEC and risks described in other filings that the Company makes with the SEC in the future. Any forward-looking statements contained in this Current Report on Form 8-K speak only as of the date hereof, and the Company expressly disclaims any obligation to update any forward-looking statements, whether because of new information, future events or otherwise.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Below is a list of exhibits included with this Current Report on Form 8-K.

Exhibit No.	Document
99.1	Press release dated March 24, 2023
99.2	Investor Presentation
99.3	Form of Securities Purchase Agreement, by and among Ribbon Communications Inc. and each purchaser to be identified on the signature pages thereto
99.4	Form of Certificate of Designation of Series A Preferred Stock
99.5	Form of Warrant
99.6	Form of Warrant Agreement
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Ribbon Communications Inc.

By: /s/ Patrick Macken
Name: Patrick Macken
Title: Executive Vice President and Chief Legal Officer

Date: March 27, 2023



Ribbon Announces \$55 Million Preferred Stock Private Placement Financing and Amendment to Credit Facility

March 24, 2023

Plano, TX – Ribbon Communications Inc. (“Ribbon”) (Nasdaq: RBBN) today announced that it has priced a private placement financing of Series A preferred stock and warrants to purchase shares of common stock to raise gross proceeds of approximately \$53.4 million.

Ribbon also announced that it has entered into an amendment to its senior secured credit agreement. The amendment, among other things, reduces the minimum consolidated fixed charge coverage ratio and increases the maximum consolidated net leverage ratio that Ribbon must comply with on a quarterly basis with the quarter ended March 31, 2023 through March 31, 2024. In addition, the amendment replaces LIBOR with the Secured Overnight Financing Rate, or SOFR, as the alternative rate that may be used by Ribbon for calculating interest owed under the credit facility.

In connection with the amendment to the credit facility, Ribbon has agreed to a prepayment of \$75 million of the principal amount outstanding on the Term Loan A under the credit facility and Ribbon intends to use the net proceeds from the private placement, together with cash on hand, to pay down borrowings under the credit facility.

Ribbon expects to issue 55,000 shares of Series A preferred stock, along with warrants to purchase shares of common stock, in the private placement. Each share of Series A preferred stock will be sold at a price of \$970 per share. The warrants will be immediately exercisable and will expire four years from the date of issuance. The warrant exercise price per share will be equal to 115% of the lower of (i) the closing price of the common stock on March 24, 2023 and (ii) the two-day VWAP (as defined in the securities purchase agreement relating to the private placement) of March 27, 2023 and March 28, 2023. The private placement is expected to close on or about March 30, 2023, subject to customary closing conditions.

The securities are being offered in a private placement under Section 4(a)(2) of the Securities Act of 1933, as amended (“Securities Act”), and have not been registered under the Securities Act, or applicable state securities laws. Accordingly, the securities may not be offered or sold in the United States except pursuant to an effective registration statement or an applicable exemption from the registration requirements of the Securities Act and such applicable state securities laws. Ribbon has agreed to file a registration statement with the Securities and Exchange Commission registering the resale of the Series A preferred stock, the warrants and the shares of common stock underlying the warrants.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any sale of the securities in any state in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction.

Important Information Regarding Forward-Looking Statements

The information in this press release contains "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which are subject to a number of risks and uncertainties. All statements other than statements of historical facts contained in this release, including without limitation statements regarding use of proceeds, the expected terms of the securities issued in the private placement and the signing and closing of the private placement financing, are forward-looking statements. Without limiting the foregoing, the words "believes", "estimates", "expects", "expectations", "intends", "may", "plans", "projects" and other similar language, are intended to identify forward-looking statements. For further information regarding risks and uncertainties associated with Ribbon Communications' business, please refer to the "Risk Factors" section of Ribbon Communications' most recent Annual Report for the year ended December 31, 2021 filed with the SEC. Any forward-looking statements represent Ribbon Communications' views only as of the date on which such statement is made and should not be relied upon as representing Ribbon Communications' views as of any subsequent date. While Ribbon Communications may elect to update forward-looking statements at some point, Ribbon Communications specifically disclaims any obligation to do so.

Investor Contact

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Ribbon Investor Presentation

March 2023

Note Regarding Forward-Looking Statements and Non-GAAP Financial Me

This presentation contains "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which are subject to a number of risks and uncertainties. All statements of facts contained in this release, including, without limitation statements regarding the Company's projected financial results for the first quarter of 2023, year ended 2023 and beyond; customer engagement and future operations and cost savings; and plans for future product development and manufacturing and the expected benefits therefrom, are forward-looking statements. Without limiting the foregoing, the words "expectations", "intends", "may", "plans", "projects" and other similar language, are intended to identify forward-looking statements.

Forward-looking statements are based on the Company's current expectations and assumptions regarding its business, the economy and other future conditions. Because forward-looking statements relate to the uncertainties, risks and changes in circumstances that are difficult to predict. Actual results may differ materially from those contemplated in these forward-looking statements due to various risks, uncertainties and changes in circumstances, including, among others, the effects of geopolitical instabilities and disputes, including between Russia and Ukraine and the impact of sanctions imposed as a result thereof; the potential impact of litigation; risks including as a result of component availability; risks that the Company will not realize the anticipated benefits from the acquisition of ECI Telecom Group Ltd. (the "ECI Acquisition"); risks that the Company will not realize and/or anticipated benefits from its strategic restructuring; the impact of restructuring and cost-containment activities; unpredictable fluctuations in quarterly revenue and operating results; risks related to the term agreement including compliance with the financial covenants; risks related to cybersecurity and data intrusion; failure to compete successfully against telecommunications equipment and networking companies; customer base or generate recurring business from existing customers; credit risks; the timing of customer purchasing decisions and the Company's recognition of revenues; macroeconomic conditions, including changes in interest rates; the Company's products and services; rapid technological and market change; the ability to protect Company intellectual property rights and obtain necessary licenses; the ability to maintain partner, reseller, distributor relationships; the potential for defects in the Company's products; increases in tariffs, trade restrictions or taxes on the Company's products; and currency fluctuations. Any forward-looking statements represent the Company's views as of the date of this presentation and should not be relied upon as representing our views as of any subsequent date. While we may elect to update forward-looking statements at some point, we specifically disclaim any obligation to do so. Any forward-looking statements may be required by law.

This presentation contains projected financial information with respect to the Company, namely revenue, EBITDA, gross margin, and interest and other expense. Such projected financial information constitutes information for illustrative purposes only and should not be relied upon as necessarily being indicative of future results. The assumptions and estimates underlying such projected financial information are inherently uncertain and subject to significant business, economic, competitive and other risks and uncertainties that could cause actual results to differ materially from those contained in the projected financial information. Actual results may differ from those contemplated by the projected financial information contained in this presentation, and the inclusion of such information in this presentation should not be regarded as a representation by any person that the results will be achieved. The independent registered accounting firm of the Company has not audited, reviewed, compiled or performed any procedures with respect to the projections for the purpose of their inclusion in this presentation and has not expressed an opinion or provided any other form of assurance with respect thereto for the purpose of this presentation.

This presentation also includes certain non-GAAP financial measures in addition to the U.S. GAAP financials. Our management believes that presenting certain non-GAAP financial measures provides meaningful information to investors and may enhance investors' ability to analyze financial and business trends including the ability to compare period to period more easily by excluding items that could have a positive impact on results in a given financial period. The non-GAAP measures have limitations as analytical tools, and you should not consider them in isolation or as a substitute for the most directly comparable GAAP financial measure to evaluate our business. We urge you to review the reconciliation of our non-GAAP financial measures to the most directly comparable GAAP financial measures set forth in the Appendix to this presentation.

Please note that as part of the basis of presentation, totals may not sum due to rounding.

Ribbon Confidential Information

Today's Presenters



Bruce McClelland
President, CEO & Director

- Former CEO of ARRIS, COO of CommScope and held several leadership roles at Nortel
- 35 years of industry experience



Mick Lopez
EVP & CFO

- Former CFO of Vista Outdoor, CFO of Veritas Technologies and CFO of Harris Corporation
- 40 years of industry experience



Investment Highlights



Ribbon at a Glance

Company Overview

- Global provider of software and network solutions to enable real-time communications and high-bandwidth networking and connectivity
- Two business segments: Cloud & Edge and IP Optical Networks
- Key Investors: JPMorgan Chase & Co. and Swarth Group⁽¹⁾

 Headquarters: **Plano, Texas**
 Employees: **3,400**
 NASDAQ: **RBBN**

Strong Financial and Business Momentum

\$840–870M

'23 Est. Revenue

1,000+

Customers

945

Patents

\$95–110M

'23 Est. EBITDA

\$64M

22A EBITDA

1.10x

4Q22A Book-to-Bill

Long-Term Customer Relationships



1. Shares held by JPMC Heritage Parent LLC (indirect subsidiary) and Heritage PE (OEP) III, L.P. (general partner indirectly controlled by JPMC Heritage Parent LLC), and deemed beneficial ownership of shares of OEP II Partners Co-Invest, L.P.

'22 Rev

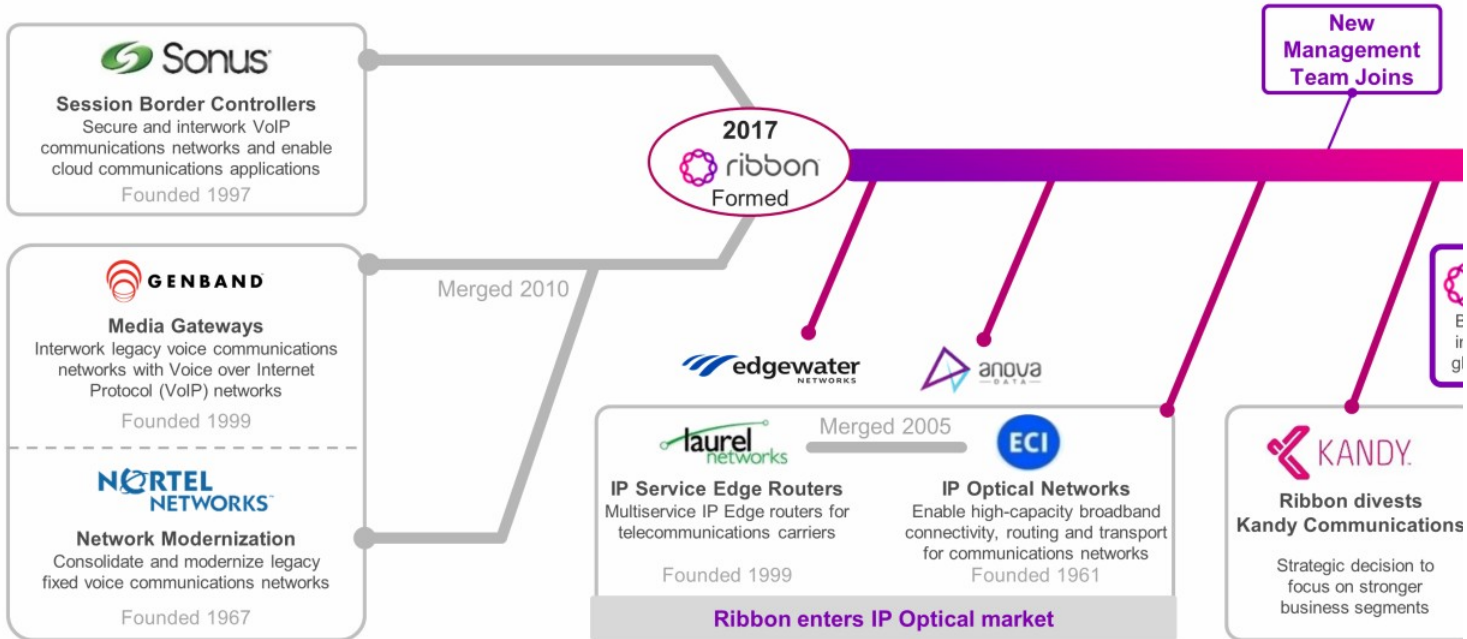
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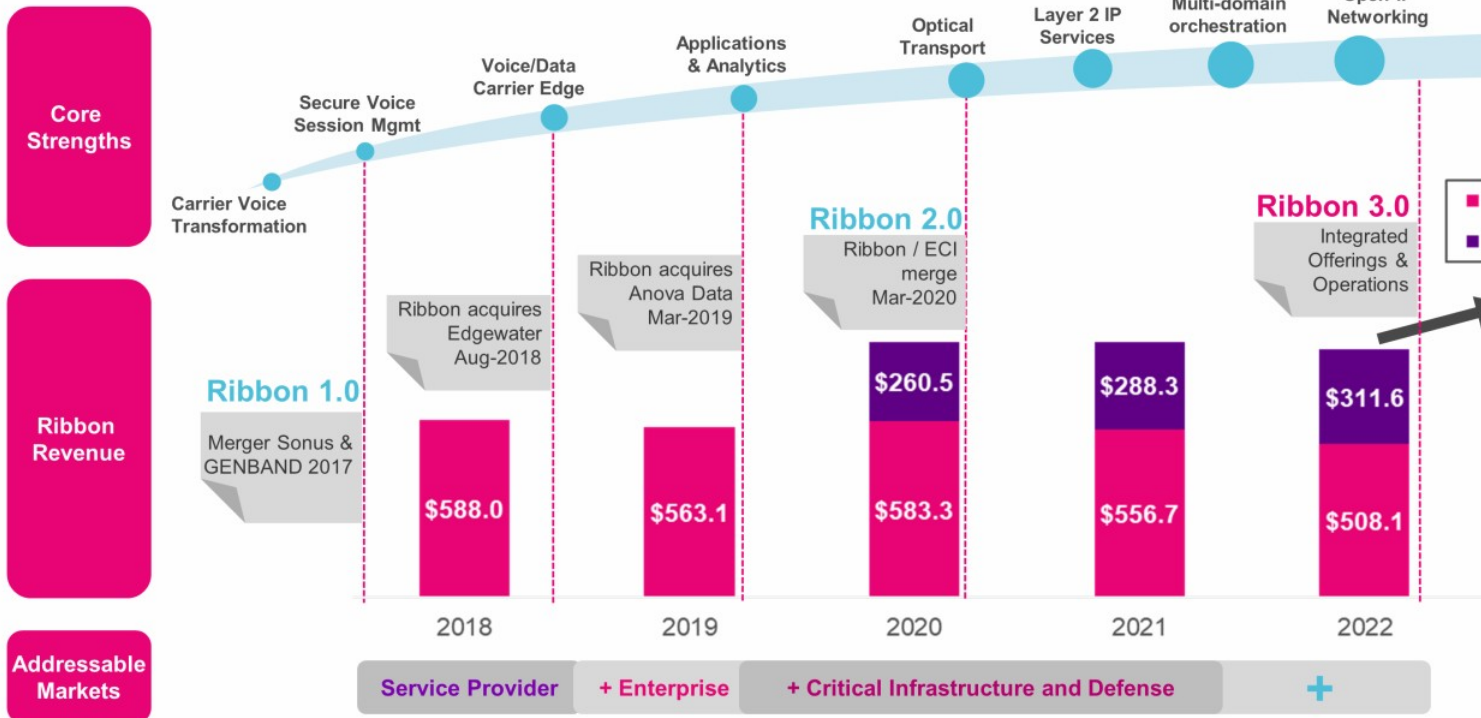
46% Services

Rich History of Innovation Brought Together as Ribbon

Several meaningful transactions have strengthened our market position, expanded our market scope and will provide a major new growth vector in the company's transformation



Ribbon 3.0 – The Next Phase of Growth and Profitability



Continued Momentum for Expected Profitable Growth in 2023



2022 Accomplishments

- 36%+ IP Optical sales growth in 2H22 vs. 1H22
- Major new growth vector on strength of expanded IP Networking portfolio

- Noteworthy IP Optical wins:

viettel **MTN** **INFINIVAN**

airtel **EASTERN** **SoftBank**

- Telco Cloud momentum and Enterprise growth
- New product launches



Profitable Growth in 2023 Expected

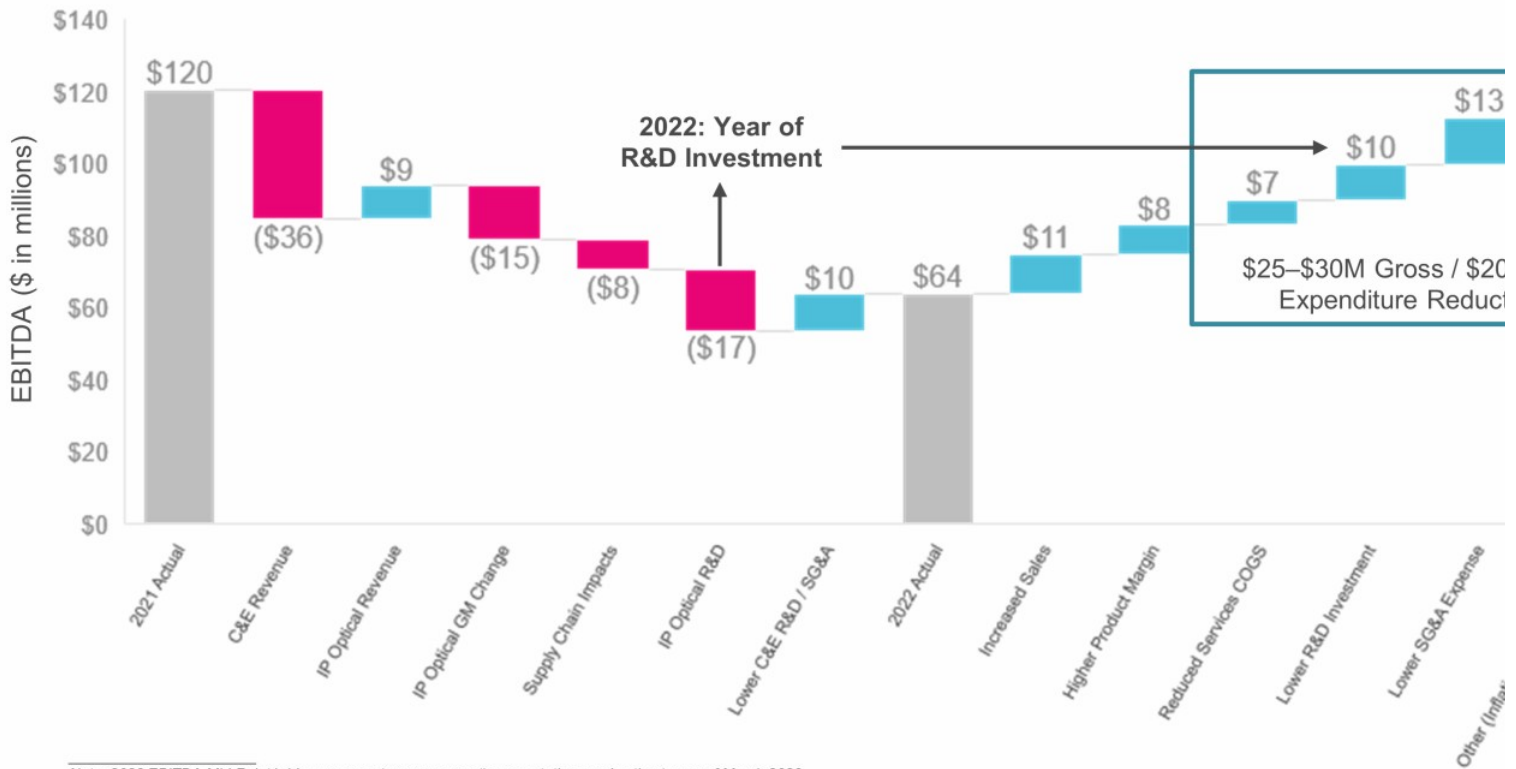
- 2023 Adj. EBITDA guidance, which assumes, \$95 – \$110 million (60% YoY growth at the midpoint)
- 10%+ IP Optical Transport revenue growth target with path to profitability
- Cloud & Edge stability with meaningful Secure VoIP opportunities in Federal and Enterprise
- Improving supply chain environment
- Additional cost savings (~5%) to be implemented



Targets for 2023 and Beyond

- Investment in Tier One Provider opportunities non-linear growth opp
- Portfolio investment lead expanded addressable
- Partnership opportunities increase scale and acc market share gains
- Federal opportunities p multi-year investment c
- Increasing software an recurring revenue mix

Capital Raise Comes at Significant EBITDA Inflection Point



...And Facilitates Credit Agreement Amendment

Credit Agreement Amendment Overview

- Upon completion of the Preferred Offering, RBBN will pay down at least \$75.0 million of the existing Term Loan A (from \$330.5 million to \$255.5 million)
- Revolver is reduced from \$100M to \$75M
- Amendment alleviates covenant pressure by increasing the total net leverage covenant ratio and decreasing the minimum fixed charge coverage ratio, as shown below:

Fiscal Quarter Ending	Net Leverage Covenant Ratio ⁽¹⁾		Fixed Charge Coverage Ratio	
	Existing	New	Existing	New
Mar 31, 2023	3.25x	4.50x	1.25x	1.10x
Jun 30, 2023	3.25x	4.50x	1.25x	1.10x
Sep 30, 2023	3.00x	4.50x	1.25x	1.10x
Dec 31, 2023	3.00x	4.25x	1.25x	1.10x
Mar 31, 2024	3.00x	4.00x	1.25x	1.10x
June 30, 2024 - Thereafter	3.00x	No Change	1.25x	No Change

1. Each leverage covenant in effect will remain net of up to \$25 million of cash (unchanged).

Data Explosion Drives Continuous Network Transformation

Market Drivers

Connected Devices

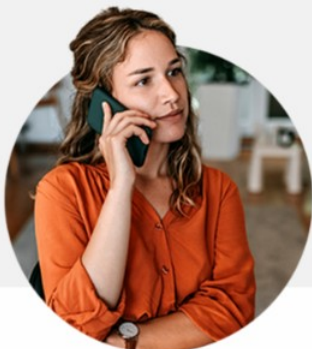
Personalized & Customized

Applications for Everything

Explosion of Data

Work-from-anywhere

Broadband explosion



Network Transformation



Technology Evolution

Nextgen BB Access

Everyt over

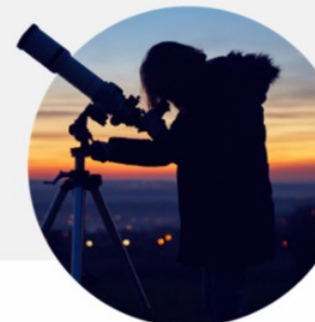
Automation & Orchestration

Clou Netwo

Edge Computing

Nextgen M 5G, 6G, W

Everything as a Service



Key Technology Trends Underpinning Our Investment Strat

IP + Optical

- 4.5X expected growth in global mobile traffic from 2020-2026¹ driving fiber and IP Networking closer to the edge
- Network complexity demanding better management and automation – across Optical transport and IP switching/routing domains
- Next generation IP segment routing and 5G network slicing are a catalyst for alternative vendors
- Heightened sense of urgency to transition legacy TDM voice networks to IP



Open Networking

- Best-of-breed agile solutions
- Eliminate vendor lock-in
- Faster time-to-market
- Commercial silicon surpassing proprietary solutions
 - Pluggable optics
 - High performance routing
- Hybrid IP networking solutions from access to core
- Adoption of white box computing

Open ROADM

NETCONF

OPENCONFIG

ONF

gNMI telemetry

TELECOM INFRA PROJECT

Unified Communications

- Broad adoption of cloud-based unified communication platforms supporting work-from-anywhere needs
- Multiple target markets: Online Collaboration, Desktop and Mobile, Contact Center
- Multiple target verticals: Finance, Government, Education, Critical Infrastructure, Healthcare, Manufacturing
- Specialized solutions needed for advanced applications – survivability, security, 911, etc.



Microsoft

zoom

GENESYS

Service m to the C

- Traditional network operating in private cloud compute environment
- Pre-integrated friendly deployment with CapEx consumption
- Large scale analytics data from multiple and 3rdparty sources
- Improved service leveraging CI/CD
- Expanded partner OEM, Distributor

TELCC

5G

1. Source: Ericsson Mobility Report, November 2020

Ribbon Solutions Meet Demanding Network Requirements

TELCO CLOUD

“Cloud & Edge” Business Segment

Core business supports telecom carrier and enterprise voice services

- Leading market position with tier one service providers including Verizon and AT&T
- Significant cash flow generator underpinned by strong recurring maintenance and increasing software component of revenue
- Portfolio addresses fixed and mobile carrier VoIP networks as well as faster growing enterprise communication applications
- Strong market position in Core Session Border Control (“SBC”) products

Annual Cloud & Edge Revenues (\$ in mm)⁽¹⁾



1. Reflects Kandy revenue of \$8mm and \$11mm in 2019 and 2020, respectively.
 2. Reflects pro forma full year results for periods before the close of the ECI acquisition.

IP WAVE

“IP Optical Networks” Business Segment

Highly-competitive products with substantial market g

- Record of success in many of the most competitive glo India and EMEA
- Leveraging N.A. carrier relationships to penetrate the i profitable accounts, exploiting its technical advances &
- The industry’s shift to open networking architectures is Ribbon’s product portfolio compared to major competit
- Global replacement of Huawei network equipment in m networks provides a once-in-a-lifetime opportunity for I

Annual IP Optical Revenues (\$ in m



Industry-leading Telco and Enterprise Communications Portfolio

Voice Simplification



- Business & consumer voice application server
- Hosted PBX and Contact Centre features
- Scale from thousands to millions of subs
- Solutions for TDM transformation




Session Border Control



- Cloud Native SBC architecture
- Highly efficient infrastructure needs
- Automation for lifecycle management
- Full VoLTE IMS functionality

UC Interconnect



- Interconnect support for multiple UCaaS platforms
-  Microsoft Teams  webex by cisco
-  zoom phone
- Comprehensive portal environment
 - Customer engagement & automation
 - Connectivity and security in public or private cloud

Fraud & Security



- Securing communications
- Incident Detection known threats
- Behavioral analysis reveals new threats
- Recognize and prevent Fraud and Abuse

Continuous Innovation to Meet Customer Needs



IP Routing with Neptune

- Proven state of the art IP stack with co
- Right fit with range of form factors and
- New high performance router family -

Optical Networking with Apollo

- Best in class metro transport with performance or power-cost optimized 400G/200G/100G and OTN
- Tailored solutions with smooth capacity growth
- Delivering new wavelengths fast with Ribbon Alien Wavelengths

Domain Orchestration w

- Practical Automation
- Multi-vendor, multidomain, multilayer
- Low code CI/CD

Continuous Innovation for Next Generation Optimized, Automated Open I

2023 Customer Investment Profiles



Mobile Remains a Top Priority

Cell site Router
Aggregation
Optical transport



Surge in Investment Broadband Access (Fiber, HFC, Fixed Wireless)

IP routing
Metro and Access
Optical transport



Relentless Pursuit to Lower Total Cost of Ownership

Analytics
Enhanced Security
Energy Efficiency



Digital Transformation

Telco Cloud
As-a-Service
Automation

Ribbon solutions directly address these key investment priorities

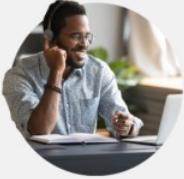
2023 Targeted Growth Areas

Cloud & Edge



Enterprise

- Target F1000 Customers in key verticals
- Expand adoption of Cloud Services - Ribbon Connect, Identity Management, Analytics
- Convert US Federal Opportunities



Telco Cloud Transformation Projects

- US Tier 1, NA Tier 2, Europe, APAC, CALA



SBC Share

- Market expected to grow 6%+ in 2023
- Leverage Application portfolio

IP Optical Networks



Optical Major Ac

- Expand on recent major acco
- Convert Tier One pipeline in
- Leapfrog with new Apollo 940



Establish Ribbon as Major IP Network Solution Provider

- New XDR 2000 Series portfo
- Cloud-native Muse managen
- Multiple entry points – 5G, TI service access, automation/c

Large and Diverse Service Provider and Enterprise Customer

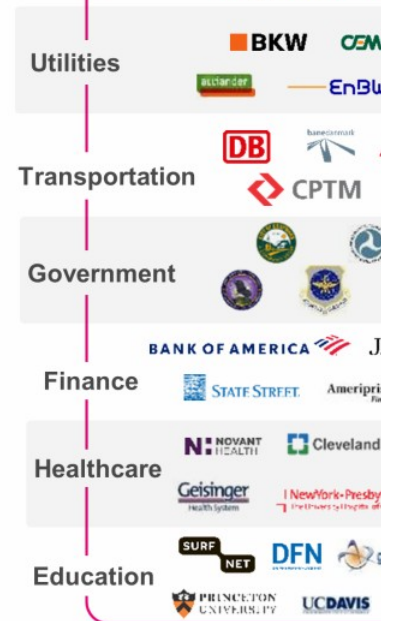
Telco and Mobile



Multi-System Operators

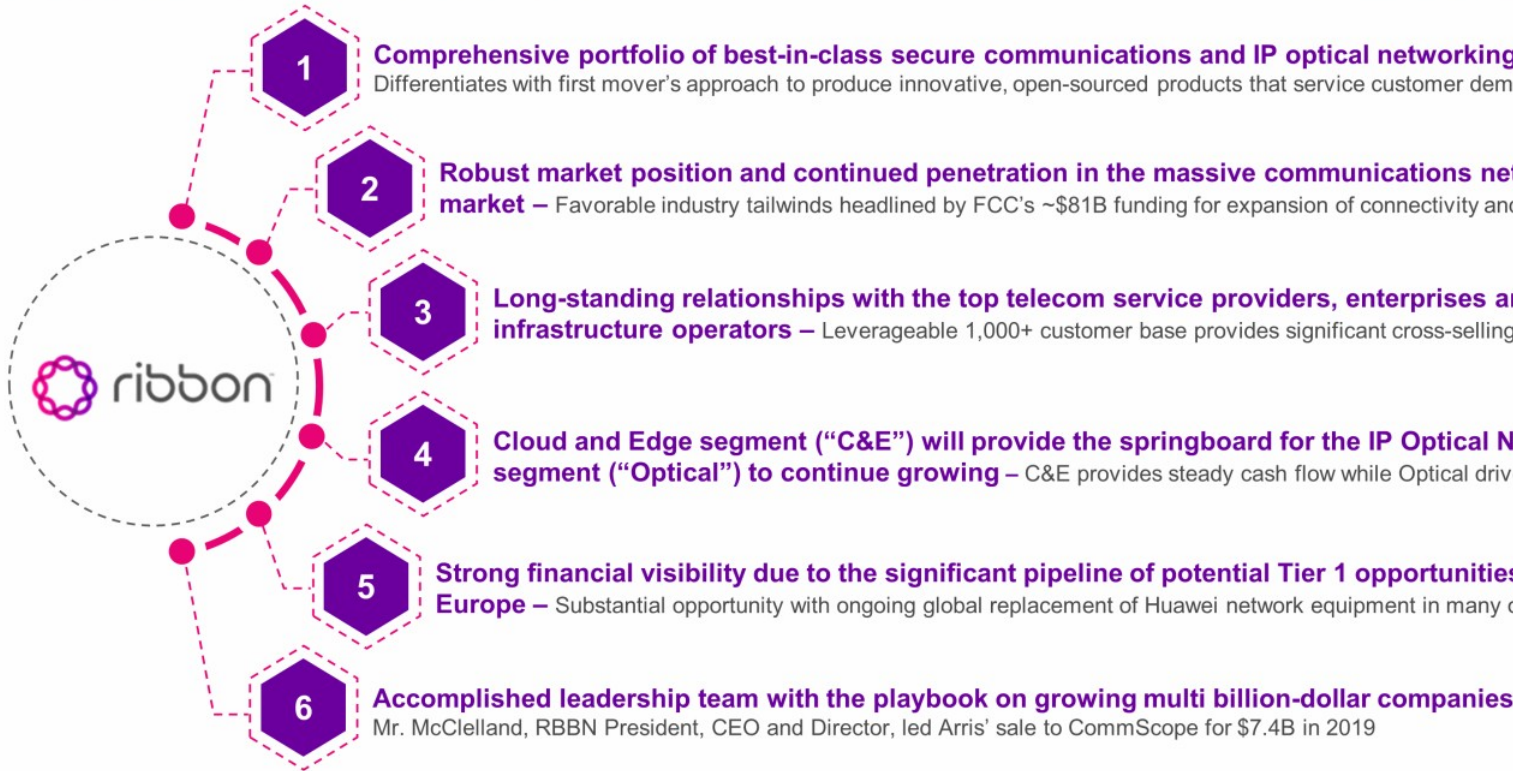


Regulated Verticals



Ribbon is a global company with 57% of 2022 revenues from international customers and does business with more than 80% of the top 50 Telecom Service Providers around the globe (excluding China)

Investment Highlights



Appendix



Apollo: Programmable Optical Networks

New

Next Gen Compact Modular

OT9408

OLS9408



Pay as you grow pluggables

- 140Gbaud: 1200G, real 800G, unlimited 400G
- Ultra-dense metro 400

F2B cooling plus Telco NEBS

400G+ Everywhere

Metro Power-Cost Optimized

TM400_2



Multisource 400G ZR+ pluggables

- Pay-as-you-grow 400G
- OpenROADM interop

Capacity-Reach Optimized

TM800/1200 – 70Gbaud λs



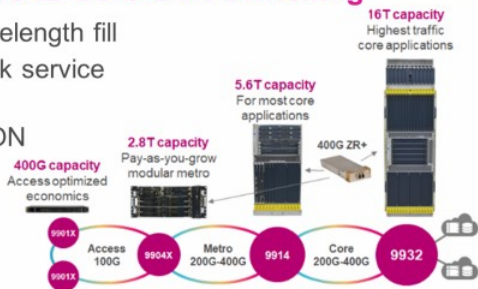
TM800_2 – 140Gbaud λs



- Real 800G
- Unlimited 400G

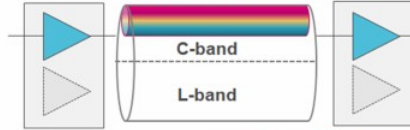
Access-to-Core OTN Switching

- Optimize wavelength fill
- Point-and-click service provisioning
- Dynamic ASON restoration



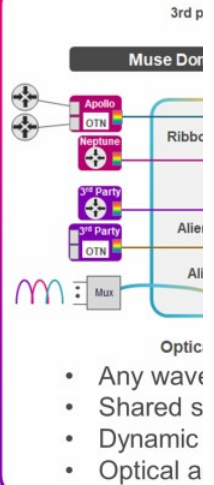
C+L Band

High traffic fiber route



Pay as you grow for extra capacity
Where you need it – When you need it

Super



- Any wave
- Shared s
- Dynamic
- Optical a

Open Co

Open ROADM



Optical overlay

Neptune IP Routing: WAN Access, Metro & Edge Router Applications



High Performance Routing – XDR Family



New IP Routing Portfolio

- 3 times capacity in same form factor
- 20% reduction in cost
- 65% reduction in power
- IP Wave rNOS - Open NOS across entire portfolio

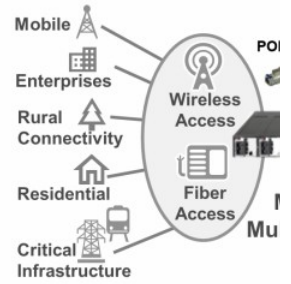
Disaggregated Routing

Past Proprietary Routers	Present Common NOS	Future Telco SONiC
Vendor Software (Proven OS)	IP Wave rNOS	Disaggregated IP Wave rNOS
Broadcom Silicon Proprietary Hardware	Broadcom Silicon Proprietary and ODM Hardware	Merchant Silicon Proprietary and ODM Hardware
• Integrated routers	• Disaggregated and Integrated options	• Disaggregated s/w • Any merchant silicon

IP Wave rNOS provides

- Same NOS across entire portfolio
- Hardware/software disaggregation

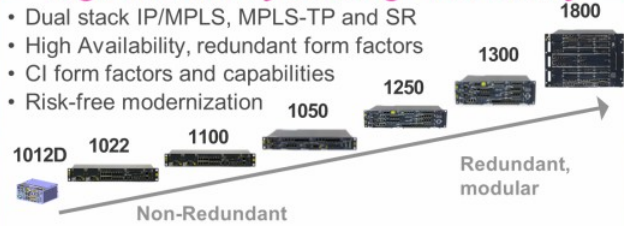
Super-converged Multi-Access



Multiservice Aggregation

- Rural Backbone/Bandwidth
- Critical Infrastructure
- Converged Network

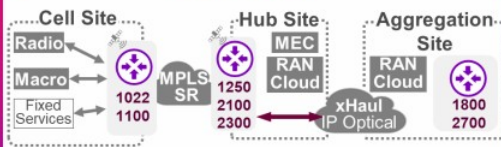
High Availability Routing – AR Family



- Dual stack IP/MPLS, MPLS-TP and SR
- High Availability, redundant form factors
- CI form factors and capabilities
- Risk-free modernization

Market leading solution for critical industries

5G xHaul



- 5G Synchronization PTP 1588, Class C/D, GNSS Receiver
- Open and Programmable – SR-TE, FlexAlgo, PCEP

TDM to IP Migration

Risk-free Migration

- Comprehensive CES Technology
- Multiple applications
- Field hardened processes

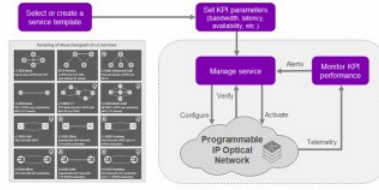
Muse: Cloud Native SDN

Workflow Automation



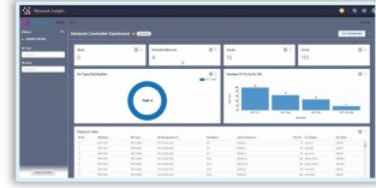
- Reduce OPEX
- Minimize human mistakes

Closed Loop Provisioning



- Speed time to revenues
- Sell performance assured services

Insights & Analytics



- Better use of CAPEX
- Improve NOC efficiency

Flex

Service
Customer Defined NBIs



- Integrate SDN eco

Network Health



- Predictive maintenance
- Fast-accurate fault finding

Cloud Native



- DevOps and Customization
- Performance and Security

Intuitive Web UI



- Reduce mgmt complexity
- Tailor to NOC processes

Flexible M



SBIs to Network Elements

Routers + Optical Termin

- Disaggr
- Remove

2023 Organization and Leadership



Bruce McClelland
President, CEO & Director

- Board of Directors



Mick Lopez
EVP & CFO

- Financial accounting reporting, controls, & planning
- AP & AR
- Treasury & Tax
- Investor Relations
- Information Technologies



Sam Bucci
EVP & COO

- Business strategy
- Innovation & Product Development
- Portfolio Management
- Global Services
- Supply Chain & Operations



Dan Redington
EVP, Global Sales

- Regional Sales Units
- Pre-Sales Engineering
- Project Management
- Strategic account development



Patrick Macken
EVP, Chief Legal Officer

- General Counsel
- Employment Law
- Contract Law
- Compliance
- Facilities
- Corporate Secretary



Fourth Quarter and Full Year 2022 GAAP Financial Summary

	4Q21	3Q22	4Q22	2021	2022
Revenue	\$231M	\$207M	\$234M	\$845M	\$820M
Gross Margin	50%	50%	49%	53%	49%
Opex¹	\$235M	\$108M	\$113M	\$562M	\$449M
Income (loss) from operations	(\$120M)	(\$3M)	\$1M	(\$118M)	(\$48M)
Other (expense) income, net²	(\$9M)	(\$4M)	(\$2M)	(\$75M)	(\$44M)
Net income (loss)	(\$96M)	(\$18M)	\$20M	(\$177M)	(\$98M)
Diluted EPS	(\$0.65)	(\$0.12)	\$0.12	(\$1.20)	(\$0.63)

1. Opex – includes Goodwill impairment charges of \$116M in 2021, \$0M in 2022.

2. Other (expense) income, net includes the following non-cash measurement gains (losses) associated with the quarterly mark-to-market adjustments to the investment in AVCT: FY21 (\$75M) / FY22 (\$41M).

Fourth Quarter and Full Year 2022 Non-GAAP Financial Summary

	4Q21	3Q22	4Q22	FY21	FY22
Revenue	\$231M	\$207M	\$234M	\$845M	\$820M
Non-GAAP Gross Margin	54%	54%	52%	57%	53%
Non-GAAP Opex	\$102M	\$94M	\$97M	\$381M	\$380M
Non-GAAP Operating Margin	9%	9%	11%	12%	6%
Non-GAAP Adjusted EBITDA	\$26M	\$23M	\$29M	\$120M	\$64M
Non-GAAP Diluted EPS	\$0.01	\$0.02	\$0.09	\$0.32	\$0.15

Note: Please see the discussion of non-GAAP financial measures in the appendix.

Fourth Quarter and Full Year 2022 Non-GAAP Segment Sum

	4Q22 Cloud and Edge	4Q22 IP Optical Networks	4Q22 Consolidated	FY22 Cloud and Edge	FY22 IP Optical Networks
Revenue <i>vs Prior Year</i>	\$137M (7%)	\$97M +17%	\$234M +1%	\$508M (9%)	\$312M +8%
Non-GAAP Gross Margin	64%	36%	52%	65%	34%
Non-GAAP Adjusted EBITDA	\$36M	(\$7M)	\$29M	\$128M	(\$64M)
Non-GAAP Adjusted EBITDA Margin	26%	-8%	12%	25%	-20%

Note: Please see the discussion of non-GAAP financial measures in the appendix.

First Quarter and Full Year 2023 Business Outlook

	FY22 (Actual)	1Q23 (Estimated)	FY23 (Estimated)
Revenue	\$820M	\$180M to \$190M	\$840M to \$850M
Non-GAAP Gross Margin	53%	46% to 48%	53% to 54%
Non-GAAP Adjusted EBITDA	\$64M	(\$6M) to \$1M	\$95M to \$100M
Interest and Other Expense	(\$23M)	~(\$6M)	~(\$20M)

Note: Please see the discussion of non-GAAP financial measures in the appendix.

Discussion of Non-GAAP Financial Measures

The Company's management uses several different financial measures, both GAAP and non-GAAP, in analyzing and assessing the overall performance of its business, making operating decisions, planning and forecasting future periods, and determining payments under compensation programs. The Company considers the use of non-GAAP financial measures helpful in assessing the core performance of its continuing operations and when planning and forecasting future periods. The Company's annual financial plan is prepared on a non-GAAP basis and is approved by its board of directors. In addition, budgeting and forecasting for revenue and expenses are conducted on a non-GAAP basis, and actual results on a non-GAAP basis are assessed against the annual financial plan. The Company defines continuing operations as the ongoing results of its business adjusted for certain expenses and credits, as described below. The Company believes that providing non-GAAP information to investors will allow investors to view the financial results in the way its management views them and helps investors to better understand the Company's core financial and operating performance and evaluate the efficacy of the methodology and information used by its management to evaluate and measure such performance.

While the Company's management uses non-GAAP financial measures as tools to enhance its understanding of certain aspects of the Company's financial performance, its management does not consider these measures to be a substitute for, or superior to, GAAP measures. In addition, the Company's presentations of these measures may not be comparable to similarly titled measures used by other companies. These non-GAAP financial measures should not be considered alternatives for, or in isolation from, the financial information prepared and presented in accordance with GAAP. Investors are cautioned that there are material limitations associated with the use of non-GAAP financial measures. In particular, many of the adjustments to the Company's financial measures reflect the exclusion of items that are recurring and will be reflected in its financial results for the foreseeable future.

Discussion of Non-GAAP Financial Measures (continued)

Stock-Based Compensation

The expense related to stock-based awards is generally not controllable in the short-term and can vary significantly based on the timing, size and nature of awards granted. The Company believes that presenting non-GAAP operating results that exclude stock-based compensation provides investors with visibility and insight into its management's method of analysis and its core operating performance.

Amortization of Acquired Technology (including software licenses); Amortization of Acquired Intangible Assets

Amortization amounts are inconsistent in frequency and amount and are significantly impacted by the timing and size of acquisitions. Amortization of acquired technology is reported separately within Cost of revenue and Amortization of acquired intangible assets is reported separately within Operating expenses. These items are reported collectively as Amortization of acquired intangible assets in the accompanying reconciliations of non-GAAP and GAAP financial measures. The Company believes that excluding non-cash amortization of these intangible assets facilitates the comparison of its financial results to its historical operating results and to other companies in its industry as if the acquired intangible assets had been developed internally rather than acquired.

Impairment of Goodwill

The Company performs its annual testing for impairment of goodwill in the fourth quarter each year. For the purpose of testing goodwill for impairment, all goodwill has been assigned to one of the Company's two operating segments. The Company performs a fair value analysis using both an income and market approach, which encompasses a discounted cash flow analysis and a guideline public company analysis using selected multiples. Based on the results of the impairment test completed in the fourth quarter of 2021, the Company determined that the carrying value of its IP Optical Networks segment exceeded its fair value, and accordingly, recorded a non-cash impairment charge of \$116 million. There was no impairment of the Company's Cloud and Edge segment. The Company believes that such non-cash costs are not part of its core business or ongoing operations. Accordingly, the Company believes that excluding the goodwill impairment charge facilitates the comparison of the Company's financial results to its historical operating results and to other companies in its industry.

Discussion of Non-GAAP Financial Measures (continued)

Acquisition-, Disposal- and Integration-Related

The Company considers certain acquisition-, disposal- and integration-related costs to be unrelated to the organic continuing operations of its acquired businesses and the Company. Such costs are generally not relevant to assessing or estimating the long-term performance of the acquired assets. The Company excludes such acquisition-, disposal- and integration-related costs to allow more accurate comparisons of its financial results to its historical operations and the financial results of less acquisitive peer companies and allows management and investors to consider the ongoing operations of the business both with and without such expenses.

Restructuring and Related

The Company has recorded restructuring and related expense to streamline operations and reduce operating costs by closing and consolidating certain facilities and reducing its worldwide workforce. The Company believes that excluding restructuring and related expense facilitates the comparison of its financial results to its historical operating results and to other companies in its industry, as there are no future revenue streams or other benefits associated with these costs.

Interest Income on Debentures

The Company recorded paid-in-kind interest income on the American Cloud Technologies, Inc. ("AVCT") Series A-1 convertible debentures (the "Debentures") it received as consideration in connection with the sale of its Kandy Communications business (the "Kandy Sale") through September 8, 2021, when the Debentures were converted to shares of AVCT common stock (the "Debenture Shares"), which increased their fair value. The Company excludes this interest income because it believes that such a gain is not part of its core business or ongoing operations.

Discussion of Non-GAAP Financial Measures (continued)

Gain on Sale of Business

On May 12, 2021, the Company sold its QualiTech business, which it had acquired as part of its acquisition of ECI Telecom Group Ltd., to Hermon Laboratories, Ltd. As consideration, the Company received \$2.9 million of cash and recorded a gain on the sale of \$2.8 million. The Company excludes this gain because it believes that such gain is not part of its core business or ongoing operations.

Decrease in Fair Value of Investments

The Company calculated the fair values of the Debentures and the warrants to purchase shares of AVCT common stock it received as consideration in connection with the Kandy Sale (the "Warrants") (prior to September 8, 2021) and the Debenture Shares and Warrants (effective September 8, 2021) and at each quarter-end until their disposal on August 29, 2022 when they were used as partial consideration in connection with the Company's acquisition of perpetual software licenses from AVCT. The Company recorded any adjustments to their fair values in Other (expense) income, net. The Company excluded these gains and losses from the change in fair value of this investment because it believes that such gains or losses were not part of its core business or ongoing operations.

Tax Effect of Non-GAAP Adjustments

The Non-GAAP income tax provision is presented based on an estimated tax rate applied against forecasted annual non-GAAP income. The Non-GAAP income tax provision assumes no available net operating losses or valuation allowances for the U.S. because of reporting significant cumulative non-GAAP income over the past several years. The Company is reporting its non-GAAP quarterly income taxes by computing an annual rate for the Company and applying that single rate (rather than multiple rates by jurisdiction) to its consolidated quarterly results. The Company expects that this methodology will provide a consistent rate throughout the year and allow investors to better understand the impact of income taxes on its results. Due to the methodology applied to its estimated annual tax rate the Company's estimated tax rate on non-GAAP income will differ from its GAAP tax rate and from its actual tax liabilities.

Discussion of Non-GAAP Financial Measures (continued)

Adjusted EBITDA

The Company uses Adjusted EBITDA as a supplemental measure to review and assess its performance. The Company calculates Adjusted EBITDA by excluding from (Income) loss from operations: depreciation; amortization of acquired intangible assets; stock-based compensation; impairment of goodwill; acquisition-, disposal- and integration related expense; and restructuring and related expense. In general, the Company excludes the expenses that it considers to be non-cash and/or not part of its ongoing operations. The Company may exclude other items in the future that have those characteristics. Adjusted EBITDA is a non-GAAP financial measure that is used by the investing community for comparative and valuation purposes. The Company discloses this metric to support and facilitate dialogue with research analysts and investors. Other companies may calculate Adjusted EBITDA differently than the Company does, limiting its usefulness as a comparative measure.

GAAP to Non-GAAP Reconciliation

\$000's	1Q21			2Q21			3Q21			4Q21			C
	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	
Revenue	\$ 125,422	\$ 67,350	\$ 192,772	\$ 141,421	\$ 69,789	\$ 211,210	\$ 142,437	\$ 67,961	\$ 210,398	\$ 147,376	\$ 83,201	\$ 230,577	\$
GAAP Gross profit	\$ 77,523	\$ 22,963	\$ 100,486	\$ 88,836	\$ 29,891	\$ 118,727	\$ 89,000	\$ 21,654	\$ 110,654	\$ 88,105	\$ 26,688	\$ 114,793	\$
GAAP Gross margin (Gross profit/Revenue)	61.8%	34.1%	52.1%	62.8%	42.8%	56.2%	62.5%	31.9%	52.6%	59.8%	32.1%	49.8%	
Stock-based compensation	0.1%	0.1%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	
Amortization of acquired technology	5.3%	5.1%	5.2%	4.7%	4.4%	4.6%	4.6%	4.5%	4.6%	3.9%	3.7%	3.8%	
Non-GAAP Gross margin	67.2%	39.3%	57.5%	67.8%	47.5%	61.1%	67.4%	36.7%	57.5%	64.0%	36.0%	53.9%	
GAAP Income (loss) from operations	\$ 4,693	\$ (17,297)	\$ (12,604)	\$ 24,931	\$ (11,979)	\$ 12,952	\$ 26,361	\$ (24,369)	\$ 1,992	\$ 20,371	\$ (140,507)	\$ (120,136)	\$
Depreciation	3,137	1,089	4,226	3,142	1,107	4,249	3,018	1,191	4,209	2,972	1,306	4,278	
Amortization of acquired intangible assets	11,305	4,518	15,823	11,300	5,881	17,181	11,340	5,881	17,221	10,519	5,882	16,401	
Stock-based compensation	3,334	1,726	5,060	3,039	1,751	4,790	2,936	1,625	4,561	3,199	1,808	5,007	
Impairment of goodwill	-	-	-	-	-	-	-	-	-	-	116,000	116,000	
Acquisition-, disposal- and integration-related	241	956	1,197	29	1,023	1,052	165	1,790	1,955	46	3,382	3,428	
Restructuring and related	5,620	330	5,950	1,095	1,735	2,830	1,125	642	1,767	215	891	1,106	
Non-GAAP Adjusted EBITDA	\$ 28,330	\$ (8,678)	\$ 19,652	\$ 43,536	\$ (482)	\$ 43,054	\$ 44,945	\$ (13,240)	\$ 31,705	\$ 37,322	\$ (11,238)	\$ 26,084	\$
Adjusted EBITDA Margin (Adjusted EBITDA/Revenue):													
GAAP Income (loss) from operations	3.7%	(25.7%)	(6.5%)	17.6%	(17.2%)	6.1%	18.5%	(35.9%)	0.9%	13.8%	(168.9%)	(52.1%)	
Depreciation	2.5%	1.6%	2.2%	2.2%	1.6%	2.0%	2.1%	1.8%	2.0%	2.0%	1.6%	1.9%	
Amortization of acquired intangible assets	9.0%	6.7%	8.2%	8.1%	8.4%	8.2%	8.0%	8.7%	8.3%	7.2%	7.0%	7.0%	
Stock-based compensation	2.7%	2.6%	2.6%	2.1%	2.5%	2.3%	2.1%	2.4%	2.2%	2.2%	2.2%	2.2%	
Impairment of goodwill	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	139.4%	50.3%	
Acquisition-, disposal- and integration-related	0.2%	1.4%	0.6%	0.2%	1.5%	0.5%	0.1%	2.6%	0.9%	0.1%	4.1%	1.5%	
Restructuring and related	4.5%	0.5%	3.1%	0.8%	2.5%	1.3%	0.8%	0.9%	0.8%	0.1%	1.1%	0.5%	
Non-GAAP Adjusted EBITDA Margin	22.6%	(12.9%)	10.2%	30.8%	(0.7%)	20.4%	31.6%	(19.5%)	15.1%	25.3%	(13.5%)	11.3%	

* Less than 0.1% impact on non-GAAP Adjusted EBITDA margin

GAAP to Non-GAAP Reconciliation (Continued)

\$000's	1Q22			2Q22			3Q22			4Q22		
	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated
Revenue	\$ 109,806	\$ 63,392	\$ 173,198	\$ 137,080	\$ 68,716	\$ 205,796	\$ 124,685	\$ 82,442	\$ 207,127	\$ 136,566	\$ 97,073	\$ 233,639
GAAP Gross profit	\$ 62,732	\$ 15,323	\$ 78,055	\$ 88,250	\$ 16,300	\$ 104,550	\$ 76,442	\$ 27,876	\$ 104,318	\$ 82,873	\$ 31,140	\$ 114,013
GAAP Gross margin (Gross profit/Revenue)	57.1%	24.2%	45.1%	64.4%	23.7%	50.8%	61.3%	33.8%	50.4%	60.7%	32.1%	48.8%
Stock-based compensation	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%	0.4%	0.3%	0.3%	0.3%
Amortization of acquired technology	4.7%	4.9%	4.8%	3.5%	4.6%	3.8%	3.7%	3.8%	3.7%	2.9%	3.8%	3.3%
Non-GAAP Gross margin	62.2%	29.4%	50.2%	68.2%	28.6%	54.9%	65.4%	37.9%	54.5%	63.9%	36.2%	52.4%
GAAP Loss from operations	\$ (2,347)	\$ (36,707)	\$ (39,054)	\$ 25,953	\$ (33,192)	\$ (7,239)	\$ 16,812	\$ (20,108)	\$ (3,296)	\$ 21,298	\$ (20,033)	\$ 1,265
Depreciation	2,715	1,170	3,885	2,685	1,203	3,888	2,753	1,162	3,915	2,605	1,002	3,607
Amortization of acquired intangible assets	9,528	6,014	15,542	9,118	6,283	15,401	8,995	6,281	15,276	8,090	6,879	14,969
Stock-based compensation	2,665	1,590	4,255	2,646	1,753	4,399	2,992	1,849	4,841	3,214	1,998	5,212
Acquisition-, disposal- and integration-related	44	1,805	1,849	70	1,465	1,535	42	946	988	-	1,914	1,914
Restructuring and related	3,366	1,448	4,814	2,321	573	2,894	1,287	(18)	1,269	970	886	1,856
Non-GAAP Adjusted EBITDA	\$ 15,971	\$ (24,680)	\$ (8,709)	\$ 42,793	\$ (21,915)	\$ 20,878	\$ 32,881	\$ (9,888)	\$ 22,963	\$ 36,177	\$ (7,354)	\$ 28,823
Adjusted EBITDA Margin (Adjusted EBITDA/Revenue):												
GAAP Loss from operations	(2.1%)	(57.9%)	(22.5%)	18.9%	(48.3%)	(3.5%)	13.5%	(24.4%)	(1.6%)	15.6%	(20.6%)	0.5%
Depreciation	2.5%	1.8%	2.2%	2.0%	1.8%	1.9%	2.2%	1.4%	1.9%	1.9%	1.0%	1.5%
Amortization of acquired intangible assets	8.6%	9.6%	8.9%	6.6%	9.1%	7.5%	7.3%	7.7%	7.4%	5.9%	7.0%	6.5%
Stock-based compensation	2.4%	2.5%	2.5%	1.9%	2.6%	2.1%	2.4%	2.2%	2.3%	2.4%	2.1%	2.2%
Acquisition-, disposal- and integration-related	*	2.8%	1.1%	0.1%	2.1%	0.7%	0.0%	1.1%	0.5%	*	2.0%	0.8%
Restructuring and related	3.1%	2.3%	2.8%	1.7%	0.8%	1.4%	1.0%	0.0%	0.6%	0.7%	0.9%	0.8%
Non-GAAP Adjusted EBITDA Margin	14.5%	(38.9%)	(5.0%)	31.2%	(31.9%)	10.1%	26.4%	(12.0%)	11.1%	26.5%	(7.6%)	12.3%

* Less than 0.1% impact on non-GAAP Adjusted EBITDA margin

GAAP to Non-GAAP Reconciliation (Continued)

\$000s	1Q21	2Q21	3Q21	4Q21	FY21	1Q22	2Q22	3Q22
GAAP Operating expenses	\$ 113,090	\$ 105,775	\$ 108,662	\$ 234,929	\$ 562,456	\$ 117,109	\$ 111,789	\$ 107,107
Stock-based compensation	(4,798)	(4,228)	(3,973)	(4,422)	(17,421)	(3,675)	(3,798)	(4,107)
Amortization of acquired intangible assets	(5,762)	(7,481)	(7,547)	(7,493)	(28,283)	(7,275)	(7,513)	(7,107)
Impairment of goodwill	-	-	-	(116,000)	(116,000)	-	-	-
Acquisition-, disposal- and integration-related	(1,197)	(1,052)	(1,955)	(3,428)	(7,632)	(1,849)	(1,535)	(1,607)
Restructuring and related	(5,950)	(2,830)	(1,767)	(1,106)	(11,653)	(4,814)	(2,894)	(1,607)
Non-GAAP Operating expenses	\$ 95,383	\$ 90,184	\$ 93,420	\$ 102,480	\$ 381,467	\$ 99,496	\$ 96,049	\$ 93,493
(Loss) income from operations as a percentage of revenue ("Operating margin"):								
GAAP Operating margin	(6.5%)	6.1%	0.9%	(52.1%)	(13.9%)	(22.5%)	(3.5%)	(1.1%)
Stock-based compensation	2.6%	2.3%	2.2%	2.2%	2.3%	2.5%	2.1%	2.2%
Amortization of acquired intangible assets	8.2%	8.2%	8.3%	7.1%	7.9%	8.9%	7.6%	7.7%
Impairment of goodwill	0.0%	0.0%	0.0%	50.3%	13.7%	0.0%	0.0%	0.0%
Acquisition-, disposal- and integration-related	0.6%	0.5%	0.9%	1.5%	0.9%	1.1%	0.7%	0.8%
Restructuring and related	3.1%	1.3%	0.8%	0.5%	1.4%	2.7%	1.4%	0.8%
Non-GAAP Operating margin	8.0%	18.4%	13.1%	9.5%	12.3%	(7.3%)	8.3%	8.3%

GAAP to Non-GAAP Reconciliation (Continued)

	1Q21	2Q21	3Q21	4Q21	FY21	1Q22	2Q22	3Q22
GAAP Diluted (loss) earnings per share	\$ (0.31)	\$ 0.15	\$ (0.40)	\$ (0.65)	\$ (1.20)	\$ (0.47)	\$ (0.20)	\$
Stock-based compensation	0.03	0.03	0.03	0.03	0.14	0.03	0.03	
Amortization of acquired intangible assets	0.11	0.11	0.12	0.12	0.44	0.11	0.10	
Impairment of goodwill	-	-	-	0.77	0.77	-	-	
Acquisition-, disposal- and integration-related	0.01	0.01	0.01	0.02	0.05	0.01	0.01	
Restructuring and related	0.05	0.02	0.01	0.01	0.08	0.03	0.02	
Interest income on debentures	(0.01)	(0.01)	(0.01)	-	(0.02)	-	-	
Gain on sale of business	-	(0.02)	-	-	(0.02)	-	-	
Decrease (increase) in fair value of investments	0.16	(0.08)	0.38	0.04	0.50	0.18	0.08	
Tax effect of non-GAAP adjustments	(0.01)	(0.04)	(0.03)	(0.33)	(0.42)	0.03	0.02	
Non-GAAP Diluted earnings (loss) per share	\$ 0.03	\$ 0.17	\$ 0.11	\$ 0.01	\$ 0.32	\$ (0.08)	\$ 0.06	\$
Weighted average shares used to compute diluted earnings (loss) per share (000's):								
Shares used to compute GAAP diluted (loss) earnings per share	145,936	154,160	148,184	148,675	147,575	149,167	150,190	15
Shares used to compute non-GAAP diluted earnings (loss) per share	155,032	154,160	154,061	153,898	154,527	149,167	154,035	16

GAAP to Non-GAAP Reconciliation (Continued)

	Three months ending March 31, 2023		Year ending December 31, 2022	
	Range		Range	
Revenue (\$ millions)	\$ 180	\$ 190	\$ 840	\$
Gross margin:				
GAAP outlook	42.5%	43.7%	49.3%	
Stock-based compensation	0.4%	0.4%	0.3%	
Amortization of acquired technology	4.1%	3.9%	3.4%	
Non-GAAP outlook	47.0%	48.0%	53.0%	
Adjusted EBITDA (\$ millions):				
GAAP (loss) income from operations	\$ (36.4)	\$ (29.4)	\$ (17.3)	\$
Depreciation	3.8	3.8	15.4	
Stock-based compensation	5.4	5.4	22.0	
Amortization of acquired intangible assets	14.7	14.7	56.9	
Acquisition-, disposal- and integration-related	0.4	0.4	0.6	
Restructuring and related	6.1	6.1	17.4	
Non-GAAP outlook	\$ (6.0)	\$ 1.0	\$ 95.0	\$

Thank You



SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this "*Agreement*") is dated as of March [●], 2023, by and among Ribbon Communications Inc., a Delaware corporation (the "*Company*"), and each purchaser identified on the signature pages hereto (each, including its successors and assigns, a "*Purchaser*" and collectively, the "*Purchasers*"). Certain capitalized terms used but not otherwise defined herein shall have the meanings given to such terms in Section 1.1 hereof.

RECITALS

A. The Company and each Purchaser is executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act of 1933, as amended (the "*Securities Act*"), and Rule 506 of Regulation D as promulgated by the United States Securities and Exchange Commission (the "*Commission*").

B. Each Purchaser, severally and not jointly, wishes to purchase, and the Company wishes to sell, upon the terms and conditions stated in this Agreement, (i) that number of shares of the Preferred Stock (as defined below) set forth below such Purchaser's name on the signature page of this Agreement and (ii) the Warrants (as defined below) in accordance with Section 2.2(a)(iii) of this Agreement. The Purchasers hereunder are collectively subscribing for (i) an aggregate of [●] shares of Preferred Stock and (ii) [●] Warrants (as defined below).

C. The Company has engaged B. Riley Securities, Inc. as its exclusive placement agent for the offering of the Securities (as defined below) on a "best efforts" basis.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Company and the Purchasers hereby agree as follows:

ARTICLE I.
DEFINITIONS

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms shall have the meanings indicated in this Section 1.1:

"*Action*" means any action, suit, inquiry, notice of violation, proceeding (including any partial proceeding such as a deposition) or investigation pending or, to the Company's Knowledge, threatened in writing against the Company, any Subsidiary or any of their respective properties or any officer, director or employee of the Company or any Subsidiary acting in his or her capacity as an officer, director or employee before or by any federal, state, county, local or foreign court, arbitrator, governmental or administrative agency, regulatory authority, stock market, stock exchange or trading facility.

“*Additional Securities Option*” has the meaning set forth in [Section 2.1\(c\)](#).

“*Affiliate*” means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act. With respect to a Purchaser, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Purchaser will be deemed to be an Affiliate of such Purchaser.

“*Agreement*” has the meaning set forth in the Preamble.

“*Anti-Money Laundering Laws*” has the meaning set forth in [Section 3.1\(kk\)](#).

“*Board of Directors*” means the board of directors of the Company.

“*Bloomberg*” means Bloomberg Financial Markets.

“*Business Day*” means any day except Saturday, Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

“*Certificate of Designation*” means the Certificate of Designation of the Preferred Stock to be filed prior to the Closing by the Company with the Secretary of State of the State of Delaware, substantially in the form of [Exhibit A](#).

“*Closing*” means the closing of the purchase and sale of the Preferred Stock and Warrants pursuant to this Agreement.

“*Closing Date*” means March [●], 2023 (the [●] Trading Day following the execution of this Agreement), or such other date as the parties may agree.

“*Code*” means the Internal Revenue Code of 1986, as amended.

“*Commission*” means the Securities and Exchange Commission.

“*Commission Comments*” means written comments pertaining solely to Rule 415 which are received by the Company from the Commission, and a copy of which shall have been provided by the Company to the Purchasers, to a filed Registration Statement which require the Company to limit the amount of Warrant Shares which may be included therein to a number of Warrant Shares, which is less than such amount sought to be included thereon as filed with the Commission.

“*Common Stock*” means the common stock, par value \$0.0001 per share, of the Company, and also includes any other class of securities into which the Common Stock may hereafter be reclassified or changed into.

“*Common Stock Equivalents*” means any securities of the Company or any Subsidiary which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock or other securities that entitle the holder to receive, directly or indirectly, Common Stock.

Company” has the meaning set forth in the Preamble.

Company Counsel” means Troutman Pepper Hamilton Sanders LLP, with offices located at 600 Peachtree Street, N.E., Suite 3000, Atlanta, Georgia 30308.

Company Deliverables” has the meaning set forth in [Section 2.2\(a\)](#).

Company’s Knowledge” means with respect to any statement made to the Company’s Knowledge, that the statement is based upon the actual knowledge of the executive officers of the Company having responsibility for the matter or matters that are the subject of the statement, after a reasonable inquiry.

Control” (including the terms “controlling”, “controlled by” or “under common control with”) means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

Disclosure Materials” has the meaning set forth in [Section 3.1\(h\)](#).

Disclosure Schedules” has the meaning set forth in [Section 3.1](#).

Effective Date” means the date on which a Registration Statement, as required by [Section 6.1](#) hereof, is first declared effective by the Commission (but in no event earlier than May 10, 2023).

Effectiveness Period” has the meaning set forth in [Section 6.1\(b\)](#).

Environmental Laws” has the meaning set forth in [Section 3.1\(dd\)](#).

Evaluation Date” has the meaning set forth in [Section 3.1\(t\)](#).

Exchange Act” means the Securities Exchange Act of 1934, as amended, or any successor statute, and the rules and regulations promulgated thereunder.

Filing Date” means the date that is thirty (30) days after the Closing Date or, if such date is not a Business Day, the next date that is a Business Day.

GAAP” means U.S. generally accepted accounting principles, as applied by the Company.

Intellectual Property Rights” has the meaning set forth in [Section 3.1\(p\)](#).

“*Irrevocable Transfer Agent Instructions*” means, with respect to the Company, the Irrevocable Transfer Agent Instructions, in the form of [Exhibit E](#), executed by the Company and delivered to and acknowledged in writing by the Transfer Agent.

“*IRS*” means the Internal Revenue Service.

“*Legend Removal Date*” has the meaning set forth in [Section 4.1\(c\)](#).

“*Lien*” means any lien, charge, claim, encumbrance, security interest, right of first refusal, preemptive right or other restrictions of any kind.

“*Lock-Up Agreement*” has the meaning set forth in [Section 2.2\(a\)\(viii\)](#).

“*Losses*” has the meaning set forth in [Section 6.5\(a\)](#).

“*Material Adverse Effect*” means a material adverse effect on the results of operations, assets, prospects, management, business or financial condition of the Company and the Subsidiaries, taken as a whole, except that any of the following, either alone or in combination, shall not be deemed a Material Adverse Effect: (i) effects caused by changes or circumstances affecting general market conditions in the U.S. economy or which are generally applicable to the industry in which the Company operates, provided that such effects are not borne disproportionately by the Company, (ii) effects resulting from or relating to the announcement or disclosure of the sale of the Securities or other transactions contemplated by this Agreement, or (iii) effects caused by any event, occurrence or condition resulting from or relating to the taking of any action in accordance with this Agreement.

“*Material Contract*” means any contract of the Company that has been filed or was required to have been filed as an exhibit to the SEC Reports pursuant to Item 601(b)(4) or Item 601(b)(10) of Regulation S-K.

“*Material Permits*” has the meaning set forth in [Section 3.1\(n\)](#).

“*New York Courts*” means the state and federal courts sitting in the City of New York, Borough of Manhattan, New York.

“*OFAC*” has the meaning set forth in [Section 3.1\(j\)](#).

“*Outside Date*” means the tenth day following the date of this Agreement.

“*Person*” means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

“*Preferred Stock*” means up to [•] shares of the Company’s Series A Preferred Stock, par value \$0.01 per share, issued hereunder and having the rights, preferences and privileges set forth in the Certificate of Designation, in the form of [Exhibit A](#) hereto.

“*Press Release*” has the meaning set forth in [Section 4.4](#).

“*Principal Trading Market*” means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the date of this Agreement and the Closing Date, shall be the NASDAQ Global Select Market.

“*Proceeding*” means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“*Prospectus*” means the prospectus included in the Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A, as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Warrant Shares covered by the Registration Statement, and all other amendments and supplements to the Prospectus including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus).

“*Purchase Price*” means \$970 per share of Preferred Stock.

“*Purchaser*” or “*Purchasers*” has the meaning set forth in the Recitals.

“*Purchaser Deliverables*” has the meaning set forth in [Section 2.2\(b\)](#).

“*Purchaser Party*” has the meaning set forth in [Section 6.5\(a\)](#).

“*Registration Statement*” means each registration statement required to be filed under Article VI, including (in each case) the Prospectus, amendments and supplements to such registration statement or Prospectus, including pre- and post-effective amendments, all exhibits thereto, and all material incorporated by reference or deemed to be incorporated by reference in such registration statement.

“*Required Approvals*” has the meaning set forth in [Section 3.1\(e\)](#).

“*Required Effectiveness Date*” means the date which is, (i) if there is no review of the Registration Statement by the Commission, one hundred and twenty (120) days after the Closing Date or, if such date is not a Business Day, the next date that is a Business Day, or, (ii) if there is a review of the Registration Statement by the Commission, one hundred and fifty (150) days after the date of the Closing Date or, if such date is not a Business Day, the next date that is a Business Day.

“*Rule 144*” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

“Sanctioned Country” has the meaning set forth in [Section 3.1\(jj\)](#).

“Sanctions” has the meaning set forth in [Section 3.1\(jj\)](#).

“SEC Reports” has the meaning set forth in [Section 3.1\(h\)](#).

“Secretary’s Certificate” has the meaning set forth in [Section 2.2\(a\)\(vi\)](#).

“Securities” means, collectively, the Preferred Stock, the Warrants and the Warrant Shares (and, to the extent applicable, any Preferred Stock, Warrants and Warrant Shares issued in connection with the Additional Securities Option).

“Securities Act” has the meaning set forth in the Recitals.

“Short Sales” include, without limitation, (i) all “short sales” as defined in Rule 200 promulgated under Regulation SHO under the Exchange Act, whether or not against the box, and all types of direct and indirect stock pledges, forward sale contracts, options, puts, calls, short sales, swaps, “put equivalent positions” (as defined in Rule 16a-1(h) under the Exchange Act) and similar arrangements (including on a total return basis), and (ii) sales and other transactions through non-U.S. broker dealers or foreign regulated brokers (but shall not be deemed to include the location and/or reservation of borrowable shares of Common Stock).

“Subscription Amount” means, with respect to each Purchaser, the aggregate amount to be paid for the Preferred Stock and Warrants purchased hereunder as indicated on such Purchaser’s signature page to this Agreement next to the heading “Aggregate Purchase Price (Subscription Amount)” in United States dollars and in immediately available funds.

“Subsidiary” means the subsidiaries of the Company as set forth on [Schedule 3.1\(a\)](#).

“Trading Day” means (i) a day on which the Common Stock is listed or quoted and traded on its Principal Trading Market (other than the OTC Bulletin Board), or (ii) if the Common Stock is not listed on a Trading Market (other than the OTC Bulletin Board), a day on which the Common Stock is traded in the over-the-counter market, as reported by the OTC Bulletin Board; *provided*, that in the event that the Common Stock is not listed or quoted as set forth in (i) and (ii) hereof, then Trading Day shall mean a Business Day.

“Trading Market” means whichever of the New York Stock Exchange, the NYSE Amex, the NASDAQ Global Select Market, the NASDAQ Global Market, the NASDAQ Capital Market or the OTC Bulletin Board on which the Common Stock is listed or quoted for trading on the date in question.

“Transaction Documents” means this Agreement, the schedules and exhibits attached hereto, the Warrant Agent Agreement, the Warrants, the Irrevocable Transfer Agent Instructions and any other documents or agreements explicitly contemplated hereunder.

“Transfer Agent” means American Stock Transfer & Trust Company, LLC, the current transfer agent of the Company, with a mailing address of 59 Maiden Lane, New York, New York 10007 and a facsimile number of (718) 236-2641 or any successor transfer agent for the Company.

“*Treasury Regulation*” means the regulations promulgated pursuant to the Code.

“*VWAP*” means, as of any date of determination, the average per share volume-weighted average price as displayed under the heading “Bloomberg VWAP” on Bloomberg page “RBBN US<equity>VAP” (or its equivalent successor if such Bloomberg page is not available) in respect of the period from the open of trading on the relevant Trading Day until the close of trading on such Trading Day (or if such volume-weighted average price is unavailable, the market value of one share of Common Stock on such Trading Day reasonably determined, using a volume-weighted average method, by an independent financial expert appointed (and compensated by the Company) for such purpose). The VWAP will be determined without regard to after-hours trading or any other trading outside of the regular trading session trading hours.

“*Warrants*” means, collectively, the warrants to purchase shares of Common Stock, delivered to the Purchasers at Closing in accordance with Section 2.2(a) hereof, which Warrants shall be exercisable immediately and shall expire on 5:00 p.m. on the date four (4) years thereafter, in the form of Exhibit B.

“*Warrant Agent Agreement*” means the Warrant Agreement, dated as of the Closing Date, by and between the Company and American Stock Transfer & Trust Company, LLC.

“*Warrant Shares*” means the shares of Common Stock issuable upon exercise of the Warrants.

“*Warrant Strike Price*” means an amount equal to 115% of the lower of (i) the closing price of the Common Stock on the date hereof and (ii) the two day VWAP of March 27, 2023 and March 28, 2023.

ARTICLE II.
PURCHASE AND SALE

2.1 Closing.

(a) Amount. Subject to the terms and conditions set forth in this Agreement, at the Closing, the Company shall issue and sell to each Purchaser, and each Purchaser shall, severally and not jointly, purchase from the Company, (i) [●] shares of the Preferred Stock set forth on such Purchaser’s signature page to this Agreement, at the Purchase Price and an aggregate purchase price of \$[●] and (ii) [●] Warrants, as determined pursuant to Section 2.2(a), (iii) and set forth on such Purchaser’s signature page to this Agreement.

(b) Closing. The Closing of the purchase and sale of the Preferred Stock and Warrants shall take place at the offices of Troutman Pepper Hamilton Sanders LLP on the Closing Date or at such other locations or remotely by facsimile transmission or other electronic means as the parties may mutually agree.

(c) Additional Securities Option. In addition, on the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company hereby grants an option to B. Riley Securities, Inc. to arrange for the purchase of all or any part of an additional aggregate purchase price of \$[●] million of the Preferred Stock and Warrants (the "*Additional Securities Option*"). The *Additional Securities Option* may be exercised in whole or in part from time to time upon notice by B. Riley Securities, Inc. to the Company delivered at or prior to 30 days following the Closing setting forth the aggregate purchase price of the Preferred Stock and Warrants as to which B. Riley Securities, Inc. is exercising the *Additional Securities Option*. Payment for and delivery of the Preferred Stock and Warrants as to which B. Riley Securities, Inc. is exercising the *Additional Securities Option*, if any, shall occur within 30 days after the Closing. The Purchasers hereby consent to the offer, sale and issuance of the Preferred Stock and the Warrants pursuant to the *Additional Securities Option*.

(d) Form of Payment. On or prior to the Closing Date, (a) the Company shall deliver to each Purchaser its respective Preferred Stock and Warrants, (i) free and clear of all Liens, except restrictions imposed by the Certificate of Designation, applicable securities laws and the provisions of this Agreement, and (ii) evidence of the issuance of the Preferred Stock and the Warrants, credited to book-entry accounts maintained by the transfer agent of the Company with respect to the Preferred Stock and Warrants, and such other documents, certificates and agreements as required pursuant to the terms of this Agreement; and (b) each Purchaser shall pay its respective Subscription Amount for the shares of Preferred Stock and the Warrants to be issued and sold to such Purchaser at the Closing, by wire transfer of immediately available funds in accordance with the Company's written wire instructions.

2.2 Closing Deliveries. (a) On or prior to the Closing (or at such other time as may be specifically referred to below), the Company shall issue, deliver or cause to be delivered to each Purchaser the following (the "*Company Deliverables*"):

- (i) this Agreement, duly executed by the Company;
- (ii) one or more certificates (or reasonable evidence of issuance by book entry) evidencing a number of shares of Preferred Stock set forth on such Purchaser's signature page to this Agreement, registered in the name of such Purchaser, and evidence of the filing and acceptance of the Certificate of Designation by the Secretary of State of the State of Delaware;
- (iii) a Warrant, duly executed by the Company, registered in the name of such Purchaser to purchase up to a number of shares of Common Stock equal to such Purchaser's Subscription Amount, divided by the Warrant Strike Price, multiplied by 33.3%, and rounded to the nearest whole Warrant, subject to adjustment;
- (iv) a legal opinion of Company Counsel, dated as of the Closing Date and in the form attached hereto as Exhibit D, executed by such counsel and addressed to the Purchasers and B. Riley Securities, Inc.;
- (v) duly executed Irrevocable Transfer Agent Instructions acknowledged in writing by the Transfer Agent;

(vi) a certificate of the Secretary of the Company (the "*Secretary's Certificate*"), dated as of the Closing Date, (a) certifying the resolutions adopted by the Board of Directors of the Company or a duly authorized committee thereof approving the transactions contemplated by this Agreement and the other Transaction Documents and the issuance of the Preferred Stock, the Warrants and the Warrant Shares, (b) certifying the current versions of the Restated Certificate of Incorporation and the By-Laws of the Company and the Subsidiaries (or the organizational equivalents of such documents in the case of the Subsidiaries), (c) certifying as to the good standing (or jurisdictional equivalent) of the Company and the Subsidiaries under the laws of their respective jurisdictions and each state in which the Company and each Subsidiary is authorized as a foreign corporation or organization to conduct business and their qualification to conduct business in the State of Delaware and each such other state in which the Company and each Subsidiary is authorized as a foreign corporation or organization to conduct business; and (d) certifying as to the signatures and authority of persons signing the Transaction Documents and related documents on behalf of the Company, in the form attached hereto as Exhibit F;

(vii) the Compliance Certificate referred to in Section 5.1(i);

(viii) a Lock-Up Agreement, substantially in the form of Exhibit I hereto (the "*Lock-Up Agreement*") executed by each person listed on Exhibit I hereto, and each such Lock-Up Agreement shall be in full force and effect on the Closing Date;

(ix) a certificate evidencing the formation and good standing of the Company issued by the Secretary of State of Delaware, as of a date within three (3) Business Days of the Closing Date;

(x) the Warrant Agent Agreement, duly executed by the Company and American Stock Transfer & Trust Company, LLC; and

(xi) such other documents relating to the transactions contemplated by this Agreement as the Purchasers or their counsel may reasonably request, including, upon request: (i) a duly completed and executed Internal Revenue Service Form W-9 or W-8BenE and (ii) the names and contact information for two authorized persons at the Company, in each case, to be delivered to any requesting Purchaser, not less than two (2) Business Days prior to the Closing Date.

(b) On or prior to the Closing, each Purchaser shall deliver or cause to be delivered to the Company the following (the "*Purchaser Deliverables*"):

(i) this Agreement, duly executed by such Purchaser;

(ii) its Subscription Amount, in United States dollars and in immediately available funds, in the amount set forth as the "Purchase Price" indicated below such Purchaser's name on the applicable signature page hereto under the heading "Aggregate Purchase Price (Subscription Amount)" by wire transfer; and

(iii) a fully completed and duly executed Accredited Investor Questionnaire, satisfactory to the Company, and DRS Book-Entry Questionnaire, if applicable, in forms substantially similar to the forms attached hereto as Exhibits C-1 and C-2, respectively.

ARTICLE III.
REPRESENTATIONS AND WARRANTIES

3.1 Representations and Warranties of the Company. Except as set forth in the schedules delivered herewith (the "*Disclosure Schedules*"), which Disclosure Schedules shall be deemed a part hereof and shall qualify any representation made herein to the extent of the disclosure contained in the corresponding section of the Disclosure Schedules or other representations relating to the subject matter of such disclosure, the Company hereby represents and warrants as of the date hereof and the Closing Date (except for the representations and warranties that speak as of a specific date, which shall be made as of such date), to each of the Purchasers:

(a) Subsidiaries. The Company has no direct or indirect subsidiaries other than those disclosed in the SEC Reports. The Company owns, directly or indirectly, all of the capital stock or comparable equity interests of each Subsidiary free and clear of any and all Liens, and all the issued and outstanding shares of capital stock or comparable equity interest of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities.

(b) Organization and Qualification. The Company and each of its Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization (as applicable), with the requisite corporate power and authority to own or lease and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation or default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. The Company and each of its Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not have or reasonably be expected to result in a Material Adverse Effect, and no Proceeding has been instituted, is pending, or, to the Company's Knowledge, has been threatened in writing in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(c) Authorization, Enforcement, Validity. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by each of the Transaction Documents to which it is a party and otherwise to carry out its obligations hereunder and thereunder. The Company's execution and delivery of each of the Transaction Documents to which it is a party and the consummation by it of the transactions contemplated hereby and thereby (including, but not limited to, the sale and delivery of the Securities) have been duly authorized by all necessary corporate action on the part of the Company, and no further corporate action is required by the Company, its Board of Directors or its stockholders in connection therewith other than in connection with the Required Approvals. Each of the Transaction Documents to which it is a party has been (or upon delivery will have been) duly executed by the Company and is, or when delivered in accordance with the terms hereof, will constitute the legal, valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally the enforcement of, creditors' rights and remedies or by other equitable principles of general application, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(d) No Conflicts. The execution, delivery and performance by the Company of the Transaction Documents to which it is a party and the consummation by the Company of the transactions contemplated hereby or thereby (including, without limitation, the issuance of the Securities) do not and will not (i) conflict with or violate any provisions of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or otherwise result in a violation of the organizational documents of the Company, (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would result in a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any Material Contract, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations and the rules and regulations, assuming the correctness of the representations and warranties made by the Purchasers herein and the information disclosed in the Accredited Investor Questionnaires provided by the Purchasers, of any self-regulatory organization to which the Company or its securities are subject, including all applicable Trading Markets), or by which any property or asset of the Company or a Subsidiary is bound or affected, except in the case of clauses (ii) and (iii) such as would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect.

(e) Filings, Consents and Approvals. Neither the Company nor any of its Subsidiaries is required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents (including the issuance of the Securities), other than (i) the filing with the Commission of one or more Registration Statements in accordance with the requirements hereunder, (ii) filings required by applicable state securities laws, (iii) the filing of a Form D pursuant to Regulation D under the 1933 Act, (iv) the filing of any requisite notices and/or application(s) to the Principal Trading Market for the issuance and sale of the Securities and the listing of the Warrant Shares for trading or quotation, as the case may be, thereon in the time and manner required thereby, (v) the filings required in accordance with Section 4.4 of this Agreement, (vi) the filing and the acceptance of the Certificate of Designation with and by the Secretary of State of the State of Delaware, and (vii) those that have been made or obtained prior to the date of this Agreement (collectively, the "Required Approvals").

(f) Issuance of the Securities. The Securities have been duly authorized and, when issued and paid for in accordance with the terms of the Transaction Documents, will be duly and validly issued, fully paid and nonassessable and free and clear of all Liens, other than restrictions on transfer provided for in the Transaction Documents or imposed by applicable securities laws and Liens created by or imposed by a Purchaser, and shall not be subject to preemptive or similar rights, except for any such preemptive or contractual rights that have been effectively waived or satisfied. Assuming the accuracy of the representations and warranties of the Purchasers in this Agreement and the information disclosed in the Accredited Investor Questionnaires provided by the Purchasers, the Securities will be issued in compliance with all applicable federal and state securities laws. The Company has reserved from its duly authorized capital stock the maximum aggregate number of shares of Common Stock issuable upon exercise in full of all Warrants.

(g) Capitalization. The number of shares and type of all authorized, issued and outstanding capital stock, options and other securities of the Company (whether or not presently convertible into or exercisable or exchangeable for shares of capital stock of the Company) as of December 31, 2022 is set forth in Schedule 3.1(g) hereto. Except as set forth on Schedule 3.1(g) hereto, no Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents that have not been effectively waived as of the date of this Agreement. Except as set forth on Schedule 3.1(g) or a result of the purchase and sale of the Securities, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire any shares of Common Stock, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents. The issuance and sale of the Securities will not obligate the Company to issue shares of Common Stock or other securities to any Person (other than the Purchasers) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. All of the outstanding shares of capital stock of the Company are validly issued, fully paid and nonassessable, have been issued in compliance with all applicable federal and state securities laws in all material respects, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities which violation would have or would reasonably be expected to result in a Material Adverse Effect. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Securities. Except as set forth on Schedule 3.1(g), there are no stockholders agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the Company's Knowledge, between or among any of the Company's stockholders.

(h) SEC Reports; Disclosure Materials. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by it under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the "SEC Reports", and the SEC Reports, together with the Disclosure Schedules, being collectively referred to as the "Disclosure Materials") on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective filing dates, or to the extent corrected by a subsequent restatement, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act and the rules and regulations of the Commission promulgated thereunder, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company has never been an issuer subject to Rule 144(i) under the Securities Act. Each of the Material Contracts to which the Company or any Subsidiary is a party or to which the property or assets of the Company or any of its Subsidiaries are subject has been filed (or incorporated by reference) as an exhibit to the SEC Reports.

(i) Financial Statements. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing (or to the extent corrected by a subsequent restatement). Such financial statements have been prepared in accordance with GAAP applied on a consistent basis during the periods involved, except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated subsidiaries taken as a whole as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial year-end audit adjustments.

(j) Material Changes. Since the date of the latest audited financial statements included within the SEC Reports, except as specifically disclosed in a subsequent SEC Report filed prior to the date hereof, (i) there have been no events, occurrences or developments that have had or would reasonably be expected to have, either individually or in the aggregate, a Material Adverse Effect, (ii) the Company has not incurred any material liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or required to be disclosed in filings made with the Commission, (iii) the Company has not altered materially its method of accounting or the manner in which it keeps its accounting books and records, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock (other than in connection with repurchases of unvested stock issued to employees of the Company), and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except Common Stock issued pursuant to existing Company stock option or stock purchase plans or executive and director compensation arrangements disclosed in the SEC Reports. Except for the issuance of the Securities contemplated by this Agreement, no event, liability or development has occurred or exists with respect to the Company or its Subsidiaries or their respective business, properties, operations or financial condition, that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made that has not been publicly disclosed at least one (1) Trading Day prior to the date that this representation is made.

(k) Litigation. There is no Action which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) except as disclosed in the SEC Reports, would, if there were an unfavorable decision, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect. There has not been, and to the Company's Knowledge there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any of its Subsidiaries under the Exchange Act or the Securities Act.

(l) Employment Matters. No material labor dispute exists or, to the Company's Knowledge, is imminent with respect to any of the employees of the Company which would have or would reasonably be expected to result in a Material Adverse Effect. Except as disclosed in the SEC Reports, none of the Company's or any Subsidiary's employees is a member of a labor union that relates to such employee's relationship with the Company, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and each Subsidiary believes that its relationship with its employees is good. No executive officer of the Company (as defined in Rule 501(f) of the Securities Act) has notified the Company or any such Subsidiary that such officer intends to leave the Company or any such Subsidiary or otherwise terminate such officer's employment with the Company or any such Subsidiary. To the Company's Knowledge, no executive officer is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of a third party, and to the Company's Knowledge, the continued employment of each such executive officer does not subject the Company or any Subsidiary to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect.

(m) Compliance. Neither the Company nor any of its Subsidiaries (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any of its Subsidiaries under), nor has the Company or any of its Subsidiaries received written notice of a claim that it is in default under or that it is in violation of, any Material Contract (whether or not such default or violation has been waived), (ii) is in violation of any order of any court, arbitrator or governmental body having jurisdiction over the Company or its properties or assets, or (iii) is in violation of, or in receipt of written notice that it is in violation of, any statute, rule or regulation of any governmental authority applicable to the Company, except in each case as would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect.

(n) Regulatory Permits. The Company and each of its Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct its respective business as currently conducted and as described in the SEC Reports, except where the failure to possess such permits, individually or in the aggregate, has not and would not have or reasonably be expected to result in a Material Adverse Effect ("*Material Permits*"), and neither the Company nor any of its Subsidiaries has received any notice of Proceedings relating to the revocation or modification of any such Material Permits.

(o) Title to Assets. The Company and its Subsidiaries do not own any real property. Except as disclosed in the SEC Reports, the Company and its Subsidiaries have good and marketable title to all tangible personal property owned by them that is material to the business of the Company and its Subsidiaries, taken as whole, in each case free and clear of all Liens except such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and any of its Subsidiaries. Any real property and facilities held under lease by the Company and any of its Subsidiaries are held by them under valid, subsisting and enforceable leases with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company and its Subsidiaries.

(p) Patents and Trademarks. To the Company's knowledge, the Company and the Subsidiaries own, possess, license or have other rights to use, all patents, patent applications, trade and service marks, trade and service mark applications and registrations, trade names, trade secrets, inventions, copyrights, licenses, technology, know-how and other intellectual property rights and similar rights described in the SEC Reports necessary or material for use in connection with their respective businesses and which the failure to so have would have or reasonably be expected to result in a Material Adverse Effect (collectively, the "*Intellectual Property Rights*"). To the Company's knowledge, none of the Intellectual Property Rights used by the Company or any Subsidiary violates or infringes upon the rights of any Person, except as would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect. There is no pending or, to the Company's Knowledge, threatened Action by any Person that the Company's business as now conducted infringes or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of another, except in each case as would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect. To the Company's Knowledge, there is no existing infringement by another Person of any of the Company's Intellectual Property Rights. The Company and its Subsidiaries have taken commercially reasonable security measures to protect the secrecy, confidentiality and value of all of their Intellectual Property Rights.

(q) Insurance. The Company and each of the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Company believes to be prudent and customary in the businesses and locations in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage. Neither the Company nor any of its Subsidiaries has received any notice of cancellation of any such insurance, nor, to the Company's Knowledge, will it or any Subsidiary be unable to renew their respective existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(r) Transactions With Affiliates and Employees. Except as set forth in the SEC Reports and except as contemplated by the Transaction Documents, none of the officers or directors of the Company and, to the Company's Knowledge, none of the employees of the Company is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), that would be required to be disclosed pursuant to Item 404 of Regulation S-K promulgated under the Securities Act.

(s) Internal Accounting Controls. The Company maintains a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset and liability accountability, (iii) access to assets or incurrence of liabilities is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets and liabilities is compared with the existing assets and liabilities at reasonable intervals and appropriate action is taken with respect to any differences.

(t) Sarbanes-Oxley: Disclosure Controls. The Company is in compliance in all material respects with all of the provisions of the Sarbanes-Oxley Act of 2002 which are applicable to it as of the Closing Date. The Company has established disclosure controls and procedures (as such term is defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act) for the Company and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by the Company's most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the Company's internal control over financial reporting (as such term is defined in the Exchange Act) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(u) Certain Fees. No Person will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon the Company or a Purchaser for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Company, other than B. Riley Securities, Inc. and JMP Securities LLC with respect to the offer and sale of the Securities (which fees are being paid by the Company). The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this paragraph (u) that may be due in connection with the transactions contemplated by the Transaction Documents. The Company shall indemnify, pay, and hold each Purchaser harmless against, any liability, loss or expense (including, without limitation, attorneys' fees and out-of-pocket expenses) arising in connection with any such right, interest or claim.

(v) Private Placement. Assuming the accuracy of the Purchasers' representations and warranties set forth in Section 3.2 of this Agreement and the accuracy of the information disclosed in the Accredited Investor Questionnaires provided by the Purchasers, no registration under the Securities Act is required for the offer and sale of the Securities by the Company to the Purchasers under the Transaction Documents. The issuance and sale of the Securities hereunder does not contravene the rules and regulations of the Trading Market.

(w) Investment Company. The Company is not, and immediately after receipt of payment for the Securities, will not be an "investment company," an affiliate of an "investment company," a company controlled by an "investment company" or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

(x) Registration Rights. Other than each of the Purchasers or as set forth in Schedule 3.1(x) hereto, no Person has any right to cause the Company to effect the registration under the Securities Act of any securities of the Company other than those securities which are currently registered on an effective registration statement on file with the Commission.

(y) Listing and Maintenance Requirements. The Company's Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to terminate the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. The Company has not, in the twelve (12) months preceding the date hereof, received written notice from any Trading Market on which the Common Stock is listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is in compliance with all listing and maintenance requirements of the Principal Trading Market on the date hereof.

(z) Application of Takeover Protections, Rights Agreements. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's Restated Certificate of Incorporation or the laws of its state of incorporation that is or could reasonably be expected to become applicable to any of the Purchasers as a result of the Purchasers and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including, without limitation, the Company's issuance of the Securities and the Purchasers' ownership of the Securities.

(aa) Disclosure. The Company confirms that it has not provided, and to the Company's Knowledge, none of its officers or directors nor any other Person acting on its or their behalf has provided, and it has not authorized B. Riley Securities, Inc. to provide, any Purchaser or its respective agents or counsel with any information that it believes constitutes material, non-public information except insofar as the existence, provisions and terms of the Transaction Documents and the proposed transactions hereunder may constitute such information, all of which will be disclosed by the Company in the Press Release as contemplated by Section 4.4 hereof. The Company understands and confirms that the Purchasers will rely on the foregoing representations in effecting transactions in securities of the Company.

(bb) No Integrated Offering. None of the Company, its Subsidiaries nor, to the Company's Knowledge, any of its Affiliates or any Person acting on its behalf has, directly or indirectly, at any time within the past six (6) months, made any offers or sales of any Company security or solicited any offers to buy any security under circumstances that would (i) eliminate the availability of the exemption from registration under the Securities Act in connection with the offer and sale by the Company of the Securities as contemplated hereby or (ii) cause the offering of the Securities pursuant to the Transaction Documents to be integrated with prior offerings by the Company for purposes of any applicable law, regulation or stockholder approval provisions, including, without limitation, under the rules and regulations of any Trading Market on which any of the securities of the Company are listed or designated.

(cc) Tax Matters. The Company and each of its Subsidiaries (i) has accurately and timely prepared and filed (or requested valid extensions thereof) all foreign, federal and state income and all other material tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, except those being contested in good faith, with respect to which adequate reserves have been set aside on the books of the Company and (iii) has set aside on its books provisions reasonably adequate for the payment of all taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the Company or any of its Subsidiaries by the taxing authority of any jurisdiction. Neither the Company nor any of its Subsidiaries has engaged in, or advised on, a reportable or listed transaction within the meaning of Section 6011 of the United States Internal Revenue Code of 1986, as amended, and the regulations issued thereunder (or otherwise participated in, or advised on, any transaction that required disclosure to a taxing authority to reduce or eliminate tax, interest or penalties.

(dd) Environmental Matters. To the Company's Knowledge, neither the Company nor any of its Subsidiaries (i) is in violation of any statute, rule, regulation, decision or order of any governmental agency or body or any court, domestic or foreign, relating to the use, disposal or release of hazardous or toxic substances or relating to the protection or restoration of the environment or human exposure to hazardous or toxic substances (collectively, "Environmental Laws"), (ii) owns or operates any real property contaminated with any substance that is in violation of any Environmental Laws, (iii) is liable for any off-site disposal or contamination pursuant to any Environmental Laws, or (iv) is subject to any claim relating to any Environmental Laws; which violation, contamination, liability or claim has had or would have, individually or in the aggregate, a Material Adverse Effect; and there is no pending investigation or, to the Company's Knowledge, investigation threatened in writing that might lead to such a claim.

(ee) No General Solicitation. Neither the Company nor, to the Company's Knowledge, any person acting on behalf of the Company has offered or sold any of Securities by any form of general solicitation or general advertising.

(ff) Foreign Corrupt Practices. Neither the Company, nor to the Company's Knowledge, any agent or other person acting on behalf of the Company, has: (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company (or made by any person acting on its behalf of which the Company is aware) which is in violation of law or (iv) violated in any material respect any provision of the Foreign Corrupt Practices Act of 1977, as amended.

(gg) Off Balance Sheet Arrangements. There is no transaction, arrangement, or other relationship between the Company (or any Subsidiary) and an unconsolidated or other off balance sheet entity that is required to be disclosed by the Company in SEC Reports and is not so disclosed and would have or reasonably be expected to result in a Material Adverse Effect.

(hh) Acknowledgment Regarding Purchasers' Purchase of Securities. The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by any Purchaser or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchasers' purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

(ii) Regulation M Compliance. The Company has not, and to the Company's Knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the securities of the Company or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to B. Riley Securities, Inc. in connection with the placement of the Securities.

(jj) No Conflicts with Sanctions Laws. Neither the Company nor any of its Subsidiaries, directors, officers, or employees, nor, to the Company's Knowledge, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries is currently the subject or the target of any sanctions or trade restrictions administered or enforced by the U.S. government (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), the Bureau of Industry and Security of the U.S. Department of Commerce or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person"), the United Nations Security Council, the European Union, Her Majesty's Treasury or other relevant sanctions authority (collectively, "Sanctions"), nor is the Company, any of its subsidiaries located, organized or resident in a country or geographic region thereof that is the subject or target of comprehensive embargoes with respect thereto (each, a "Sanctioned Country"); and the Company will not directly or indirectly use the proceeds of the sale of the Securities hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person that, at the time of such funding or facilitation, is the subject or target of Sanctions, (ii) to fund or facilitate any activities of or business in any Sanctioned Country or (iii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. For the past five years, the Company and its Subsidiaries have not knowingly engaged in, are not now knowingly engaged in and will not engage in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(kk) Compliance with Anti-Money Laundering Laws. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements, including those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the applicable money laundering statutes of all jurisdictions where the Company or any of its subsidiaries conducts business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any governmental agency (collectively, the "Anti-Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(ll) No Defaults. Neither the Company nor any of its Subsidiaries (a) is in default in the performance, observance or fulfillment of any of the obligations, covenants or conditions contained in any indenture, loan, credit agreement, note, lease, license agreement, contract, franchise or other instrument (including, without limitation, any pledge agreement, security agreement, mortgage or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness) to which the Company or any of its Subsidiaries is a party or by which it or any of them may be bound, or to which any of their respective properties or assets are subject, and (b) no condition exists which, with the giving of notice or the lapse of time or both, could constitute such a default, except, in each case of the foregoing subclauses (a)-(b), where the consequences, direct or indirect, of such default or defaults, if any, could not reasonably be expected to have a Material Adverse Effect.

(mm) Use of Proceeds. The Company shall use the net proceeds from the sale of the Securities hereunder to pay down borrowings under the Credit Agreement (as defined below) and for general corporate purposes.

3.2 Representations and Warranties of the Purchasers. Each Purchaser hereby, for itself and for no other Purchaser, represents and warrants as of the date hereof and as of the Closing Date to the Company as follows:

(a) Organization; Authority. Such Purchaser is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization with the requisite corporate, partnership, limited liability company or similar power and authority to enter into and to consummate the transactions contemplated by the applicable Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement by such Purchaser and performance by such Purchaser of the transactions contemplated by this Agreement have been duly authorized by all necessary corporate or, if such Purchaser is not a corporation, such partnership, limited liability company or other applicable like action, on the part of such Purchaser. Each Transaction Document to which it is a party has been duly executed by such Purchaser, and when delivered by such Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Purchaser, enforceable against it in accordance with its terms, except as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally the enforcement of, creditors' rights and remedies or by other equitable principles of general application.

(b) No Conflicts. The execution, delivery and performance by such Purchaser of this Agreement and the consummation by such Purchaser of the transactions contemplated hereby and thereby will not (i) result in a violation of the organizational documents of such Purchaser, (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, indenture or instrument to which such Purchaser is a party, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws) applicable to such Purchaser, except in the case of clauses (ii) and (iii) above, for such conflicts, defaults, rights or violations which would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the ability of such Purchaser to perform its obligations hereunder.

(c) Investment Intent. Such Purchaser understands that the Securities are "restricted securities" and have not been registered under the Securities Act or any applicable state securities law and is acquiring the Securities as principal for its own account and not with a view to, or for distributing or reselling such Securities or any part thereof in violation of the Securities Act or any applicable state securities laws, *provided, however*, that by making the representations herein, such Purchaser reserves the right, subject to the provisions of this Agreement, to sell or otherwise dispose of all or any part of such Securities pursuant to an effective registration statement under the Securities Act or under an exemption from such registration and in compliance with applicable federal and state securities laws. Such Purchaser is acquiring the Securities hereunder in the ordinary course of its business. Such Purchaser does not presently have any agreement, plan or understanding, directly or indirectly, with any Person to distribute or effect any distribution of any of the Securities (or any securities which are derivatives thereof) to or through any person or entity; such Purchaser is not a registered broker-dealer under Section 15 of the Exchange Act or an entity engaged in a business that would require it to be so registered as a broker-dealer.

(d) Purchaser Status. At the time such Purchaser was offered the Securities, it was, and at the date hereof it is, and on each date on which it exercises any Warrants and receives Warrant Shares, it will be either: a “qualified institutional buyer” or an “accredited investor” as such terms are defined under the Securities Act.

(e) General Solicitation. Such Purchaser is not purchasing the Securities as a result of any advertisement, article, notice or other communication regarding the Securities published in any newspaper, magazine or similar media or broadcast over television or radio or presented at any seminar or any other general advertisement.

(f) Experience of Such Purchaser. Such Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

(g) Access to Information. Such Purchaser acknowledges that it has had the opportunity to review the Disclosure Materials and has been afforded (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to information about the Company and the Subsidiaries and their respective financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment. Neither such inquiries nor any other investigation conducted by or on behalf of such Purchaser or its representatives or counsel shall modify, amend or affect such Purchaser’s right to rely on the truth, accuracy and completeness of the Disclosure Materials and the Company’s representations and warranties contained in the Transaction Documents. Such Purchaser has sought such accounting, legal and tax advice as it has considered necessary to make an informed decision with respect to its acquisition of the Securities.

(h) Certain Trading Activities and Confidentiality. Other than consummating the transactions contemplated hereunder, such Purchaser has not, nor has any Person acting on behalf of or pursuant to any understanding with such Purchaser, directly or indirectly executed any purchases or sales, including Short Sales, of the securities of the Company during the period commencing as of the time that such Purchaser first received a term sheet (written or oral) from the Company or any other Person representing the Company setting forth the material terms of the transactions contemplated hereunder and ending immediately prior to the execution hereof. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser’s assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser’s assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement. Other than to other Persons party to this Agreement or to such Purchaser’s representatives, including, without limitation, its officers, directors, partners, legal and other advisors, employees, agents and Affiliates, such Purchaser has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

(i) Brokers and Finders. No Person will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon the Company or any Purchaser for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Purchaser.

(j) Independent Investment Decision. Such Purchaser has independently evaluated the merits of its decision to purchase Securities pursuant to the Transaction Documents, and such Purchaser confirms that it has not relied on the advice of any other Purchaser's business and/or legal counsel in making such decision. Such Purchaser understands that nothing in this Agreement or any other materials presented by or on behalf of the Company to the Purchaser in connection with the purchase of the Securities constitutes legal, tax or investment advice. Such Purchaser has consulted such legal, tax and investment advisors as it, in its sole discretion, has deemed necessary or appropriate in connection with its purchase of the Securities. Such Purchaser understands that B. Riley Securities, Inc. has acted solely as the agent of the Company in this placement of the Securities and such Purchaser has not relied on any statements or other information provided by B. Riley Securities, Inc. or any of its agents, counsel or Affiliates in making its investment decision hereunder, and confirms that none of such Persons has made any representations or warranties to such Purchaser in connection with the transactions contemplated by the Transaction Documents.

(k) Reliance on Exemptions. Such Purchaser understands that the Securities being offered and sold to it in reliance on specific exemptions from the registration requirements of United States federal and state securities laws and that the Company is relying in part upon the truth and accuracy of, and such Purchaser's compliance with, the representations, warranties, agreements, acknowledgements and understandings of such Purchaser set forth herein in order to determine the availability of such exemptions and the eligibility of such Purchaser to acquire the Securities.

(l) No Governmental Review. Such Purchaser understands that no United States federal or state agency or any other government or governmental agency has passed on or made any recommendation or endorsement of the Securities or the fairness or suitability of the investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

(m) Regulation M. Such Purchaser is aware that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of Common Stock and other activities with respect to the Common Stock by the Purchasers.

(n) Residency. Such Purchaser's residence (if an individual) or offices in which its investment decision with respect to the Securities was made (if an entity) are located at the address immediately below such Purchaser's name on its signature page hereto.

The Company and each of the Purchasers acknowledge and agree that no party to this Agreement has made or makes any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in this Article III and the Transaction Documents.

ARTICLE IV.
OTHER AGREEMENTS OF THE PARTIES

4.1 Transfer Restrictions.

(a) Compliance with Laws. Notwithstanding any other provision of this Article IV, each Purchaser covenants that the Securities may be disposed of only pursuant to an effective registration statement under, and in compliance with the requirements of, the Securities Act, or pursuant to an available exemption from, or in a transaction not subject to, the registration requirements of the Securities Act, and in compliance with any applicable state and federal securities laws. In connection with any transfer of the Securities other than (i) pursuant to an effective registration statement, (ii) to the Company, (iii) pursuant to Rule 144 (*provided* that the Purchaser provides the Company with reasonable assurances (in the form of seller and, if applicable, broker representation letters) that the securities may be sold pursuant to such rule) or (iv) in connection with a bona fide pledge as contemplated in Section 4.1(b), the Company may require the transferor thereof to provide to the Company an opinion of counsel selected by the transferor and reasonably acceptable to the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Securities under the Securities Act. As a condition of transfer, any such transferee shall agree in writing to be bound by the terms of this Agreement and shall have the rights of a Purchaser under this Agreement with respect to such transferred Securities.

(b) Legends. The Purchasers understand that, unless provided otherwise in this Agreement, the Securities, whether certificated or uncertificated, will be endorsed with a restrictive legend in substantially the following form, until such time as they are not required under Section 4.1(c):

THESE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED (I) IN THE ABSENCE OF (A) AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OR (B) AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS OR BLUE SKY LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY AND ITS TRANSFER AGENT OR (II) UNLESS SOLD PURSUANT TO RULE 144 UNDER THE SECURITIES ACT. NOTWITHSTANDING THE FOREGOING, THE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY THE SECURITIES.

The Company acknowledges and agrees that a Purchaser may from time to time pledge, and/or grant a security interest in, some or all of the legended Securities in connection with applicable securities laws, pursuant to a bona fide margin agreement in compliance with a bona fide margin loan. Such a pledge would not be subject to approval or consent of the Company and no legal opinion of legal counsel to the pledgee, secured party or pledgor shall be required in connection with the pledge, but such legal opinion shall be required in connection with a subsequent transfer or foreclosure following default by the Purchaser transferee of the pledge. No notice shall be required of such pledge, but Purchaser's transferee shall promptly notify the Company of any such subsequent transfer or foreclosure. Each Purchaser acknowledges that the Company shall not be responsible for any pledges relating to, or the grant of any security interest in, any of the Securities or for any agreement, understanding or arrangement between any Purchaser and its pledgee or secured party. At the appropriate Purchaser's expense, the Company will execute and deliver such reasonable documentation as a pledgee or secured party of Securities may reasonably request in connection with a pledge or transfer of the Securities, including the preparation and filing of any required prospectus supplement under Rule 424(b)(3) of the Securities Act or other applicable provision of the Securities Act to appropriately amend the list of Selling Stockholders thereunder. Each Purchaser acknowledges and agrees that, except as otherwise provided in [Section 4.1\(c\)](#), any Securities subject to a pledge or security interest as contemplated by this [Section 4.1\(b\)](#) shall continue to bear the legend set forth in this [Section 4.1\(b\)](#) and be subject to the restrictions on transfer set forth in [Section 4.1\(a\)](#).

(c) **Removal of Legends.** The legend set forth in [Section 4.1\(b\)](#) above shall be removed if (i) such Securities are registered for resale under the Securities Act (provided that, if the Purchaser is selling pursuant to the effective registration statement registering the Securities for resale, the Purchaser agrees to only sell such Securities during such time that such registration statement is effective and not withdrawn or suspended, and only as permitted by such registration statement), (ii) such Securities are sold or transferred pursuant to Rule 144 (if the transferor is not an Affiliate of the Company), or (iii) such Securities are eligible for resale under Rule 144(b) or any successor provision, without volume or manner-of-sale restrictions. Following the earlier of (i) the Effective Date or (ii) Rule 144 becoming available for the resale of the Securities, without volume or manner-of-sale restrictions, the Company shall cause Company Counsel to issue to the Transfer Agent the legal opinion referred to in the Irrevocable Transfer Agent Instructions. Any fees (with respect to the Transfer Agent, Company Counsel or otherwise) associated with the issuance of such opinion or the removal of such legend shall be borne by the Company. Following the Effective Date, or at such earlier time as a legend is no longer required for the Securities, if requested by a Purchaser, the Company shall request that the Transfer Agent remove any restrictive legends related to such Securities, whether certificated or uncertificated, and issue a new, unlegended stock certificate or make a new, unlegended book entry for such Securities, as the case may be, within three (3) Trading Days of any such request (such third (3rd) Trading Day, the "*Legend Removal Date*"), provided that the Company has timely received from such Purchaser customary representations and other documentation reasonably acceptable to the Company and the Transfer Agent in connection therewith and an opinion of counsel to the extent required by [Section 4.1\(a\)](#). The Company may not make any notation on its records or give instructions to the Transfer Agent that enlarge the restrictions on transfer set forth in this [Section 4.1\(c\)](#).

(d) Irrevocable Transfer Agent Instructions. The Company shall issue irrevocable instructions to its transfer agent, and any subsequent transfer agent, in the form of Exhibit E attached hereto (the “*Irrevocable Transfer Agent Instructions*”). The Company represents and warrants that no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 4.1(d) (or instructions that are consistent therewith) will be given by the Company to its transfer agent regarding the Securities in connection with Section 4.1(c), and that such Securities shall otherwise be freely transferable on the books and records of the Company as and to the extent provided in this Agreement and the other Transaction Documents and applicable law. The Company acknowledges that a breach by it of its obligations under this Section 4.1(d) will cause irreparable harm to a Purchaser. Accordingly, the Company acknowledges that the remedy at law for a breach of its obligations under this Section 4.1(d) will be inadequate and agrees, in the event of a breach or threatened breach by the Company of the provisions of this Section 4.1(d), that a Purchaser shall be entitled, in addition to all other available remedies, to an order and/or injunction restraining any breach and requiring immediate issuance and transfer, without the necessity of showing economic loss and without any bond or other security being required.

(e) Acknowledgement. Each Purchaser hereunder acknowledges its primary responsibilities under the Securities Act and accordingly will not sell or otherwise transfer the Securities or any interest therein without complying with the requirements of the Securities Act. While the Registration Statement remains effective, each Purchaser hereunder may sell the Securities in accordance with the plan of distribution contained in the Registration Statement and if it does so it will comply therewith and with the related prospectus delivery requirements unless an exemption therefrom is available. Each Purchaser, severally and not jointly with the other Purchasers, agrees that if it is notified by the Company in writing at any time that the Registration Statement registering the resale of the Securities is not effective or that the prospectus included in such Registration Statement no longer complies with the requirements of Section 10 of the Securities Act, the Purchaser will refrain from selling such Securities until such time as the Purchaser is notified by the Company that such Registration Statement is effective or such prospectus is compliant with Section 10 of the Securities Act, unless such Purchaser is able to, and does, sell such Securities pursuant to an available exemption from the registration requirements of Section 5 of the Securities Act. Both the Company and its Transfer Agent, and their respective directors, officers, employees and agents, may rely on this Section 4.1(e).

4.2 Furnishing of Information. In order to enable the Purchasers to sell the Securities under Rule 144, the Company shall use its commercially reasonable efforts to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act. If the Company is not required to file reports pursuant to the Exchange Act, it will prepare and furnish to the Purchasers and make publicly available in accordance with Rule 144(c) such information as is required for the Purchasers to sell the Securities under Rule 144.

4.3 Integration. The Company shall not, and shall use its commercially reasonable efforts to ensure that no Affiliate of the Company shall, sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that will be integrated with the offer or sale of the Securities in a manner that would require the registration under the Securities Act of the sale of the Securities to the Purchasers, or that will be integrated with the offer or sale of the Securities for purposes of the rules and regulations of any Trading Market such that it would require stockholder approval prior to the closing of such other transaction unless stockholder approval is obtained before the closing of such subsequent transaction.

4.4 Securities Laws Disclosure: Publicity. By 9:00 A.M., New York City time, on the Trading Day immediately following the date hereof, the Company shall issue a press release (the “*Press Release*”) reasonably acceptable to B. Riley Securities, Inc. disclosing all material terms of the transactions contemplated hereby. On or before 9:00 A.M., New York City time, on the Trading Day immediately following the date hereof, the Company will file a Current Report on Form 8-K with the Commission describing the terms of the Transaction Documents or forms thereof (and including as exhibits to such Current Report on Form 8-K the material Transaction Documents (including, without limitation, this Agreement, the Certificate of Designation and the Warrants)) and all other material nonpublic information shared with the Purchasers, if any. Notwithstanding the foregoing, the Company shall not publicly disclose the name of any Purchaser or an Affiliate of any Purchaser, or include the name of any Purchaser or an Affiliate of any Purchaser in any press release or filing with the Commission (other than the Registration Statement) or any regulatory agency or Trading Market, without the prior written consent of such Purchaser, except (i) as required by federal securities law in connection with (A) any Registration Statement contemplated hereunder and (B) the filing of final Transaction Documents (including signature pages thereto) with the Commission and (ii) to the extent such disclosure is required by law, request of the Staff of the Commission or Trading Market regulations, in which case the Company shall provide the Purchasers with prior written notice of such disclosure permitted under this subclause (ii). From and after the issuance of the Press Release and the filing of the Current Report on Form 8-K, no Purchaser shall be in possession of any material, non-public information received from the Company, any Subsidiary or any of their respective officers, directors, employees or agents (including B. Riley Securities, Inc.), that is not disclosed in the Press Release or the Current Report on Form 8-K unless a Purchaser shall have executed a separate written agreement regarding the confidentiality and use of such information. Each Purchaser, severally and not jointly with the other Purchasers, covenants that until such time as the transactions contemplated by this Agreement are required to be publicly disclosed by the Company as described in this Section 4.4, such Purchaser will maintain the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction).

4.5 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, including this Agreement, or as expressly required by any applicable securities law, the Company covenants and agrees that neither it, nor any other Person acting on its behalf (including B. Riley Securities, Inc.), will provide any Purchaser or its agents or counsel with any information regarding the Company that the Company believes constitutes material non-public information without the express written consent of such Purchaser, unless prior thereto such Purchaser shall have executed a written agreement regarding the confidentiality and use of such information. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

4.6 Use of Proceeds. The Company shall use the net proceeds from the sale of the Securities hereunder to pay down borrowings under the Credit Agreement and for general corporate purposes.

4.7 Principal Trading Market Listing. In the time and manner required by the Principal Trading Market, the Company shall prepare and file with such Principal Trading Market a listing of additional shares notification covering the Warrant Shares and shall use its commercially reasonable efforts to take all steps necessary to cause the Warrant Shares to be approved for listing on the Principal Trading Market as promptly as possible thereafter.

4.8 Blue Sky. The Company, on or before the Closing Date, shall take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for or to qualify the Securities for sale to the Purchasers under applicable securities or "Blue Sky" laws of the states of the United States (or to obtain an exemption from such qualification) and shall provide evidence of such actions promptly upon the written request of any Purchaser.

4.9 Delivery of Securities. The Company shall deliver, or cause to be delivered, the respective Securities purchased by each Purchaser in accordance with Section 2.1(d).

4.10 Subsequent Equity Sales. Without the prior written consent of B. Riley Securities, Inc., from the date hereof until thirty (30) days following the Closing Date, neither the Company nor any Subsidiary shall issue shares of Common Stock or Common Stock Equivalents. Notwithstanding anything to the contrary contained herein, the foregoing restriction shall not apply to (a) securities required to be issued pursuant to the Transaction Documents, (b) securities required to be issued to contractual obligations of the Company in effect as of the date of this Agreement, (c) equity securities issued or issuable pursuant to employee benefit or purchase plans in effect as of the date of this Agreement or pursuant to bona fide employee benefit or purchase plans established during the period described in the first sentence of this Section 4.10 and (d) the issuance of shares of Common Stock in connection with mergers or acquisitions of businesses, entities, property or other assets, joint ventures or strategic alliances.

4.11 Tax Covenants

(a) The Company shall use commercially reasonable efforts to cause the Company and its subsidiaries not to engage, directly or indirectly, in a transaction that is a "listed transaction" within the meaning of Section 6011 of the Code and the regulations issued thereunder.

(b) The Parties agree that the intended U.S. federal tax treatment of the holding of the Preferred Stock is that (i) the Preferred Stock will be treated as equity and not debt, (ii) the Preferred Stock is issued with original issue discount ("OID") as defined for purposes of Treasury Regulation Section 1.305(b), and (iii) dividends for years two through three will not be reported as distributions for U.S. federal income tax purposes until when and as declared as dividends by the board of directors of the Company. The Parties agree that they will not take any inconsistent position with such treatment unless required by a final determination as defined in Section 1313 of the Code. The Company will comply with the requirement, as applicable, to post IRS form 8937 to its website on an annual basis, as needed. At the written request of a holder of the Preferred Stock, the Company will provide, for a given year, a statement that (x) the amount of the OID that the Company will treat as attributable to the year, and (y) the amount of current or accumulated earnings and profits of the Company that it will use for purposes of reporting the OID or any distributions to the IRS; provided that the Company will have complied with such obligations if it provides form 1099-DIV to the holder of Preferred Stock for the year.

(c) For purposes of determining the OID in the Preferred Stock, the parties agree that the Warrants shall be valued as required by the Code by the Company with assistance from a third party nationally recognized as qualified to render valuation advice, and such valuation will be used in the calculation of the OID.

(d) The Company will withhold, or will direct its paying agent to withhold, any amount of taxes that it is required to withhold from any accruals or payments to be made to a holder of the Preferred Stock, and such holder will provide the sufficient resources to fund such withholding. If a holder provides a properly executed IRS Form W-9 (or other appropriate IRS Forms on which a withholding agent may reasonably rely that provides for an exemption of withholding under Section 1441 of the Code), no withholding will occur under Section 1441 of the Code.

ARTICLE V.
CONDITIONS PRECEDENT TO CLOSING

5.1 Conditions Precedent to the Obligations of the Purchasers to Purchase Securities. The obligation of each Purchaser to acquire Securities at the Closing is subject to the fulfillment to such Purchaser's satisfaction, on or prior to the Closing Date, of each of the following conditions, any of which may be waived by such Purchaser (as to itself only):

(a) Representations and Warranties. The representations and warranties of the Company contained herein shall be true and correct in all material respects (except for those representations and warranties which are qualified as to materiality or Material Adverse Effect, in which case such representations and warranties shall be true and correct in all respects) as of the date when made and as of the Closing Date, as though made on and as of such date, except for such representations and warranties that speak as of a specific date.

(b) Performance. The Company shall have performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by it at or prior to the Closing.

(c) No Injunction. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction that prohibits the consummation of any of the transactions contemplated by the Transaction Documents.

(d) Consents. The Company shall have obtained in a timely fashion any and all consents, permits, approvals, registrations and waivers necessary for consummation of the purchase and sale of the Securities (including (i) all Required Approvals and (ii) in connection with entry into the Credit Agreement), all of which shall be and remain so long as necessary in full force and effect.

(e) Adverse Changes. Since the date of execution of this Agreement, no event or series of events shall have occurred that has had or would reasonably be expected to have a Material Adverse Effect.

(f) Listing. The NASDAQ Global Select Market shall have notified the Company that its obligation to submit the listing of additional shares notification form for the Warrant Shares is completed.

(g) No Suspensions of Trading in Common Stock. The Common Stock shall not have been suspended, as of the Closing Date, by the Commission or the Principal Trading Market from trading on the Principal Trading Market nor shall suspension by the Commission or the Principal Trading Market have been threatened, as of the Closing Date, either (A) in writing by the Commission or the Principal Trading Market or (B) by falling below the minimum listing maintenance requirements of the Principal Trading Market.

- (h) Company Deliverables. The Company shall have delivered the Company Deliverables in accordance with Section 2.2(a).
- (i) Compliance Certificate. The Company shall have delivered to each Purchaser a certificate, dated as of the Closing Date and signed by its Chief Executive Officer or its Chief Financial Officer, dated as of the Closing Date, certifying to the fulfillment of the conditions specified in Sections 5.1(a) and (b) in the form attached hereto as Exhibit G.
- (j) Termination. This Agreement shall not have been terminated as to such Purchaser in accordance with Section 7.17 herein.
- (k) Credit Agreement Amendment. The Company shall have entered into the sixth amendment to the Credit Agreement, dated March 3, 2020 (as amended, the "*Credit Agreement*"), with Citizens Bank, N.A., as administrative agent, the various lenders from time to time party thereto, and certain of the Company's subsidiaries party thereto from time to time as guarantors.
- (l) No Default under the Credit Agreement. No default or event of default (as described in the Credit Agreement) shall be existing under the Credit Agreement.
- (m) Sixth Amendment Operative Date. Subject only to the paydown of borrowings as required pursuant the Credit Agreement, the Sixth Amendment Operative Date (as defined in the Credit Agreement) shall have occurred.
- (n) Payment of Fees and Expenses. The Company shall have reimbursed B. Riley Securities, Inc. the costs and expenses in accordance with the Engagement Letter, dated March 8, 2023, between the Company and B. Riley Securities, Inc.

5.2 Conditions Precedent to the Obligations of the Company to sell Securities. The Company's obligation to sell and issue the Securities at the Closing to the Purchasers is subject to the fulfillment to the satisfaction of the Company on or prior to the Closing Date of the following conditions, any of which may be waived by the Company:

- (a) Representations and Warranties. The representations and warranties made by the Purchasers contained herein hereof shall be true and correct in all material respects (except for those representations and warranties which are qualified as to materiality or Material Adverse Effect, in which case such representations and warranties shall be true and correct in all respects) as of the date when made, and as of the Closing Date as though made on and as of such date, except for representations and warranties that speak as of a specific date.
- (b) Performance. Such Purchaser shall have performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by such Purchaser at or prior to the Closing Date.
- (c) No Injunction. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction that prohibits the consummation of any of the transactions contemplated by the Transaction Documents.

(d) Consents. The Company shall have obtained in a timely fashion any and all consents, permits, approvals, registrations and waivers necessary for consummation of the purchase and sale of the Securities, all of which shall be and remain so long as necessary in full force and effect.

(e) Purchasers Deliverables. Such Purchaser shall have delivered its Purchaser Deliverables in accordance with Section 2.2(b).

(f) Termination. This Agreement shall not have been terminated as to such Purchaser in accordance with Section 7.17 herein.

ARTICLE VI.
REGISTRATION RIGHTS

6.1 Required Registration Statement.

(a) As promptly as possible, and in any event on or prior to the Filing Date, the Company shall prepare and file with the Commission a Registration Statement covering the resale of all Securities for an offering to be made on a continuous basis pursuant to Rule 415. The Registration Statement shall be on Form S-3 (except if the Company is not then eligible to register for resale the Securities on Form S-3, in which case such registration shall be on another appropriate form in accordance with the Securities Act and the Exchange Act) and shall contain (except if otherwise directed by the Purchasers or requested by the Commission) the "Plan of Distribution" in substantially the form attached hereto as Exhibit K.

(b) The Company shall use its commercially reasonable efforts to cause the Registration Statement to be declared effective by the Commission as promptly as possible after the filing thereof, but in any event prior to the Required Effectiveness Date, and shall use its commercially reasonable efforts to keep the Registration Statement continuously effective under the Securities Act until the date that all Securities covered by such Registration Statement have been sold or can be sold publicly under Rule 144 without volume limitations by the holders of the Securities (the "*Effectiveness Period*"). Upon notification by the Commission that a Registration Statement will not be reviewed or is no longer subject to further review and comments, the Company shall request acceleration of such Registration Statement within five (5) Trading Days after receipt of such notice and request that it become effective no later than 4:00 p.m. New York City time on the Effective Date and file a prospectus supplement for any Registration Statement, whether or not required under Rule 424 (or otherwise), by 9:00 a.m. New York City time the day after the Effective Date.

(c) If the Company receives Commission Comments to a Registration Statement filed pursuant to Section 6.1(a), the Company shall be obligated to use its commercially reasonable efforts to advocate with the Commission for the registration of all of the Securities requested to be included in the Registration Statement in accordance with applicable Commission guidance. If it is determined by the Company that all of the Securities requested to be included in a Registration Statement cannot be included due to the Commission Comments, then the Company shall use its commercially reasonable efforts to prepare and file as expeditiously as practicable, such number of additional Registration Statements as may be necessary in order to ensure that all Securities are covered by an existing and effective Registration Statement. Any cutbacks of Securities from a Registration Statement filed pursuant to Section 6.1(a), due to Commission Comments shall be applied to the Purchasers pro rata in accordance with the number of such Securities sought to be included in such Registration Statement by reference to the number of such Purchaser's Securities relative to all outstanding Securities.

(d) The Company shall notify the Purchasers in writing promptly (and in any event within two Trading Days) after receiving notification from the Commission that the Registration Statement has been declared effective.

(e) Neither the Company nor any of its security holders (other than the Purchasers in such capacity pursuant hereto) may include securities of the Company in the Registration Statement required to be filed under Section 6.1(a) other than the Securities, except as otherwise required pursuant to that certain Second Amended and Restated Registration Rights Agreement, dated as of August 12, 2022, by and among the Company and the Purchasers thereto (the "*Registration Rights Agreement*").

6.2 Effectiveness of Registration Statement. Notwithstanding anything in this Agreement to the contrary, the Company may, by written notice to the Purchasers, suspend sales under a Registration Statement after the Effective Date thereof and/or require that the Purchasers immediately cease the sale of Securities pursuant thereto and/or defer the filing of any subsequent Registration Statement if the board of directors of the Company determines in good faith, by appropriate resolutions, that the disclosure of material non-public information concerning the Company (A) would be materially detrimental to the Company (other than as relating solely to the price of the Common Stock) to maintain a Registration Statement at such time or (B) it is in the good faith determination of the Company's board of directors that it is in the best interests of the Company to suspend sales under such registration at such time; provided, however, that the Company may not delay or suspend the Registration Statement on more than two occasions or for more than thirty (30) consecutive calendar days, or more than sixty (60) total calendar days, in each case during any twelve-month period. Upon receipt of such notice, each Purchaser shall immediately discontinue any sales of Securities pursuant to such registration until such Purchaser is advised in writing by the Company that the current Prospectus or amended Prospectus, as applicable, may be used. In no event, however, shall this right be exercised to suspend sales beyond the period during which (in the good faith determination of the Company's board of directors) the failure to require such suspension would be materially detrimental to the Company. Immediately after the end of any suspension period under this Section 6.2, the Company shall take all necessary actions (including filing any required supplemental prospectus) to restore the effectiveness of the applicable Registration Statement and the ability of the Purchasers to publicly resell their Securities pursuant to such effective Registration Statement.

6.3 Registration Procedures. In connection with the Company's registration obligations under Section 6.1, the Company shall:

(a) Not less than three Trading Days prior to the filing of a Registration Statement or any related Prospectus or any amendment or supplement thereto, furnish via email to those Purchasers who have supplied the Company with email addresses copies of all such documents and correspondence proposed to be filed, which documents (other than any document that is incorporated or deemed to be incorporated by reference therein) will be subject to the review of such Purchasers. The Company shall reflect in each such document when so filed with the Commission such comments regarding the Purchasers and the plan of distribution as the Purchasers may reasonably and promptly propose no later than two Trading Days after the Purchasers have been so furnished with copies of such documents as aforesaid.

(b) Subject to Section 6.2, prepare and file with the Commission such amendments, including post-effective amendments, to each Registration Statement and the Prospectus used in connection therewith as may be necessary to keep the Registration Statement continuously effective, as to the applicable Securities for the Effectiveness Period and prepare and file with the Commission such additional Registration Statements in order to register for resale under the Securities Act all of the Securities; (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement, and as so supplemented or amended to be filed pursuant to Rule 424; (iii) respond as promptly as reasonably possible, and in any event within 15 Trading Days (except to the extent that the Company reasonably requires additional time to respond to accounting comments), to any comments received from the Commission with respect to the Registration Statement or any amendment thereto; and (iv) comply in all material respects with the provisions of the Securities Act and the Exchange Act with respect to the disposition of all Securities covered by the Registration Statement during the applicable period in accordance with the intended methods of disposition by the Purchasers thereof set forth in the Registration Statement as so amended or in such Prospectus as so supplemented.

(c) Notify the Purchasers as promptly as reasonably possible, and (if requested by the Purchasers) confirm such notice in writing no later than two Trading Days thereafter, of any of the following events: (i) the Commission notifies the Company whether there will be a "review" of any Registration Statement; (ii) the Commission comments in writing on any Registration Statement; (iii) any Registration Statement or any post-effective amendment is declared effective; (iv) the Commission or any other Federal or state governmental authority requests any amendment or supplement to any Registration Statement or Prospectus or requests additional information related thereto; (v) the Commission issues any stop order suspending the effectiveness of any Registration Statement or initiates any Proceedings for that purpose; (vi) the Company receives notice of any suspension of the qualification or exemption from qualification of any Securities for sale in any jurisdiction, or the initiation or threat of any Proceeding for such purpose; or (vii) the financial statements included in any Registration Statement become ineligible for inclusion therein or any Registration Statement or Prospectus or other document contains any untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) Use its commercially reasonable efforts to avoid the issuance of or, if issued, obtain the withdrawal of (i) any order suspending the effectiveness of any Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Securities for sale in any jurisdiction, as soon as possible.

(e) If requested by any Purchaser, provide such Purchaser without charge, at least one conformed copy of each Registration Statement and each amendment thereto, including financial statements and schedules, and all exhibits to the extent requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the Commission.

(f) Promptly deliver to each Purchaser, without charge, as many copies of the Prospectus or Prospectuses (including each form of prospectus) and each amendment or supplement thereto as such Persons may reasonably request. The Company hereby consents to the use of such Prospectus and each amendment or supplement thereto by each of the selling Purchasers in connection with the offering and sale of the Securities covered by such Prospectus and any amendment or supplement thereto to the extent permitted by federal and state securities laws and regulations.

(g) During the Effectiveness Period, maintain the listing of such Warrant Shares on each such Trading Market.

(h) Prior to any public offering of Securities, use its commercially reasonable efforts to register or qualify or cooperate with the selling Purchasers in connection with the registration or qualification (or exemption from such registration or qualification) of such Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions within the United States as any Purchaser requests in writing, to keep each such registration or qualification (or exemption therefrom) effective for so long as required, but not to exceed the duration of the Effectiveness Period, and to do any and all other acts or things reasonably necessary or advisable to enable the disposition in such jurisdictions of the Securities covered by a Registration Statement; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

(i) Cooperate with the Purchasers to facilitate the timely preparation and delivery of certificates representing the Securities, as applicable, to be delivered to a transferee pursuant to a Registration Statement, which certificates shall be free, to the extent permitted by this Agreement and under law, of all restrictive legends, and to enable such certificates to be in such denominations and registered in such names as any such Purchaser may reasonably request.

(j) Upon the occurrence of any event described in Section 6.3(c)(vii), as promptly as reasonably possible, prepare a supplement or amendment, including a post-effective amendment, to the Registration Statement or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, neither the Registration Statement nor such Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(k) Cooperate with any reasonable due diligence investigation undertaken by the Purchasers in connection with the sale of Securities, including, without limitation, by making available documents and information; provided that the Company will not deliver or make available to any Purchaser material, nonpublic information unless such Purchaser requests in advance in writing to receive material, nonpublic information and agrees to keep such information confidential.

(l) Comply with all rules and regulations of the Commission applicable to the registration of the securities.

(m) It shall be a condition precedent to the obligations of the Company to complete the registration pursuant to this Agreement with respect to the Securities of any particular Purchaser that such Purchaser furnish to the Company the information specified in Exhibits C-1, C-2 and C-3 hereto and such other information regarding itself, the Securities and other shares of Common Stock held by it and the intended method of disposition of the Securities held by it (if different from the Plan of Distribution set forth on Exhibit K hereto) as shall be reasonably required to effect the registration of such Securities and shall complete and execute such documents in connection with such registration as the Company may reasonably request.

(n) The Company shall comply with all applicable rules and regulations of the Commission under the Securities Act and the Exchange Act, including, without limitation, Rule 172 under the Securities Act, file any final Prospectus, including any supplement or amendment thereof, with the Commission pursuant to Rule 424 under the Securities Act, promptly inform the Purchaser in writing if, at any time during the Effectiveness Period, the Company does not satisfy the conditions specified in Rule 172 and, as a result thereof, the Purchaser are required to make available a Prospectus in connection with any disposition of Securities and take such other actions as may be reasonably necessary to facilitate the registration of the Securities hereunder.

6.4 Registration Expenses – Registration Required by Section 6.1. The Company shall pay all fees and expenses incurred by the Company in connection with (and incident to) the performance of its obligations under Section 6.1 of this Agreement by the Company, including without limitation (a) all registration and filing fees and expenses, including without limitation those related to filings with the Commission, any Trading Market and in connection with applicable state securities or Blue Sky laws, (b) printing expenses (including without limitation expenses of printing certificates for Warrant Shares, if any), (c) messenger, telephone and delivery expenses, (d) fees and disbursements of counsel for the Company, and (e) fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement (for the avoidance of doubt, such fees and expenses shall include all reasonable and documented fees and disbursements of one single primary outside counsel and one outside local counsel for each jurisdiction that the Securities shall be distributed for the holders thereof, which counsels shall be selected by the holders of a majority of the Securities being sold). The fees and expenses incurred by the Company in connection with (and incident to) the performance of its obligations under Section 6.1 of this Agreement shall be borne by the Company regardless of whether or not any registration statement is filed or becomes effective. The Company will pay its internal expenses (including all salaries and expenses of its officers and employees performing legal or accounting duties, the expense of any annual audit and the expense of any liability insurance), the expenses and fees for listing the securities to be registered on each securities exchange and included in each established over-the-counter market on which similar securities issued by the Company are then listed or traded and any expenses of the Company incurred in connection with any “road show”.

6.5 Indemnification.

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Purchaser, the officers, directors, partners, members, agents and employees of each of them, each Person who controls any such Purchaser (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, partners, members, agents and employees of each such controlling Person (each, a "*Purchaser Party*"), to the fullest extent permitted by applicable law, from and against any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation (collectively, "*Losses*") that any such Purchaser Party may suffer or incur as a result of or relating to (i) any misrepresentation or breach of any representation or warranty made by the Company in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (ii) any breach of any covenant, agreement or obligation of the Company contained in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (iii) any cause of action, suit or claim brought or made against such Indemnified Party (as defined in Section 6.5(e) below) by a third party (including for these purposes a derivative action brought on behalf of the Company), arising out of or resulting from (x) the execution, delivery, performance or enforcement of the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (y) any transaction financed or to be financed in whole or in part, directly or indirectly, with the proceeds of the issuance of the Securities, or (z) the status of Indemnified Party as holder of the Securities (unless, and only to the extent that, such action, suit or claim is based upon a breach of such Investor's representations, warranties or covenants under the Transaction Documents or any conduct by such Investor that constitutes fraud, gross negligence or willful misconduct) or (iv) any untrue or alleged untrue statement of a material fact contained in the Registration Statement, any Prospectus or any form of Company prospectus or in any amendment or supplement thereto or in any Company preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or form of prospectus or supplement thereto, in the light of the circumstances under which they were made) not misleading, except to the extent, but only to the extent, that (A) such untrue statements, alleged untrue statements, omissions or alleged omissions are based solely upon information regarding such Investor furnished in writing to the Company by or on behalf of such Purchaser for use therein, or to the extent that such information relates to such Investor or such Investor's proposed method of distribution of Securities and was reviewed and expressly approved by such Purchaser in writing expressly for use in the Registration Statement, or (B) with respect to any prospectus, if the untrue statement or omission of material fact contained in such prospectus was corrected on a timely basis in the prospectus, as then amended or supplemented, if such corrected prospectus was timely made available by the Company to the Purchaser, and the Purchaser seeking indemnity hereunder was advised in writing not to use the incorrect prospectus prior to the use giving rise to Losses.

(b) Indemnification by Purchasers. Each Purchaser shall, severally and not jointly, indemnify and hold harmless the Company and its directors, officers, agents and employees to the fullest extent permitted by applicable law, from and against all Losses (as determined by a court of competent jurisdiction in a final judgment not subject to appeal or review) arising solely out of any untrue statement of a material fact contained in the Registration Statement, any Prospectus, or any form of prospectus, or in any amendment or supplement thereto, or arising out of or relating to any omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or form of prospectus or supplement thereto, in the light of the circumstances under which they were made) not misleading, but only to the extent that (i) such untrue statements or omissions are based solely upon information regarding such Purchaser furnished to the Company by or on behalf of such Purchaser in writing expressly for use therein, or (ii) such information relates to such Purchaser or such Purchaser's proposed method of distribution of Securities and was reviewed and expressly approved in writing by such Purchaser expressly for use in the Registration Statement (it being understood that the information provided by the Purchaser to the Company in (A) Exhibits C-1, C-2 and C-3 and the Plan of Distribution set forth on Exhibit K, as the same may be modified by such Purchaser or (B) in writing constitutes information reviewed and expressly approved by such Purchaser in writing expressly for use in the Registration Statement), such Prospectus or such form of prospectus or in any amendment or supplement thereto. In no event shall the liability of any selling Purchaser hereunder be greater in amount than the dollar amount of the net proceeds received by such Purchaser upon the sale of the Securities giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "*Indemnified Party*"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "*Indemnifying Party*") in writing, and the Indemnifying Party shall assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses incurred in connection with defense thereof; provided, that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have proximately and materially adversely prejudiced the Indemnifying Party.

An Indemnified Party shall have the right to employ separate counsel (including local counsel) in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel (including local counsel) shall be at the expense of such Indemnified Party or Parties unless: (i) the Indemnifying Party has agreed in writing to pay such fees and expenses; or (ii) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel (including local counsel) reasonably satisfactory to such Indemnified Party in any such Proceeding; or (iii) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and such Indemnified Party shall have been advised by counsel that a conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel (including local counsel) at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and the reasonable fees and expenses of separate counsel (including local counsel) shall be at the expense of the Indemnifying Party). It shall be understood, however, that the Indemnifying Party shall not, in connection with any one such Proceeding (including separate Proceedings that have been or will be consolidated before a single judge) be liable for the fees and expenses of more than one separate firm of attorneys at any time for all Indemnified Parties, which firm shall be appointed by a majority of the Indemnified Parties. The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding.

All reasonable fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within 20 Trading Days of written notice thereof to the Indemnifying Party (regardless of whether it is ultimately determined that an Indemnified Party is not entitled to indemnification hereunder; provided, that the Indemnifying Party may require such Indemnified Party to undertake to reimburse all such fees and expenses to the extent it is finally judicially determined that such Indemnified Party is not entitled to indemnification hereunder).

(d) Contribution. If a claim for indemnification under Section 6.5(a) or (b) is unavailable to an Indemnified Party (by reason of public policy or otherwise), then each Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of such Losses, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, Knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in Section 6.5(c), any reasonable attorneys' or other reasonable fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 6.5(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 6.5(d), no Purchaser shall be required to contribute, in the aggregate, any amount in excess of the amount by which the net proceeds actually received by such Purchaser from the sale of the Warrant Shares subject to the Proceeding exceed the amount of any damages that such Purchaser has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation.

The indemnity and contribution agreements contained in this Section are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties.

6.6 Dispositions. Each Purchaser agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it in connection with sales of Securities pursuant to the Registration Statement and shall sell its Securities in accordance with the Plan of Distribution set forth in the Prospectus. Each Purchaser further agrees that, upon receipt of a notice from the Company of the occurrence of any event of the kind described in Sections 6.3(c)(v), (vi) or (vii), such Purchaser will discontinue disposition of such Securities under the Registration Statement until such Purchaser is advised in writing by the Company that the use of the Prospectus, or amended Prospectus, as applicable, may be resumed. The Company may provide appropriate stop orders to enforce the provisions of this paragraph. Each Purchaser, severally and not jointly with the other Purchasers, agrees that the removal of the restrictive legend from certificates representing Securities as set forth in Section 4.1 is predicated upon the Company's reliance that the Purchaser will comply with the provisions of this subsection. Both the Company and the Transfer Agent, and their respective directors, officers, employees and agents, may rely on this subsection

ARTICLE VII.
MISCELLANEOUS

7.1 Fees and Expenses. Except as provided in Section 6.4, the Company and the Purchasers shall each pay the fees and expenses of their respective advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party in connection with the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees, stamp taxes and other taxes and duties levied in connection with the sale and issuance of the Securities to the Purchasers.

7.2 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, contain the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements, understandings, discussions and representations, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules. At or after the Closing, and without further consideration, the Company and the Purchasers will execute and deliver to the other such further documents as may be reasonably requested in order to give practical effect to the intention of the parties under the Transaction Documents.

7.3 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of (a) the date of transmission, if such notice or communication is delivered via facsimile (provided the sender receives a machine-generated confirmation of successful transmission) at the facsimile number specified in this Section 7.3 or email attachment at the email address specified in this Section 7.3 prior to 5:00 P.M., New York City time, on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section 7.3 or email attachment at the email address specified in this Section 7.3 on a day that is not a Trading Day or later than 5:00 P.M., New York City time, on any Trading Day, (c) the Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service with next day delivery specified, or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as follows:

If to the Company: Ribbon Communications Inc.
6500 Chase Oaks Boulevard
Plano, Texas 75023
Telephone No.: (978) 614-8170
Attention: Patrick Macken
E-mail: pmacken@rbbn.com

With a copy to: Troutman Pepper Hamilton Sanders LLP
600 Peachtree Street, N.E., Suite 3000
Atlanta, Georgia 30308
Telephone No.: (404) 885-3000
Facsimile No.: (404) 962-6599
Attention: David W. Ghegan
E-mail: david.ghegan@troutman.com

If to a Purchaser: To the address set forth under such Purchaser's name on the signature page hereto;

or such other address as may be designated in writing hereafter, in the same manner, by such Person.

7.4 Amendments; Waivers; No Additional Consideration. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Purchasers of at least a majority in interest of the Securities subscribed for purchase pursuant to this Agreement or, in the case of a waiver, by the party against whom enforcement of any such waiver is sought; *provided, however*, that the Purchase Price shall not be modified except in a written instrument signed by the Company and each Purchaser; *provided, further*, that no waiver, modification, supplementation or amendment that (i) alters the Securities allocated to a Purchaser or (ii) is unduly burdensome to a Purchaser shall be valid and enforceable against such Purchaser without the prior written consent of such Purchaser. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of either party to exercise any right hereunder in any manner impair the exercise of any such right. No consideration shall be offered or paid to any Purchaser to amend or consent to a waiver or modification of any provision of any Transaction Document unless the same consideration is also offered to all Purchasers who then hold Securities.

7.5 Construction. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party. This Agreement shall be construed as if drafted jointly by the parties, and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement or any of the Transaction Documents.

7.6 Successors and Assigns. The provisions of this Agreement shall inure to the benefit of and be binding upon the parties and their successors and permitted assigns. This Agreement, or any rights or obligations hereunder, may not be assigned by the Company without the prior written consent of each Purchaser. Any Purchaser may assign its rights hereunder in whole or in part to any Person to whom such Purchaser assigns or transfers any Securities in compliance with the Transaction Documents and applicable law, provided such transferee shall agree in writing to be bound, with respect to the transferred Securities, by the terms and conditions of this Agreement that apply to the "Purchasers".

7.7 No Third-Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except (i) B. Riley Securities, Inc. is an intended third-party beneficiary of [Section 2.2](#), [Article III](#) and [Section 4.10](#) hereof and (ii) each Purchaser Party is an intended third-party beneficiary of [Section 4.6](#).

7.8 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective Affiliates, employees or agents) shall be commenced exclusively in the New York Courts. Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the New York Courts for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Proceeding, any claim that it is not personally subject to the jurisdiction of any such New York Court, or that such Proceeding has been commenced in an improper or inconvenient forum. Each party hereto hereby irrevocably waives personal service of process and consents to process being served in any such Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. **EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.**

7.9 Survival. Subject to applicable statute of limitations, the representations, warranties, agreements and covenants contained herein shall survive the Closing and the delivery of the Securities.

7.10 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signatures complying with the U.S. federal ESIGN Act of 2000, e.g., www.docuSign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

7.11 Severability. If any provision of this Agreement is held to be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Agreement shall not in any way be affected or impaired thereby and the parties will attempt to agree upon a valid and enforceable provision that is a reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Agreement.

7.12 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) the Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

7.13 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations described in the foregoing sentence and hereby agree to waive in any action for specific performance of any such obligation (other than in connection with any action for a temporary restraining order) the defense that a remedy at law would be adequate.

7.14 Payment Set Aside. To the extent that the Company makes a payment or payments to any Purchaser pursuant to any Transaction Document or a Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

7.15 Adjustments in Share Numbers and Prices. In the event of any stock split, subdivision, dividend or distribution payable in shares of Common Stock (or other securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly shares of Common Stock), combination or other similar recapitalization or event occurring after the date hereof and prior to the Closing, each reference in any Transaction Document to a number of shares or a price per share shall be deemed to be amended to appropriately account for such event.

7.16 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance of the obligations of any other Purchaser under any Transaction Document. The decision of each Purchaser to purchase Securities pursuant to the Transaction Documents has been made by such Purchaser independently of any other Purchaser and independently of any information, materials, statements or opinions as to the business, affairs, operations, assets, properties, liabilities, results of operations, condition (financial or otherwise) or prospects of the Company or any Subsidiary which may have been made or given by any other Purchaser or by any agent or employee of any other Purchaser, and no Purchaser and any of its agents or employees shall have any liability to any other Purchaser (or any other Person) relating to or arising from any such information, materials, statement or opinions. Nothing contained herein or in any Transaction Document, and no action taken by any Purchaser pursuant thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser acknowledges that no other Purchaser has acted as agent for such Purchaser in connection with making its investment hereunder and that no Purchaser will be acting as agent of such Purchaser in connection with monitoring its investment in the Securities or enforcing its rights under the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights, including without limitation the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. For reasons of administrative convenience only, Purchasers and their respective counsels have chosen to communicate with the Company through Troutman Pepper Hamilton Sanders LLP, counsel to the Company. Each Purchaser acknowledges that Troutman Pepper Hamilton Sanders LLP has rendered legal advice to the Company and not to such Purchaser in connection with the transactions contemplated hereby, and that each such Purchaser has relied for such matters on the advice of its own respective counsel.

7.17 Termination. This Agreement may be terminated and the sale and purchase of the Securities abandoned at any time prior to the Closing by either the Company or any Purchaser (with respect to itself only) upon written notice to the other, if the Closing has not been consummated on or prior to 5:00 P.M., New York City time, on the Outside Date; *provided, however*, that the right to terminate this Agreement under this Section 7.17 shall not be available to any Person whose failure to comply with its obligations under this Agreement has been the cause of or resulted in the failure of the Closing to occur on or before such time. Nothing in this Section 7.17 shall be deemed to release any party from any liability for any breach by such party of the terms and provisions of this Agreement or the other Transaction Documents or to impair the right of any party to compel specific performance by any other party of its obligations under this Agreement or the other Transaction Documents. In the event of a termination pursuant to this Section 7.17, the Company shall promptly notify all non-terminating Purchasers. Upon a termination in accordance with this Section 7.17, the Company and the terminating Purchaser(s) shall not have any further obligation or liability (including arising from such termination) to the other, and no Purchaser will have any liability to any other Purchaser under the Transaction Documents as a result therefrom.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

RIBBON COMMUNICATIONS INC.

By:

Name: Bruce McClelland
Title: President and Chief Executive Officer

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

NAME OF PURCHASER: _____

By: _____

Name: _____

Title: _____

Aggregate Purchase Price (Subscription Amount): \$ _____

Number of Shares of Preferred Stock to be Acquired: _____

Number of Warrants to be Acquired: _____

Certificated or Uncertificated: _____

Tax ID No.: _____

Address for Notice:

Telephone No.: _____

Facsimile No.: _____

E-mail Address: _____

Attention: _____

EXHIBITS:

- A: Form of Certificate of Designation of Preferred Stock
- B: Form of Warrant
- C-1: Accredited Investor Questionnaire
- C-2: DRS Book-Entry Questionnaire
- C-3: Selling Stockholder Questionnaire
- D: Form of Opinion of Company Counsel
- E: Form of Irrevocable Transfer Agent Instructions
- F: Form of Secretary's Certificate
- G: Form of Officer's Certificate
- H: Wire Instructions
- I: Form of Lock-Up Agreement
- J: List of Directors and Executive Officers Executing Lock-Up Agreements
- K: Form of Plan of Distribution

SCHEDULES:

- 3.1(a) Subsidiaries
- 3.1(g) Capitalization
- 3.1(x) Registration Rights

EXHIBIT A
FORM OF CERTIFICATE OF
DESIGNATION OF PREFERRED STOCK

EXHIBIT B

FORM OF
WARRANT

INSTRUCTION SHEET

(to be read in conjunction with the entire Securities Purchase Agreement)

A. Complete the following items in the Securities Purchase Agreement:

1. Provide the information regarding the Purchaser requested on the signature page. The Securities Purchase Agreement must be executed by an individual authorized to bind the Purchaser.
2. Exhibit C-1 Accredited Investor Questionnaire:
Provide the information requested by the Accredited Investor Questionnaire.
3. Exhibit C-2 DRS Book-Entry Questionnaire:
Provide the information requested by the DRS Book-Entry Questionnaire, if applicable.
4. Exhibit C-3 Selling Stockholder Questionnaire:
Provide the information requested by the Selling Stockholder Questionnaire.
5. Return the signed Securities Purchase Agreement to:

Stuart Craft
Troutman Pepper Hamilton Sanders LLP
Troutman Pepper Building
1001 Haxall Point
Richmond, Virginia 23219
Tel: (804) 697-2292
Email: stuart.craft@troutman.com

B. Instructions regarding the transfer of funds for the purchase of the Securities is set forth on Exhibit H to the Securities Purchase Agreement.

EXHIBIT C-1

ACCREDITED INVESTOR QUESTIONNAIRE

(ALL INFORMATION WILL BE TREATED CONFIDENTIALLY)

To: Ribbon Communications Inc.

This Investor Questionnaire ("*Questionnaire*") must be completed by each potential investor in connection with the offer and sale of the shares of the Series A Preferred Stock, par value \$0.01 per share (the "*Preferred Stock*"), of Ribbon Communications Inc., a Delaware corporation (the "*Corporation*"), and warrants to purchase shares of the common stock, par value \$0.0001 per share, of the Corporation (collectively with the Preferred Stock, the "*Securities*"). The Securities are being offered and sold by the Corporation without registration under the Securities Act of 1933, as amended (the "*Act*"), and the securities laws of certain states, in reliance on the exemptions contained in Section 4(a) (2) of the Act and in reliance on similar exemptions under applicable state laws. The Corporation must determine that a potential investor meets certain suitability requirements before offering or selling Securities to such investor. The purpose of this Questionnaire is to assure the Corporation that each investor will meet the applicable suitability requirements. The information supplied by you will be used in determining whether you meet such criteria, and reliance upon the private offering exemptions from registration is based in part on the information herein supplied.

This Questionnaire does not constitute an offer to sell or a solicitation of an offer to buy any security. Your answers will be kept strictly confidential. However, by signing this Questionnaire, you will be authorizing the Corporation to provide a completed copy of this Questionnaire to such parties as the Corporation deems appropriate in order to ensure that the offer and sale of the Securities will not result in a violation of the Act or the securities laws of any state and that you otherwise satisfy the suitability standards applicable to purchasers of the Securities. All potential investors must answer all applicable questions and complete, date and sign this Questionnaire. Please print or type your responses and attach additional sheets of paper if necessary to complete your answers to any item.

PART A. BACKGROUND INFORMATION

Name of Beneficial Owner of the Securities: _____

Business Address: _____
(Number and Street)

(City) (State) (Zip Code)

Telephone Number: (____) _____

If a corporation, partnership, limited liability company, trust or other entity:

Type of entity: _____
State of formation: _____ Approximate Date of formation: _____

Were you formed for the purpose of investing in the securities being offered?

Yes No

If an individual:

Residence Address: _____
(Number and Street)

(City) (State) (Zip Code)

Telephone Number: (____) _____

Age: _____ Citizenship: _____ Where registered to vote: _____

Set forth in the space provided below the state(s), if any, in the United States in which you maintained your residence during the past two years and the dates during which you resided in each state:

Are you a director or executive officer of the Corporation?

Yes No

Social Security or Taxpayer Identification No. _____

PART B. ACCREDITED INVESTOR CONFIRMATION

1. You are (a) a "qualified institutional buyer" or an "accredited investor" as such terms are defined under the United States Securities Act of 1933, as amended, (b) an institutional account as defined in FINRA Rule 4512(c) and (c) a sophisticated institutional investor with sufficient knowledge and experience in investing in private equity transactions to properly evaluate the risks and merits of your participation in the Transaction. You have determined based on your own independent review and judgment and such professional advice as you deem appropriate that your purchase of the Securities and participation in the Transaction (i) are fully consistent with your financial needs, objectives and condition, (ii) comply and are fully consistent with all investment policies, guidelines and other restrictions applicable to you, (iii) have been duly authorized and approved by all necessary action, (iv) do not and will not violate or constitute a default under your charter, by-laws or other constituent document or under any law, rule, regulation, agreement or other obligation by which you are bound and (v) are a fit, proper and suitable investment for you, notwithstanding the substantial risks inherent in investing in or holding the Securities. You are able to bear the substantial risks associated with your purchase of the Securities, including but not limited to loss of your entire investment therein.

2. You have had the opportunity to ask questions of and receive answers from the Company directly and conducted and completed your own independent due diligence with respect to the Transaction. Based on such information as you have deemed appropriate and without reliance upon any statements, representations or warranties or other information made or provided by B. Riley Securities, Inc. ("B. Riley"), you have independently made your own analysis and decision to enter into the Transaction. Except for the representations, warranties and agreements of the Company expressly set forth in the Purchase Agreement, you are relying exclusively on your own sources of information, investment analysis and due diligence (including professional advice you deem appropriate) with respect to the Transaction, the Securities and the business, condition (financial and otherwise), management, operations, properties and prospects of the Company, including but not limited to all business, legal, regulatory, accounting, credit and tax matters.

3. You hereby acknowledge and agree that (a) B. Riley is acting solely as placement agent in connection with the Transaction and is not acting as an underwriter or in any other capacity and is not and shall not be construed as a financial advisor or fiduciary for you, the Company or any other person or entity in connection with the Transaction, (b) B. Riley has not made any representation or warranty, whether express or implied, of any kind or character and has not provided any advice or recommendation in connection with the Transaction or solicited any action from us in connection with the Transaction, (c) B. Riley has not prepared any disclosure or offering document in connection with the Transaction, (d) B. Riley and its directors, officers, employees, affiliates, representatives and controlling persons have made no independent investigation with respect to the Company or the Transaction or the accuracy, completeness or adequacy of any information supplied to them by the Company, (e) B. Riley will have no responsibility with respect to (i) any representations, warranties or agreements made by any person or entity under or in connection with the Transaction or any of the documents furnished pursuant thereto or in connection therewith, or the execution, legality, validity or enforceability (with respect to any person) or any thereof, or (ii) the business, affairs, financial condition, operations, properties or prospects of, or any other matter concerning the Company or Transaction, and (f) B. Riley, its affiliates and any of its or their control persons, officers, directors and employees shall have no liability or obligation (including without limitation, for or with respect to any losses, claims, damages, obligations, penalties, judgments, awards, liabilities, costs, expenses or disbursements incurred by you, the Company or any other person or entity), whether in contract, tort or otherwise, to you, or to any person claiming through you, in respect of the Transaction. B. Riley shall be entitled to rely on the representations made in this Questionnaire to the same extent as if such Questionnaire was addressed to B. Riley.

4. You are acquiring your entire beneficial ownership interest in the Securities for your own account, or for an account over which we exercise sole discretion for another qualified institutional buyer or accredited investor, for investment purposes only and not with a view to any distribution of the Securities in any manner that would violate the securities laws of the United States or any other jurisdiction. You understand that the Securities have not been registered under the securities laws of the United States or any other jurisdiction and that the Securities may not be resold or transferred in the United States or otherwise except in compliance with applicable law and the restrictions on transfer set forth in the definitive documentation for the Transaction.

A. FOR EXECUTION BY AN INDIVIDUAL:

_____ Date

By _____

Print Name: _____

B. FOR EXECUTION BY AN ENTITY:

_____ Date

Entity Name: _____

By _____

Print Name: _____

Title: _____

C. ADDITIONAL SIGNATURES (if required by partnership, corporation or trust document):

_____ Date

Entity Name: _____

By _____

Print Name: _____

Title: _____

_____ Date

Entity Name: _____

By _____

Print Name: _____

Title: _____

EXHIBIT C-2

DRS BOOK-ENTRY QUESTIONNAIRE

Pursuant to Section 2.2(h) of the Agreement, please provide us with the following information:

1. The exact name that the Securities are to be registered in (this is the name that will appear on the Transfer Agent's books. You may use a nominee name if appropriate): _____
2. The relationship between the Purchaser of the Securities and the Registered Holder listed in response to Item 1 above: _____
3. The mailing address, telephone and teletype number of the Registered Holder listed in response to Item 1 above: _____

4. The Tax Identification Number (or, if an individual, the Social Security Number) of the Registered Holder listed in response to Item 1 above: _____

EXHIBIT C-3

SELLING STOCKHOLDER QUESTIONNAIRE

RIBBON COMMUNICATIONS INC.

INFORMATION FURNISHED BY:

(PLEASE PRINT FULL NAME OF PURCHASER)

The undersigned Purchaser (the "**Purchaser**" or "**you**") is receiving this Questionnaire because you have subscribed for shares of the Series A Preferred Stock, par value \$0.01 per share (the "**Preferred Stock**"), and Warrants (the "**Warrants**") to purchase shares of common stock (the "**Warrant Shares**" and together with the Preferred Stock and Warrants, the "**Securities**") of Ribbon Communications Inc. (the "**Company**") pursuant to that certain Securities Purchase Agreement, entered into on March [•], 2023, by and among you, the Company and certain other purchasers identified on the signatures pages thereto (the "**Securities Purchase Agreement**").

The Company has agreed to include the Securities in a registration statement on Form S-3 and a related prospectus (the "**Registration Statement**") that the Company intends to file with the U.S. Securities and Exchange Commission (the "**SEC**") for registration and resale under Rule 415 of the Securities Act of 1933, as amended (the "**Securities Act**"), in accordance with the terms of the Securities Purchase Agreement.

The Company has agreed to name you as a selling stockholder in the Registration Statement. This Questionnaire will assist the Company in gathering the information needed from you in connection with including you as a selling stockholder in the Registration Statement. Please complete, sign, date and return this Questionnaire at your earliest convenience.

Certain legal consequences arise from being named as a selling shareholder in the Registration Statement. Accordingly, you are advised to consult with your own legal counsel regarding the consequences of being named or not being named or not being named as a selling shareholder in the Registration Statement.

By signing this Questionnaire, you consent to the use by the Company in the Registration Statement and related prospectus of the information provided in this Questionnaire.

IF YOU DO NOT RETURN THIS QUESTIONNAIRE IN A TIMELY MANNER, THE COMPANY MAY NOT BE ABLE TO INCLUDE SUFFICIENT INFORMATION REGARDING YOUR SECURITIES IN THE REGISTRATION STATEMENT, WHICH MAY PREVENT THE COMPANY FROM REGISTERING YOUR SECURITIES PURSUANT TO THE REGISTRATION STATEMENT.

INSTRUCTIONS

This Selling Stockholder Questionnaire (this “**Questionnaire**”) should be completed by each Purchaser party to the Securities Purchase Agreement. When completing this Questionnaire, please answer all questions, using the entry “None” or “Not Applicable” where appropriate.

Unless expressly stated otherwise, answers should be given as of the date you complete this Questionnaire. If there is insufficient space on this Questionnaire to respond to any item, you may complete your response on an additional page but, if you do so, please clearly indicate on the additional page, the number of the question to which you are responding. It is recommended that you make a copy of your completed Questionnaire and retain it for your personal records.

Your attention is called to the “Definitions” section below for information concerning the meanings of certain terms used in the regulations of the SEC and in this Questionnaire. Please report all information, regardless of whether you consider it to be material.

DEFINITIONS

Before you complete this Questionnaire, please give consideration to the following definitions of various terms used herein.

1. “**Affiliate**” means a person that, directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with the person specified.
2. “**Associate**” means (a) any corporation or organization (other than the Company) of which you are an officer, director, member or partner; (b) any corporation or organization (other than the Company) of which you are, directly or indirectly, the beneficial owner of ten percent or more of any class of equity securities; (c) any trust or other estate in which you have a substantial beneficial interest or as to which you serve as trustee or in a similar fiduciary capacity; or (d) your spouse and any relative of yours or your spouse, with whom you share a residence or who is a director or officer of the Company.
3. “**Beneficial Ownership**” means that you, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, have or share: (1) voting power, which includes the power to vote, or to direct the voting of such security, or (2) investment power, which includes the power to dispose, or to direct the disposition, of such security. You are also the beneficial owner of a security if you, directly or indirectly, create or use a trust, proxy, power of attorney, pooling arrangement or any other contract, arrangement or device with the purpose or effect of divesting yourself of beneficial ownership of a security or preventing the vesting of such beneficial ownership. Finally, you are deemed to be the beneficial owner of a security if you have the right to acquire beneficial ownership of such security at any time within sixty (60) days, including, but not limited to, any right to acquire the security (a) through the exercise of any option, warrant or right, (b) through the conversion of a security, (c) pursuant to the power to revoke a trust, discretionary account or similar arrangement, or (d) pursuant to the automatic termination of a trust, discretionary account or similar arrangement.

4. "Material", when used to qualify a requirement for the furnishing of information as to any subject for purposes of SEC disclosure, limits the information required to those matters as to which there is a substantial likelihood that a reasonable investor would consider it important in deciding whether to invest in the Company's shares of common stock. This definition does not require a substantial likelihood that if an omitted fact were later disclosed, it would cause a reasonable shareholder to change his decision. Rather, it contemplates a substantial likelihood that, under all the circumstances, the omitted fact would have assumed actual significance in the deliberations of the reasonable investor.

I. INFORMATION

A. Please state the full legal name of the Purchaser. If the Purchaser is an entity, please indicate the natural persons controlling its investment decisions.

B. If the registered holder is a person or entity other than the Purchaser named in I(A) above, please state the full legal name of the registered holder through which the Securities are held.

C. Please provide contact information and an address for notices to the Purchaser.

Address: _____

Telephone: _____

Facsimile: _____

Email: _____

D. Please provide information for the removal of the restrictive legends on the Securities following registration.

Account Number: _____

Share Certificate Prefix: _____

Share Certificate Number: _____

Number of Shares to be registered: _____

II. OWNERSHIP OF COMPANY SECURITIES

A. Please state (i) the number of equity securities of the Company beneficially owned by you as of the date of this Questionnaire (**not including any Securities acquired by you pursuant to the Securities Purchase Agreement**), (ii) the manner of ownership and (iii) whether you share investment and voting power over such securities. Please see the definition of "Beneficial Ownership" set forth above. *If you share investment or voting power with respect to any such securities, please identify with whom such power is shared.*

COMPANY SECURITIES

TYPE OF SECURITY	NUMBER OF SHARES	MANNER OF OWNERSHIP	INVESTMENT POWER (SOLE OR SHARED)	VOTING POWER (SOLE OR SHARED)

B. Other than those securities set forth in Item II.A (**and other than any Securities acquired by you pursuant to the Securities Purchase Agreement**) above, state (i) the number of shares of common stock which you have the right to acquire within sixty (60) days of the date of this Questionnaire (including options, rights or warrants to purchase shares of common stock which are or will become exercisable within sixty (60) days following the date of this Questionnaire), (ii) the exercise date, (iii) the equity plan pursuant to which such awards were granted, as applicable, (iv) the manner of ownership and (v) and whether you share investment and voting power over such shares. Please see the definition of "Beneficial Ownership" set forth above. *If you share investment or voting power with respect to any such securities, please identify with whom such power is shared.*

**OPTIONS, RIGHTS OR WARRANTS
TO PURCHASE SHARES OF COMMON STOCK
(currently exercisable or exercisable
within 60 days following the date of this Questionnaire)**

NUMBER OF SHARES SUBJECT TO OPTIONS, RIGHTS OR WARRANTS	DATE EXERCISABLE	IDENTITY OF PLAN	MANNER OF OWNERSHIP	INVESTMENT POWER (SOLE OR SHARED)	VOTING POWER (SOLE OR SHARED)

C. Please state whether any shares, options, rights or warrants to purchase shares of common stock owned by you **(including any Securities purchased by you pursuant to the Securities Purchase Agreement)**, beneficially or of record, are or are intended to pledged as collateral for a loan or are otherwise pledged. If so, describe the securities involved and the significant terms governing such pledge.

D. Please state whether you have acted or agreed to act together with any other person, persons or entities as a partnership, limited partnership, syndicate or other group for the purpose of acquiring, voting, holding or disposing of shares or options, rights or warrants to purchase shares of common stock **(including any Securities purchased by you pursuant to the Securities Purchase Agreement)**.

1. If so, please identify such other person, persons or entities.

2. If known to you, please state the number of shares of common stock beneficially owned by each such person, persons or entities.

E. Please state whether to your knowledge, any shares of common stock are held or are to be held subject to any voting trust or similar agreement. If known to you, please state the number of shares held or to be held of each such class of security, the duration of the agreement, the names and addresses of the voting trustees and their rights and other powers under the agreement.

F. Please state whether you have an existing short position in any Company securities. If so, please state the date you entered into the short position.

III. Broker-Dealer Status

A. Are you a broker-dealer?

Yes No

B. If "yes" to Section III.A., did you receive your Securities as compensation for investment banking services to the Company?

Yes No

Note: If "no" to Section III.B., the SEC's staff has indicated that you should be identified as an underwriter in the Registration Statement.

C. Are you an affiliate of a broker-dealer?

Yes No

D. If you are an affiliate of a broker-dealer, do you certify that you purchased the Securities in the ordinary course of business, and at the time of the purchase of the Securities to be resold, you had no agreements or understandings, directly or indirectly, with any person to distribute the Securities?

Yes No

Note: If "no" to Section III.D., the SEC's staff has indicated that you should be identified as an underwriter in the Registration Statement.

IV. RELATIONSHIPS WITH THE COMPANY

A. Except as set forth below, neither you nor any of your affiliates, officers, directors or principal equity holders (5% or more) has held any position or office or has had any other material relationship with the Company (or any of its predecessors or affiliates) during the past three (3) years. If applicable, identify your interest in the transaction, the amount of the transaction and the amount of your interest in the transaction

B. If any transaction is reported above, state what direct or indirect remuneration or compensation you received as a direct result of such transaction or transactions.

C. Please describe any contract, arrangement, understanding or relationship (whether or not legally enforceable) between you and any person with respect to any securities of the Company (including, but not limited to, any contract, arrangement, understanding or relationship concerning the transfer or the voting of any of such securities, joint ventures, loan or option arrangements, puts or calls, guarantees or loans, guaranties against loss or the giving or withholding of proxies, consents or authorizations). Please name the persons with whom such contracts, arrangements, understandings and relationships have been entered into and state the material provisions thereof. (Include such information for any of such securities that are pledged or otherwise subject to a contingency, the occurrence of which would give another person the power to direct the voting or disposition of such securities, except that disclosure of standard default and similar provisions contained in loan agreements need not be included.)

V. LEGAL PROCEEDINGS INVOLVING THE COMPANY

Please state whether you or any of your affiliates or associates have a material interest adverse to the Company, or to any partnership, association or other entity in which the Company has an interest, in any legal proceedings. If so, please state the date proceedings were instituted, the parties involved and the court or agency in which proceedings were instituted.

EXHIBIT D

FORM OF OPINION OF COMPANY COUNSEL

1. The Company and each Subsidiary have been duly incorporated or otherwise organized and are validly existing and in good standing or the jurisdictional equivalent under the laws of their respective jurisdictions of incorporation or organization, are duly qualified to do business and are in good standing in each jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such qualification, and have all corporate or organizational power and authority necessary to own or hold their respective properties and to conduct the businesses in which they are engaged, except where the failure to be so qualified or have such power or authority would not, individually or in the aggregate, have a Material Adverse Effect.
2. The Securities have been duly authorized and, when issued and paid for in accordance with the terms of the Transaction Documents, will be duly and validly issued, fully paid and nonassessable and the issuance of the Securities is not subject to any (i) preemptive rights under Delaware General Corporation Law, (ii) preemptive rights under the Certificate of Incorporation or By-Laws, or (iii) similar contractual rights under any Material Contract, except for any such preemptive or contractual rights that have been effectively waived or satisfied.
3. The Company has reserved from its duly authorized capital stock the maximum aggregate number of shares of Common Stock issuable upon exercise in full of all Warrants.
4. All corporate action on the part of the Company necessary for the authorization, execution and delivery of the Transaction Documents by the Company, the authorization, sale, issuance and delivery of the Securities and the performance by the Company of its obligations under the Transaction Documents has been taken. The Transaction Documents have been duly and validly executed and delivered by the Company and each of them constitutes a valid and binding obligation of the Company, enforceable against the Company in accordance with their respective terms.
5. The execution and delivery by the Company of the Transaction Documents, the performance by the Company of its obligations under the Transaction Documents, and the issuance of the Securities, do not and will not, as the case may be, (i) conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to any Material Contract, (ii) result in any violation of the provisions of the Certificate of Incorporation or By-Laws, (iii) result in any violation of any Delaware or federal law known to us to be customarily applicable to the Company or (iv) result in any violation of any judgment, order or regulation of any court or arbitrator or governmental or regulatory authority known to us to be applicable to the Company, except, in the case of clauses (i), (iii) and (iv) above, for such conflict, breach, violation or default that would not, individually or in the aggregate, have a Material Adverse Effect.

6. No consent, approval or authorization of designation, declaration or filing with any federal government authority any self-regulatory organization or approval of the stockholders of the Company is required in connection with the valid execution and delivery of the Transaction Documents, the offer, sale or issuance of the Securities, or the consummation by the Company of any other transaction contemplated by the Transaction Documents except for the Required Approvals.
7. Subject to the accuracy of the Purchasers' representations in Section 3.2 of the Agreement and the information disclosed in the Accredited Investor Questionnaires provided by the Purchasers, the offer, sale and issuance of the Securities in conformity with the terms of the Agreement constitute transactions exempt from the registration requirements of Section 5 of the Securities Act of 1933, as amended.
8. The Company is not, and, immediately after giving effect to the application of the proceeds received by the Company from the offering and sale of the Securities as described in the Agreement, will not be required to register as an "investment company" or an entity "controlled" by an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended.

EXHIBIT E

FORM OF IRREVOCABLE TRANSFER AGENT INSTRUCTIONS

As of March [●], 2023

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
Attn: Cindy Armenia

Ladies and Gentlemen:

Reference is made to that certain Securities Purchase Agreement, dated as of March [●], 2023 (the "*Agreement*"), by and among Ribbon Communications Inc., a Delaware corporation (the "*Company*"), and the purchasers named on the signature pages thereto (collectively, and including permitted transferees, the "*Holder*s"), pursuant to which the Company is issuing to the Holders shares of Preferred Stock of the Company, par value \$0.01 per share (the "*Preferred Stock*"), and warrants (the "*Warrants*") exercisable into shares of common stock of the Company, \$0.0001 per share (the "*Warrant Shares*" and, together with the Preferred Stock and Warrants, the "*Securities*").

This letter shall serve as our irrevocable authorization and direction to you (provided that you are the transfer agent of the Company at such time and the conditions set forth in this letter are satisfied), subject to any stop transfer instructions that we may issue to you from time to time, if any, to issue stock certificates or make book entries representing the Securities.

You acknowledge and agree that so long as you have received (a) written confirmation from the Company's legal counsel that either (1) a registration statement covering resales of the Securities has been declared effective by the Securities and Exchange Commission (the "*Commission*") under the Securities Act of 1933, as amended (the "*Securities Act*"), or (2) the Securities have been sold in conformity with Rule 144 under the Securities Act ("*Rule 144*") or are eligible for sale under Rule 144(b), without volume or manner-of-sale restrictions and (b) if applicable, a copy of such registration statement, then, unless otherwise required by law, within three (3) Trading Days of your receipt of a notice of transfer of Securities, you shall remove any restrictive legends related to the Securities and issue a new, unlegended stock certificate or make a new, unlegended entry for such book-entry Securities and such Securities should not be subject to any stop-transfer restriction; *provided, however*, that if such Securities are not registered for resale under the Securities Act or able to be sold under Rule 144(b), without volume or manner-of-sale restrictions, then such Securities shall bear the following legend, as applicable:

THESE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED (I) IN THE ABSENCE OF (A) AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OR (B) AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS OR BLUE SKY LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY AND ITS TRANSFER AGENT OR (II) UNLESS SOLD PURSUANT TO RULE 144 UNDER THE SECURITIES ACT. NOTWITHSTANDING THE FOREGOING, THE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY THE SECURITIES.

A form of written confirmation from the Company's outside legal counsel that a registration statement covering resales of the Securities has been declared effective by the Commission under the Securities Act is attached hereto as Annex I.

Please be advised that the Holders are relying upon this letter as an inducement to enter into the Agreement and, accordingly, each Holder is a third-party beneficiary to these instructions.

Please execute this letter in the space indicated to acknowledge your agreement to act in accordance with these instructions.

Very truly yours,

RIBBON COMMUNICATIONS INC.

By: _____

Name: _____

Title: _____

Acknowledged and Agreed:

AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC

By: _____
Name: _____
Title: _____

Date: [●]

Annex I
FORM OF NOTICE OF EFFECTIVENESS OF REGISTRATION STATEMENT

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
Attn: Cindy Armenia

Re: Ribbon Communications Inc.

Ladies and Gentlemen:

We are counsel to Ribbon Communications Inc., a Delaware corporation (the "*Company*"), and have represented the Company in connection with that certain Securities Purchase Agreement, dated as of March [●], 2023 (the "*Agreement*"), entered into by and among the Company and the purchasers named therein (collectively, the "*Purchasers*"), pursuant to which the Company issued to the Purchasers shares of the Company's preferred stock, par value \$0.01 per share (the "*Preferred Stock*") and warrants (the "*Warrants*") to purchase shares of the Company's common stock, par value \$0.0001 per share (the "*Warrant Shares*" and, together with the Preferred Stock and Warrants, the "*Securities*"). Pursuant to Section 6 of the Agreement, the Company agreed to register the resale of the Securities, under the Securities Act of 1933, as amended (the "*Securities Act*"). In connection with the Company's obligation under the Agreement, on [●], 2023, the Company filed a Registration Statement on Form S-3 (File No. 333-[●]) (the "*Registration Statement*") with the Securities and Exchange Commission (the "*Commission*") relating to the Securities which names each of the Purchasers as a selling stockholder thereunder.

In connection with the foregoing, we advise you that a member of the Commission's staff has advised us by telephone that the Commission has entered an order declaring the Registration Statement effective under the Securities Act at [●] [a.m.][p.m.] on [●], 2023, and we have no knowledge, after telephonic inquiry of a member of the staff, that any stop order suspending its effectiveness has been issued or that any proceedings for that purpose are pending before, or threatened by, the Commission and the Securities are available for resale under the Securities Act pursuant to the Registration Statement.

This letter shall serve as our standing notice to you that the Securities may be freely transferred by the Purchasers pursuant to the Registration Statement. You need not require further letters from us to effect any unlegended issuance of stock certificates or entry for book-entry shares of Securities to the Purchasers or the transferees of the Purchasers, as the case may be, as contemplated by the Company's Irrevocable Transfer Agent Instructions dated March [●], 2023, provided at the time of such reissuance, the Company has not otherwise notified you that the Registration Statement is unavailable for the resale of the Securities. This letter shall serve as our standing instructions with regard to this matter.

Very truly yours,

TROUTMAN PEPPER HAMILTON SANDERS LLP

By: _____

EXHIBIT F

FORM OF SECRETARY'S CERTIFICATE

The undersigned hereby certifies that he is the duly elected, qualified and acting Secretary of Ribbon Communications Inc., a Delaware corporation (the "Company"), and that as such he is authorized to execute and deliver this certificate in the name and on behalf of the Company and in connection with the Securities Purchase Agreement, dated as of March [●], 2023, by and among the Company and the investors parties thereto (the "Securities Purchase Agreement"), and further certifies in his official capacity, in the name and on behalf of the Company, the items set forth below. Capitalized terms used but not otherwise defined herein shall have the meaning set forth in the Securities Purchase Agreement.

1. Attached hereto as Exhibit A is a true, correct and complete copy of the resolutions duly adopted by each of (a) the Board of Directors of the Company (the "Board"), (b) the Audit Committee of the Board and (c) the Pricing Committee of the Board. Such resolutions have not in any way been amended, modified, revoked or rescinded, have been in full force and effect since their adoption to and including the date hereof and are now in full force and effect.
 2. Attached hereto as Exhibit B-1 is a true, correct and complete copy of the Restated Certificate of Incorporation of the Company, together with any and all amendments thereto currently in effect, and no action has been taken to further amend, modify or repeal such Restated Certificate of Incorporation, the same being in full force and effect in the attached form as of the date hereof.
 3. Attached hereto as Exhibit B-2 are true, correct and complete copies of the certificates of incorporation (or organizational equivalent) of the Subsidiaries, together with any and all amendments thereto currently in effect, and no action has been taken to further amend, modify or repeal such the certificates of incorporation, the same being in full force and effect in the attached forms as of the date hereof.
 4. Attached hereto as Exhibit C-1 is a true, correct and complete copy of the Amended and Restated By-Laws of the Company and any and all amendments thereto currently in effect, and no action has been taken to further amend, modify or repeal such By-Laws, the same being in full force and effect in the attached form as of the date hereof.
 5. Attached hereto as Exhibit C-2 are true, correct and complete copies of the bylaws of the Subsidiaries and any and all amendments thereto currently in effect, and no action has been taken to further amend, modify or repeal such bylaws, the same being in full force and effect in the attached forms as of the date hereof.
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6. The Company and each Subsidiary has taken all required actions, filed all reports, and has paid all required franchise and other taxes, fees and amounts, necessary for the Company and each Subsidiary to be in good standing or the jurisdictional equivalent under the laws of their respective jurisdictions of incorporation or organization and are therefore in good standing under the laws of their respective jurisdictions and each state in which the Company and each Subsidiary is authorized as a foreign corporation or organization to conduct business and duly qualified to conduct business in the State of Delaware and each such other state in which the Company and each Subsidiary is authorized as a foreign corporation or organization to conduct business. To my knowledge, there have been no filings made or proceedings instituted (including, without limitation, liquidation or dissolution proceedings), agreements made or other actions taken which contradict the good standing and/or qualification of the Company and each Subsidiary in their respective jurisdictions of incorporation or organization or any such other state in which the Company and each Subsidiary is authorized as a foreign corporation or organization to conduct business.
7. Each person listed below has been duly elected or appointed to the position(s) indicated opposite his name and is duly authorized to sign the Securities Purchase Agreement and each of the Transaction Documents on behalf of the Company, and the signature appearing opposite such person's name below is such person's genuine signature.

<u>Name</u>	<u>Position</u>	<u>Signature</u>
Bruce McClelland	President and Chief Executive Officer	_____
Patrick Macken	Executive Vice President, Chief Legal Officer and Corporate Secretary	_____
Miguel Lopez	Executive Vice President, Chief Financial Officer	_____

IN WITNESS WHEREOF, the undersigned has hereunto set his hand as of this ____ day of March, 2023.

Secretary

I, Bruce McClelland, President and Chief Executive Officer, hereby certify that Patrick Macken is the duly elected, qualified and acting Secretary of the Company and that the signature set forth above is his true signature.

Bruce McClelland
President and Chief Executive Officer

Resolutions

Restated Certificate of Incorporation

Certificates of Incorporation of Subsidiaries

Amended and Restated By-Laws

Bylaws of Subsidiaries

EXHIBIT G

FORM OF OFFICER'S CERTIFICATE

The undersigned, the President and Chief Executive Officer of Ribbon Communications Inc., a Delaware corporation (the "*Company*"), pursuant to Section 5.1(i) of the Securities Purchase Agreement, dated as of March [●], 2023, by and among the Company and the investors signatory thereto (the "*Securities Purchase Agreement*"), hereby represents, warrants and certifies as follows (capitalized terms used but not otherwise defined herein shall have the meaning set forth in the Securities Purchase Agreement):

1. The representations and warranties of the Company contained in the Securities Purchase Agreement are true and correct in all material respects (except for those representations and warranties which are qualified as to materiality, in which case, such representations and warranties shall be true and correct in all respects) as of the date when made and as of the date hereof, as though made on and as of such date, except for such representations and warranties that speak as of a specific date.
2. The Company has performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by it at or prior to the date hereof.
3. The Company is not in default, and no event of default has occurred, under the Credit Agreement.
4. Together with the net proceeds to be received pursuant to the offer and sale of Securities pursuant to the Securities Purchase Agreement, the Company will have sufficient funds to paydown borrowings under the Credit Agreement in amount necessary to satisfy all conditions precedents to the Sixth Amendment Operative Date and the Company will use such proceeds and funds to paydown such borrowings.

IN WITNESS WHEREOF, the undersigned has executed this certificate this [●] day of March, 2023.

Bruce McClelland
President and Chief Executive Officer

EXHIBIT H

WIRE INSTRUCTIONS

Please use the following information for all wire transfers to:

Ribbon Communications Operating Company, Inc.

6500 Chase Oaks Blvd.
Suite 100
Plano, TX 75023

Remember to reference invoice number and/or other instructions in your transfer. If you have any questions, please contact:

Email: office-treasurer4@rbbn.com

Beneficiary Bank:	Citizens Bank, NA
Beneficiary Bank Address:	1 Citizens Drive Riverside RI, 02915
ABA Routing:	211070175
Domestic Wire:	011500120
SWIFT Code (International wires only):	CTZIUS33
Account:	1401319189
Account Name:	Ribbon Communications Operating Co Inc
Currency:	USD

EXHIBIT I
FORM OF LOCK-UP AGREEMENT

[To be attached.]

EXHIBIT J

LIST OF EXECUTIVE OFFICERS, DIRECTORS AND OTHER STOCKHOLDERS
EXECUTING LOCK-UP AGREEMENTS

Executive Officers

Bruce McClelland
Miguel Lopez
Sam Bucci
Patrick Macken
Dan Redington
Petrena Ferguson

Non-Employee Directors

R. Stewart Ewing, Jr.
Richard W. Smith
Mariano S. de Beer
Shaul Shani
Tanya Tamone
Bruns H. Grayson
Beatriz V. Infante
Scott Mair

Other Stockholders

JPMC Heritage Parent LLC
Heritage PE (OEP) III, L.P.
Swarth Investments Ltd.

EXHIBIT J

FORM OF PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of our Preferred Stock, Common Stock, interests in shares of our Common Stock or Warrants received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of Preferred Stock, Common Stock, interests in shares of Common Stock or Warrants on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted by applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of our Preferred Stock, Common Stock or Warrants owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of our Preferred Stock, Common Stock or Warrants, from time to time, under this prospectus, or under an amendment or supplement to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of Preferred Stock, Common Stock or Warrants in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our Preferred Stock, Warrants, Common Stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the Preferred Stock, Common Stock or Warrants in the course of hedging the positions they assume. The selling stockholders may also sell shares of our Preferred Stock, Common Stock or Warrants short and deliver these securities to close out their short positions, or loan or pledge the Preferred Stock, Common Stock or Warrants to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (supplemented or amended as necessary to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of our Preferred Stock, Common Stock or Warrants offered by them, as applicable, will be the purchase price of the Preferred Stock, Common Stock or Warrants, as applicable, less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of Preferred Stock, Common Stock or Warrants to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of our Preferred Stock, Warrants, Common Stock or interests therein may be deemed to be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act.

To the extent required, the shares of our Preferred Stock, Common Stock or Warrants to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, our Preferred Stock, Common Stock or Warrants may be sold in these jurisdictions only through registered or licensed brokers or dealers.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their Affiliates. In addition, to the extent applicable we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying any prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to use our reasonable best efforts to keep the registration statement of which this prospectus constitutes a part continuously effective until the earlier of (1) three years after the registration statement has been declared effective and (2) the date on which all of the shares of our Preferred Stock Common Stock or Warrants covered by the registration statement have been sold under the registration statement in accordance with the plan and method of distribution disclosed in this prospectus, or otherwise.

Schedule 3.1(a)

Ribbon Communication Operating Company, Inc.

Ribbon Communications B.V.

Ribbon Networks B.V.

Ribbon Communication International Ltd.

Ribbon Israel Limited

ECI Telecom Ltd

Ribbon Communications Federal, Inc.

Schedule 3.1(g)

Capitalization as of December 31, 2022

1. Common Stock, \$0.0001 par value per share: 240,000,000 shares authorized and 168,324,995 shares issued and outstanding
2. Preferred Stock, \$0.01 par value per share: 10,000,000 shares authorized and no shares issued and outstanding
3. 13,496,501 shares of Common Stock reserved for issuance under outstanding equity awards

Preemptive Rights

1. First Amended and Restated Stockholders Agreement, dated as of March 3, 2020, by and among the Company and the stockholders of the Company that are party thereto.
-

Schedule 3.1(x)

Registration Rights

First Amended and Restated Investors' Rights Agreement, dated as of March 3, 2020, by and among the Company and the stockholders of the Company parties thereto.

Second Amended and Restated Registration Rights Agreement, dated as of August 12, 2022, by and among the Company and the stockholders of the Company parties thereto.

CERTIFICATE OF DESIGNATION, PREFERENCES AND RIGHTS

OF

SERIES A PREFERRED STOCK OF

RIBBON COMMUNICATIONS INC.

On March [●], 2023, the Board of Directors of Ribbon Communications Inc., a Delaware corporation (the “Company”), adopted the following resolution designating and creating, out of the authorized and unissued shares of preferred stock, par value \$0.01 per share, of the Company (the “Preferred Stock”), [●] authorized shares of a series of Preferred Stock titled the “Series A Preferred Stock”:

RESOLVED that, pursuant to the Certificate of Incorporation, the By-Laws and applicable law, a series of Preferred Stock titled the “Series A Preferred Stock,” and having a par value of \$0.01 per share and an initial number of authorized shares equal to [●], is hereby designated and created out of the authorized and unissued shares of Preferred Stock, which series has the rights, designations, preferences and other provisions set forth below.

SECTION 1. Classification and Number of Shares. The shares of such series of Preferred Stock shall be classified as “Series A Preferred Stock” (the “Series A Preferred Stock”). The number of authorized shares constituting the Series A Preferred Stock shall be [●]. That number from time to time may be increased (but not in excess of the total number of authorized shares of preferred stock, less all shares of any other series of preferred stock authorized at the time of such increase) or decreased (but not below the number of shares of Series A Preferred Stock then outstanding) by (a) further resolution duly adopted by the Board and (b) the filing of a certificate of amendment to this Certificate of Designation, signed by an officer of the Company, with the Secretary of State of the State of Delaware, and (c) without the vote or consent of the holders of the Series A Preferred Stock, except as otherwise required by this Certificate of Designations. The Company shall not have the authority to issue fractional shares of Series A Preferred Stock.

SECTION 2. Ranking. The Series A Preferred Stock will rank, with respect to dividend rights and rights upon Liquidation Events:

- (a) senior to the Common Stock and each other class or series of Capital Stock (including without limitation, any other series of preferred stock) of the Company now existing or hereafter authorized, classified or reclassified, contingent equity liabilities and future equity distributions of the Company (such Capital Stock, “Junior Stock”); and
- (b) on a parity basis with each other class or series of Capital Stock of the Company hereafter authorized, classified or reclassified, the terms of which expressly provide that such class or series ranks on a parity basis with the Series A Preferred Stock as to dividend rights and rights on the distribution of assets on any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the Company (such Capital Stock, “Parity Stock”).

SECTION 3. Definitions. As used herein with respect to Series A Preferred Stock:

“Accrued Dividends” means, as of any date, with respect to any shares of Series A Preferred Stock, all Preferred Dividends that have accrued on such shares pursuant to Section 4, whether or not declared, but that have not, as of such date, been paid in cash.

“Affiliate” means, with respect to a specified Person, another Person that directly, or indirectly through one or more intermediaries, controls or is controlled by or is under common control with the Person specified; provided, however, (a) that the Company and its Subsidiaries shall not be deemed to be Affiliates of the Investors or any of their Affiliates and (b) “portfolio companies” (as such term is customarily used in the private equity industry) in which any Person or any of its Affiliates has an investment shall not be deemed an Affiliate of such Person unless (x) such Person is the beneficial owner, directly or indirectly, of more than fifty percent (50%) of the Voting Stock of such portfolio company or such portfolio company is the beneficial owner, directly or indirectly, of more than fifty percent (50%) of the Voting Stock of such person, (y) such portfolio company has been directed by such Person or any of its Affiliates in carrying out any act prohibited by this Certificate of Designations, or (z) such portfolio company is a member of a group (as such term is defined in Section 13(d)(3) of the Exchange Act) with such Person or any of its Affiliates with respect to any securities of the Company. For this purpose, “control” (including, with its correlative meanings, “controlled” and “controlling”) shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ability to exercise voting power, by contract or otherwise.

“Board” means the Board of Directors of the Company or any committee thereof duly authorized to act on behalf of such Board of Directors for the purposes in question.

“Business Day” means any weekday that is not a day on which banking institutions in New York, New York are authorized or required by law, regulation or executive order to be closed.

“By-Laws” means the Amended and Restated By-Laws of the Company, as may be amended from time to time.

“Capital Stock” means, with respect to any Person, any and all shares of, interests in, rights to purchase, warrants to purchase, options for, participations in or other equivalents of or interests in (however designated) stock issued by such Person.

“Certificate of Designations” means this Certificate of Designation, Preferences and Rights, as may be amended from time to time.

“Certificate of Incorporation” means the Restated Certificate of Incorporation of the Company, as may be amended from time to time.

“Change of Control” means (a) at any time, any “person” or “group” (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act), excluding (x) any employee benefit plan of such person or its Subsidiaries, and any Person acting in its capacity as trustee, agent or other fiduciary or administrator of any such plan and (y) the Permitted Investors (as defined in the Credit Agreement), shall become, or obtain rights (whether by means or warrants, options or otherwise) to become, the “beneficial owner” (as defined in Rules 13(d)-3 and 13(d) 5 under the Exchange Act), directly or indirectly, of 40% or more of the voting power for the appointment of directors of the Company (determined on a fully diluted basis); (b) during any period of twelve (12) consecutive months commencing on March 3, 2020, a majority of the members of the board of directors of the Company cease to be composed of individuals (disregarding individuals who cease to serve due to death or disability) (i) who were members of that board on the first day of such period, (ii) whose appointment to that board was approved by individuals referred to in clause (i) above constituting at the time of such appointment at least a majority of that board or (iii) whose appointment to that board was approved by individuals referred to in clauses (i) or (ii) above or this clause (iii) constituting at the time of such appointment at least a majority of that board (in each case, such approval either by a specific vote or by approval of the Company’s proxy or information statement in which such member was named as a nominee for election as a director); (c) at any time, the Company shall cease to own and control, of record and beneficially, directly or indirectly, 100% of each class of outstanding Capital Stock of each Loan Party (as defined in the Credit Agreement) (free and clear of all Liens (other than Liens created by the Security Documents and Liens permitted by Section 7.3 of the Credit Agreement); (d) Ribbon Communications Operating Company, Inc. shall cease to be a wholly-owned direct Subsidiary of the Company; or (e) 100% of the Capital Stock of any Loan Party other than the Company shall cease to be owned directly by another Loan Party.

“Change of Control Effective Date” has the meaning set forth in Section 7(c).

“Change of Control Purchase Date” means, with respect to each share of Series A Preferred Stock, the date on which the Company makes the payment in full of the Change of Control Purchase Price for such share to the Holder thereof.

“**Change of Control Purchase Price**” means, per share of Series A Preferred Stock (expressed as percentages of the Liquidation Preference set forth below), if redeemed during the 12-month period beginning on March [●] of the years indicated below:

Year	Change of Control Purchase Price
2024	103.000%
2025 and thereafter	102.000%

“**Change of Control Redemption**” has the meaning set forth in [Section 7\(a\)](#).

“**close of business**” means 5:00 p.m. (New York City time).

“**Common Stock**” means the common stock, par value \$0.0001 per share, of the Company.

“**Common Stock Dividend Record Date**” has the meaning set forth in [Section 4\(d\)](#).

“**Company**” has the meaning set forth in the recitals above.

“**Credit Agreement**” means that certain credit agreement, dated March 3, 2020, by and among the Company, Ribbon Communications Operating Company, Inc., a Delaware corporation, the guarantors party thereto, the lenders party thereto, and Citizens Bank, N.A., as administrative agent for the lenders thereunder, as may be amended, amended and restated, supplemented or otherwise modified from time to time.

“**Disqualified Stock**” means, with respect to any Person, any Capital Stock of such Person which, by its terms, or by the terms of any security into which it is convertible or for which it is putable or exchangeable, or upon the happening of any event, matures or is mandatorily redeemable (other than solely as a result of a change of control, asset sale, casualty, eminent domain or condemnation event) for cash or in exchange for Indebtedness pursuant to a sinking fund obligation or otherwise, or is or may be (in accordance with its terms) redeemable or repurchasable for cash or in exchange of Indebtedness at the option of the holder thereof (other than solely as a result of a change of control, asset sale, casualty, eminent domain or condemnation event), in whole or in part, in each case on or prior to the date 91 days after the date the Series A Preferred Stock is no longer outstanding (provided that only the portion of the Capital Stock that so mature or are mandatorily redeemable, are so convertible or exchangeable or are so redeemable at the option of the holder thereof prior to such date shall be deemed Disqualified Stock).

Notwithstanding the foregoing: (x) Capital Stock that is issued to any plan for the benefit of employees of the Company or its Subsidiaries or by any such plan to such employees shall not constitute Disqualified Stock solely because it may be required to be repurchased by the Company or its Subsidiaries in order to satisfy applicable statutory or regulatory obligations; (y) any Capital Stock held by any future, current or former officer, director, employee, consultant or independent contractor (or their respective controlled investment affiliates or immediate family members) of the Company, any of its Subsidiaries or any parent entity or any other entity in which the Company or a Subsidiary has an investment and is designated in good faith as an “[affiliate](#)” by the Board shall not constitute Disqualified Stock solely because it may be required to be repurchased by the Company or its Subsidiaries pursuant to any equityholders’ agreement, management equity plan, equity option plan or any other management or employee benefit plan or agreement or in order to satisfy applicable statutory or regulatory obligations; and (z) any Capital Stock that would constitute Disqualified Stock solely because the holders thereof have the right to require the Company or its Subsidiaries to repurchase such Capital Stock upon the occurrence of a “[change of control](#)” shall not constitute Disqualified Stock if the terms of such Capital Stock (and all such securities into which it is convertible or for which it is ratable or exchangeable) provide that the Company or its Subsidiaries, as applicable, may not repurchase or redeem any such Capital Stock (and all such securities into which it is convertible or for which it is ratable or exchangeable) pursuant to such provision prior to compliance by the Company with [Section 7](#) hereof.

“**Dividend Record Date**” has the meaning set forth in [Section 4\(d\)](#).

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

“**Face Value**” means, as of the Original Issuance Date, for each share of Series A Preferred Stock, a dollar amount equal to \$1,000.00.

“GAAP” means generally accepted accounting principles in the United States of America set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements of the Financial Accounting Standards Board or in such other statements by such other entity as have been generally accepted by the accounting professionals, which are in effect from time to time.

“Holder” means a Person in whose name any Series A Preferred Stock is registered in the Register.

“Indebtedness” means, of any Person at any date, without duplication, (a) all indebtedness of such Person for borrowed money and any other Junior Debt Incurrence Event (as defined in the Credit Agreement), (b) all Deferred Payment Obligations (as defined in the Credit Agreement) and other obligations of such Person for the deferred purchase price of property or services (other than current trade payables incurred in the ordinary course of such Person’s business), (c) all obligations of such Person evidenced by notes, bonds, debentures or other similar instruments, (d) all indebtedness created or arising under any conditional sale or other title retention agreement with respect to property acquired by such Person (even though the rights and remedies of the seller or lender under such agreement in the event of default are limited to repossession or sale of such property), (e) all Capital Lease Obligations (as defined in the Credit Agreement) and all Synthetic Lease Obligations (as defined in the Credit Agreement) of such Person, (f) all obligations of such Person, whether or not matured, as an account party or applicant under or in respect of acceptances, letters of credit, surety bonds or similar arrangements, (g) all obligations of such Person to purchase, redeem, retire, defease or otherwise make any payment in respect of any Capital Stock in such Person or any other Person (including, without limitation, Disqualified Stock), or any warrant, right or option to acquire such Capital Stock, valued, in the case of a redeemable preferred interest, at the greater of its voluntary or involuntary liquidation preference plus accrued and unpaid dividends, (h) all Guarantee Obligations (as defined in the Credit Agreement) of such Person in respect of obligations of the kind referred to in clauses (a) through (g) above, (i) all obligations of the kind referred to in clauses (a) through (h) above secured by (or for which the holder of such obligation has an existing right, contingent or otherwise, to be secured by) any Lien on property (including accounts and contract rights) owned by such Person, whether or not such Person has assumed or become liable for the payment of such obligation, but limited to the value of the property owned by such Person securing such obligation if such obligations is not otherwise recourse to such Person, and (j) the net obligations of such Person in respect of Swap Agreements (as defined in the Credit Agreement). The Indebtedness of any Person shall include the Indebtedness of any other entity (including any partnership in which such Person is a general partner) to the extent such Person is liable therefor as a result of such Person’s ownership interest in or other relationship with such entity, except to the extent the terms of such Indebtedness expressly provide that such Person is not liable therefor.

“Indebtedness Agreement” means any agreement, document or instrument governing or evidencing any Indebtedness of the Company or its Subsidiaries.

“Internal Revenue Code” means the Internal Revenue Code of 1986, as amended.

“Investors” means such funds or accounts managed or sub-managed by the entities set forth on Schedule I hereto.

“Investors Parties” means Investors and their Affiliates.

“Junior Stock” has the meaning set forth in Section 2(a).

“Lien” means, any mortgage, deed of trust, pledge, hypothecation, collateral assignment, deposit arrangement, encumbrance, lien (statutory or other), charge or other security interest or any preference, priority or other security agreement or preferential arrangement of any kind or nature whatsoever (including any conditional sale or other title retention agreement and any capital lease having substantially the same economic effect as any of the foregoing).

“Liquidation Event” means any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the Company.

“Liquidation Preference” means, with respect to any share of Series A Preferred Stock, as of any date, the Face Value increased by Accrued Dividends with respect to such share.

“Maturity Date” means September [●], 2025.

“NASDAQ” means The Nasdaq Global Select Market (or its successor).

“Notice of Redemption” has the meaning set forth in Section 6(f)(i).

“Notice of Trigger Event” has the meaning set forth in Section 6(f)(ii).

“Original Issuance Date” means the date of closing pursuant to the Securities Purchase Agreement.

“Participating Dividends” has the meaning set forth in Section 4(a).

“Person” means any individual, corporation, estate, partnership, joint venture, association, joint-stock company, limited liability company, trust, unincorporated organization or any other entity.

“PIK Dividends” has the meaning set forth in Section 4(b)(i).

“Preferential Dividend Base Amount” means, as to shares of Series A Preferred Stock, initially the Face Value per share, subject to adjustment as set forth in Section 4(b), including, for the avoidance of doubt, pursuant to any PIK Dividends.

“Preferential Dividend Payment Date” means March 31, June 30, September 30 and December 31 of each year, commencing on June 30, 2023; provided that if any such Preferential Dividend Payment Date is not a Business Day, then the applicable Preferred Dividend shall be payable on the next Business Day immediately following such Preferential Dividend Payment Date, without any interest.

“Preferential Dividend Period” means, in respect of any share of Series A Preferred Stock, the period from (and including) the Original Issuance Date of such share to (but excluding) the next Preferential Dividend Payment Date and, subsequently, in each case the period from (and including) any Preferential Dividend Payment Date to (but excluding) the next Preferential Dividend Payment Date.

“Preferential Dividend Rate” means the percentages set forth below.

Prior to the first anniversary of the Original Issuance Date	9.25% per annum
On or after the first anniversary of the Original Issuance Date but prior to the second anniversary of the Original Issuance Date	9.75% per annum
On or after the second anniversary of the Original Issuance Date and thereafter	12.00% per annum

“Preferential Dividend Record Date” means, with respect to any Preferential Dividend Payment Date, the March 15, June 15, September 15 and December 15, as the case may be, immediately preceding the relevant Preferential Dividend Payment Date. These Preferential Dividend Record Dates shall apply regardless of whether a particular Preferential Dividend Record Date is a Business Day.

“Preferential Dividend Record Holder” means, with respect to any Preferential Dividend Payment Date, a Holder of record of the shares of Series A Preferred Stock as such holder appears on the stock register of the Company at the close of business on the related Preferential Dividend Record Date.

“Preferred Stock” has the meaning set forth in the Recitals.

“Record Date” means, with respect to any dividend, distribution or other transaction or event in which the holders of the Common Stock have the right to receive any cash, securities or other property or in which the Common Stock is exchanged for or converted into any combination of cash, securities or other property, the date fixed for determination of holders of the Common Stock entitled to receive such cash, securities or other property (whether such date is fixed by the Board or by statute, contract or otherwise).

“Redemption Date” mean a date that is fixed for redemption of the Series A Preferred Stock by the Company in accordance with Section 6.

“Register” means the securities register maintained in respect of the Preferred Stock by the Company, or, to the extent the Company has engaged a transfer agent, such transfer agent.

“Satisfaction of Indebtedness Obligations” means, in connection with any Change of Control, (i) the payment in full in cash of all principal, interest, fees and all other amounts due or payable in respect of any Indebtedness of the Company or any of its Subsidiaries (including in respect of any penalty or premium) that is required to be prepaid, repaid, redeemed, repurchased or otherwise retired, (ii) the cancellation or termination, or if permitted by the terms of such Indebtedness, cash collateralization, of any letters of credit or letters of guaranty that are required to be cancelled or terminated or cash collateralized, (iii) compliance with any requirement to effect an offer to purchase any bonds, debentures, notes or other instruments of Indebtedness (and the purchase of any such instruments tendered in such offer and the payment in full of any other amounts due or payable in connection with such purchase) and (iv) the termination of any lending commitments required to be terminated, in each case of clauses (i) – (iv), as a result of or in connection with such Change of Control or in order for the Series A Preferred Stock not to constitute or be deemed as “Indebtedness”, “Disqualified Stock”, “disqualified capital stock”, “disqualified equity interests”, or similar instruments, however denominated, under the terms of any Indebtedness Agreement.

“Securities Purchase Agreement” means that certain Securities Purchase Agreement between the Company and the Investors dated as of March [●], 2023, as it may be amended, supplemented or otherwise modified from time to time, with respect to certain terms and conditions concerning, among other things, the rights of and restrictions on the Investors Parties.

“Series A Preferred Stock” has the meaning set forth in Section 1.

“Stockholder Voting Power” means the aggregate number of votes which may be cast by holders of the Company’s Voting Stock, with the calculation of such aggregate number of votes being conclusively made for all purposes under this Certificate of Designations and the Certificate of Incorporation, absent manifest error, by the Company based on the Company’s review of the Register, the Company’s other books and records, each Holder’s public filings pursuant to Section 13 or Section 16 of the Exchange Act and any other written evidence satisfactory to the Company regarding any Holder’s beneficial ownership of any securities of the Company.

“Subsidiary” means as to any Person, a corporation, company, partnership, limited liability company or other entity of which shares, shares of stock or other ownership interests having ordinary voting power (other than stock or such other ownership interests having such power only by reason of the happening of a contingency) to elect a majority of the board of directors or other managers of such corporation, partnership or other entity are at the time owned, or the management of which is otherwise controlled, directly or indirectly through one or more intermediaries, or both, by such Person. Unless otherwise qualified, all references to a “Subsidiary” or to “Subsidiaries” (a) shall refer to a Subsidiary or Subsidiaries of the Company and (b) will not include any unrestricted Subsidiary.

“Super Majority Holders” means Holders representing at least sixty-six and two-thirds percent (66 2/3%) of the then-issued and outstanding shares of Series A Preferred Stock.

“Tax” or “Taxes” means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

“Transfer Agent” means the Person acting as Transfer Agent, Registrar and paying agent for the Series A Preferred Stock and its successors and assigns, which may be the Company or one of its Affiliates. The initial Transfer Agent shall be American Stock Transfer & Trust Company, LLC.

“Trigger Event” means:

- (a) failure by the Company to make any payment of dividends or any other amounts (including, without limitation, the Liquidation Preference, the redemption prices pursuant to Section 6 or the repurchase price pursuant to Section 7(a)) as required hereunder when the same becomes due and payable (whether at maturity or otherwise);
- (b) the Company or any of its Subsidiaries fail to comply with any of the covenants hereunder and such failure continues for thirty (30) continuous days;
- (c) the Company contests in writing the validity or enforceability of this Certificate of Designations or any provision herein and fails to withdraw such contestation within ten (10) days thereafter;
- (d) the Company or any of its Subsidiaries commences or is subject to a case or proceeding pursuant to or within the meaning of any bankruptcy or insolvency law; or
- (e) a court of competent jurisdiction enters an order or decree (that remains unstayed and in effect for sixty (60) days) that would result in fines or damages against the Company or any of its Subsidiaries in an amount exceeding \$15,000,000.

“Voting Stock” means (a) with respect to the Company, the Common Stock and any other Capital Stock of the Company having the right to vote generally in any election of directors of the Board and (b) with respect to any other Person, all Capital Stock of such Person having the right to vote generally in any election of directors of the board of directors of such Person or other similar governing body.

SECTION 4. Dividends.

Holders shall be entitled to receive dividends of the type and in the amount determined as set forth in this Section 4.

- (a) [Reserved.]
- (b) Preferential Dividends.
 - (i) Subject to the rights of holders of any class or series of Capital Stock senior to the Series A Preferred Stock, a preferential cumulative return on the Preferential Dividend Base Amount of the Series A Preferred Stock (the “Preferential Dividends”) shall accumulate daily in arrears, whether or not earned or declared by the Board, at the Preferential Dividend Rate. Preferential Dividends shall be payable in cash (other than a PIK Dividend, as described below) quarterly on each Preferential Dividend Payment Date at such Preferential Dividend Rate, and shall accumulate from the most recent Preferential Dividend Payment Date or, prior to the first Preferential Dividend Payment Date, from the Original Issuance Date, whether or not in any Preferential Dividend Periods there have been funds legally available. Preferential Dividends shall be payable in cash only when, as and if declared by the Board on the relevant Preferential Dividend Payment Date to Preferential Dividend Record Holders on the immediately preceding Preferential Dividend Record Date, to the extent that such Series A Preferred Stock remains outstanding on the applicable Preferential Dividend Payment Date; provided that the Preferential Dividend Record Date for any such Preferential Dividends shall not precede the date on which such dividend was so declared; provided, further that the Board may declare an amount to be paid in cash in respect of a part of, rather than all, of the Preferential Dividend payable on such Preferential Dividend Payment Date. The amount of Preferential Dividends payable on each share of Series A Preferred Stock for each Preferential Dividend Period shall be computed based upon the actual number of days elapsed during such period over a 360-day year (consisting of twelve 30-day months). The Company shall use commercially reasonable efforts to provide written notice to the holders of Series A Preferred Stock that it intends to pay a Preferential Dividend in cash at least five (5) days prior to the applicable Preferential Dividend Payment Date. In the event that the Company does not declare and pay the full amount of Preferential Dividends in cash as described above, the Preferential Dividend Base Amount of the Series A Preferred Stock shall automatically increase at the Preferential Dividend Rate, on a compounding basis, on such Preferential Dividend Payment Date with respect to any Preferential Dividend Base Amount for which Preferential Dividends remain unpaid (the “PIK Dividends”) and, together with the Preferential Dividends, the “Preferred Dividends”). Thereafter, the Preferential Dividends shall accrue and be payable on such increased Preferential Dividend Base Amount. Preferred Dividends shall be paid pro rata (based on the number of shares of Series A Preferred Stock held by the Holder) to the Holders of shares of Series A Preferred Stock entitled thereto (for the avoidance of doubt, taking into account any differences in Issuance Date).

- (ii) Preferred Dividends shall be payable, to the extent that such Series A Preferred Stock remains outstanding on the applicable Preferential Dividend Payment Date, (i) from the Original Issue Date until the first anniversary of the Original Issuance Date, in PIK Dividends, (ii) on or after the first anniversary of the Original Issuance Date but prior to the second anniversary of the Original Issuance Date, in PIK Dividends or in cash, at the Company's option, and (iii) after the second anniversary of the Original Issuance Date, in cash. The amount of Preferred Dividends payable on each share of Series A Preferred Stock for each Preferential Dividend Period shall be computed based upon the actual number of days elapsed during such period over a 360-day year (consisting of twelve 30-day months). The Company shall use commercially reasonable efforts to provide written notice to the holders of Series A Preferred Stock that it intends to pay a Preferred Dividend in cash at least five (5) days prior to the applicable Preferential Dividend Payment Date.
- (iii) Notwithstanding anything to the contrary contained herein, any PIK Dividend (1) shall be treated as an accrued but unpaid dividend of the Series A Preferred Stock that compounds, whether or not declared by the Board, and (2) shall not be declared as a dividend by the Board (A) unless and until such PIK Dividend is paid to the Holders of the Series A Preferred Stock immediately in cash (it being understood that no dividends may be declared and paid in securities or otherwise "in kind") or (B) in anticipation of a redemption of the Series A Preferred Stock or any liquidation of the Company.
- (c) Priority of Dividends. So long as any shares of Series A Preferred Stock remain outstanding, unless full Preferred Dividends on all outstanding shares of Series A Preferred Stock that have accrued from and including the Original Issuance Date have been declared and paid in cash have been or contemporaneously are declared and a sum sufficient for the payment of those Preferred Dividends has been or is set aside for the benefit of the Holders, the Company may not declare any dividend on, or make any distributions relating to, Junior Stock or Parity Stock, or redeem, purchase, acquire (either directly or through any Subsidiary) or make a liquidation payment relating to, any Junior Stock or Parity Stock, other than:
 - (i) purchases, redemptions or other acquisitions of shares of Junior Stock in accordance with any employment contract, benefit plan or other similar arrangement with or for the benefit of current or former employees, officers, directors or consultants;
 - (ii) purchases of fractional interests in shares of Parity Stock or Junior Stock pursuant to the conversion or exchange provisions of such Parity Stock or Junior Stock or the security being converted or exchanged;
 - (iii) payment of any dividends or distributions in respect of Junior Stock where the dividend or distribution is in the form of the same stock or rights to purchase the same stock as that on which the dividend is being paid;
 - (iv) any dividend "in kind" in connection with the implementation of a shareholders' rights or similar plan, or the redemption or repurchase of any rights under any such plan; or
 - (v) as a result of an exchange or conversion of any class or series of Parity Stock or Junior Stock for any other class or series of Parity Stock (in the case of Parity Stock) or Junior Stock (in the case of Parity Stock or Junior Stock).

Notwithstanding the foregoing, for so long as any shares of Series A Preferred Stock remain outstanding, if Preferential Dividends are not declared and paid in full upon the shares of Series A Preferred Stock and any Parity Stock, all Preferential Dividends declared upon shares of Series A Preferred Stock and any Parity Stock will be declared on a proportional basis so that the amount of Preferential Dividends declared per share will bear to each other the same ratio that all accrued and unpaid Preferential Dividends as of the end of the most recent Preferential Dividend Period per share of Series A Preferred Stock and accrued and unpaid Preferential Dividends as of the end of the most recent dividend period per share of any Parity Stock bear to each other.

- (d) **Record Date.** Each Participating Dividend shall be paid pro rata to the Holders of shares of Series A Preferred Stock entitled thereto. Each Participating Dividend shall be payable to the Holders of Series A Preferred Stock as they appear on the Register at the close of business on the record date designated by the Board for such dividends (each such date, a "**Dividend Record Date**") which shall be the same day as the record date for the payment of dividends to the holders of shares of Common Stock (the "**Common Stock Dividend Record Date**").
- (e) **Other Dividends and Repurchases.** So long as any shares of Series A Preferred Stock remain outstanding, the Company may not declare any dividend on, or make any distributions relating to, Junior Stock, or redeem, purchase, acquire (either directly or through any Subsidiary) or make a liquidation payment relating to, any Junior Stock, in each case other than in the form of Junior Stock.

SECTION 5. **Liquidation Rights.**

- (a) **Liquidation.** In the event of any Liquidation Event, the Holders shall be entitled, out of assets legally available therefor, before any distribution or payment out of the assets of the Company may be made to or set aside for the holders of any Junior Stock, and subject to the rights of the Company's existing and future creditors, to receive in full a liquidating distribution in cash and in the amount per share of Series A Preferred Stock equal to the Liquidation Preference.
- (b) **Partial Payment.** If in connection with any distribution described in **Section 5(a)** above, the assets of the Company or proceeds therefrom are not sufficient to pay in full the aggregate liquidating distributions required to be paid pursuant to **Section 5(a)** above to all Holders, the amounts distributed to the Holders shall be paid pro rata in accordance with the respective aggregate liquidating distributions to which they would otherwise be entitled if all amounts payable thereon were paid in full.

SECTION 6. **Redemption.**

- (a) **Optional Redemption.** Shares of Series A Preferred Stock may be redeemable by the Company in accordance with this **Section 6(a)**.
- (i) The Company may not redeem any shares of Series A Preferred Stock prior to first anniversary of the Original Issuance Date. At any time or from time to time on or after the first anniversary of the Original Issuance Date, the Company, at its option, may redeem any shares of Series A Preferred Stock at the redemption prices per share of Series A Preferred Stock (expressed as percentages of the Liquidation Preference set forth below) if redeemed during the 12-month period beginning on March [●] of the years indicated below:

Year	Redemption Price
2024	103.000%
2025 and thereafter	102.000%

- (b) **Mandatory Redemption.** The Company will, on the Maturity Date, redeem for cash (the "**Mandatory Redemption**") from each Holder of Series A Preferred Stock, all outstanding shares of Series A Preferred Stock held by such Holder at a purchase price per share of Series A Preferred Stock equal to 102.000% multiplied by the Liquidation Preference (the "**Mandatory Redemption Price**"); provided, however, the Company shall only be required to pay the Mandatory Redemption Price to the extent such purchase can be made out of funds legally available therefor.

- (c) Class Protective Provisions. Upon the occurrence of a Trigger Event, each Holder of outstanding shares of Series A Preferred Stock may, at such Holder's election, require the Company to redeem for cash (the "Trigger Event Redemption") all, but not less than all, of such Holder's outstanding shares of Series A Preferred Stock at a purchase price per share of Series A Preferred Stock equal to 102.000% multiplied by the Liquidation Preference (the "Protective Redemption Price"); provided, however, the Company shall only be required to pay the Protective Redemption Price to the extent such purchase can be made out of funds legally available therefor.
- (d) Redemption Date. If the Redemption Date falls after a Record Date for the payment of dividends declared on the Series A Preferred Stock before the open of business on the Dividend Payment Date corresponding to that Record Date, holders of the shares of Series A Preferred Stock at the close of business on that Record Date shall be entitled to receive the dividend payable on those shares on the corresponding Dividend Payment Date. The price payable on such Redemption Date will include only the Redemption Price, but will not include any amount in respect of dividends on the Series A Preferred Stock declared and payable on such corresponding Dividend Payment Date.
- (e) Number of Shares. If fewer than all the outstanding shares of Series A Preferred Stock are to be redeemed, the number of shares to be redeemed shall be determined by the Board and the shares to be redeemed shall be selected on a pro rata basis (with any fractional shares being rounded to the nearest whole share), by lot or any other method as may be determined by the Board, in its discretion, to be fair and appropriate.
- (f) Notice of Redemption; Notice of Trigger Event.
- (i) Notice of redemption of the Series A Preferred Stock pursuant to Section 6(a) or 6(b) (the "Notice of Redemption") shall be given by overnight courier or first class mail, postage prepaid, addressed to the Holders of record of the Series A Preferred Stock. Such Notice of Redemption shall be delivered to each Holder at least five (5) days and not more than sixty (60) days before the proposed redemption date and shall state: (1) the applicable redemption date; (2) the number of shares of Series A Preferred Stock held by the Holder and to be redeemed; (3) the applicable redemption price per share of Series A Preferred Stock; (4) the place or places where certificates for such shares of Series A Preferred Stock, if any, are to be surrendered for payment.
- (ii) Notice of the occurrence of a Trigger Event pursuant to Section 6(c) (the "Notice of Trigger Event") shall be given by overnight courier or first class mail, postage prepaid, addressed to the Holders of record of the Series A Preferred Stock. Such Notice of Trigger Event shall be mailed to each Holder as soon as practicable after the occurrence of any Trigger Event but in any case not more than five (5) Business Days after the occurrence thereof. Such Notice of Trigger Event shall state: (1) the date on which such Trigger Event occurred; (2) the applicable redemption price per share of Series A Preferred Stock; (3) that an election form is attached or where to obtain such an election form; and (4) the date by which each such Holder shall be required to provide notice to the Company of its election to cause such redemption and the place or places where such Holders must send their election form along with certificates for such shares of Series A Preferred Stock, if any, are to be surrendered for payment. The date to be set by the Company by which each Holder shall be required to affirmatively elect to cause the Company to so redeem its shares of Series A Preferred Stock shall be a date no earlier than fifteen (15) days after the date such Notice of Trigger Event was sent to all Holders, as aforesaid.
- (iii) Each Holder of Series A Preferred Stock electing to cause the Company to redeem its shares of Series A Preferred Stock in accordance with Section 6(f)(ii) shall deliver its duly completed election form to the Company by the date and at the location as set forth in the Notice of Trigger Event. Any such election may be withdrawn and cancelled by any such Holder by further notice delivered to the Company no later than the Business Day prior to the specified date of redemption.
- (g) Treatment of Shares; Partial Redemption. Until a share of Series A Preferred Stock is redeemed by the payment or deposit in full of the redemption price as provided in Section 6(h), such share of Series A Preferred Stock will remain outstanding and will be entitled to all of the powers, designations, preferences and other rights provided herein. In the event that an optional redemption is effected with respect to shares of Series A Preferred Stock representing less than all shares of Series A Preferred Stock held by a Holder, promptly following such optional redemption, the Company shall reflect in the Register the remaining shares of Series A Preferred Stock held by such Holder.

- (h) Sufficient Funds. If the Company shall not have sufficient funds legally available to redeem all shares of Series A Preferred Stock required under this Section 6, the Company shall (i) redeem, pro rata among the Holders, a number of shares of Series A Preferred Stock with an aggregate redemption price equal to the amount legally available for the purchase of shares of Series A Preferred Stock and (ii) purchase any shares of Series A Preferred Stock not purchased because of the foregoing limitations at the applicable Liquidation Preference as soon as practicable after the Company is able to make such purchase out of assets legally available for the purchase of such share of Series A Preferred Stock. The inability of the Company (or its successor) to make a purchase payment for any reason shall not relieve the Company (or its successor) from its obligation to effect any required purchase when, as and if permitted by applicable law. Notwithstanding the foregoing, in the event a Holder exercises a Trigger Event Redemption pursuant to this Section 6 at a time when the Company is restricted or prohibited (contractually or otherwise) from redeeming some or all of the Series A Preferred Stock subject to the Trigger Event Redemption, the Company will use its reasonable best efforts to obtain the requisite consents to remove or obtain an exception or waiver to such restrictions or prohibition. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity, including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to comply with its obligations under this Section 6. For so long as a failure to comply with this Section 6 has occurred and is continuing, the restrictions set forth in Section 4(c) with respect to restrictions on dividends or distributions relating to Junior Stock shall apply *mutatis mutandis*.
- (i) With respect to any share of Series A Preferred Stock to be redeemed by the Company pursuant to Section 6(a), 6(b) or 6(c) and which has been redeemed in accordance with the provisions of this Section 6, (i) such share shall no longer be deemed outstanding and (ii) all rights with respect to such share shall cease and terminate other than the rights of the Holder thereof to receive the Liquidation Preference therefor.

SECTION 7. Change of Control.

- (a) Repurchase at the Option of the Holder. Upon the occurrence of a Change of Control, each Holder of outstanding shares of Series A Preferred Stock may, at such Holder's election, require the Company to redeem (the "Change of Control Redemption") all or part of such Holder's shares of Series A Preferred Stock at a purchase price per share of Series A Preferred Stock, payable in cash, equal to the Change of Control Purchase Price; provided, however, the Company shall only be required to pay the Change of Control Purchase Price to the extent such purchase can be made out of funds legally available therefor.
- (b) Initial Change of Control Notice. On or before the fifteenth (15th) Business Day prior to the anticipated Change of Control Effective Date (or, if later, promptly after the Company discovers that a Change of Control may occur), a written notice (the "Initial Change of Control Notice") shall be sent by or on behalf of the Company to the Holders as they appear in the records of the Company, which notice shall set forth a description of the anticipated Change of Control and contain (i) the date on which the Change of Control is anticipated to be effected (or, if applicable, the date on which a Schedule TO or other schedule, form or report disclosing a Change of Control was filed) and (ii) a description of the material terms and conditions of the Change of Control. No later than ten (10) Business Days prior to the anticipated Change of Control Effective Date as set forth in the Initial Change of Control Notice (or, if the Change of Control has already occurred as provided in the Initial Change of Control Notice, promptly, but no later than the tenth (10th) Business Day following receipt thereof), any Holder that desires to exercise its rights pursuant to Section 7(a) shall notify the Company in writing thereof and shall specify (x) whether such Holder is electing to exercise its right to effect a Change of Control Redemption of all or a portion of its shares of Series A Preferred Stock pursuant to Section 7(a), and (y) the number of shares of Series A Preferred Stock subject to the Change of Control Redemption.

- (c) **Final Change of Control Notice.** Within five (5) Business Days following the effective date of the Change of Control (the “**Change of Control Effective Date**”) (or, if the Change of Control had already occurred as specified in **Section 7(b)**), within five (5) Business Days following the ten (10) Business Day period referred to in **Section 7(b)** above), the Company shall deliver to each Holder a written notice setting forth:
- (i) a statement setting forth in reasonable detail the calculation of the Change of Control Purchase Price with respect to such Holder;
 - (ii) the Change of Control Purchase Date, which shall be no later than thirty (30) days after such notice is sent; provided, that a reasonable amount of time shall be provided between delivery of such notice and the Change of Control Purchase Date to allow such Holder to comply with the instructions delivered pursuant to **Section 7(c)(iii)** below; and
 - (iii) the instructions a Holder must follow to receive the Change of Control Purchase Price in connection with such Change of Control.
- (d) **Change of Control Redemption Procedure.** To receive the Change of Control Purchase Price, a Holder must complete and sign the redemption notice in the form attached hereto as **Exhibit A** (the “**Change of Control Redemption Notice**”) and surrender in accordance with the instructions delivered pursuant to **Section 7(c)(iii)**, the certificates (if any) representing the shares of Series A Preferred Stock to be repurchased by the Company or lost stock affidavits therefor, to the extent applicable.
- (e) **Delivery upon Change of Control Redemption.** Upon a Change of Control Redemption, subject to **Section 7(g)** below, the Company (or its successor) shall deliver or cause to be delivered to the Holder by wire transfer of immediately available funds, the Change of Control Purchase Price for such Holder’s shares of Series A Preferred Stock.
- (f) **Treatment of Shares; Partial Exercise.** Until a share of Series A Preferred Stock is redeemed by the payment or deposit in full of the applicable Change of Control Purchase Price as provided in **Section 7(i)**, such share of Series A Preferred Stock will remain outstanding and will be entitled to all of the powers, designations, preferences and other rights provided herein. In the event that a Change of Control Redemption is effected with respect to shares of Series A Preferred Stock representing less than all shares of Series A Preferred Stock held by a Holder, promptly following such Change of Control Redemption, the Company shall reflect in the Register the remaining shares of Series A Preferred Stock held by such Holder.
- (g) **Sufficient Funds.** If the Company shall not have sufficient funds legally available to redeem all shares of Series A Preferred Stock required under **Section 7(a)**, the Company shall (i) redeem, pro rata among the Holders, a number of shares of Series A Preferred Stock with an aggregate Change of Control Purchase Price equal to the amount legally available for the purchase of shares of Series A Preferred Stock and (ii) purchase any shares of Series A Preferred Stock not purchased because of the foregoing limitations at the applicable Change of Control Purchase Price as soon as practicable after the Company is able to make such purchase out of assets legally available for the purchase of such share of Series A Preferred Stock. The inability of the Company (or its successor) to make a purchase payment for any reason shall not relieve the Company (or its successor) from its obligation to effect any required purchase when, as and if permitted by applicable law. Notwithstanding the foregoing, in the event a Holder exercises a Change of Control Redemption pursuant to this **Section 7** at a time when the Company is restricted or prohibited (contractually or otherwise) from redeeming some or all of the Series A Preferred Stock subject to the Change of Control Redemption, the Company will use its reasonable best efforts to obtain the requisite consents to remove or obtain an exception or waiver to such restrictions or prohibition. Nothing herein shall limit a Holder’s right to pursue any other remedies available to it hereunder, at law or in equity, including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to comply with its obligations under this **Section 7**. For so long as a failure to comply with this **Section 7** has occurred and is continuing, the restrictions set forth in **Section 4(c)** with respect to restrictions on dividends or distributions relating to Junior Stock shall apply *mutatis mutandis*.

- (h) Change of Control Agreements. The Company shall not enter into any agreement for, or otherwise willingly engage in, a transaction constituting a Change of Control, unless (i) such agreement provides for or does not interfere with or prevent (as applicable) the exercise by the Holders of their Change of Control Redemption in a manner that is consistent with and gives effect to this Section 7, and (ii) the acquiring or surviving Person in such Change of Control represents or covenants, in form and substance reasonably satisfactory to the Board acting in good faith, that at the closing of such Change of Control, to the effect that such Person shall have sufficient funds (which may include, without limitation, cash and cash equivalents on the Company's balance sheet, the proceeds of any debt or equity financing, available lines of credit or uncalled capital commitments) to consummate such Change of Control and effect the Satisfaction of Indebtedness Obligations and the payment of the Change of Control Purchase Price in respect of all shares of Series A Preferred Stock then outstanding.
- (i) With respect to any share of Series A Preferred Stock to be redeemed by the Company pursuant to the Change of Control Redemption and which has been redeemed in accordance with the provisions of this Section 7, (i) such share shall no longer be deemed outstanding and (ii) all rights with respect to such share shall cease and terminate other than the rights of the Holder thereof to receive the Change of Control Purchase Price therefor.

SECTION 8. Redemption Limitations; Conversion to Indebtedness. Notwithstanding anything to the contrary contained herein, in the event any redemption of the shares of Series A Preferred Stock shall be prohibited on the date specified herein by the express terms of the Credit Agreement, as in effect as of the date hereof, then in lieu of such redemption and payment on such date, the redemption of such shares of Series A Preferred Stock shall occur on a date that is no later than 91 days after the date on which the principal amount of the loans under the Credit Agreement has been repaid; provided, if such shares of Series A Preferred Stock are, due to such express terms, not permitted to be repaid on the date of repayment of such loans, and all of the loans have been repaid in full, the shares of Series A Preferred Stock shall be automatically, and without further action or consideration by the Holder, be converted into a promissory note in favor of the Holders, obligating the Company or its successor in interest to pay an amount equal to the Liquidation Preference on a date no later than 91 days after the date on which the principal amount of the loans under the Credit Agreement has been repaid.

SECTION 9. Voting Rights.

- (a) General. No Holder of shares of Series A Preferred Stock shall be entitled to a vote on any matter submitted to a vote of stockholders of the Company, except as otherwise provided herein or as required by applicable law. The Holders of shares of Series A Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Certificate of Incorporation and the Bylaws as if they were holders of record of Common Stock for such meeting.
- (b) Series A Preferred Stock Adverse Changes. So long as any shares of Series A Preferred Stock are outstanding, in addition to any other vote required by applicable law, the Company may not take, and may not permit any of its Subsidiaries to directly or indirectly take, any of the following actions (including by means of merger, consolidation, reorganization, recapitalization or otherwise) without the prior affirmative vote or written consent from the Super Majority Holders, voting as a separate class:
 - (i) amend, alter, repeal or otherwise modify (whether by merger, consolidation or otherwise) any provision of the Certificate of Incorporation (including this Certificate of Designations) in a manner that would adversely affect the powers, preferences, rights or privileges of the Series A Preferred Stock;
 - (ii) authorize, create, increase the authorized amount of, or issue any class or series of Capital Stock of the Company or any security convertible into, or exchangeable or exercisable for any of the foregoing, or reclassify any security into, any Capital Stock of the Company ranking senior or pari passu to the Series A Preferred Stock (provided, however, that the authorization, creation, increase in the authorized amount of, or issuance of any class or series of Junior Stock or any security convertible into, or exchangeable or exercisable for any of the foregoing, or reclassification of any security into, Junior Stock will not require the vote or consent of any Holders);

- (iii) increase or decrease the authorized number of shares of Series A Preferred Stock (except for the cancellation and retirement of shares set forth in [Section 10](#)) or issue additional shares of Series A Preferred Stock other than in connection with the transactions described in the securities purchase agreement dated on or around March [●], 2023; and
- (iv) unless the conditions set forth in [Section 7\(h\)](#) (Change of Control Agreements) are satisfied, consummate any binding share exchange or reclassification involving the Series A Preferred Stock, or any merger or consolidation of the Company with another entity, unless in each case (x) the shares of Series A Preferred Stock remain outstanding or, in the case of any such merger or consolidation with respect to which the Company is not the surviving or resulting entity, are converted into or exchanged for preference securities of the surviving or resulting entity or its ultimate parent, and (y) such shares remaining outstanding or such preference securities, as the case may be, have such rights, preferences, privileges and voting powers, and limitations and restrictions thereof, taken as a whole, as are not materially less favorable to the holders thereof than the rights, preferences, privileges and voting powers, and limitations and restrictions thereof, of the Series A Preferred Stock immediately prior to such consummation, taken as a whole.
- (c) Each Holder of Series A Preferred Stock will have one (1) vote per share on any matter on which Holders of Series A Preferred Stock are entitled to vote separately as a class, whether at a meeting or by written consent.

SECTION 10. [Status of Shares](#). Shares of Series A Preferred Stock that have been issued and reacquired in any manner, whether by redemption, repurchase or otherwise, shall thereupon be retired and shall have the status of authorized and unissued shares of preferred stock of the Company undesignated as to series, and may be redesignated as any series of preferred stock of the Company and reissued.

SECTION 11. [Creation of Capital Stock](#). Subject to [Section 9\(b\)](#), the Board, or any duly authorized committee thereof, without the vote of the Holders, may authorize and issue additional shares of Capital Stock of the Company.

SECTION 12. [No Sinking Fund](#). Shares of Series A Preferred Stock shall not be subject to or entitled to the operation of a retirement or sinking fund.

SECTION 13. [Taxes, Transfer Taxes](#). The Company shall pay any and all stock transfer, documentary, stamp and similar taxes that may be payable in respect of any issuance or delivery of shares of Series A Preferred Stock or other securities issued on account of Series A Preferred Stock pursuant hereto or certificates representing such shares or securities. The Company shall not, however, be required to pay any such tax that may be payable in respect of any transfer involved in the issuance or delivery of shares of Series A Preferred Stock or other securities in a name other than the name in which the shares of Series A Preferred Stock with respect to which such shares or other securities are issued or delivered were registered, or in respect of any payment to any Person other than a payment to the registered holder thereof, and shall not be required to make any such issuance, delivery or payment, unless and until the Person otherwise entitled to such issuance, delivery or payment has paid to the Company the amount of any such tax or has established, to the satisfaction of the Company, that such tax has been paid or is not payable. All payments and distributions (or deemed distributions) on the shares of Series A Preferred Stock shall be subject to withholding and backup withholding of taxes to the extent required by law, subject to applicable exemptions, and amounts withheld, if any, shall be treated as received by the Holders.

SECTION 14. [Notices](#). All notices referred to herein shall be in writing (which may include electronic communications) and, unless otherwise specified herein, all notices hereunder shall be deemed to have been given upon the earlier of receipt thereof (if received prior to 5:00 p.m. E.T. on a Business Day) or three (3) Business Days after the mailing thereof if sent by overnight courier or registered or certified mail (unless first-class mail shall be specifically permitted for such notice under the terms of this Certificate of Designations) with postage prepaid, addressed, (i) if to the Company, to its office at 6500 Chase Oaks Boulevard, Suite 100, Plano, Texas 75023 (Attention: Patrick W. Macken, Executive Vice President, Chief Legal Officer and Secretary), or to any transfer or other agent of the Company designated to receive such notice as permitted by this Certificate of Designations; (ii) if to any Holder, to such Holder at the address of such Holder as listed in the Register or otherwise appearing on the books of the Company; or (iii) to such other address as the Company or any such Holder, as the case may be, shall have designated by notice similarly given. If a notice or communication is given in the manner provided in this Certificate of Designations within the time prescribed, it is duly given, whether or not the addressee receives it, provided that electronic communications shall only be deemed received upon acknowledgement of receipt.

SECTION 15. Facts Ascertainable. When the terms of this Certificate of Designations refer to a specific agreement or other document to determine the meaning or operation of a provision hereof, the Secretary of the Company shall maintain a copy of such agreement or document at the principal executive offices of the Company and a copy thereof shall be provided free of charge to any Holder who makes a request therefor. The Secretary of the Company shall also maintain a written record of the Original Issuance Date, the number of shares of Series A Preferred Stock issued to a Holder and shall furnish such written record free of charge to any Holder who makes a request therefor.

SECTION 16. Waiver. Notwithstanding any provision in this Certificate of Designations to the contrary, any provision contained herein and any right of the Holders of Series A Preferred Stock granted hereunder may be waived as to all shares of Series A Preferred Stock (and the Holders thereof) upon the written consent of the Holders of a majority of the shares of Series A Preferred Stock then outstanding; provided, that any provision contained herein and any right of the Holders of Series A Preferred Stock granted hereunder that requires the approval of Super Majority Holders may be waived as to all shares of Series A Preferred Stock (and the Holders thereof) upon the written consent of the Super Majority Holders.

SECTION 17. Severability. If any term of the Series A Preferred Stock set forth herein is invalid, unlawful or incapable of being enforced by reason of any rule of law or public policy, all other terms set forth herein, which can be given effect without the invalid, unlawful or unenforceable term will, nevertheless, remain in full force and effect, and no term herein set forth will be deemed dependent upon any other such term, unless so expressed herein.

SECTION 18. No Preemptive Rights. The Holders shall have no preemptive or preferential rights to purchase or subscribe for any stock, obligations, warrants or other securities of the Company of any class or series.

SECTION 19. No Other Rights. The Series A Preferred Stock will have no rights, preferences, privileges or voting powers or relative, participating, optional or other special rights, or qualifications, limitations or restrictions thereof, except as provided in this Certificate of Designations or the Certificate of Incorporation or as provided by applicable law.

SECTION 20. Rule 144A. At any time the Company is not subject to the reporting requirements under Section 13 or 15(d) of the Exchange Act, the Company shall, upon written request, furnish to any Holder, beneficial owner or prospective purchaser of the Series A Preferred Stock, the information required to be delivered pursuant to Rule 144A(d)(4) under the Securities Act of 1933, as amended (the "Securities Act"), to facilitate the resale of such Series A Preferred Stock pursuant to Rule 144A under the Securities Act. The Company shall take such further action as any such beneficial owner may reasonably request to the extent required from time to time to enable such beneficial Holder to sell such Series A Preferred Stock in accordance with Rule 144A under the Securities Act, as such rule may be amended from time to time.

Schedule I

[to be completed]

Exhibit A

**RIBBON COMMUNICATIONS INC.
CHANGE OF CONTROL REDEMPTION NOTICE**

Reference is made to the Certificate of Designation, Preferences and Rights of the Series A Preferred Stock of Ribbon Communications Inc. (the "Certificate of Designations"). In accordance with and pursuant to the Certificate of Designations, the undersigned hereby elects to require the Company to redeem the number of shares of Series A Preferred Stock, par value \$0.01 per share (the "Series A Preferred Stock"), of Ribbon Communications Inc., a Delaware corporation (the "Company"), indicated below at a purchase price per share of Series A Preferred Stock, payable in cash, equal to the Change of Control Purchase Price (as defined in the Certificate of Designations) upon, and subject to the occurrence of, the Change of Control described in the Initial Change of Control Notice. Each capitalized term used herein that is not otherwise defined shall have the meaning set forth in the Certificate of Designations.

Number of shares of Series A Preferred Stock to be redeemed: _____
Share certificate no(s). of Series A Preferred Stock to be redeemed: _____
Tax ID Number (if applicable): _____

Please direct the above cash payment to the following name and address:

Name: _____
Address: _____
Telephone Number: _____
Email: _____
By: _____
Title: _____
Dated: _____

Payment Instructions for cash payment:

Account Number: _____
Bank Number: _____

[NOTE TO HOLDER — THIS FORM MUST BE SENT CONCURRENTLY TO TRANSFER AGENT (IF ANY).]

ACKNOWLEDGMENT

[The Company hereby acknowledges the attached Change of Control Redemption Notice and will direct the cash payment to the account specified in such notice.]

By:
Name:
Title:

NEITHER THE ISSUANCE AND SALE OF THE SECURITIES REPRESENTED BY THIS WARRANT NOR THE SECURITIES INTO WHICH THESE SECURITIES ARE EXERCISABLE HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF (A) AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR (B) AN OPINION OF COUNSEL SELECTED BY THE HOLDER, IN A FORM REASONABLY SATISFACTORY TO THE COMPANY, THAT REGISTRATION IS NOT REQUIRED UNDER SAID ACT. NOTWITHSTANDING THE FOREGOING, THE SECURITIES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY THE SECURITIES.

THIS WARRANT IS ONE OF THE WARRANTS TO PURCHASE COMMON STOCK ISSUED PURSUANT TO THAT CERTAIN SECURITIES PURCHASE AGREEMENT, DATED AS OF MARCH [•], 2023, BY AND AMONG THE COMPANY AND THE INVESTORS REFERRED TO THEREIN. ANY HOLDER OF THIS WARRANT TAKES SUCH WARRANT SUBJECT TO THE TERMS AND CONDITIONS OF SUCH SECURITIES PURCHASE AGREEMENT AND, BY ITS ACCEPTANCE HEREOF, AGREES TO ABIDE BY THE TERMS AND CONDITIONS THEREOF NOTWITHSTANDING ANYTHING TO THE CONTRARY SET FORTH HEREIN.

RIBBON COMMUNICATIONS INC.

WARRANT TO PURCHASE COMMON STOCK

Warrant No.: [•]
Number of Shares of Common Stock: [•]
Date of Issuance: March [•], 2023 (“**Issuance Date**”)

Ribbon Communications Inc., a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [INVESTOR], the registered holder hereof or its permitted assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined below) then in effect, at any time or times on or after the Issuance Date, but not after 11:59 p.m., New York time, on the Expiration Date, (as defined below), [•] ([•]) fully paid nonassessable shares of Common Stock, subject to adjustment as provided herein (the “**Warrant Shares**”). Except as otherwise defined herein, capitalized terms in this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, this “**Warrant**”), shall have the meanings set forth in Section 16. This Warrant is one of the Warrants to purchase Common Stock (the “**March 2023 Warrants**”) issued pursuant to Section 2.2(a)(iii) of that certain Securities Purchase Agreement, dated as of March [•], 2023 (the “**Subscription Date**”), by and among the Company and the investors (the “**Purchasers**”) referred to therein (the “**Securities Purchase Agreement**”). Capitalized terms used herein and not otherwise defined shall have the definitions ascribed to such terms in the Securities Purchase Agreement.

1. EXERCISE OF WARRANT

(a) **Mechanics of Exercise.** Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section 1(e)), this Warrant may be exercised by the Holder at any time or times on or after the Issuance Date, in whole or in part, by (i) delivery to the Warrant Agent of a duly executed written notice, in the form attached hereto as Exhibit A (the “**Exercise Notice**”), of the Holder’s election to exercise this Warrant and (ii) (A) payment to the Warrant Agent of an amount equal to the applicable Exercise Price multiplied by the number of Warrant Shares as to which this Warrant is being exercised (the “**Aggregate Exercise Price**”) in cash by wire transfer of immediately available funds to an account designated in writing by the Warrant Agent or (B) by notifying the Company in writing that this Warrant is being exercised pursuant to a Cashless Exercise (as defined in Section 1(c)). No ink-original Exercise Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Exercise Notice be required, provided that the Warrant Agent and the Company shall have no liability to the Holder for honoring a non-medallion guaranteed Exercise Notice that the Warrant Agent or the Company reasonably believes to be genuine. The registered Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. On or before the first (1st) Trading Day following the Trading Day on which the Holder has delivered an Exercise Notice and the Aggregate Exercise Price (or notice of a Cashless Exercise) to the Warrant Agent (for purposes of this Warrant, if an Exercise Notice is delivered to the Warrant Agent on a day that is not a Trading Day, such Exercise Notice shall be deemed to have been delivered on the first Trading Day following the day of actual delivery), the Warrant Agent shall transmit by electronic mail an acknowledgment of confirmation of receipt of the Exercise Notice to the Holder. On or before the earlier of (i) the second (2nd) Trading Day and (ii) the number of Trading Days comprising the Standard Settlement Period, in each case, following the date on which the Holder has delivered the Exercise Notice and the Aggregate Exercise Price to the Warrant Agent (or notice of a Cashless Exercise to the Company) (a “**Share Delivery Date**”), the Warrant Agent shall (X) provided that the Company’s transfer agent (the “**Transfer Agent**”) is participating in The Depository Trust Company (“**DTC**”) Fast Automated Securities Transfer Program and (A) the Warrant Shares are subject to an effective resale registration statement in favor of the Holder and the Holder has delivered to the Company a representation that such Warrant Shares have been sold pursuant to such registration statement or (B) if exercised via Cashless Exercise, at a time when Rule 144 would be available for immediate resale of the Warrant Shares by the Holder, and the Holder has delivered to the Company a representation that such Warrant Shares have been sold pursuant to Rule 144, cause the aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to be transmitted by Transfer Agent to the Holder by crediting the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system, or (Y) if (A) the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program or (B) the Warrant Shares are not subject to an effective resale registration statement in favor of the Holder or the Holder has not delivered to the Company a representation that such Warrant Shares have been sold pursuant to such registration statement and, if exercised via Cashless Exercise, at a time when Rule 144 would not be available for immediate resale of the Warrant Shares by the Holder or the Holder has not delivered to the Company a representation that such Warrant Shares have been sold pursuant to such registration statement, cause the Transfer Agent to (i) issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company’s share register in the name of the Holder or its designee and bearing such restrictive legends as the Company deems necessary, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise, or (ii) issue and dispatch by electronic mail to the address as specified in the Exercise Notice, evidence of book entry, registered in the Company’s share register in the name of the Holder or its designee and bearing such restrictive legends as the Company deems necessary, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise. The Company shall be responsible for all fees and expenses of the Warrant Agent and the Transfer Agent and all fees and expenses with respect to the issuance of Warrant Shares via DTC, if any, including without limitation for same day processing. Upon delivery of the Exercise Notice and the Aggregate Exercise Price (or notice of a Cashless Exercise), the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder’s DTC account or the date of delivery of the certificates or book entry evidence evidencing such Warrant Shares, as the case may be. If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then the Company shall as soon as practicable and in no event later than five (5) Trading Days after any exercise and at its own expense, issue a new Warrant (in accordance with Section 6(d)) representing the right to purchase the number of Warrant Shares issuable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional Warrant Shares are to be issued upon the exercise of this Warrant, but rather the number of Warrant Shares to be issued shall be rounded to the nearest whole number. The Company shall pay any and all taxes which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. If the materials discussed in this Section 1(a) are received or deemed to be received after the Expiration Date, the Exercise Notice (or notice of a Cashless Exercise) will be null and void and any funds delivered to the Company will be returned to the Holder, as soon as practicable. In no event will interest accrue on any funds deposited with the Company or its warrant agent in respect of an exercise or attempted exercise of the Warrants.

(b) **Exercise Price.** For purposes of this Warrant, “**Exercise Price**” means \$[●], subject to adjustment as provided herein.

(c) **Company’s Failure to Timely Deliver Securities.** If either (i) the Company shall fail for any reason or for no reason to issue to the Holder on or prior to the applicable Share Delivery Date, if (A) the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, a certificate or book entry for the number of shares of Common Stock to which the Holder is entitled and register such Common Stock on the Company’s share register or (B) if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, to credit the Holder’s balance account with DTC, for such number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise of this Warrant, (ii) the Company shall not within thirty (30) days after the Issuance Date file with the SEC a registration statement for the resale by the Holder or any transferee therefrom of the Warrant Shares (the “**Registration Statement**”), or (iii) a registration statement (which may be the Registration Statement) covering the issuance or resale of the Warrant Shares is not available for the issuance or resale, as applicable, of such Warrant Shares during a time when a registration statement is required to be available pursuant to the Securities Purchase Agreement and (A) the Company fails to promptly, but in no event later than one (1) Business Day after such registration statement becomes unavailable, to so notify the Holder and (B) the Company is unable to deliver the Warrant Shares electronically without any restrictive legend by crediting such aggregate number of Warrant Shares to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system (the event described in the immediately foregoing clause (iii) is hereinafter referred to as a “**Notice Failure**” and together with the events described in clauses (i) and (ii) above, an “**Exercise Failure**”), then, in addition to all other remedies available to the Holder, if on or prior to the applicable Share Delivery Date either (i) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, the Company shall fail to issue and deliver a certificate or book entry to the Holder and register such shares of Common Stock on the Company’s share register or, if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, credit the Holder’s balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise hereunder or pursuant to the Company’s obligation pursuant to clause (II) below or (ii) a Notice Failure occurs, and if on or after such Trading Day the Holder purchases (in an open market transaction or otherwise) Common Stock to deliver in satisfaction of a sale by the Holder of shares of Common Stock issuable upon such exercise that the Holder anticipated receiving from the Company (a “**Buy-In**”), then the Company shall, within three (3) Trading Days after the Holder’s request and in the Holder’s discretion, either (I) pay cash to the Holder in an amount equal to the Holder’s total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (the “**Buy-In Price**”), at which point the Company’s obligation to deliver such certificate (and to issue such shares of Common Stock) or credit such Holder’s balance account with DTC for such shares of Common Stock shall terminate, or (II) promptly honor its obligation to deliver to the Holder a certificate or certificates or book entry or entries representing such shares of Common Stock or credit such Holder’s balance account with DTC, as applicable, and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (x) such number of shares of Common Stock, times (y) any trading price of the Common Stock selected by the Holder in writing as in effect at any time during the period beginning on the date of the applicable Exercise Notice and ending on the applicable Share Delivery Date.

Nothing shall limit the Holder’s right to pursue any other remedies available to it hereunder, at law or in equity, including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to timely deliver certificates representing Warrant Shares (or to electronically deliver such Warrant Shares) upon the exercise of this Warrant as required pursuant to the terms hereof. [While this Warrant is outstanding, the Company shall cause the Transfer Agent to participate in the DTC Fast Automated Securities Transfer Program]. In addition to the foregoing rights, (i) if the Company fails to deliver the applicable number of Warrant Shares upon an exercise pursuant to Section 1(a) by the applicable Share Delivery Date, then the Holder shall have the right to rescind such exercise in whole or in part and retain and/or have the Company return, as the case may be, any portion of this Warrant that has not been exercised pursuant to such Exercise Notice; provided that the rescission of an exercise shall not affect the Company’s obligation to make any payments that have accrued prior to the date of such notice pursuant to this Section 1(c) or otherwise, and (ii) if a registration statement (which may be the Registration Statement) covering the issuance or resale of the Warrant Shares that are subject to an Exercise Notice is not available for the issuance or resale, as applicable, of such Warrant Shares during a time when a registration statement is required to be available pursuant to the Securities Purchase Agreement and the Holder has submitted an Exercise Notice prior to receiving notice of the non-availability of such registration statement and the Company has not already delivered the Warrant Shares underlying such Exercise Notice electronically without any restrictive legend by crediting such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system, the Holder shall have the option, by delivery of notice to the Company, to rescind such Exercise Notice in whole or in part and retain or have returned, as the case may be, any portion of this Warrant that has not been exercised pursuant to such Exercise Notice; provided that the rescission of an Exercise Notice shall not affect the Company’s obligation to make any payments that have accrued prior to the date of such notice pursuant to this Section 1(c) or otherwise.

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary, the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the "**Net Number**" of shares of Common Stock determined according to the following formula (a "**Cashless Exercise**"):

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{B}$$

For purposes of the foregoing formula:

A= the total number of shares with respect to which this Warrant is then being exercised.

B= as applicable: (i) the Weighted Average Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 1(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 1(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder indicated in the Exercise Notice, either (x) the Weighted Average Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice, or (y) the Weighted Average Price of the Common Stock on the Trading Day of the applicable Exercise Notice if such Exercise Notice is executed and delivered during "regular trading hours" on a Trading Day pursuant to Section 1(a) hereof, or (iii) the Weighted Average Price of the Common Stock on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 1(a) hereof after the close of "regular trading hours" on such Trading Day.

C= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price, the Black Scholes Value (as defined below) or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed and resolve such dispute in accordance with Section 13.

(f) Beneficial Ownership Limitations on Exercises. Notwithstanding anything to the contrary contained herein, the Warrant Agent shall not effect the exercise of any portion of this Warrant, and the Holder shall not have the right to exercise any portion of this Warrant, and any such exercise shall be null and void and treated as if never made, to the extent that as a result of, and after giving effect to, such exercise, the Holder together with the other Attribution Parties collectively would beneficially own in excess of 9.99% (the “**Maximum Percentage**”) of the number of shares of Common Stock outstanding immediately after giving effect to such exercise; provided, however, that such Maximum Percentage shall not apply to either JPMorgan Chase & Co. or Swarth Investments Inc., in each case together with its Attribution Parties. For purposes of this Section 1(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the “**1934 Act**”). For purposes of determining the number of outstanding shares of Common Stock the Holder may acquire upon the exercise of this Warrant without exceeding the Maximum Percentage, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission (the “**SEC**”), as the case may be, (y) a more recent public announcement by the Company or (z) any other written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding (the “**Reported Outstanding Share Number**”). If the Warrant Agent receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder’s beneficial ownership, as determined pursuant to this Section 1(e), to exceed the Maximum Percentage, the Holder must notify the Warrant Agent of a reduced number of Warrant Shares to be purchased pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the “**Reduction Shares**”) and (ii) as soon as reasonably practicable, the Warrant Agent shall return to the Holder any Exercise Price paid by the Holder for the Reduction Shares. For any reason at any time, upon the written or oral request of the Holder, the Warrant Agent shall within one (1) Trading Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. The number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and any other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of shares of Common Stock to the Holder upon exercise of this Warrant results in the Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the 1934 Act), the number of shares so issued by which the Holder’s and the other Attribution Parties’ aggregate beneficial ownership exceeds the Maximum Percentage (the “**Excess Shares**”) shall be deemed null and void and shall be cancelled ab initio, and the Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Warrant Agent shall return to the Holder the Exercise Price paid by the Holder for the Excess Shares. Upon delivery of a written notice to the Warrant Agent, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% as specified in such notice; provided that (i) any such increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is delivered to the Warrant Agent and (ii) any such increase or decrease will apply only to the Holder and the other Attribution Parties and not to any other holder of March 2023 Warrants that is not an Attribution Party of the Holder. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(e) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 1(e) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of this Warrant.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES

(a) Adjustment Upon Subdivision or Combination of Shares of Common Stock. If the Company at any time on or after the Subscription Date subdivides (by any stock split, stock dividend, recapitalization or otherwise) its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time on or after the Subscription Date combines (by combination, reverse stock split or otherwise) its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 2(a) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(b) Adjustment to Exercise Price and Number of Warrant Shares for Subsequent Issuances. In order to prevent dilution of the purchase rights granted under this Warrant, the Exercise Price and the number of Warrant Shares issuable upon exercise of this Warrant shall be subject to adjustment from time to time as provided in this Section 2(b) (in each case, after taking into consideration any prior adjustments pursuant to this Section 2(b) or otherwise), with any such adjustment automatically becoming effective without further action of any person required; provided, that there shall be no adjustment to the number of Warrant Shares acquirable upon exercise of the Warrant, as provided in this Section 2(b) (an "**Adjustment**"), unless and until such Adjustment, together with any previous Adjustments to the number of Warrant Shares so acquirable which would otherwise have resulted in an Adjustment were it not for this proviso, would require an increase or decrease of at least 5% of the total number of Warrant Shares so acquirable at the time of such Adjustment, in which event such Adjustment and all such previous Adjustments shall immediately occur.

(i) Definitions. For purposes of this Section 2(b), the following terms shall have the following meanings:

"**Excluded Issuances**" means any issuance or sale (or deemed issuance or sale in accordance with Section 2(b)(iv)) by the Company after the Issuance Date of: (a) shares of Common Stock issued upon the exercise of the Warrants; or (b) shares of Common Stock under the Company's Amended and Restated 2019 Incentive Award Plan.

"**Independent Financial Expert**" shall mean a nationally recognized accounting, investment banking or consultant firm, which firm does not have a material financial interest or other material economic relationship with either the Company or any of its Affiliates or the Holder or any of its Affiliates that is, in the good faith judgment of the Company's board of directors (the "**Board**"), qualified to perform the task for which it has been engaged.

"**Trading Day**" shall mean a day on which trading in the shares of Common Stock (or other applicable security) generally occurs on the principal exchange or market on which the shares of Common Stock (or other applicable security) are then listed or traded; provided that if the shares of Common Stock (or other applicable security) are not so listed or traded, "Trading Day" means a Business Day.

"**VWAP**" shall mean, as of any date of determination, the average per share volume-weighted average price as displayed under the heading "Bloomberg VWAP" on Bloomberg page "RBBN US<equity> VAP" (or its equivalent successor if such Bloomberg page is not available) in respect of the period from the open of trading on the relevant Trading Day until the close of trading on such Trading Day (or if such volume-weighted average price is unavailable, the market value of one share of Common Stock on such Trading Day reasonably determined, using a volume-weighted average method, by an Independent Financial Expert appointed (and compensated by the Company) for such purpose). The VWAP will be determined without regard to after-hours trading or any other trading outside of the regular trading session trading hours.

(ii) Adjustment for Common Stock Issuances. If the Company shall, at any time or from time to time after the Issuance Date, issue or sell, or is deemed to have issued or sold, any shares of Common Stock for consideration per share less than the Exercise Price in effect immediately prior to such issuance or sale (or deemed issuance or sale) ("**Adjustment Trigger Shares**"), then immediately upon such issuance or sale (or deemed issuance or sale), the Exercise Price shall be reduced to the weighted average per share consideration received by the Company for all Adjustment Trigger Shares so issued or sold (or deemed issued or sold) from and after the Issuance Date, as determined in good faith by the Board, and the number of Warrant Shares will be proportionately increased.

(iii) Exceptions to Adjustment Upon Issuance of Common Stock. Anything herein to the contrary notwithstanding, there shall be no adjustment to the Exercise Price or the number of Warrant Shares issuable upon exercise of this Warrant with respect to any Excluded Issuance.

(iv) Adjustment for Certain Events. For purposes of determining the adjusted Exercise Price and number of Warrant Shares under Section 1(a) hereof, the following shall be applicable:

(A) *Issuance of Options.* If the Company shall, at any time or from time to time after the Issuance Date, grant or sell any options, whether or not such options or the right to convert or exchange any convertible securities issuable upon the exercise of such options are immediately exercisable, and the price per share (determined as provided in this paragraph and in Section 2(b)(iv)(C)) for which Common Stock is issuable upon the exercise of such options or upon the conversion or exchange of convertible securities issuable upon the exercise of such options is less than the Exercise Price in effect immediately prior to the time of the granting or sale of such options, then the total maximum number of shares of Common Stock issuable upon the exercise of such options or upon conversion or exchange of the total maximum amount of convertible securities issuable upon the exercise of such options shall be deemed to have been issued as of the date of granting or sale of such options at a price per share equal to the quotient obtained by dividing of (a) the total amount, if any, received or receivable by the Company as consideration for the granting, sale, or exercise of all such options (which sum shall constitute the applicable consideration received for purposes of Section 1(a)), by (b) the total maximum number of shares of Common Stock issuable upon the exercise of all such options or upon the conversion or exchange of all convertible securities issuable upon the exercise of all such options, and the number of Warrant Shares will be proportionately increased. No further adjustment of the Exercise Price or the number of Warrant Shares shall be made upon the actual issuance of Common Stock or of convertible securities upon exercise of such options or upon the actual issuance of Common Stock upon conversion or exchange of convertible securities issuable upon exercise of such options.

(B) *Issuance of Convertible Securities.* If the Company shall, at any time or from time to time after the Issuance Date, grant or sell any convertible securities, whether or not the right to convert or exchange any such convertible securities is immediately exercisable, and the price per share (determined as provided in this paragraph and in Section 2(b)(iv)(C)) for which Common Stock is issuable upon the conversion or exchange of such convertible securities is less than the Exercise Price in effect immediately prior to the time of the granting or sale of such convertible securities, then the total maximum number of shares of Common Stock issuable upon conversion or exchange of the total maximum amount of such convertible securities shall be deemed to have been issued as of the date of granting or sale of such convertible securities at a price per share equal to the quotient obtained by dividing (a) the total amount, if any, received or receivable by the Company as consideration for the granting, sale, or exercise of such convertible securities (which sum shall constitute the applicable consideration received for purposes of Section 1(a)), by (b) the total maximum number of shares of Common Stock issuable upon the conversion or exchange of all such convertible securities, and the number of Warrant Shares will be proportionately increased. No further adjustment of the Exercise Price or the number of Warrant Shares shall be made upon the actual issuance of Common Stock upon conversion or exchange of such convertible securities or by reason of the issue or sale of convertible securities upon exercise of any options to purchase any such convertible securities for which adjustments of the Exercise Price have been made pursuant to the other provisions of this Section 2(b)(iv).

(C) *Calculation of Consideration Received.* If the Company shall, at any time or from time to time after the Issuance Date, issue or sell, or is deemed to have issued or sold, any shares of Common Stock, options or convertible securities: (A) for cash, the consideration received therefor shall be deemed to be the net amount received or receivable by the Company therefor; (B) for consideration other than cash, the amount of the consideration other than cash received or receivable by the Company shall be the fair market value of such consideration, except where such consideration consists of marketable securities, in which case the amount of consideration received or receivable by the Company shall be the market price (as reflected on any securities exchange, quotation system or association or similar pricing system covering such security) for such securities as of the end of business on the date of receipt of such securities; or (C) for no specifically allocated consideration in connection with an issuance or sale of other securities of the Company, together comprising one integrated transaction, the amount of the consideration therefor shall be deemed to be the fair market value of such portion of the aggregate consideration received or receivable by the Company in such transaction as is attributable to such shares of Common Stock, options or convertible securities, as the case may be, issued in such transaction. The net amount of any cash consideration and the fair market value of any consideration other than cash or marketable securities shall be determined in good faith by the Board.

(v) Certificate as to Adjustment.

(A) As promptly as reasonably practicable following any adjustment of the Exercise Price and/or the number of Warrant Shares, but in any event not later than 15 Business Days thereafter, the Company shall furnish to the Holder a certificate of an executive officer setting forth in reasonable detail such adjustment and the facts upon which it is based and certifying the calculation thereof. All calculations of Exercise Price under this Section 2(b) shall be made to the nearest cent or to the nearest one-hundredth of a share, as the case may be.

(B) As promptly as reasonably practicable following the receipt by the Company of a written request by the Holder, but in any event not later than 15 Business Days thereafter, the Company shall furnish to the Holder a certificate of an executive officer certifying the Exercise Price then in effect and the number of Warrant Shares or the amount, if any, of other shares of stock, securities or assets then issuable upon exercise of the Warrant.

3. FUNDAMENTAL TRANSACTIONS. In the event of a Fundamental Transaction, the Company shall make appropriate provision to ensure that (a) the purchaser (or its parent) shall assume this Warrant (with appropriate changes to the Exercise Price to take into account the value of the securities substituted for the Common Stock so as to preserve the intrinsic spread between the fair market value of any substituted securities and the Exercise Price), or (b) Holder will thereafter have the right to receive upon an exercise of this Warrant, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property) issuable upon the exercise of this Warrant prior to such Fundamental Transaction, such securities, cash or other assets (including warrants or other purchase or subscription rights) which the Holder would have been entitled to receive on a per share basis upon the happening of such Fundamental Transaction had this Warrant been exercised immediately prior to such Fundamental Transaction (without regard to any limitations on the exercise of this Warrant); provided, however, that following any Fundamental Transaction, this Warrant shall only be exercisable via Cashless Exercise. The provisions of this Section 3 shall apply similarly and equally to successive Fundamental Transactions.

Notwithstanding the foregoing, at the request of the Holder delivered at any time commencing on the earliest to occur of (a) the public disclosure of the consummation of any Fundamental Transaction, (b) the consummation of any Fundamental Transaction and (c) the Holder first becoming aware of the consummation of any Fundamental Transaction through the date that is sixty (60) days after the public disclosure of the consummation of such Fundamental Transaction by the Company pursuant to a Current Report on Form 8-K filed with the SEC, the Company or the successor entity (as the case may be) shall purchase this Warrant from the Holder on the date of such request by paying to the Holder cash in an amount equal to the Black Scholes Value.

4. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its Certificate of Incorporation or Bylaws, or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and will at all times in good faith carry out all of the provisions of this Warrant and take all action as may be required to protect the rights of the Holder. Without limiting the generality of the foregoing, the Company (a) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (b) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (c) shall, so long as any of the March 2023 Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the March 2023 Warrants, 100% of the number of shares of Common Stock as shall from time to time be necessary to effect the exercise of the March 2023 Warrants then outstanding (without regard to any limitations on exercise).

5. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of capital stock of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

6. REISSUANCE OF WARRANTS

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Warrant Agent, whereupon the Warrant Agent will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 6(d)), registered with the Company as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 6(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred; provided, however, that in the event that a Warrant surrendered for transfer bears a restrictive legend, the Warrant Agent shall not cancel such Warrant and issue new Warrants in exchange thereof until the Warrant Agent has received an opinion of counsel for the Company (who may be in-house counsel) stating that such transfer may be made and indicating whether the new Warrants must also bear the restrictive legend.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary form and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company and the Warrant Agent shall execute and deliver to the Holder a new Warrant (in accordance with Section 6(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 6(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, that no March 2023 Warrants for fractional Warrant Shares shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 6(a), Section 6(b) or Section 6(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

7. **PRINCIPAL MARKET REGULATION.** Unless permitted by the applicable rules and regulations of the Principal Market, the Company shall not issue any Warrant Shares if the issuance of such Warrant Shares would exceed the aggregate number of shares of Common Stock which the Company may issue upon exercise of the Warrants without breaching the Company's obligations under the rules or regulations of the Principal Market (the number of shares which may be issued without violating such rules and regulations, the "Exchange Cap"). Notwithstanding the foregoing, such limitation shall not apply in the event that the Company (A) obtains the approval of its stockholders as required by the applicable rules of the Principal Market for issuances of shares of Common Stock in excess of such amount or (B) obtains a written opinion from outside counsel to the Company that such approval is not required, which opinion shall be reasonably satisfactory to the Holder. In the event that any Holder shall sell or otherwise transfer such Holder's Warrant, the Exchange Cap restrictions set forth herein shall continue to apply to the Warrant and such transferee.

8. **RULE 144.** At any time the Company is not subject to the reporting requirements under Section 13 or 15(d) of the 1934 Act, the Company shall, upon written request, furnish to any Holder, beneficial owner or prospective purchaser of the Warrants, the information required to be delivered pursuant to Rule 144A(d)(4) under the 1933 Act to facilitate the resale of such Warrants pursuant to Rule 144A under the 1933 Act. The Company shall take such further action as any such beneficial owner may reasonably request to the extent required from time to time to enable such beneficial Holder to sell such Warrants in accordance with Rule 144A under the 1933 Act, as such rule may be amended from time to time.

9. **NOTICES.** Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in accordance with Section 7.3 of the Securities Purchase Agreement. The Company will give written notice to the Holder (a) promptly following any adjustment of the Exercise Price, setting forth in reasonable detail, and certifying, the calculation of such adjustment and (b) at least ten (10) days prior to the date on which the Company closes its books or takes a record (i) with respect to any dividend or distribution upon the shares of Common Stock, (ii) with respect to any grants, issuances or sales of any options, convertible securities or rights to purchase stock, warrants, securities or other property, in each case pro rata to all record holders of Common Stock, or (iii) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation; provided in each case that such information shall be made known to the public prior to or in conjunction with such notice being provided to the Holder.

10. **AMENDMENT AND WAIVER.** Except as otherwise provided herein, the provisions of this Warrant may be amended or waived and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Required Holders. Any amendment or waiver by the Company and the Required Holders shall be binding on the Holder of this Warrant and all holders of the March 2023 Warrants.

11. **GOVERNING LAW; JURISDICTION; JURY TRIAL.** This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. The Company hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude the Holder from bringing suit or taking other legal action against the Company in any other jurisdiction to collect on the Company's obligations to the Holder, to realize on any collateral or any other security for such obligations, or to enforce a judgment or other court ruling in favor of the Holder. **THE COMPANY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

12. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and all of the Purchasers and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

13. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price, the Black Scholes Value or the arithmetic calculation of the Warrant Shares, the Company shall submit the disputed determinations or arithmetic calculations via electronic mail within three (3) Business Days of receipt of the Exercise Notice giving rise to such dispute, as the case may be, to the Holder. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price, the Black Scholes Value or the Warrant Shares within three (3) Business Days of such disputed determination or arithmetic calculation being submitted to the Holder, then the Company shall, within three (3) Business Days submit via electronic mail (a) the disputed determination of the Exercise Price or the Black Scholes Value, as applicable, together with the Company's and Holder's respective calculations, to an independent, reputable investment bank or financial services firm selected by the Holder and approved by the Company, such approval not to be unreasonably withheld, conditioned, or delayed, or (b) the disputed arithmetic calculation of the Warrant Shares, together with the Company's and Holder's respective calculations, to an independent, outside accountant, selected by the Holder and approved by the Company, such approval not to be unreasonably withheld, conditioned, or delayed. The Company shall cause the investment bank, financial services firm or accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than five (5) Business Days from the time it receives the disputed determinations or calculations. Such investment bank's, financial services firm's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error. The costs of such investment bank, financial services firm or accountant shall be allocated by such firm between the Company and the Holder proportionally based on such firm's determination or calculation and the Company's and Holder's respective calculations submitted to such firm.

14. REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant and the other Transaction Documents (as defined in the Securities Purchase Agreement), at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to seek an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required.

15. TRANSFER. This Warrant and the Warrant Shares may be offered for sale, sold, transferred, pledged or assigned without the consent of the Company, except as may otherwise be required by Section 4.1 of the Securities Purchase Agreement.

16. SEVERABILITY. If any provision of this Warrant is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Warrant so long as this Warrant as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

17. **DISCLOSURE.** Upon delivery by the Company to the Holder of any notice required to be given in accordance with the terms of this Warrant, unless the Company has in good faith determined that the matters relating to such notice do not constitute material, nonpublic information relating to the Company or its Subsidiaries, the Company shall contemporaneously with any such delivery publicly disclose such material, nonpublic information on a Current Report on Form 8-K or otherwise. In the event that the Company believes that any notice required to be delivered by the Company in accordance with the terms of this Warrant contains material, nonpublic information relating to the Company or its Subsidiaries, the Company so shall indicate to the Holder contemporaneously with delivery of such notice, and in the absence of any such indication, the Holder shall be allowed to presume that all matters relating to such notice do not constitute material, nonpublic information relating to the Company or its Subsidiaries.

18. **CERTAIN DEFINITIONS.** For purposes of this Warrant, the following terms shall have the following meanings:

(a) “**1933 Act**” means the Securities Act of 1933, as amended.

(b) “**Affiliate**” shall have the meaning ascribed to such term in Rule 405 of the 1933 Act.

(c) “**Attribution Parties**” means, collectively, the following Persons and entities: (i) any investment vehicle, including, any funds, feeder funds or managed accounts, currently, or from time to time after the Issuance Date, directly or indirectly managed or advised by the Holder’s investment manager or any of its Affiliates or principals, (ii) any direct or indirect Affiliates of the Holder or any of the foregoing, (iii) any Person acting or who could be deemed to be acting as a Group together with the Holder or any of the foregoing and (iv) any other Persons whose beneficial ownership of the Common Stock would or could be aggregated with the Holder’s and the other Attribution Parties for purposes of Section 13(d) of the 1934 Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Maximum Percentage.

(d) “**Black Scholes Value**” means the value of the unexercised portion of this Warrant remaining on the date of the Holder’s request pursuant to Section 3, which value is calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the greater of (1) the highest closing sale price of the Common Stock during the period beginning on the Trading Day immediately preceding the announcement of the applicable Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Trading Day of the Holder’s request pursuant to Section 3 and (2) the sum of the price per share being offered in cash in the applicable Fundamental Transaction (if any) plus the value of the non-cash consideration being offered in the applicable Fundamental Transaction (if any), (ii) a strike price equal to the Exercise Price in effect on the date of the Holder’s request pursuant to Section 3, (iii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the greater of (1) the remaining term of this Warrant as of the date of the Holder’s request pursuant to Section 3 and (2) the remaining term of this Warrant as of the date of consummation of the applicable Fundamental Transaction or as of the date of the Holder’s request pursuant to Section 3 if such request is prior to the date of the consummation of the applicable Fundamental Transaction, (iv) a zero cost of borrow and (v) an expected volatility equal to the greater of 100% and the 30 day volatility obtained from the “HVT” function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the earliest to occur of (A) the public disclosure of the applicable Fundamental Transaction and (B) the date of the Holder’s request pursuant to Section 3.

(e) “**Bloomberg**” means Bloomberg Financial Markets.

(f) “**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York, New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York, New York generally are open for use by customers on such day.

(g) “**Common Stock**” means (i) the Company’s shares of common stock, par value \$0.0001 per share, and (ii) any capital stock into which such Common Stock shall have been changed or any capital stock resulting from a reclassification, reorganization or recapitalization of such Common Stock.

(h) “**Designee**” means [●].

(i) “**Expiration Date**” means the date that is forty-eight (48) months after the Issuance Date or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a “**Holiday**”), the next day that is not a Holiday.

(j) “**Fundamental Transaction**” means (A) that the Company shall, directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Subject Entity, or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company, or (iii) make, or allow one or more Subject Entities to make, or allow the Company to be subject to or have its Common Stock be subject to or party to one or more Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least either (x) 50% of the outstanding shares of Common Stock, (y) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding; or (z) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (iv) consummate a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby such Subject Entities, individually or in the aggregate, acquire, either (x) at least 50% of the outstanding shares of Common Stock, (y) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (z) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (v) reorganize, recapitalize or reclassify its Common Stock, (B) that the Company shall, directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, allow any Subject Entity individually or the Subject Entities in the aggregate to be or become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding shares of Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reorganization, recapitalization or reclassification or otherwise in any manner whatsoever, of either (x) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock, (y) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock not held by all such Subject Entities as of the Subscription Date calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (z) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other stockholders of the Company to surrender their shares of Common Stock without approval of the stockholders of the Company or (C) directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, the issuance of or the entering into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this definition in which case this definition shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this definition to the extent necessary to correct this definition or any portion of this definition which may be defective or inconsistent with the intended treatment of such instrument or transaction.

(k) “**Group**” means a “group” as that term is used in Section 13(d) of the 1934 Act and as defined in Rule 13d-5 thereunder.

agency thereof.

(l) **“Person”** means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or

(m) **“Principal Market”** means The Nasdaq Global Select Market.

(n) **“Required Holders”** means the holders of the March 2023 Warrants representing at least a majority of the shares of Common Stock underlying the March 2023 Warrants then outstanding and shall include the Designee as long as the Designee or any of its Affiliates holds any March 2023 Warrants.

(o) **“Standard Settlement Period”** means the standard settlement period, expressed in a number of Trading Days, on the principal securities exchange or securities market on which the Common Stock is then traded as in effect on the date of delivery of the applicable Exercise Notice.

(p) **“Subject Entity”** means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group.

(q) **“Subsidiary”** has the meaning as set forth in the Securities Purchase Agreement.

(r) **“Trading Day”** means any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock on such day, then on the principal securities exchange or securities market on which the Common Stock is then traded.

(s) **“Weighted Average Price”** means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market during the period beginning at 9:30:01 a.m., New York time (or such other time as the Principal Market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as the Principal Market publicly announces is the official close of trading), as reported by Bloomberg through its “Volume at Price” function or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30:01 a.m., New York time (or such other time as such market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as such market publicly announces is the official close of trading), as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Weighted Average Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Weighted Average Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 11 with the term “Weighted Average Price” being substituted for the term “Exercise Price.” All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed as of the Issuance Date set out above in accordance with the terms of the Warrant.

RIBBON COMMUNICATIONS INC.

By: _____
Name:
Title:

**EXERCISE NOTICE
TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS
WARRANT TO PURCHASE COMMON STOCK**

RIBBON COMMUNICATIONS INC.

The undersigned holder hereby exercises the right to purchase _____ of the shares of Common Stock (“**Warrant Shares**”) of Ribbon Communications Inc., a Delaware corporation (the “**Company**”), evidenced by the attached Warrant to Purchase Common Stock (the “**Warrant**”). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

_____ a “**Cash Exercise**” with respect to _____ Warrant Shares; and/or
_____ a “**Cashless Exercise**” with respect to _____ Warrant Shares, resulting in a delivery obligation of the Company to the Holder of _____ shares of Common Stock representing the applicable Net Number.

2. Payment of Exercise Price. In the event that the holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the holder shall pay the Aggregate Exercise Price in the sum of \$ _____ to the Warrant Agent in accordance with the terms of the Warrant.

3. Delivery of Warrant Shares. The Warrant Agent shall deliver to the holder _____ Warrant Shares in accordance with the terms of the Warrant as follows, subject to Section 1(a) of the Warrant.

_____ Warrant Shares have been sold pursuant to an effective resale registration statement and should be credited to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system pursuant to the information that accompanies this notice; and/or

_____ Warrant Shares acquired via Cashless Exercise have been sold pursuant to Rule 144 and the Holder has delivered to the Company representations from the Holder and the Holder’s broker indicating such and such Warrant Shares should be credited to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system pursuant to the information that accompanies this notice; and/or

_____ Warrant Shares represented by a certificate or evidence of book entry should be sent to the Holder or its designee at the address below.

Date: _____, _____

Name of Registered Holder

By: _____
Name:
Title:

Address for certificate or evidence of book entry delivery (if applicable):

DTC Information (if applicable):

ACKNOWLEDGMENT

The Company hereby acknowledges this Exercise Notice and hereby directs American Stock Transfer & Trust Company, LLC to issue the above indicated number of shares of Common Stock.

RIBBON COMMUNICATIONS INC.

By: _____
Name:
Title:

WARRANT AGREEMENT

WARRANT AGREEMENT (this “**Warrant Agreement**”) dated as of March [●], 2023 (the “**Issuance Date**”) between Ribbon Communications Inc., a Delaware corporation (the “**Company**”), and American Stock Transfer & Trust Company, LLC, a New York limited liability trust company (the “**Warrant Agent**”).

WHEREAS, the Company is engaged in a private placement of shares of its preferred stock, par value \$0.01 per share, and warrants (each a “**Warrant**” or, collectively, the “**Warrants**”) entitling holders to purchase shares of the Company’s common stock (the “**Common Stock**”), par value \$0.0001 per share (the “**Warrant Shares**”);

WHEREAS, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing to so act, in accordance with the terms set forth in this Warrant Agreement in connection with the issuance, registration, transfer, exchange and exercise of the Warrants;

WHEREAS, the Company desires to provide for the provisions of the Warrants, the terms upon which they shall be issued and exercised, and the respective rights, limitation of rights, and immunities of the Company, the Warrant Agent, and the holders of the Warrants; and

WHEREAS, all acts and things have been done and performed which are necessary to make the Warrants the valid, binding and legal obligations of the Company, and to authorize the execution and delivery of this Warrant Agreement.

NOW, THEREFORE, in consideration of the mutual agreements herein contained, the parties hereto agree as follows:

1. **Appointment of Warrant Agent.** The Company hereby appoints the Warrant Agent to act as agent for the Company with respect to the Warrants, and the Warrant Agent hereby accepts such appointment and agrees to perform the same in accordance with the express terms and conditions set forth in this Warrant Agreement (and no implied terms or conditions).

2. **Warrants.**

2.1 **Form of Warrants.** The Warrants shall be substantially in the form of **Exhibit A** attached hereto.

2.2 **Effect of Countersignature.** If a physical certificate is issued, unless and until countersigned by the Warrant Agent pursuant to this Warrant Agreement, a Warrant shall be invalid and of no effect and may not be exercised by the holder thereof.

2.3 **Registration.**

2.3.1 **Warrant Register.** The Warrant Agent shall maintain books (the “**Warrant Register**”) for the registration of the original issuance and transfers of the Warrants. Upon the initial issuance of the Warrants in book-entry form, the Warrant Agent shall issue and register the Warrants in the names of the respective holders thereof in such denominations and otherwise in accordance with instructions delivered to the Warrant Agent by the Company.

2.3.2 **Registered Holder.** Prior to due presentment for registration of transfer of any Warrant, the Company and the Warrant Agent may deem and treat the person in whose name such Warrant shall be registered upon the Warrant Register (“**Registered Holder**”) as the absolute owner of such Warrant and of each Warrant represented thereby (notwithstanding any notation of ownership or other writing on the Warrant made by anyone other than the Company or the Warrant Agent), for the purpose of any exercise thereof, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

3. **Terms and Exercise of Warrants.**

3.1 **Exercise Price.** Each Warrant shall entitle the Registered Holder thereof, subject to the provisions of such Warrant and of this Warrant Agreement, to purchase from the Company the number of shares of Common Stock, stated therein, at the price of \$[•] per share, subject to the adjustments provided in Section 4 hereof (the “**Exercise Price**”).

3.2 Duration of Warrants. Warrants may be exercised only during the period (“**Exercise Period**”) commencing on the Issuance Date and terminating at 11:59 P.M., New York time (the “**close of business**”) on March [•], 2027 (“**Expiration Date**”), unless the Expiration Date is not a Business Day or a day on which trading takes place on the principal Trading Market (a “**Holiday**”), in which case the Expiration Date will be the next day that is not a Holiday. Each Warrant not exercised on or before the Expiration Date shall become void, and all rights thereunder and all rights in respect thereof under this Warrant Agreement shall cease at the close of business on the Expiration Date.

3.3 Exercise of Warrant

3.3.1 Exercise and Payment. Subject to the provisions of this Warrant Agreement and the Warrant, a Registered Holder may exercise the purchase rights represented by the Warrant, in whole or in part, at any time or times on or before the Expiration Date by (i) delivering to the Warrant Agent, a duly executed Exercise Notice in the form attached as Exhibit A to the Warrant (the “**Exercise Notice**”) and (ii) (A) payment to the Warrant Agent of an amount equal to the applicable Exercise Price multiplied by the number of Warrant Shares as to which the Warrant is being exercised (the “**Aggregate Exercise Price**”) in cash by wire transfer of immediately available funds to an account designated in writing by the Warrant Agent or (B) by notifying the Company in writing that this Warrant is being exercised pursuant to a Cashless Exercise (as defined below). No ink-original Exercise Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Exercise Notice be required. The Company acknowledges that the bank accounts maintained by the Warrant Agent in connection with the services provided under this Warrant Agreement will be in its name and that the Warrant Agent may receive investment earnings in connection with the investment at Warrant Agent risk and for its benefit of funds held in those accounts from time to time. Neither the Company nor the Registered Holders will receive interest on any deposits or Exercise Price. If the materials discussed in this Section 3.3.1 are received or deemed to be received after the Expiration Date, the Exercise Notice (or notice of a Cashless Exercise (as defined below)) will be null and void and any funds delivered to the Warrant Agent will be returned to the Registered Holder, as the case may be, as soon as practicable. In no event will interest accrue on any funds deposited with the Warrant Agent in respect of an exercise or attempted exercise of the Warrants.

3.3.2 No Fractional Exercise. No fractional Warrant Shares are to be issued upon the exercise of the Warrant, but rather the number of Warrant Shares to be issued shall be rounded to the nearest whole number.

3.3.3 Cashless Exercise. Notwithstanding anything contained herein to the contrary (other than Section 3.3.7 below), the Registered Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the “**Net Number**” of shares of Common Stock determined according to the following formula (a “**Cashless Exercise**”):

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{B}$$

For purposes of the foregoing formula:

A= the total number of shares with respect to which the Warrant is then being exercised.

B= as applicable: (i) the Weighted Average Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 3.3.1 hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 3.3.1 hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Registered Holder indicated in the Exercise Notice, either (x) the Weighted Average Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice, or (y) the Weighted Average Price of the Common Stock on the Trading Day of the applicable Exercise Notice if such Exercise Notice is executed and delivered 3.3.1 during “regular trading hours” on a Trading Day pursuant to Section 3 hereof, or (iii) the Weighted Average Price of the Common Stock on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 3.3.1 hereof after the close of “regular trading hours” on such Trading Day.

C= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

If the Warrant Shares are issued in a Cashless Exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act of 1933, as amended (the "1933 Act"), the Warrant Shares take on the registered characteristics of the Warrants being exercised. For purposes of Rule 144(d) promulgated under the 1933 Act, as in effect on the date hereof, it is intended that the Warrant Shares issued in a Cashless Exercise shall be deemed to have been acquired by the Registered Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the date this Warrant was originally issued.

The Company will be responsible for determining whether Cashless Exercise applies to a Warrant exercise and will notify the Warrant Agent if it does. The Company shall calculate and transmit to the Warrant Agent, and the Warrant Agent shall have no obligation under this section to calculate, the number of Warrant Shares issuable in connection with the Cashless Exercise. The Warrant Agent will promptly return the Aggregate Exercise Price paid by the Registered Holder in the event a Cashless Exercise applies.

3.3.4 Issuance of Warrant Shares. On or before the first (1st) Trading Day following the Trading Day on which the Registered Holder has delivered an Exercise Notice and the Aggregate Exercise Price (or notice of a Cashless Exercise) to the Warrant Agent (for purposes of this Warrant Agreement, if an Exercise Notice is delivered to the Warrant Agent on a day that is not a Trading Day, such Exercise Notice shall be deemed to have been delivered on the first Trading Day following the day of actual delivery), the Warrant Agent shall transmit by electronic mail an acknowledgment of confirmation of receipt of the Exercise Notice to the Registered Holder. On or before the earlier of (i) the second (2nd) Trading Day and (ii) the number of Trading Days comprising the Standard Settlement Period, in each case, following the date on which the Registered Holder has delivered the Exercise Notice and the Aggregate Exercise Price to the Warrant Agent (or notice of a Cashless Exercise to the Company) (a "**Share Delivery Date**"), the Warrant Agent shall (X) provided that the Company's transfer agent (the "**Transfer Agent**") is participating in The Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program and (A) the Warrant Shares are subject to an effective resale registration statement in favor of the Registered Holder and the Registered Holder has delivered to the Company a representation that such Warrant Shares have been sold pursuant to such registration statement or (B) if exercised via Cashless Exercise, at a time when Rule 144 would be available for immediate resale of the Warrant Shares by the Registered Holder, and the Registered Holder has delivered to the Company a representation that such Warrant Shares have been sold pursuant to Rule 144, cause the aggregate number of Warrant Shares to which the Registered Holder is entitled pursuant to such exercise to be transmitted by the Transfer Agent to the Registered Holder by crediting the Registered Holder's or its designee's balance account with DTC through its Deposit / Withdrawal At Custodian system, or (Y) if (A) the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program or (B) the Warrant Shares are not subject to an effective resale registration statement in favor of the Registered Holder or the Registered Holder has not delivered to the Company a representation that such Warrant Shares have been sold pursuant to such registration statement and, if exercised via Cashless Exercise, at a time when Rule 144 would not be available for immediate resale of the Warrant Shares by the Registered Holder or the Registered Holder has not delivered to the Company a representation that such Warrant Shares have been sold pursuant to such registration statement, cause the Transfer Agent to (i) issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company's share register in the name of the Registered Holder or its designee and bearing such restrictive legends as the Company deems necessary, for the number of Warrant Shares to which the Registered Holder is entitled pursuant to such exercise, or (ii) issue and dispatch by electronic mail to the address as specified in the Exercise Notice, evidence of book entry, registered in the Company's share register in the name of the Registered Holder or its designee and bearing such restrictive legends as the Company deems necessary, for the number of Warrant Shares to which the Registered Holder is entitled pursuant to such exercise. If fewer than all the Warrants registered in the Warrant Register in the name of the Registered Holder or its designee are exercised, a notation shall be made to Warrant Register maintained by the Warrant Agent, as appropriate, evidencing the balance of the Warrants remaining after such exercise.

3.3.5 Valid Issuance. All shares of Common Stock issued upon the proper exercise or surrender of a Warrant in conformity with this Warrant Agreement shall be validly issued, fully paid and non-assessable.

3.3.6 Date of Issuance. Each person or entity in whose name any such certificate for shares of Common Stock is issued or any book entry for shares of Common Stock is made shall, for all purposes, be deemed to have become the holder of record of such shares on the date on which the Warrant was surrendered and payment of the Exercise Price was made, irrespective of the date of delivery of such certificate or book entry, except that, if the date of such surrender and payment is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the close of business on the next succeeding date on which the stock transfer books are open.

3.3.7 Registered Holder's Exercise Limitations. Notwithstanding anything to the contrary contained herein, the Warrant Agent shall not effect the exercise of any portion of a Warrant, and the Registered Holder shall not have the right to exercise any portion of a Warrant, and any such exercise shall be null and void and treated as if never made, to the extent that as a result of, and after giving effect to, such exercise, the Registered Holder together with the other Attribution Parties collectively would beneficially own in excess of 9.99% (the "**Maximum Percentage**") of the number of shares of Common Stock outstanding immediately after giving effect to such exercise; provided, however, that such Maximum Percentage shall not apply to each of JPMorgan Chase & Co. or Swarth Investments Inc., in each case together with its Attribution Parties. For purposes of this Section 1(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the "**1934 Act**"). For purposes of determining the number of outstanding shares of Common Stock the Registered Holder may acquire upon the exercise of a Warrant without exceeding the Maximum Percentage, the Registered Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company's most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission (the "**SEC**"), as the case may be, (y) a more recent public announcement by the Company or (z) any other written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding (the "**Reported Outstanding Share Number**"). If the Warrant Agent receives an Exercise Notice from the Registered Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Warrant Agent shall (i) notify the Registered Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Registered Holder's beneficial ownership, as determined pursuant to this Section 1(e), to exceed the Maximum Percentage, the Registered Holder must notify the Warrant Agent of a reduced number of Warrant Shares to be purchased pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the "**Reduction Shares**") and (ii) as soon as reasonably practicable, the Warrant Agent shall return to the Registered Holder any Exercise Price paid by the Registered Holder for the Reduction Shares. For any reason at any time, upon the written or oral request of the Registered Holder, the Warrant Agent shall within one (1) Trading Day confirm orally and in writing or by electronic mail to the Registered Holder the number of shares of Common Stock then outstanding. The number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including a Warrant, by the Registered Holder and any other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of shares of Common Stock to the Registered Holder upon exercise of a Warrant results in the Registered Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the 1934 Act), the number of shares so issued by which the Registered Holder's and the other Attribution Parties' aggregate beneficial ownership exceeds the Maximum Percentage (the "**Excess Shares**") shall be deemed null and void and shall be cancelled ab initio, and the Registered Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Warrant Agent shall return to the Registered Holder the Exercise Price paid by the Registered Holder for the Excess Shares. Upon delivery of a written notice to the Warrant Agent, the Registered Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% as specified in such notice; provided that (i) any such increase in the Maximum Percentage will not be effective until the 61st day after such notice is delivered to the Warrant Agent and (ii) any such increase or decrease will apply only to the Registered Holder and the other Attribution Parties and not to any other holder of the Warrants that is not an Attribution Party of the Registered Holder. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant Agreement in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Registered Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. No prior inability to exercise the Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 3.3.7 to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 3.3.7 or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of the Warrant.

4. Adjustments. The Exercise Price, the number of Warrant Shares issuable upon exercise of each Warrant and the number of Warrants outstanding are subject to adjustment from time to time as provided in Section 2 of the Warrant. Upon every adjustment of the Exercise Price or the number of Warrant Shares issuable upon exercise of a Warrant, the Company shall give written notice thereof to the Warrant Agent, which notice shall state the Exercise Price resulting from such adjustment and the increase or decrease, if any, in the number of Warrant Shares purchasable at such price upon the exercise of a Warrant, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based. As promptly as reasonably practicable following any adjustment of the Exercise Price and/or the number of Warrant Shares, but in any event not later than 15 Business Days thereafter, the Company shall furnish to the Registered Holder a certificate of an executive officer setting forth in reasonable detail such adjustment and the facts upon which it is based and certifying the calculation thereof. The Warrant Agent shall be entitled to rely conclusively on, and shall be fully protected in relying on, any certificate, notice or instructions provided by the Company with respect to any adjustment of the Exercise Price or the number of shares issuable upon exercise of a Warrant, or any related matter, and the Warrant Agent shall not be liable for any action taken, suffered or omitted to be taken by it in accordance with any such certificate, notice or instructions or pursuant to this Warrant Agreement. The Warrant Agent shall not be deemed to have knowledge of any such adjustment unless and until it shall have received written notice thereof from the Company.

5. Fundamental Transactions. In the event of a Fundamental Transaction (as defined in the Warrant), the Company shall make appropriate provision to ensure that (a) the purchaser (or its parent) shall assume each Warrant (with appropriate changes to the Exercise Price to take into account the value of the securities substituted for the Common Stock so as to preserve the intrinsic spread between the fair market value of any substituted securities and the Exercise Price), or (b) Registered Holder will thereafter have the right to receive upon an exercise of a Warrant, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property) issuable upon the exercise of the Warrant prior to such Fundamental Transaction, such securities, cash or other assets (including warrants or other purchase or subscription rights) which the Registered Holder would have been entitled to receive on a per share basis upon the happening of such Fundamental Transaction had such Warrant been exercised immediately prior to such Fundamental Transaction (without regard to any limitations on the exercise of the Warrant); provided, however, that following any Fundamental Transaction, the Warrant shall only be exercisable via Cashless Exercise. The provisions of this Section 5 shall apply similarly and equally to successive Fundamental Transactions.

Notwithstanding the foregoing, at the request of the Registered Holder delivered at any time commencing on the earliest to occur of (a) the public disclosure of the consummation of any Fundamental Transaction, (b) the consummation of any Fundamental Transaction and (c) the Registered Holder first becoming aware of the consummation of any Fundamental Transaction through the date that is 60 days after the public disclosure of the consummation of such Fundamental Transaction by the Company pursuant to a Current Report on Form 8-K filed with the SEC, the Company or the successor entity (as the case may be) shall purchase the Warrant from the Registered Holder on the date of such request by paying to the Registered Holder cash in an amount equal to the Black Scholes Value (as defined below).

6. Transfer and Exchange of Warrants.

6.1 Registration of Transfer. The Warrant Agent shall register the transfer, from time to time, of any outstanding Warrant into the Warrant Register, upon surrender of such Warrant for transfer. Upon any such transfer, a new Warrant representing the right to purchase an equal number of Warrant Shares shall be issued and the old Warrant shall be cancelled by the Warrant Agent. The Warrants so cancelled shall be delivered by the Warrant Agent to the Company from time to time upon the Company's request. If less than the total number of Warrant Shares then underlying the Warrants is being transferred, a new Warrant shall be issued to the Registered Holder representing the right to purchase the number of Warrant Shares not being transferred.

6.2 Procedure for Surrender of Warrants. Warrants may be surrendered to the Warrant Agent, together with a written request for exchange or transfer, and, thereupon, the Warrant Agent shall issue in exchange therefor one or more new Warrants as requested by the Registered Holder of the Warrants so surrendered, representing an equal aggregate number of Warrants; provided, however, that in the event that a Warrant surrendered for transfer bears a restrictive legend, the Warrant Agent shall not cancel such Warrant and issue new Warrants in exchange thereof until the Warrant Agent has received an opinion of counsel for the Company (who may be in-house counsel) stating that such transfer may be made and indicating whether the new Warrants must also bear the restrictive legend.

6.3 Exchangeable for Multiple Warrants. Warrants are exchangeable, upon the surrender hereof by the Registered Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 6(d) of the Warrant) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Registered Holder at the time of such surrender; provided, however, that no Warrants for fractional Warrant Shares shall be given.

6.3 Fractional Warrants. The Warrant Agent shall not be required to effect any registration of transfer or exchange which will result in the issuance of a warrant certificate for a fraction of a Warrant.

6.4 Service Charges. No service charge shall be made for any exchange or registration of transfer of Warrants.

6.5 Warrant Execution and Countersignature. The Warrant Agent is hereby authorized to countersign and to deliver, in accordance with the terms of this Warrant Agreement, the Warrants required to be issued pursuant to the provisions of this Section 6, and the Company, whenever required by the Warrant Agent, will supply the Warrant Agent with Warrants duly executed on behalf of the Company for such purpose.

7. Other Provisions Relating to Rights of Registered Holders of Warrants

7.1 No Rights as Stockholder. Except as otherwise specifically provided herein, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of capital stock of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

7.2 Lost, Stolen Mutilated or Destroyed Warrants. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of a Warrant, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Registered Holder to the Company in customary form and, in the case of mutilation, upon surrender and cancellation of the Warrant, the Company and the Warrant Agent shall cause a new Warrant to be delivered to the Registered Holder (in accordance with Section 6(d) of the Warrant) representing the right to purchase the Warrant Shares then underlying the Warrant.

7.3 Reservation of Common Stock. The Company shall at all times reserve and keep available a number of its authorized but unissued shares of Common Stock that will be sufficient to permit the exercise in full of all outstanding Warrants issued pursuant to this Warrant Agreement. The Company will take all such commercially reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the trading market upon which the Common Stock may be listed.

8. Concerning the Warrant Agent and Other Matters.

8.1 Payment of Taxes. The Company will, from time to time, promptly pay all taxes and charges that may be imposed upon the Company or the Warrant Agent in respect of the issuance or delivery of shares of Common Stock upon the exercise of Warrants, but the Company shall not be obligated to pay any transfer taxes in respect of the Warrants or such shares.

8.2 Resignation, Consolidation, or Merger of Warrant Agent.

8.2.1 Appointment of Successor Warrant Agent. The Warrant Agent, or any successor to it hereafter appointed, may resign its duties and be discharged from all further duties and liabilities hereunder after giving 60 days' notice in writing to the Company. If the office of the Warrant Agent becomes vacant by resignation or incapacity to act or otherwise, the Company shall appoint, in writing, a successor Warrant Agent in place of the Warrant Agent. If the Company shall fail to make such appointment within a period of 30 days after it has been notified in writing of such resignation or incapacity by the Warrant Agent or by the Registered Holder of the Warrant (who shall, with such notice, submit his, her or its Warrant for inspection by the Company), then the Registered Holder of any Warrant may apply to the Supreme Court of the State of New York for the County of New York for the appointment of a successor Warrant Agent. Any successor Warrant Agent, whether appointed by the Company or by such court, shall be a corporation organized and existing under the laws of the State of New York, in good standing and having its principal office in the Borough of Manhattan, City and State of New York, and be authorized under such laws to exercise corporate trust powers and subject to supervision or examination by federal or state authorities. After appointment, any successor Warrant Agent shall be vested with all the authority, powers, rights, immunities, duties and obligations of its predecessor Warrant Agent with like effect as if originally named as Warrant Agent hereunder, without any further act or deed; but, if for any reason it becomes necessary or appropriate, the predecessor Warrant Agent shall execute and deliver, at the expense of the Company, an instrument transferring to such successor Warrant Agent all the authority, powers, and rights of such predecessor Warrant Agent hereunder, and, upon request of any successor Warrant Agent, the Company shall make, execute, acknowledge, and deliver any and all instruments in writing for more fully and effectually vesting in and confirming to such successor Warrant Agent all such authority, powers, rights, immunities, duties and obligations.

8.2.2 Notice of Successor Warrant Agent. In the event a successor Warrant Agent shall be appointed, the Company shall give notice thereof to the predecessor Warrant Agent and the Transfer Agent for the Common Stock not later than the effective date of any such appointment.

8.2.3 Merger or Consolidation of Warrant Agent. Any corporation into which the Warrant Agent may be merged or with which it may be consolidated or any corporation resulting from any merger or consolidation to which the Warrant Agent shall be a party shall be the successor Warrant Agent under this Warrant Agreement without any further act on the part of the Company or the Warrant Agent.

8.3 Fees and Expenses of Warrant Agent.

8.3.1 Remuneration and Reimbursement. The Company agrees to pay the Warrant Agent reasonable remuneration for its services as Warrant Agent and reasonable reimbursement for expenditures incurred as Warrant Agent in accordance with Schedule I hereto.

8.3.2 Further Assurances. The Company agrees to perform, execute, acknowledge and deliver, or cause to be performed, executed, acknowledged and delivered, all such further and other acts, instruments and assurances as may reasonably be required by the Warrant Agent for the carrying out or performing of the provisions of this Warrant Agreement.

8.4 Liability of Warrant Agent.

8.4.1 Reliance on Company Statement. Whenever, in the performance of its duties under this Warrant Agreement, the Warrant Agent shall deem it necessary or desirable that any fact or matter be proved or established by the Company prior to taking or suffering any action hereunder, such fact or matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a statement signed by an officer of the Company and delivered to the Warrant Agent. The Warrant Agent may rely upon such statement for any action taken or suffered in good faith by it pursuant to the provisions of this Warrant Agreement.

8.4.2 Indemnity. The Warrant Agent shall be liable hereunder only for its own gross negligence, willful misconduct or bad faith. The Company agrees to indemnify the Warrant Agent and hold it harmless against any and all liabilities, including judgments, costs and reasonable counsel fees, for anything done or omitted by the Warrant Agent in the execution of this Warrant Agreement, except as a result of the Warrant Agent's gross negligence, willful misconduct or bad faith.

8.4.3 Exclusions. The Warrant Agent shall have no responsibility with respect to the validity of this Warrant Agreement or with respect to the validity or execution of any Warrant (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Warrant Agreement or in any Warrant; nor shall it be responsible to make any adjustments required under the provisions of Section 4 hereof or responsible for the manner, method or amount of any such adjustment or the ascertaining of the existence of facts that would require any such adjustment; nor shall it, by any act hereunder, be deemed to make any representation or warranty as to the authorization or reservation of any shares of Common Stock to be issued pursuant to this Warrant Agreement or any Warrant or as to whether any shares of Common Stock will when issued be valid and fully paid and non-assessable.

8.5 Acceptance of Agency. The Warrant Agent hereby accepts the agency established by this Warrant Agreement and agrees to perform the same upon the terms and conditions herein set forth and, among other things, shall account promptly to the Company with respect to Warrants exercised and concurrently account for, and pay to the Company, all moneys received by the Warrant Agent for the purchase of shares of the Company's Common Stock through the exercise of Warrants.

9. Miscellaneous Provisions

9.1 Successors. All the covenants and provisions of this Warrant Agreement by or for the benefit of the Company or the Warrant Agent shall bind and inure to the benefit of their respective successors and assigns.

9.2 Notices. Any notice, statement or demand authorized by this Warrant Agreement to be given or made by the Warrant Agent or by the Registered Holder of any Warrant to or on the Company shall be delivered by hand or sent by registered or certified mail or overnight courier service, addressed (until another address is filed in writing by the Company with the Warrant Agent) as follows:

Ribbon Communications Inc.
6500 Chase Oaks Boulevard
Plano, Texas
Telephone No.: (978) 614-8170
Attention: Patrick Macken
E-mail: pmacken@rbbn.com

and

Troutman Pepper Hamilton Sanders
600 Peachtree Street, N.E., Suite 300
Atlanta, Georgia 30308
Telephone No.: (404) 885-3000
Facsimile No.: (404) 962-6599
Attention: David W. Ghegan
E-mail: david.ghegan@troutman.com

Any notice, statement or demand authorized by this Warrant Agreement to be given or made by the Registered Holder of any Warrant or by the Company to or on the Warrant Agent shall be delivered by hand or sent by registered or certified mail or overnight courier service, addressed (until another address is filed in writing by the Warrant Agent with the Company), as follows:

American Stock Transfer & Trust Company, LLC
63201 15th Avenue
Brooklyn, New York 11219
Attention: Reorgwarrants@astfinancial.com

Any notice sent pursuant to this Warrant Agreement shall be effective, if delivered by hand, upon receipt thereof by the party to whom it is addressed, if sent by overnight courier, on the next business day of the delivery to the courier, and if sent by registered or certified mail on the third day after registration or certification thereof.

9.3 Applicable Law. The validity, interpretation, and performance of this Warrant Agreement and of the Warrants shall be governed in all respects by the laws of the State of New York. The Company and the Warrant Agent hereby agree that any action, proceeding or claim against either of them arising out of or relating in any way to this Warrant Agreement shall be brought and enforced in the state and federal courts sitting in the City of New York, Borough of Manhattan, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company and the Warrant Agent hereby waive any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. Any such process or summons to be served upon the Company or the Warrant Agent may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 9.2 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the party receiving such service in any action, proceeding or claim.

9.4 Persons Having Rights under this Warrant Agreement. Nothing in this Warrant Agreement expressed and nothing that may be implied from any of the provisions hereof is intended, or shall be construed, to confer upon, or give to, any person or corporation other than the parties hereto and the Registered Holders of the Warrants. All covenants, conditions, stipulations, promises, and agreements contained in this Warrant Agreement shall be for the sole and exclusive benefit of the parties hereto and their successors and assigns and of the Registered Holders of the Warrants.

9.5 Examination of the Warrant Agreement. A copy of this Warrant Agreement shall be available at all reasonable times at the office of the Warrant Agent in the Borough of Manhattan, City and State of New York, for inspection by the Registered Holder of any Warrant. The Warrant Agent may require any such Registered Holder to submit his, her or its Warrant for inspection.

9.6 Counterparts — Facsimile Signatures. This Warrant Agreement may be executed in any number of counterparts, and each of such counterparts shall, for all purposes, be deemed to be an original, and all such counterparts shall together constitute one and the same instrument. Facsimile signatures shall constitute original signatures for all purposes of this Warrant Agreement.

9.7 Effect of Headings. The section headings herein are for convenience only and are not part of this Warrant Agreement and shall not affect the interpretation thereof

9.8 Amendments. This Warrant Agreement and any Warrant may be amended by the parties hereto by executing a supplemental warrant agreement, without the consent of any of the Registered Holders, for the purpose of (i) curing any ambiguity, or curing, correcting or supplementing any defective provision contained herein, or making any other provisions with respect to matters or questions arising under this Warrant Agreement that is not inconsistent with the provisions of this Warrant Agreement or the Warrant, (ii) evidencing the succession of another corporation to the Company and the assumption by any such successor of the covenants of the Company contained in this Warrant Agreement and the Warrants, (iii) evidencing and providing for the acceptance of appointment by a successor Warrant Agent with respect to the Warrants, (iv) adding to the covenants of the Company for the benefit of the Registered Holders or surrendering any right or power conferred upon the Company under this Warrant Agreement, or (v) amending this Warrant Agreement and the Warrants in any manner that the Company may deem to be necessary or desirable and that will not adversely affect the interests of the Registered Holders in any material respect. All other modifications or amendments to this Warrant Agreement, including any amendment to increase the Exercise Price or shorten the Exercise Period, shall require the written consent of the Registered Holders of a majority of the then outstanding Warrants. Notwithstanding the foregoing, the Company may extend the duration of the Exercise Period in accordance with Section 3.2 without such consent.

9.9 Severability. This Warrant Agreement shall be deemed severable, and the invalidity or unenforceability of any term or provision hereof shall not affect the validity or enforceability of this Warrant Agreement or of any other term or provision hereof. Furthermore, in lieu of any such invalid or unenforceable term or provision, the parties hereto intend that there shall be added as a part of this Warrant Agreement a provision as similar in terms to such invalid or unenforceable provision as may be possible and be valid and enforceable.

10. Certain Definitions. As used herein, the following terms shall have the following meanings:

(a) "**Black Scholes Value**" means the value of the unexercised portion of this Warrant remaining on the date of the Registered Holder's request pursuant to Section 3, which value is calculated using the Black Scholes Option Pricing Model obtained from the "OV" function on Bloomberg utilizing (i) an underlying price per share equal to the greater of (1) the highest closing sale price of the Common Stock during the period beginning on the Trading Day immediately preceding the announcement of the applicable Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Trading Day of the Registered Holder's request pursuant to Section 3 and (2) the sum of the price per share being offered in cash in the applicable Fundamental Transaction (if any) plus the value of the non-cash consideration being offered in the applicable Fundamental Transaction (if any), (ii) a strike price equal to the Exercise Price in effect on the date of the Registered Holder's request pursuant to Section 3, (iii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the greater of (1) the remaining term of this Warrant as of the date of the Registered Holder's request pursuant to Section 3 and (2) the remaining term of this Warrant as of the date of consummation of the applicable Fundamental Transaction or as of the date of the Registered Holder's request pursuant to Section 3 if such request is prior to the date of the consummation of the applicable Fundamental Transaction, (iv) a zero cost of borrow and (v) an expected volatility equal to the greater of 100% and the 30 day volatility obtained from the "HVT" function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the earliest to occur of (A) the public disclosure of the applicable Fundamental Transaction and (B) the date of the Registered Holder's request pursuant to Section 3.

(b) "**Business Day**" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided that banks shall not be deemed to be authorized or obligated to be closed due to a "shelter in place," "non-essential employee" or similar closure of physical branch locations at the direction of any governmental authority if such banks' electronic funds transfer systems (including for wire transfers) are open for use by customers on such day.

(c) "**Standard Settlement Period**" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Exercise Notice.

(d) "**Trading Day**" means a day on which the Common Stock generally occurs on the Trading Market; provided that if Common Stock is not so listed or traded, "Trading Day" means a Business Day.

(e) "**Trading Market**" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

(f) "**Warrant Share Delivery Date**" means the date that is the earliest of: (i) two (2) Trading Days after the delivery to the Company of the Exercise Notice, and (ii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Exercise Notice, all subject to receipt of any cash payments required by the Registered Holder.

[Signature Page to Follow]

IN WITNESS WHEREOF, this Warrant Agreement has been duly executed by the parties hereto as of the day and year first above written.

RIBBON COMMUNICATIONS INC.

By: _____
Name: Bruce McClelland
Title: President and Chief Executive Officer

[Signature Page - Warrant Agreement]

AMERICAN STOCK TRANSFER & TRUST COMPANY

By:

Name:

[*]

Title:

[*]

[Signature Page - Warrant Agreement]

EXHIBIT A
FORM OF WARRANT

SCHEDULE 1
[SEE ATTACHED]
