

AKOUSTIS TECHNOLOGIES, INC.

AKOUSTIS, INC.

Prospectus

\$44,000,000 of 6.0% Convertible Senior Notes due 2027 for sale by the Selling Security Holders (fully and unconditionally guaranteed by Akoustis, Inc.)

13,100,000 Shares of Common Stock issuable in respect of the Notes for sale by the Selling Security Holders

This prospectus relates to the sale or other disposition from time to time of up to \$44,000,000 aggregate principal amount of our 6.0% Convertible Senior Notes due 2027 (the "Notes"), up to 9,341,825 shares of common stock, par value \$0.001 per share ("Common Stock"), that may be issued upon conversion of the Notes, and up to an additional 3,758,175 shares of Common Stock that may be issued, at our election, as payment of accrued interest on the Notes, as make-whole payments made in connection with certain conversions of the Notes or as payments made in connection with qualifying fundamental changes of Akoustis Technologies, Inc. (the "Company"), in each case as further described in the section of this prospectus entitled "Description of Notes" by the persons described in this prospectus, whom we call the "Selling Security Holders," identified in the section of this prospectus entitled "Selling Security Holders," or their transferees. The Notes are fully, unconditionally and irrevocably guaranteed (the "Guarantee") by our wholly-owned subsidiary. We are registering the Notes, the Guarantee, and shares of Common Stock issuable upon conversion and in respect of the Notes are required by the terms of the registration rights agreement among the purchasers in the offering of the Notes, us, and the guarantor party thereto, for the benefit of the Selling Security Holders. Such registration does not mean that the Selling Security Holders will actually offer or sell any of the Notes, the Guarantee or shares of Common Stock issuable upon conversion and in respect of the Notes. We will not receive any of the proceeds from the sale or other disposition of such securities offered by the Selling Security Holders.

The Notes, the Guarantee and shares of Common Stock offered by this prospectus (collectively, the "Securities") may be sold by the Selling Security Holders from time to time in the open market, through privately negotiated transactions or a combination of these methods, at market prices prevailing at the time of sale or at negotiated prices. We will not receive any proceeds from the sale of the Securities by the Security Holders. We will bear all expenses of registration incurred in connection with this offering, but all selling and other expenses incurred by the Selling Security Holders will be borne by them.

Our Common Stock is traded on the Nasdaq Capital Market ("Nasdaq") under the symbol "AKTS." On September 9, 2022, the last reported sale price for our Common Stock was \$4.43 per share. There is no public market for the Notes and we do not intend to list or quote the Notes on any securities exchange or any quotation system.

Our business and an investment in our securities involve a high degree of risk. Before making any investment in our securities, you should read and carefully consider risks described in the "Risk Factors" section beginning on page 7 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This prospectus is dated September 21, 2022.

You should rely only on the information contained in this prospectus. We have not authorized any other person to provide you with information that is different from that contained in this prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The Selling Security Holders are offering to sell and seeking offers to buy the Securities only in jurisdictions where offers and sales are permitted. You should assume that the information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our Securities. Our business, financial condition, results of operations and prospects may have changed since that date. We are not making an offer of any Securities in any jurisdiction where the offer is not permitted.

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PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus. This summary is not complete and does not contain all of the information that should be considered before investing in our Securities. Potential investors should read the entire prospectus carefully, including the more detailed information regarding our business provided in our Annual Report on Form 10-K for the fiscal year ended June 30, 2022 incorporated herein by reference, the risks of purchasing our Securities discussed under the "Risk Factors" section, and our financial statements and the accompanying notes to the financial statements incorporated herein by reference.

Unless the context indicates or requires otherwise, all references in this registration statement to "Akoustis Technologies," "Akoustis," the "Company," "we," "us" and "our" refer to Akoustis Technologies, Inc. and its wholly owned consolidated subsidiary, Akoustis, Inc., each a Delaware corporation.

This prospectus includes the trademarks of Akoustis, Inc., Akoustis TM and XBAW TM : See "Description of Business – Intellectual Property." All references to Akoustis and XBAW in this prospectus are intended to include reference to such trademarks.

Our Company

Akoustis® is an emerging commercial product company focused on developing, designing, and manufacturing innovative RF filter solutions for the wireless industry, including for products such as smartphones and tablets, network infrastructure equipment, WiFi Customer Premise Equipment ("CPE"), automotive, industrial and defense applications. Filters are critical in selecting and rejecting signals, and their performance enables differentiation in the functionality of the RF front-end ("RFFE"). Located between the device's antenna and its digital backend, the RFFE is the circuitry that performs the analog signal processing and contains components such as amplifiers, filters and switches. We have developed a proprietary microelectromechanical system ("MEMS") based bulk acoustic wave ("BAW") technology and a unique patented transfer process flow, called XBAW TM to manufacture our filters for use in RFFE modules. Our XBAW filters incorporate optimized high purity piezoelectric materials for high power, high frequency and wide bandwidth operation. We are developing RF filters for 5G, WiFi and defense bands using our proprietary resonator device models and product design kits (PDKs). As we qualify our RF filter products, we engage with target customers to evaluate our filter solutions. Our designs target UHB, (sub-6 GHz) 5G, WiFi and defense bands. More recently, we have engaged multiple customers whom lack access to high performance BAW filters and supply RFFE solutions for mobile applications such as smartphones, PC's and AR/VR devices, to market and sell our products. Our RF filter solutions address problems (such as loss, bandwidth, power handling, and isolation) created by the growing number of frequency bands in the RFFE of mobile devices, PCs, automotive, infrastructure and premise equipment to support 5G, and WiFi. We prototype, sample and shipped commercial production volume of our single-band and multi-band low loss BAW filter designs for 5G frequency bands and 5 GHz and 6 GHz WiFi bands which are suited to competitive BAW solutions and historically cannot be addressed with low-band, lower power handling surface acoustic wave ("SAW") technology. We manufacture our high-performance RF filter circuits, using our first generation XBAW wafer process, in our 120,000-square foot wafer- manufacturing facility located in Canandaigua, New York, which we acquired in June 2017. Additionally, through our recent acquisition of RFM Integrated Device, Inc. ("RFMi"), we operate a fabless business whereby we make sales of complementary SAW resonators, RF filters, crystal (Xtal) resonators and oscillators, and ceramic products—addressing opportunities in multiple end markets, such as automotive and industrial applications.

We own and/or have filed applications for patents on the core resonator device technology, manufacturing facility and intellectual property ("IP") necessary to produce our RF filter chips and operate as a "pure-play" RF filter supplier, providing discrete filter solutions direct to Original Equipment Manufacturers ("OEMs") and aligning with the front- end module manufacturers that seek to acquire high performance filters to expand their module businesses. We believe this business model is the most direct and efficient means of delivering our solutions to the market.

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Technology. Our device technology is based upon bulk-mode acoustic resonance, which we believe is superior to surface-mode resonance for high-band and ultra-high-band ("UHB") applications that include 4G/LTE, 5G, WiFi, automotive, industrial and defense applications. Although some of our target customers utilize or manufacture the RFFE module, they may lack access to critical UHB filter technology that we produce, which is necessary to compete in high frequency applications.

Manufacturing. We currently manufacture Akoustis' high-performance RF filter circuits, using our first generation XBAW[®] wafer process, in our 120,000-square foot wafer- manufacturing facility located in Canandaigua, New York, which we acquired in June 2017. RFMi products are manufactured by a third party and sold by RFMi either directly to customers or sold and shipped with Akoustis products.

Intellectual Property. As of August 31, 2022, our IP portfolio included 67 patents, including a blocking patent that we have licensed from Cornell University. Additionally, as of August 31, 2022, we have 117 pending patent applications. These patents cover our XBAW ® RF filter technology from raw materials through the system architectures.

By designing, manufacturing, and marketing our RF filter products to mobile phone OEMs, defense OEMs, network infrastructure OEMs, and WiFi CPE OEMs, we seek to enable broader competition among the front-end module manufacturers.

Since we own and/or have filed applications for patents on the core technology and control access to our intellectual property, we offer several ways to engage with potential customers. First, we engage with multiple wireless markets, providing standardized filters that we design and offer as standard catalog components. Second, we deliver unique filters to customer-supplied specifications, which we design and fabricate on a customized basis. Finally, we offer our models and design kits for our customers to design their own filters utilizing our proprietary technology.

Plan of Operation

We commercialize our technology by designing and manufacturing single-band and multi-band BAW RF filter solutions in our New York semiconductor chip fabrication facility. Our filter solutions address problems (such as loss, bandwidth, power handling, and isolation) created by the growing number of frequency bands in the RFFE of mobile devices, infrastructure and premise equipment to support 4G/LTE, 5G, and WiFi. We manufacture our single-band low-loss BAW filter designs for 4G/LTE frequency bands, which are dominated by competitive BAW solutions and historically cannot be addressed with low-band, lower power handling surface acoustic wave ("SAW") technology.

We expect to continue to incur substantial costs for commercialization of our technology on a continuous basis because our business model involves materials and solid state device technology development and engineering of catalog and custom filter design solutions. To succeed across our combined portfolio of Akoustis, XBAW, and RFMi products, we must convince customers in a wide range of industries including mobile phone OEMs, RFFE module manufacturers, network infrastructure OEMs, WiFi CPE OEMs, medical device makers, automotive and defense customers to use our products in their systems and modules. For example, since there are two dominant BAW filter suppliers in the industry that have high-band technology, and both utilize such technology as a competitive advantage at the module level, we expect customers that lack access to high-band filter technology will be open to engage with our company for XBAW filters.

To help drive our XBAW filter business, we plan to continue to pursue RF filter design and R&D development agreements and potentially joint ventures with target customers and other strategic partners, although we cannot guarantee we will be successful in these efforts. These types of arrangements may subsidize technology development costs and qualification, filter design costs, and offer complementary technology and market intelligence and other avenues to revenue. However, we intend to

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About This Offering

This prospectus relates to the public offering by the Selling Security Holders listed in this prospectus of up to \$44,000,000 aggregate principal amount of 6.0% Convertible Senior Notes due 2027, including the Guarantee, and up to 13,100,000 shares of Common Stock issuable upon conversion or in respect of the Notes. The Securities offered by this prospectus may be sold by the Selling Security Holders from time to time in the open market, through negotiated transactions or otherwise at market prices prevailing at the time of sale or at negotiated prices or otherwise as described in the section of this prospectus titled "Plan of Distribution." We will receive no proceeds from the sale of the Securities by the Selling Security Holders or from the issuance of Common Stock in respect of the Notes. We will bear all expenses of registration incurred in connection with this offering, but all selling and other expenses incurred by the Selling Security Holders will be borne by them.

Selected Risks Associated with an Investment in the Securities

An investment in the Securities is highly speculative and is subject to numerous risks described in the section entitled "Risk Factors" and elsewhere in this prospectus. You should carefully consider these risks before making an investment. Some of these risks include:

- We have a limited operating history upon which investors can evaluate our business and future prospects.
- We have incurred losses since our inception in May 2014, and will need substantial additional funding to continue our operations and may not achieve or sustain profitability in the future.
- Servicing the debt represented by the Notes requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.
- If we are unable to obtain additional financing on acceptable terms, we may have to curtail our growth or cease our development plans and operations.
- You could lose all of your investment.
- You may experience dilution of your ownership interests because of the future issuance of additional shares of our common or preferred stock or other securities
 that are convertible into or exercisable for our common or preferred stock. Furthermore, the conversion price of the Notes may not be adjusted for all dilutive
 events, including third-party tender or exchange offers, that may adversely affect the trading price of the Notes or the shares of our common stock issuable upon
 conversion of the Notes.
- Our products may not be able to be meet the required specifications of customers and achieve qualification for commercial manufacturing in a timely manner.
- If we are unable to establish effective marketing and sales capabilities or enter into agreements with third parties to market and sell our RF filters, we may not be
 able to effectively generate product revenues.
- If we fail to obtain, maintain and enforce our intellectual property rights, we may not be able to prevent third parties from using our proprietary technologies and may lose access to technologies critical to our products.

Company Information

Our principal executive offices are located at 9805 Northcross Center Court, Suite A, Huntersville, North Carolina 28078. Our telephone number is (704) 997-5735. Our website address is www.akoustis.com. The information on, or that can be accessed through, our website is not part of this prospectus and is not incorporated by reference in this prospectus.

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THE OFFERING

Common Stock currently outstanding 57,227,947 shares. (1)

Common Stock offered by the Company None.

Notes currently outstanding \$44,000,000 aggregate principal amount.

Notes offered by the Company None.

Notes offered by the Selling Security Holders Up to \$44,000,000 aggregate principal amount.

Common stock offered by the Selling Security Holders Up to 13,100,000 shares.

Use of proceeds

We will not receive any of the proceeds from the sales of the Securities by the Selling Security Holders or upon the issuance of Common Stock in respect of the Notes.

AKTS

Nasdaq symbol for Common Stock

Risk factors

You should carefully consider the information set forth in this prospectus and, in particular, the specific factors set forth in the "Risk Factors" section beginning on page 7 of this prospectus before deciding whether or not to invest in the Notes or shares of our Common Stock.

- (1) As of September 9, 2022. This number excludes:
 - warrants to purchase 41,103 shares of Common Stock, all of which are currently exercisable
 - options to purchase 3,009,139 shares of Common Stock (including options currently exercisable to purchase up to 1,851,702 shares of Common Stock),
 - unvested restricted stock units for 2,773,835 shares of Common Stock, and
 - shares issuable in respect of the Notes.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus and documents we have filed with the SEC that are incorporated by reference herein and therein contain forward-looking statements that relate to our plans objectives, estimates, and goals within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). In addition, from time to time we or our representatives have made or will make forward-looking statements in various other filings that we make with the U.S. Securities and Exchange Commission (the "SEC") or in other documents, including press releases or other similar announcements. Any and all statements contained in this prospectus supplement and the accompanying prospectus that are not statements of historical fact may be deemed to be forward-looking statements. Terms such as "may," "will," "might," "would," "should," "could," "project," "estimate," "predict," "potential," "strategy," "anticipate," "attempt," "develop," "plan," "help," "seek," "believe," "continue," "intend," "expect," "future," and terms of similar import (including the negative of any of the foregoing) may identify forward-looking statements. However, not all forward-looking statements may contain one or more of these identifying terms. Forward-looking statements in this prospectus and documents we have filed with the SEC that are incorporated by reference herein and therein may include, without limitation, statements regarding (i) the plans and objectives of management for future operations, including plans or objectives relating to the development of commercially viable radio frequency ("RF") filters, (ii) projections of income (including income/loss), earnings (including earnings/loss) per share, capital expenditures, dividends, capital structure or other financial items, (iii) our future financial performance, including any such statement contained in the management's discussion and analysis of financial condition or in the results of operations included pursuant to the rules and regulations

Forward-looking statements are not meant to predict or guarantee actual results, performance, events or circumstances and may not be realized because they are based upon our current projections, plans, objectives, beliefs, expectations, estimates and assumptions and are subject to a number of risks and uncertainties and other influences, many of which are beyond our control. Actual results and the timing of certain events and circumstances may differ materially from those described by the forward-looking statements as a result of these risks and uncertainties. Factors that may influence or contribute to the inaccuracy of the forward-looking statements or cause actual results to differ materially from expected or desired results may include, without limitation:

- our limited operating history,
- our inability to generate revenues or achieve profitability,
- the impact of the COVID-19 pandemic, Russian-Ukrainian conflict and other sources of volatility on our operations, financial condition and the worldwide economy,
- increases in prices for raw materials, labor, and fuel caused by rising inflation,
- our inability to obtain adequate financing and sustain our status as a going concern,
- the results of our research and development ("R&D") activities,
- our inability to achieve acceptance of our products in the market,
- general economic conditions, including upturns and downturns in the industry,
- existing or increased competition,
- our inability to successfully scale our New York semiconductor chip fabrication facility and related operations while maintaining quality control and assurance and avoiding delays in output,

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- · contracting with customers and other parties with greater bargaining power and agreeing to terms and conditions that may adversely affect our business,
- the possibility that the anticipated benefits from our business acquisitions (including the acquisition of RFM Integrated Device, Inc. ("RFMi")) will not be realized in full or at all or may take longer to realize than expected,
- the possibility that costs or difficulties related to the integration of acquired businesses' (including RFMi's) operations will be greater than expected and the possibility of disruptions to our business during integration efforts and strain on management time and resources;
- risks related to doing business in foreign countries,
- any security breaches or other disruptions compromising our proprietary information and exposing us to liability,
- our limited number of patents,
- failure to obtain, maintain and enforce our intellectual property rights,
- claims of infringement, misappropriation or misuse of third-party intellectual property, including the lawsuit filed by Qorvo, Inc. in October 2021, that, regardless of merit, could result in significant expense and negatively impact our business results,

- our inability to attract and retain qualified personnel,
- results of any arbitration or litigation that may arise,
- our reliance on third parties to complete certain processes in connection with the manufacture of our products,
- product quality and defects,
- our ability to market and sell our products,
- our failure to innovate or adapt to new or emerging technologies, including in relation to our competitors,
- our failure to comply with regulatory requirements,
- stock volatility and illiquidity,
- · our failure to implement our business plans or strategies,
- · our failure to maintain effective internal control over financial reporting,
- · our failure to obtain and maintain a Trusted Foundry accreditation of our New York fabrication facility, and
- shortages in supplies needed to manufacture our products, or needed by our customers to manufacture devices incorporating our products.

A description of some of the risks and uncertainties that could cause our actual results to differ materially from those described by the forward-looking statements in this prospectus appears in the section captioned "Risk Factors" as well as the risk factors described under the section captioned "Risk Factors" contained in our Annual Report on Form 10-K for our most recent fiscal year (together with any material changes thereto contained in subsequent filed Quarterly Reports on Form 10-Q and Current Reports on Form 8-K) and those contained in our other filings with the SEC, which are incorporated by reference in this prospectus and elsewhere in this prospectus. Readers are cautioned not to place undue reliance on forward-looking statements because of the risks and uncertainties related to them and to the risk factors. The forward-looking statements in this prospectus speak only as of the date hereof and, except as may be required by law, we do not undertake any obligation to update the forward-looking statements contained in this prospectus to reflect any new information or future events or circumstances or otherwise.

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RISK FACTORS

Investing in our Securities involves a high degree of risk. Before purchasing our Securities, you should read and consider carefully the following risk factors as well as the risk factors described under the section captioned "Risk Factors" contained in our Annual Report on Form 10-K for our most recent fiscal year (together with any material changes thereto contained in subsequent filed Quarterly Reports on Form 10-Q and Current Reports on Form 8-K) and those contained in our other filings with the SEC, which are incorporated by reference in this prospectus supplement and the accompanying prospectus, together with the other information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus, together with the other information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus, together with the other information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus, together with the other information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus, together with the other information contained in our incorporated by reference in this prospectus supplement and the accompanying prospectus, together with the other information contained in our Securities are incorporated by reference in this prospectus supplement and the accompanying prospectus, together with the other information contained in our securities. The supplement and the accompanying prospectus, together with the other information contained in our securities.

Risks Related to the Notes

Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.

Our ability to make scheduled payments of the principal of the Notes depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to repay our debt will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

Our ability to pay interest on, and make certain other payments with respect to, the Notes with our common stock is subject to a maximum number of shares unless we obtain shareholder approval in accordance with the listing requirements of the Nasdaq Capital Market or such other national securities exchange on which our common stock is listed.

Unless we obtain the requisite approval of our shareholders pursuant to the applicable Nasdaq Marketplace rule or listing requirements of the relevant stock exchange, the number of shares we may deliver in respect of the Notes, including those delivered in lieu of cash interest, in connection with an interest make-whole payment, or as a qualifying fundamental change payment, will not exceed 19.99% of our Common Stock outstanding (as adjusted for stock splits, reverse stock splits, stock combinations, reclassifications and reorganizations) as of the close of the trading day immediately preceding the date of the indenture that governs the Notes, or an aggregate of 13,100,000 shares of Common Stock. The number of shares of Common Stock issued to pay any portion of interest or certain other payments in respect of the Notes will be based on the average trading price of our Common Stock over the ten consecutive trading days preceding payment. Therefore, if the trading price of our Common Stock decreases, we would need to issue a greater number of shares of Common Stock in payment of a particular dollar amount. However, since the maximum number of shares we may issue in respect of the Notes without obtaining stockholder approval is limited, we may lose the ability to make these payments in shares of our Common Stock and may not have sufficient cash to service the debt in cash, which could result in a default on our debt obligations.

Subject to certain conditions and limitations in the indenture governing the Notes, we and our subsidiaries may be able to incur substantial additional debt in the future, some of which may be secured debt. Except for the limitation described under "Description of Notes—Limitation on Incurrence of Additional Indebtedness" with respect the incurrence of additional indebtedness, we and our subsidiaries will not be restricted under the terms of the indenture governing the Notes from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the indenture governing the Notes that could have the effect of diminishing our ability to make payments on the Notes when due.

Recent and future regulatory actions and other events may adversely affect the trading price and liquidity of the Notes.

We expect that many investors in, and potential purchasers of, the Notes will employ, or seek to employ, a convertible arbitrage strategy with respect to the Notes. Investors would typically implement such a strategy by selling short our Common Stock underlying the Notes and dynamically adjusting their short position while continuing to hold the Notes. Investors may also implement this type of strategy by entering into swaps on our Common Stock in lieu of or in addition to short selling the Common Stock.

The Securities Exchange Commission (the "SEC") and other regulatory and self-regulatory authorities have implemented various rules and taken certain actions, and may in the future adopt additional rules and take other actions, that may impact those engaging in short selling activity involving equity securities (including our Common Stock). Such rules and actions include Rule 201 of SEC Regulation SHO, the adoption by the Financial Industry Regulatory Authority, Inc. and the national securities exchanges of a "Limit Up-Limit Down" program, the imposition of market-wide circuit breakers that halt trading of securities for certain periods following specific market declines, and the implementation of certain regulatory reforms required by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. Any governmental or regulatory action that restricts the ability of investors in, or potential purchasers of, the Notes to effect short sales of our Common Stock, borrow our Common Stock or enter into swaps on our Common Stock could adversely affect the trading price and the liquidity of the Notes.

We cannot assure you that an active trading market will develop for the Notes.

There is no active trading market for the Notes, and we do not intend to apply to list the Notes on any securities exchange or to arrange for quotation on any automated dealer quotation system. Any market-making activities relating to the Notes may cease at any time without notice. In addition, the liquidity of the trading market in the Notes, and the market price quoted for the Notes, may be adversely affected by changes in the overall market for this type of security and by changes in our financial performance or prospects or in the prospects for companies in our industry generally. As a result, we cannot assure you that an active trading market will develop for the Notes. If an active trading market does not develop or is not maintained, the market price and liquidity of the Notes may be adversely affected. In that case you may not be able to sell your Notes at a favorable price.

Because the Notes are held in book-entry form, holders must rely on DTC's procedures to receive communications relating to the Notes and exercise their rights and remedies.

We initially issued the Notes in the form of one or more global notes registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"). As a result, beneficial interests in global notes are shown on, and transfers of global notes will be effected only through, the records maintained by DTC. Except in limited circumstances, we will not issue certificated notes. See "Description of Notes—Book-Entry; Settlement and Clearance." Accordingly, if you own a beneficial interest in a global note, then you will not be considered a record owner or holder of the Notes. Instead, DTC or its nominee will be the sole holder of the Notes. Unlike persons who have certificated Notes registered in their names, owners of beneficial interests in global notes will not have the direct right to act on our solicitations for consents or requests for waivers or other actions from holders. Instead, those beneficial owners will be permitted to act only to the extent that they have received appropriate proxies to do so from DTC or, if applicable, a DTC participant. The applicable procedures for the granting of these proxies may not be sufficient to enable owners of beneficial interests in global notes to vote on any requested actions on a timely basis. In addition, notices and other communications relating to the Notes will be sent to DTC. We expect DTC to forward any such communications to DTC participants, which in turn would forward such communications to indirect DTC participants. But we can make no assurances that you timely receive any such communications.

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Volatility in the market price and trading volume of our Common Stock could adversely impact the trading price of the Notes.

The stock market in recent years has experienced significant price and volume fluctuations that have often been unrelated to the operating performance of companies. In addition, the market price of our Common Stock could fluctuate significantly for many reasons, including in response to the risks described in this section or our most recent annual report on Form 10-K or subsequently filed quarterly reports on Form 10-Q or elsewhere in this prospectus for reasons unrelated to our operations, such as reports by industry analysts, investor perceptions or negative announcements by our customers, competitors or suppliers regarding their own performance, as well as industry conditions and general financial, economic and political instability. A decrease in the market price of our Common Stock would likely adversely impact the trading price of the Notes. The market price of our Common Stock could also be affected by possible sales of our Common Stock by investors who view the Notes as a more attractive means of equity participation in us and by hedging or arbitrage trading activity that may develop involving our Common Stock. This trading activity could, in turn, affect the trading price of the Notes. This volatility in the market price of our Common Stock may affect the price at which you could sell the shares of our Common Stock you receive upon conversion of your Notes, if any, and the sale of substantial amounts of our Common Stock could adversely affect the price of our Common Stock and the value of your Notes.

Any adverse rating of the Notes may cause their market price to fall.

We do not intend to seek a rating on the Notes. However, if a rating service were to rate the Notes and if such rating service were to lower its rating on the Notes below the rating initially assigned to the Notes or otherwise announce its intention to put the Notes on credit watch, the trading price of the Notes could decline.

You may be subject to tax attributable to interest paid on the Notes even though you do not receive a corresponding cash payment.

The Notes permit us, at our option, to make certain payments in freely tradable shares of Common Stock in lieu of cash. You may be subject to tax attributable to such payments even if they are not paid in cash.

You may be subject to tax if we make or fail to make certain adjustments to the conversion rate of the Notes even though you do not receive a corresponding cash distribution.

The conversion rate of the Notes is subject to adjustment in certain circumstances, including the payment of cash dividends. If the conversion rate is adjusted as a result of a cash dividend paid to our common stockholders, you may be deemed to have received a dividend subject to U.S. federal income tax without the receipt of any cash. In addition, a failure to adjust (or to adjust adequately) the conversion rate after an event that increases your proportionate interest in us could be treated as a deemed taxable dividend to you. If you are a non-U.S. holder (as defined in "Material U.S. Federal Income Tax Considerations"), any deemed dividend would be subject to U.S. federal withholding tax at a 30% rate, or such lower rate as may be specified by an applicable treaty, and if you are a U.S. holder (as defined in "Material U.S. Federal Income Tax Considerations"), any deemed dividend may be subject to federal backup withholding tax at a 24% rate, which, in each case, may be withheld from subsequent payments on the Notes or other amounts received by you. See "Material U.S. Federal Income Tax Considerations."

We intend to take the position that the Notes are not contingent payment debt instruments, which position is not free from doubt.

We may be required to make additional payments on Notes that are converted in certain circumstances, including settlement of the interest make-whole payment described in "Description of Notes—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions." Due to a lack of relevant authority regarding certain of these payments, the applicability to the Notes of Treasury Regulations governing contingent payment debt instruments is uncertain. In particular, the effect of the interest make-whole payment on the tax treatment of the Notes is unclear. Although the matter is not free from doubt, we intend to take the position for U.S. federal income tax purposes that the Notes are not contingent payment debt instruments. Our position that the Notes should not be treated as contingent payment debt instruments is binding on the holders of the Notes unless a contrary position is disclosed to the Internal Revenue Service (the "IRS") (but is not binding on the IRS). If the IRS were to successfully challenge our position, and the Notes were treated as contingent payment debt instruments, U.S. noteholders would be required, among other potential adverse consequences, to accrue interest income at a rate substantially higher than the stated interest rate on the Notes (regardless of such U.S. holder's regular method of accounting for U.S. federal income tax purposes), and to treat as ordinary income, rather than capital gain, any gain recognized on a sale, exchange or redemption of a Note. In addition, conversion of the Notes would be a taxable event, and any gain realized upon conversion would be required to be treated as ordinary income.

Investors are urged to consult with their own tax advisors regarding the tax consequences of purchasing, owning and disposing of the Notes and the Common Stock that may be received upon conversion of the Notes. See "Material U.S. Federal Income Tax Considerations."

Future sales of our Common Stock in the public market could lower the market price for our Common Stock and adversely impact the trading price of the Notes.

In the future, we may sell additional shares of our Common Stock to raise capital, including pursuant to our ATM Sales Agreementwith Oppenheimer & Co. Inc., Craig-Hallum Group LLC and Roth Capital Partners, LLC. In addition, a substantial number of shares of our Common Stock are reserved for issuance upon the exercise of stock options and upon conversion of the Notes. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our Common Stock. The issuance and sale of substantial amounts of Common Stock, or the perception that such issuances and sales may occur, could adversely affect the trading price of the Notes and the market price of our Common Stock and impair our ability to raise capital through the sale of additional equity securities.

Holders of Notes are not entitled to any rights with respect to our Common Stock, but they will be subject to all changes made with respect to our Common Stock to the extent our conversion obligation includes shares of our Common Stock.

Holders of Notes are not entitled to any rights with respect to our Common Stock (including, without limitation, voting rights and rights to receive any dividends or other distributions on our Common Stock) prior to the conversion date relating to such Notes, but holders of Notes will be subject to all changes affecting our Common Stock. For example, if an amendment is proposed to our certificate of incorporation or bylaws requiring stockholder approval and the record date for determining the stockholders of record entitled to vote on the amendment occurs prior to the conversion date related to a holder's conversion of its Notes, such holder will not be entitled to vote on the amendment, although such holder will nevertheless be subject to any changes affecting our Common Stock.

Upon conversion of the Notes, you may receive less valuable consideration than expected because the value of our Common Stock may decline after you exercise your conversion right but before we settle our conversion obligation.

Under the Notes, a converting holder will be exposed to fluctuations in the value of our Common Stock during the period from the date such holder surrenders Notes for conversion until the date we settle our conversion obligation, which may be two trading days following the relevant conversion date. Accordingly, if the price of our Common Stock decreases during this period, the value of the shares that you receive will be adversely affected and would be less than the conversion value of the Notes on the conversion date.

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The qualifying fundamental change payment for Notes converted in connection with a qualifying fundamental change may not adequately compensate you for any lost value of your Notes as a result of such transaction.

Following the occurrence of a qualifying fundamental change, as described in "Description of Notes—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," we will, under certain circumstances, increase the conversion rate by an additional number of shares of Common Stock ("qualifying fundamental payment additional shares"). The number of qualifying fundamental change additional shares will be based on the effective date of the qualifying fundamental change and the price paid per share of the common stock in the qualifying fundamental change. We will have the option to pay any portion of the qualifying fundamental change additional shares in cash and/or by delivering freely tradeable Common Stock (the "qualifying fundamental change payment"). The qualifying fundamental change payment for Notes converted in connection with a qualifying fundamental change may not adequately compensate you for any lost value of your Notes as a result of such transaction.

Our obligation to make a qualifying fundamental change payment for Notes converted in connection with a qualifying fundamental change could be considered a penalty, in which case the enforceability thereof would be subject to general principles of reasonableness and equitable remedies.

Federal and state statutes allow courts, under specific circumstances, to void subsidiary guarantees and require holders of the Notes to return payments received from guarantors.

Our wholly-owned subsidiary guarantees our obligations under the Notes. Under the federal bankruptcy law and comparable provisions of state fraudulent transfer laws, a subsidiary guarantee could be voided or claims in respect of a subsidiary guarantee could be subordinated to all other debts of that subsidiary guarantor. A court might do so if it found that when the subsidiary entered into its guarantee or, in some states, when payments became due under the guarantee, the subsidiary received less than reasonably equivalent value or fair consideration and either:

- was insolvent or rendered insolvent by reason of the incurrence;
- was engaged in a business or transaction for which its remaining assets constituted unreasonably small capital; or
- intended to incur, or believed that it would incur, debts beyond its ability to pay such debts as they mature.

The court might also void a subsidiary guarantee, without regard to the above factors, if the court found that the subsidiary entered into its guarantee with the actual intent to hinder, delay or defraud its creditors.

A court would likely find that a subsidiary guarantor did not receive reasonably equivalent value or fair consideration for its guarantee if the subsidiary guarantor did not substantially benefit directly or indirectly from the issuance of the Notes. If a court were to void a subsidiary guarantee, holders of the Notes would no longer have a claim against the guarantor. Sufficient funds to repay the Notes may not be available from other sources, including the remaining subsidiary guarantor, if any. In addition, the court might direct holders of the Notes to repay any amounts that they already received from the guarantor.

The measures of insolvency for purposes of these fraudulent transfer laws will vary depending upon the law applied in any proceeding to determine whether a fraudulent transfer has occurred. Generally, however, a subsidiary guarantor would be considered insolvent if:

- the sum of its debts, including contingent liabilities, were greater than the fair saleable value of all of its assets;
- the present fair saleable value of its assets were less than the amount that would be required to pay its probable liability on its existing debts, including contingent liabilities, as they become absolute and mature; or
- it could not pay its debts as they become due.

The Guarantee contains a provision intended to limit the guarantor's liability to the maximum amount that it could incur without causing the incurrence of obligations under the Guarantee to be a fraudulent transfer. This provision may not be effective to protect the Guarantee from being voided under fraudulent transfer law.

Some significant restructuring transactions may not constitute a fundamental change, in which case we would not be obligated to offer to repurchase the Notes.

If a fundamental change occurs at any time prior to the maturity date, subject to certain conditions, holders of the Notes will have the right, at their option, to require us to repurchase for cash all or part of each holder's Notes. However, the fundamental change provisions will not afford protection to holders of Notes in the event of other transactions that could adversely affect the Notes. For example, transactions such as leveraged recapitalizations, refinancings, restructurings, or acquisitions initiated by us may not constitute a fundamental change requiring us to repurchase the Notes. In the event of any such transaction, the holders would not have the right to require us to repurchase the Notes, even though each of these transactions could increase the amount of our indebtedness, or otherwise adversely affect our capital structure or any credit ratings, thereby adversely affecting the holders of Notes.

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The conversion price of the Notes may not be adjusted for all dilutive events, including third-party tender or exchange offers, that may adversely affect the trading price of the Notes or the shares of our Common Stock issuable upon conversion of the Notes.

The conversion price of the Notes is subject to adjustment upon specified events, including the issuance of stock dividends on our Common Stock, the issuance of rights or warrants, subdivisions, combination, distributions of capital stock, indebtedness or assets, cash dividends and issuer tender or exchange offers. The conversion price will not be adjusted for other events, such as third-party tender or exchange offers or the sale of our equity securities or equity-related securities to third parties or so-called price protection provisions (other than to a limited extent under certain circumstances), that may adversely affect the trading price of the Notes or Common Stock issuable upon conversion of the Notes.

The terms of the Notes contain limited covenants and other protections.

The indenture governing the Notes contains covenants restricting our ability to take certain actions. However, each of these covenants contains specified exceptions. In addition, these covenants do not protect holders of the Notes and Common Stock issuable upon conversion of the Notes from all events that could have a negative effect on the creditworthiness of the Notes and the secondary market value of the Notes and Common Stock issuable upon conversion of the Notes.

We face several risks regarding holders' potential rights to require us to repurchase the Notes upon a fundamental change.

Holders of the Notes will have the right, at their option, to require us to repurchase for cash all or part of each holder's Notes upon a fundamental change prior to maturity. We may not have sufficient future cash flow from operations to make any required repurchase in cash at any later time or the ability to arrange additional financing, if necessary, on acceptable terms. In addition, our ability to repurchase the Notes in cash may be limited by law or the terms of other agreements relating to our debt outstanding at the time. If we fail to repurchase the Notes in cash as required by the indenture governing the Notes, it would constitute an event of default under the indenture, which, in turn, could also constitute an event of default under our then existing debt instruments.

If you hold Notes, you are not entitled to any rights with respect to our Common Stock, but you are subject to all changes made with respect to our Common Stock.

If you hold Notes, you are not entitled to any rights with respect to our Common Stock (including, without limitation, voting rights and rights to receive any dividends or other distributions on our Common Stock), but you are subject to all changes affecting the Common Stock. You will only be entitled to rights on the Common Stock if and when we deliver shares of Common Stock to you in exchange for your Notes and in limited cases under the anti-dilution adjustments of the Notes. For example, in the event that an amendment is proposed to our certificate of incorporation or by-laws requiring securityholder approval and the record date for determining the securityholders of record entitled to vote on the amendment occurs prior to delivery of the Common Stock, you will not be entitled to vote on the amendment, although you will nevertheless be subject to any changes in the powers, preferences or special rights of our Common Stock.

Certain provisions in the Notes and the indenture could delay or prevent an otherwise beneficial takeover or takeover attempt of us and, therefore, the ability of holders to exercise their rights associated with a fundamental change.

Certain provisions in the Notes and the indenture could make it more difficult or more expensive for a third party to acquire us. For example, if an acquisition event constitutes a fundamental change, we are required to offer to repurchase each holder's Notes in cash. In addition, if an acquisition event constitutes a qualifying fundamental change, we may be required to make a qualifying fundamental change payment to holders who convert their Notes in connection with such qualifying fundamental change. Accordingly, our obligations under the Notes and the indenture as well as provisions of our organizational documents and other agreements could increase the cost of acquiring us or otherwise discourage a third party from acquiring us or removing incumbent management.

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SELLING SECURITY HOLDERS

This prospectus covers the resale from time to time by the Selling Security Holders identified in the first table below of up to \$44,000,000 aggregate principal amount of our 6.0% Convertible Senior Notes due 2027, including the Guarantee, as well as up to 9,341,825 shares of Common Stock that may be issued upon conversion of the Notes and up to an additional 3,758,175 shares of Common Stock that may be issued, at our election, as payment of accrued interest on the Notes, as make-whole payments made in connection with certain conversions of the Notes or as payments made in connection with qualifying fundamental changes of the Company.

The Selling Security Holders identified in the table below may from time to time offer and sell under this prospectus any or all of the Notes, including the Guarantee issuable in respect thereof, described under the column "Principal Amount of Notes Registered Hereby," as well as any or all of the shares of Common Stock issuable upon conversion or

in respect thereof, described under the column "Shares of Common Stock Registered Hereby," in such table below.

The table below have been prepared based upon the information furnished to us by the Selling Security Holders and/or our transfer agent as of the date of this prospectus. The Selling Security Holders identified below may have converted, sold, transferred or otherwise disposed of some or all of their Notes or shares of Common Stock since the date on which the information in the following table is presented. Information concerning the Selling Security Holders may change from time to time and, if necessary, we will amend or supplement this prospectus accordingly. We cannot give an estimate as to the principal amount of Notes or number of shares of Common Stock that will actually be held by the Selling Security Holders may offer some or all of their Notes or Common Stock, as applicable, under the offering contemplated by this prospectus or may acquire additional shares of Common Stock. The aggregate principal amount of Notes and total number of shares of Common Stock that may be sold hereunder will not exceed the aggregate principal amount of Notes or number of shares of Common Stock offered hereby. Please read the section entitled "Plan of Distribution" in this prospectus.

The following table sets forth the name of each Selling Security Holder, the aggregate principal amount of Notes and number of shares of our Common Stock beneficially owned by such noteholder before this offering, the aggregate principal amount of Notes to be offered for such noteholder's account and the principal amount or number and (if one percent or more) the percentage of the class of stock to be beneficially owned by such noteholder after completion of the offering. The principal amount of Notes and number of shares of Common Stock owned are those beneficially owned, as determined under the rules of the SEC, and such information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, the Selling Security Holders' beneficial ownership includes any shares of our Common Stock as to which a person has sole or shared voting power or investment power and any shares of Common Stock which the person has the right to acquire within 60 days after September 9, 2022 (as used in this section, the "Determination Date"), through the exercise of any option, warrant or right, through conversion of any security or pursuant to the automatic termination of a power of attorney or revocation of a trust, discretionary account or similar arrangement, and such shares are deemed to be beneficially owned and outstanding for computing the share ownership and percentage of the person holding such options, warrants or other rights, but are not deemed outstanding for computing the percentage of any other person.

Unless otherwise set forth below, based upon the information furnished to us, (a) the persons and entities named in the table have sole voting and sole investment power with respect to the Notes or shares set forth opposite the Selling Security Holder's name, subject to community property laws, where applicable, (b) no Selling Security Holder had any position, office or other material relationship within the past three years with us or with any of our predecessors or affiliates, and (c) no Selling Security Holder is a broker-dealer or an affiliate of a broker-dealer. The principal amount of Notes or number of shares of Common Stock shown as beneficially owned before the offering is based on information furnished to us or otherwise based on information available to us at the timing of the filing of the registration statement of which this prospectus forms a part.

Selling Security Holder	Principa Amount of Notes Beneficial Owned Pri to this Offering	f y Percentag or of Outstandi	ge Am I ng Reg	incipal nount of Notes zistered lereby	Princi Amour Note Benefic Owned Complet this Offeri	t of s ially upon ion of	Shares of Common Stock Beneficially Owned Prior to this Offering (2)	Shares of Common Stock Registered Hereby (3)	Shares of Common Stock Beneficially Owned upon Completion of this Offering (4)	Percentage of Common Stock Beneficially Owned upon Completion of this Offering (5)	
Nineteen77 Global Multi- Strategy											
Alpha Master Limited (6)	\$ 22,000	000	50.0% \$	22,000,000	\$	0	0	6,550,000	0	*	
Blackwell Partners LLC											
- Series B (7)	\$ 6,500	000	14.8% \$	6,500,000	\$	0	847,450	1,935,227	847,450	*	
Silverback Convertible Master Fund											
Limited (8) Silverback	\$ 2,250	000	5.1% \$	2,250,000	\$	0	0	669,886	0	*	
Opportunistic Credit Master Fund Limited											
(9)	\$ 3,500	000	8.0% \$	3,500,000	\$	0	476,970	1,042,046	476,970	*	
KASAD 2, L.P. (10)	\$ 9,750	000	22.2% \$	9,750,000	\$	0	0	2,902,841	0	*	

- * Less than 1%
- (1) Assumes all of the Notes to be registered on the registration statement of which this prospectus is a part are sold in the offering and that no additional Notes are purchased or otherwise acquired.
- (2) Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of Common Stock underlying options or warrants currently exercisable, or exercisable within 60 days of the Determination Date, are deemed outstanding for purposes of computing the beneficial ownership of the person holding such options or warrants but are not deemed outstanding for computing the beneficial ownership of any other person. Except where we had knowledge of such ownership, the number presented in this column may not include shares held in street name or through other entities over which the selling stockholder has voting and dispositive power. Does not include shares issuable upon conversion of the Notes, which are convertible on or after December 9, 2022.
- (3) Assumes (i) the issuance of the maximum number of shares issuable upon conversion of or in respect of the Notes (including shares issuable as payment of accrued interest, as make-whole payments, or in connection with qualifying fundamental changes) and (ii) no fractional shares of our Common Stock will be issued upon conversion of Notes. Pursuant to the terms of the Notes, none of the holders may convert any Notes that it beneficially owns, or receive shares of Common Stock in respect of such Notes, to the extent that such conversions or receipt would result in such holder and its affiliates, together with any other persons whose beneficial ownership would be aggregated for purposes of Section 13(d) of the Exchange Act, beneficially owning in excess of 4.9% of the outstanding shares of our Common Stock (as determined in accordance with Section 13(d) of the Exchange Act). Amounts registered for sale hereby do not give effect to this limitation on conversions and receipt of shares of Common Stock.

- (4) Assumes all of the shares of Common Stock to be registered on the registration statement of which this prospectus is a part are sold in the offering, that shares of Common Stock beneficially owned by the Selling Security Holders but not being offered pursuant to this prospectus (if any) are not sold, and that no additional shares of Common Stock are purchased or otherwise acquired.
- (5) Percentages are based on the 57,227,947 shares of Common Stock issued and outstanding as of the Determination Date. Shares of our Common Stock subject to options, warrants or conversion rights that are currently exercisable or convertible, or exercisable or convertible within 60 days of the Determination Date, are deemed to be outstanding for the purpose of computing the percentage ownership of the person holding those options, warrants or conversion rights, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

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- (6) UBS O'Connor LLC ("O'Connor") is the investment manager of Nineteen77 Global Multi-Strategy Alpha Master Limited ("Nineteen77") and accordingly has voting control and investment discretion over the securities described herein held by Nineteen77. Kevin Russell ("Mr. Russell"), the Chief Investment Officer of O'Connor, also has voting control and investment discretion over the securities described herein held by Nineteen77. As a result, each of O'Connor and Mr. Russell may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the securities described herein held by Nineteen77.
- (7) Voting or investment control over the securities held by Blackwell Partners LLC Series B is held by Elliot Bossen ("Mr. Bossen"), CEO of Silverback Asset Management, trading advisor of Blackwell Partners LLC Series B.
- (8) Voting or investment control over the securities held by Silverback Convertible Master Fund Limited is held by Mr. Bossen, CEO of Silverback Asset Management, trading advisor of Silverback Convertible Master Fund Limited.
- (9) Voting or investment control over the securities held by Silverback Opportunities Credit Master Fund Limited is held by Mr. Bossen, CEO of Silverback Asset Management, trading advisor of Silverback Opportunities Credit Master Fund Limited.
- (10) Voting or investment control over the securities held by KASAD 2, L.P. is held by Mr. Bossen, CEO of Silverback Asset Management, trading advisor of KASAD 2. L.P.

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USE OF PROCEEDS

We will not receive proceeds from sales of Notes or Common Stock made under this prospectus by the Selling Security Holders, or any proceeds from the issuance of Common Stock in respect of the Notes.

DETERMINATION OF OFFERING PRICE

There is no public market for our Notes and currently a limited public market for our Common Stock. The conversion price of the Notes was negotiated with the initial purchasers of the Notes and factors considered in connection therewith included, in addition to prevailing market conditions and the trading price of our common stock as traded on the Nasdaq, our historical financial and operating performance, estimates of our business potential and earnings prospects and those of our industry in general, an assessment of our management and the consideration of the above factors in relation to market valuation of companies in related businesses.

The Selling Security Holders will determine at what price they may sell the offered Securities, and such sales may be made at prevailing market prices or at privately negotiated prices. See "Plan of Distribution" below for more information.

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DESCRIPTION OF NOTES

The Notes and the Guarantee were issued under an indenture dated as of June 9, 2022 among us, Akoustis, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee. The following description is a summary of the material provisions of the Notes, the Guarantee, and the indenture and does not purport to be complete. This summary is subject to and is qualified by reference to all of the provisions of the Notes, the Guarantee, and the indenture, including the definitions of certain terms used in the Notes, the Guarantee, and the indenture. We urge you to read these documents because they, and not this description, define your rights as a holder of the Notes.

For purposes of this description, references to "we," "our" and "us" refer only to Akoustis Technologies, Inc. and not to its subsidiary, Akoustis, Inc.

General

The Notes:

- are our senior general unsecured obligations and rank equal in right to all of our existing and future unsecured indebtedness. The Notes will rank junior to secured indebtedness that we may incur as described below in "—Limitation on Incurrence of Additional Indebtedness";
- bear interest payable from the date of issuance at an annual rate of 6.0% payable at our option in cash and/or freely tradable shares of our Common Stock, subject to certain limitations, on June 15 and December 15 of each year, beginning on December 15, 2022;
- mature on June 15, 2027 (the "maturity date"), unless earlier converted or repurchased;
- are subject to repurchase by us at the option of a holder following a fundamental change (as defined below under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes"), at a price equal to 100% of the principal amount of the Notes to be repurchased, plus (1) a "qualifying fundamental change payment" with respect to such converted Notes based on a make-whole table set forth in the Indenture, or (2) if greater, the amount of any interest make-whole payment due in respect of the converted Notes;

- become redeemable by us after June 9, 2023 as follows: (1) one-third of the aggregate principal amount of the Notes on June 9, 2023; (2) two-thirds of the aggregate principal amount of the Notes on June 9, 2024; and (3) all of the aggregate principal amount of the Notes on June 9, 2025 so long as (A) the closing sale price per share of our Common Stock is greater than 150% of the then-effective conversion price for each of 20 days of any 30 consecutive trading day period immediately preceding our optional redemption notice, and (B) a registration statement registering the resale of all shares of common stock into which the principal amount of the Notes is convertible and all shares of common stock issuable as interest or as interest make-whole payments upon conversion or redemption of any Notes is effective and a current prospectus related thereto remains available throughout the period from the date the redemption notice is delivered to the holders to and including the redemption date, as described below under "—Optional Redemption";
- include a limitation on our ability and the ability of our subsidiaries to incur additional indebtedness, other than permitted debt (as defined below under "—
 Limitation on Incurrence of Additional Indebtedness");
- include a limitation on our ability and the ability of our subsidiaries to make certain payments, including the repurchase of our securities and the payment of dividends as described below under "—Limitation on Certain Payments;"
- include a limitation on our ability to restrict our subsidiaries from making dividend and other payments as described below under "—Limitation on Dividend and Other Payment Restrictions;"

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- include a limitation on our ability and the ability of our subsidiaries to sell assets as described below under "-Limitation on Asset Sales;"
- include a limitation on our ability and the ability of our subsidiaries to engage in certain transactions with our affiliates as described under "—Limitation on Transactions with Affiliates;"
- include a limitation on liens, other than permitted liens as described under "—Limitation on Liens;"
- require us and our subsidiaries to maintain our properties and insurance to the extent described under "—Maintenance of Properties and Insurance;"
- include a limitation on the issuance or sale of our subsidiaries' capital stock as described under "-Issuance or Sale of Subsidiary Stock;"
- include a limitation on the businesses in which we and our subsidiaries engage other than permitted businesses and require us and our subsidiaries to keep our existence, licenses and franchises to the extent described under "—Line of Business; Corporate Existence;"
- were issued in denominations of \$1,000 and integral multiples of \$1,000; and
- are represented by one or more registered Notes in global form, but in certain limited circumstances may be represented by Notes in definitive form. See "Book-Entry, Settlement and Clearance."

Subject to satisfaction of certain conditions, the Notes may be converted at an initial conversion rate of 212.3142 into shares of Common Stock per \$1,000 principal amount of Notes (equivalent to an initial conversion price of approximately \$4.71 per share of Common Stock). The conversion rate is subject to adjustment if certain events occur as described under "—Conversion Rights—Conversion Rate Adjustments."

Upon conversion of a Note, we will deliver shares of our Common Stock, together with a cash payment in lieu of delivering any fractional share, as described under "Conversion Rights—Settlement upon Conversion" and an interest make-whole payment, if applicable. Holders will not receive any separate cash payment for interest, if any, accrued and unpaid to the conversion date except under the limited circumstances described below under "—Conversion Rights—General."

If a holder surrenders its Notes for conversion at any time on or after December 9, 2022 and the close of business on June 9, 2025 (the "Interest Make-Whole Date"), we will make an interest make-whole payment equal to the remaining scheduled interest payments that would have been made on the Notes converted had such Notes remained outstanding through the Interest Make-Whole Date to the converting holder as described under "—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions." At our option, make-whole payments may be paid in cash and/or freely tradable shares of our Common Stock, subject to certain limitations described under "—Conversion Rights—Share Limitation," valued at 95% of the volume weighted average price of the common stock for the ten trading days ending on and including the trading day immediately preceding the conversion date. See "—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions."

The indenture limits the amount of debt that may be issued or incurred by us or our subsidiaries under the indenture or otherwise, except as described under "—Limitation on Incurrence of Additional Indebtedness." The indenture also restricts us from making certain payments, including the repurchase of our securities and the payment of dividends, as described under "—Limitation on Certain Payments." The indenture does not contain any financial covenants. Other than the restrictions described under "—Limitation on Incurrence of Additional Indebtedness," "—Limitation on Certain Payments," "—Limitation on Dividend and Other Payment Restrictions," "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" and "—Consolidation, Merger and Sale of Assets" below and except for the provisions set forth under "—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," the indenture does not contain any covenants or other provisions designed to afford holders of the Notes protection in the event of a highly leveraged transaction involving us or in the event of a decline in our credit rating as the result of a takeover, recapitalization, highly leveraged transaction or similar restructuring involving us that could adversely affect such holders.

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The Notes are not listed on any securities exchange or quoted on any automated dealer quotation system.

Except to the extent the context otherwise requires, we use the term "Notes" in this prospectus to refer to each \$1,000 principal amount of Notes. References in this prospectus to a "holder" or "holders" of Notes that are held through The Depository Trust Company ("DTC") are references to owners of beneficial interests in such Notes, unless the context otherwise requires. However, we and the trustee treat the person in whose name the Notes are registered (Cede & Co., in the case of Notes held through DTC) as the owner of such Notes for all purposes. References herein to the "close of business" refer to 5:00 p.m., New York City time, and to the "open of business" refer to 9:00 a.m., New York City time.

Purchase and Cancellation

We will cause all Notes surrendered for payment, repurchase (but excluding Notes repurchased pursuant to cash-settled swaps or other derivatives), including as described immediately below and in "—Fundamental Change Permits Holders to Require Us to Repurchase Notes," registration of transfer or exchange or conversion, if surrendered to any person that we control other than the trustee, to be delivered to the trustee for cancellation and they will no longer be considered "outstanding" under the indenture upon

their payment, repurchase, registration of transfer or exchange or conversion. All Notes delivered to the trustee shall be cancelled promptly by the trustee. Except for Notes surrendered for registration of transfer or exchange, no Notes shall be authenticated in exchange for any Notes cancelled as provided in the indenture.

We may, to the extent permitted by law, and directly or indirectly (regardless of whether such Notes are surrendered to us), repurchase Notes in the open market or otherwise, whether by us or our subsidiaries or through a privately negotiated transaction or public tender or exchange offer or through counterparties to private agreements, including by cash-settled swaps or other derivatives, in each case, without prior notice to the holders of the Notes.

Payments on the Notes; Paying Agent and Registrar; Transfer and Exchange

We will pay or cause the paying agent to pay the principal of, and interest on, Notes in global form registered in the name of or held by DTC or its nominee by wire transfer in immediately available funds to DTC or its nominee, as the case may be, as the registered holder of such global note.

We will pay or cause the paying agent to pay the principal of any certificated Notes at the office or agency designated by us for that purpose. We have initially designated the trustee as our paying agent and registrar and its office described under "—Maintenance of Office or Agency" below as a place where Notes may be presented for payment or for registration of transfer. We may, however, change the paying agent or registrar without giving prior notice to the holders of the Notes, and we may act as paying agent or registrar. Interest on certificated Notes will be payable (i) to holders holding certificated Notes having an aggregate principal amount of \$2,000,000 or less, by check mailed to the holders of these Notes and (ii) to holders holding certificated Notes having an aggregate principal amount of more than \$2,000,000, either by check mailed to each such holder or, upon written application by such a holder to the registrar not later than the relevant regular record date, by wire transfer in immediately available funds to that holder's account within the United States if such holder has provided us, the trustee or the paying agent with the requisite information necessary to make such wire transfer, which application shall remain in effect until the holder notifies, in writing, the registrar to the contrary.

A holder of Notes may transfer or exchange Notes at the office of the registrar in accordance with the indenture. The registrar and the trustee may require a holder, among other things, to furnish appropriate endorsements and transfer documents. No service charge will be imposed by us, the trustee or the registrar for any registration of transfer or exchange of Notes, but we may require a holder to pay a sum sufficient to cover any transfer tax or other similar governmental charge required by law or permitted by the indenture. We are not required to transfer or exchange any Notes surrendered for conversion or required repurchase. A holder of a beneficial interest in a Note in global form may transfer or exchange such beneficial interest in accordance with the indenture and the applicable procedures of DTC. See "—Book-Entry, Settlement and Clearance."

The registered holder of a Note is treated as its owner for all purposes.

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Interest

The Notes bear interest at a rate of 6.0% per year until maturity. Interest on the Notes accrues from the date of issuance or from the most recent date on which interest has been paid or duly provided for. Interest is payable semi-annually in arrears on June 15 and December 15 of each year, beginning on December 15, 2022, in cash and/or freely tradable shares of our Common Stock, at our option, subject to certain limitations described under "—Conversion Rights—Share Limitation." If we elect to pay any portion of the interest payment in freely tradable shares of our Common Stock, the number of shares will equal the amount of the payment (or portion thereof) to be paid in shares divided by 95% of the simple average of the daily VWAP (as defined below under the heading "—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions") of our shares for the ten consecutive trading days ending on and including the trading day immediately preceding the interest payment date.

Interest will be paid to the person in whose name a Note is registered at the close of business on June 1 or December 1 (whether or not a business day), as the case may be, immediately preceding the relevant interest payment date (each, a "regular record date"). Interest on the Notes will be computed on the basis of a 360-day year composed of 12 30-day months and, for partial months, on the basis of the number of days actually elapsed in a 30-day month.

If any interest payment date, the maturity date, or any earlier required repurchase date upon a fundamental change of a Note falls on a day that is not a business day, the required payment will be made on the next succeeding business day with the same force and effect as if made on such scheduled payment date, and no interest on such payment will accrue in respect of the delay. The term "business day" means, with respect to any Note, any day other than a Saturday, a Sunday or a day on which the Federal Reserve Bank of New York is authorized or required by law or executive order to close or be closed or a day when the corporate trust office of the trustee or the depository is closed.

Unless the context otherwise requires, all references to interest in this prospectus include (i) special interest, if any, payable as the sole remedy during certain periods for an event of default relating to the failure to comply with our reporting obligations as described under "—Events of Default" and (ii) additional interest, if any, payable under the registration rights agreement as a result of our failure to comply with certain obligations thereunder as described under "Transfer Restrictions—Registration Rights Agreement."

Ranking

The Notes are our senior general unsecured obligations. The Notes rank equal in right to all of our existing and future unsecured indebtedness. The Notes will rank junior to secured indebtedness that we may incur, as described in "—Limitation on Incurrence of Additional Indebtedness".

We may not be able to pay cash for the repurchase price upon a fundamental change if a holder requires us to repurchase Notes as described under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes." See "Risk Factors—We face several risks regarding holders' potential rights to require us to repurchase the Notes upon a fundamental change."

Guarantee

The guarantor under the indenture has irrevocably and unconditionally guaranteed, on a senior basis, the following:

- the due and punctual payment of the principal of, premium, if any, and interest on the Notes, whether at maturity of the Notes, by acceleration or otherwise; the due and punctual payment of interest on any overdue principal or interest, if any, on the Notes, to the extent lawful; and the due and punctual performance of all other obligations of the guarantor to the holders or to the trustee; and
- in case of any extension of time of payment or renewal of any Notes or any such other obligations, that the obligations will be promptly paid in full when due or performed in accordance with the terms of the extension or renewal, whether at maturity of the Notes, by acceleration or otherwise.

- in the event of a sale or other transfer (including by way of merger or consolidation) of the capital stock of the guarantor in compliance with the terms of the indenture following which the guarantor ceases to be our direct or indirect subsidiary; or
- in connection with the satisfaction and discharge of the indenture.

Limitation on Incurrence of Additional Indebtedness

For so long as the aggregate principal amount of all Notes then outstanding is greater than \$10.0 million, we will not and will not permit any of our subsidiaries to, directly or indirectly, create, incur, issue, assume, guarantee or otherwise become directly or indirectly liable, contingently or otherwise, with respect to any indebtedness (including acquired debt which, for the purposes of the indenture, means indebtedness of any other entity existing at the time the other entity is merged with or into or became a subsidiary of the specified entity and the indebtedness secured by a lien encumbering any real property or fixed assets acquired by the specified entity). Additionally, although we may issue shares of preferred stock, we will not issue any disqualified stock and will not permit any of our subsidiaries to issue any shares of preferred stock. However, the following indebtedness will be permitted (the "permitted debt"):

- the incurrence by us and our subsidiaries of existing indebtedness;
- the incurrence by us, the Guarantee thereof by the guarantor, of indebtedness represented by Notes issued on the date of the indenture;
- the incurrence by us or any of our subsidiaries of (x) indebtedness represented by capital lease obligations or purchase money obligations, in each case incurred for the purpose of financing the purchase price or cost of equipment used in our and our subsidiaries' production lines (other than any sale-leaseback transaction involving such equipment owned on the date of the indenture) and (y) additional indebtedness represented by capital lease obligations, mortgage financings or purchase money obligations, in each case, incurred for the purpose of financing all or any part of the purchase price or cost of design, construction, installation or improvement of property, plant or equipment used in our or our subsidiaries permitted businesses (other than as described in clause (x)), in an aggregate principal amount (together with all permitted secured indebtedness), not to exceed \$25.0 million in the aggregate outstanding at any time outstanding;
- the incurrence by us or any of our subsidiaries of permitted refinancing indebtedness in exchange for, or the net proceeds of which are used to renew, refund, refinance, replace, defease or discharge certain indebtedness permitted by the indenture;
- the incurrence by us or any of our subsidiaries of indebtedness not to exceed in the aggregate at any time outstanding \$5.0 million; provided, however, that the indebtedness is expressly subordinated to the prior payment in full in cash of all obligations with respect to this indenture, the Notes and the Guarantee and matures no less than 181 days following the maturity of the Notes;
- the incurrence by us or any of our subsidiaries of hedging obligations in the ordinary course of business (other than for speculative purposes);
- the incurrence by us or any of our subsidiaries of indebtedness in respect of workers' compensation claims, self-insurance obligations, bankers' acceptances, performance and surety bonds in the ordinary course of business;
- the incurrence by us or any of our subsidiaries of unsecured indebtedness not to exceed in the aggregate at any time outstanding \$25.0 million;
- guarantees by us or our subsidiaries of indebtedness otherwise permitted under the indenture;
- the incurrence of indebtedness by us or our subsidiaries arising from agreements providing for indemnification, contribution, earnout, adjustment of purchase price
 or similar obligations, in each case, incurred or assumed in connection with the acquisition or disposition of any business, assets or capital stock of a subsidiary
 otherwise permitted under the indenture;

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- the incurrence of intercompany indebtedness among us and our subsidiaries;
- the incurrence by us or any of our subsidiaries of indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument inadvertently drawn against insufficient funds, so long as such indebtedness is covered within five business days; and
- the incurrence by us or any of our subsidiaries of secured indebtedness as long as either (i) the aggregate at any time outstanding, together with any outstanding secured indebtedness described in clause (y) in the third bulleted paragraph of this list, does not exceed \$25.0 million or (ii) the Company enters into a pledge and security agreement with a collateral agent and takes such other actions as are necessary in order to cause all payments due under the indenture, Notes, and Guarantee to be secured on an equal and ratable basis with the obligations so secured by such lien securing the secured funded indebtedness.

We will not incur and will not permit the guarantor to incur any indebtedness (including permitted debt) that is contractually subordinated in right of payment to any of our or our guarantor's other indebtedness such indebtedness is also contractually subordinated in right of payment to the Notes and the Guarantee on substantially identical terms. However, no indebtedness will be deemed to be contractually subordinated in right of payment to any of our other indebtedness solely by virtue of being unsecured or by virtue of being secured on a first or junior lien basis.

For purposes of determining compliance with the provisions regarding permitted debt, if an item of proposed indebtedness meets the criteria of multiple permitted debt categories, we will be permitted to classify the indebtedness on the date of its incurrence, or later reclassify all or a portion of such item of indebtedness, in any manner that complies with this covenant.

The accrual of interest, the accretion or amortization of original issue discount, and the payment of interest on any indebtedness in the form of additional indebtedness with the same terms, will not be deemed to be an incurrence of indebtedness.

The amount of any indebtedness outstanding as of any date will be the accreted value of the indebtedness, in the case of any indebtedness issued with original issue discount; and the principal amount of the indebtedness, in the case of any other indebtedness.

Limitation on Liens

We will not, and will not permit any of our subsidiaries, directly or indirectly, to enter into, create, incur, assume or suffer to exist any liens of any kind on any asset now owned or hereafter acquired, except permitted liens.

Limitation on Certain Payments

For so long as the aggregate principal amount of all Notes then outstanding is greater than \$10.0 million, we will not and will not permit any of our subsidiaries to, directly or

indirectly:

- declare or pay any dividend or make any other payment or distribution on account of its equity interests (as defined below), including any payment in connection
 with any merger or consolidation involving us or any of our subsidiaries, or to the direct or indirect holders of its equity interests in their capacity as such, other than
 dividends or distributions payable in our or our subsidiaries' equity interests other than disqualified stock (as defined below), to us or any of our subsidiaries, or, in
 the case of dividends or distributions payable by any of our subsidiaries, pro rata to the holders of that subsidiary's equity interests;
- purchase, redeem or otherwise acquire or retire for value (including without limitation, in connection with any merger or consolidation involving us) any of our equity interests;

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- make any payment on or with respect to, or purchase, redeem, defease or otherwise acquire or retire for value any indebtedness of us or any of our subsidiaries that are contractually subordinated to the Notes or the Guarantee (excluding any intercompany indebtedness between or among us and any of our subsidiaries), except regularly scheduled payments of interest or a payment of principal at the maturity date; or
- make any restricted investment (as defined below).

All of the payments and other actions set forth above are collectively referred to as "restricted payments." Notwithstanding the foregoing, restricted payments shall be permitted if at the time of and after giving effect to such restricted payment:

- no default or event of default has occurred and is continuing or would occur as a consequence of such restricted payment; and
- the restricted payment, together with the aggregate amount of all other restricted payments made by us and our subsidiaries since the date of the indenture (excluding certain permitted restricted payments described below), is less than the sum, without duplication, of:
 - 50% of our consolidated net income (as defined below) for the period, taken as one accounting period, from the beginning of the first fiscal quarter commencing after the date of the indenture to the end of our most recently ended fiscal quarter for which internal financial statements are available at the time of the restricted payment (or, if such consolidated net income for such period is a deficit, less 100% of such deficit);
 - o 100% of the aggregate net cash proceeds received by us since the date of the indenture as a contribution to our common equity capital or from the issue or sale of our equity interests other than disqualified stock or from the issue or sale of convertible or exchangeable disqualified stock or our convertible or exchangeable debt securities that have been converted into or exchanged for such equity interests, other than equity interests or disqualified stock or debt securities sold to one of our subsidiaries; and
 - o to the extent that any restricted investment that was made after the date of the indenture is sold for cash or otherwise liquidated or repaid for cash, the lesser of (i) the cash return of capital with respect to such restricted investment (less the cost of disposition, if any) and (ii) the initial amount of such restricted investment

For purposes of the indenture, "consolidated net income" means, with respect to any specified individual or entity for any period, the aggregate of the net income of the person and its subsidiaries for the period, on a consolidated basis, determined in accordance with GAAP; provided that:

- the net income (but not loss) of any person that is not a subsidiary or that is accounted for by the equity method of accounting will be included only to the extent of the amount of dividends or similar distributions paid in cash to the specified individual or entity or a subsidiary of the individual or entity;
- the net income of any subsidiary will be excluded to the extent that the declaration or payment of dividends or similar distributions by that subsidiary of that net income is not at the date of determination permitted without any prior governmental approval (that has not been obtained) or, directly or indirectly, by operation of the terms of its charter or any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to that subsidiary or its securityholders;
- the cumulative effect of a change in accounting principles will be excluded; and
- the net income of any person acquired during the specified period for any period prior to the date of acquisition will be excluded.

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As long as no event of default has occurred and is continuing or would occur as a result of the payment, the provisions described above will not prohibit:

- the payment of any dividend or the consummation of any irrevocable redemption within 60 days after the date of declaration of the dividend or giving of the redemption notice, as the case may be, if at the date of declaration or notice, the dividend or redemption payment would have complied with the provisions of the indenture;
- the making of any restricted payment (other than certain restricted payments involving making payment to purchase, redeem, defease or otherwise acquire or retire for value certain indebtedness or securities) in exchange for, or out of the net cash proceeds of the substantially concurrent sale (other than to one of our subsidiaries) of, our equity interests (other than disqualified stock) or from the substantially concurrent contribution of common equity capital to us;
- the redemption, repurchase, defeasance or other acquisition or retirement for value of indebtedness of us or one of our subsidiaries that is contractually subordinated or subordinated with respect to security interests to the Notes or the Guarantee with the net cash proceeds from a substantially concurrent incurrence of certain permitted refinancing indebtedness;
- the repurchase, redemption or other acquisition or retirement for value of any equity interests of us or any of our subsidiaries held by any of our or any of our subsidiaries' current or former officer, director, employee or contractor in order to pay or satisfy the officer's, director's, employee's or contractor's aggregate exercise price or withholding tax payment obligations or otherwise upon death, disability, retirement or termination of employment or engagement, pursuant to awards granted under our equity incentive, stock option, restricted stock or other long-term equity compensation plans; provided that the aggregate price paid for all such repurchased, redeemed, acquired or retired equity interests may not exceed \$500,000 in the aggregate in any calendar year, provided, that any unused amounts in any calendar year may be carried forward to one or more future periods; and

 restricted investments by us and our subsidiaries not otherwise permitted under the indenture, in an aggregate amount not to exceed \$3.0 million at any time outstanding.

For purposes of the indenture, "restricted investments" means, with respect to any individual or entity, all direct or indirect investments by such individual or entity in other individuals or entities (including affiliates) in the forms of loans (including guarantees or other obligations), advances or capital contributions (excluding commission, travel and similar advances to officers and employees made in the ordinary course of business), purchases or other acquisitions for consideration of indebtedness, equity interests or other securities, together with all items that are or would be classified as investments on a balance sheet prepared in accordance with GAAP. However, restricted investments will not include any "permitted investments," which under the indenture will mean the following:

- · any investment by us in ourselves or our subsidiaries;
- any investment in cash equivalents;
- any investment by us or a subsidiary in an individual or entity, if as a result of such investment such individual or entity becomes our subsidiary or such individual or entity is merged, consolidated or amalgamated with or into, or transfers or conveys substantially all of its assets to, or is liquidated into, us or a subsidiary;
- any investment made as a result of the receipt of non-cash consideration from an asset sale that was made pursuant to and in compliance with the terms of the indenture:
- any acquisition of assets or capital stock solely in exchange for the issuance of our equity interests (other than disqualified stock);
- any investments received in compromise or resolution of litigation, arbitration or other disputes;

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- · investments represented by hedging obligations; and
- repurchases of the Notes, including the related Guarantee, in accordance with the terms of the indenture.

The amount of all restricted payments (other than cash) will be the fair market value on the date of the restricted payment of the assets or securities to be transferred or issued by us or our subsidiaries. The fair market value of any non-cash restricted payment will be determined by the Board of Directors and their resolution with respect to the restricted payment will be delivered to the trustee in an officer's certificate.

For purposes of the indenture, "equity interests" means capital stock and all warrants, options or other rights to acquire capital stock (but excluding any debt security that is convertible into, or exchangeable for, capital stock).

For purposes of the indenture, "disqualified stock" means any capital stock that, by its terms (or by the terms of any security into which it is convertible or for which it is exchangeable, in each case, at the option of the holder of the capital stock), or upon the happening of any event, matures or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise, or redeemable at the option of the holder thereof, in whole or in part, on or prior to the date that is 91 days after the date on which the Notes mature. Any capital stock that would constitute disqualified stock solely because the holders of the capital stock have the right to require us to repurchase the capital stock upon the occurrence of a fundamental change or an asset sale will not constitute disqualified stock if the terms of the capital stock provide that we may not repurchase or redeem any of the capital stock pursuant to those provisions unless the repurchase or redemption complies with the indenture. The amount of disqualified stock deemed to be outstanding at any time for purposes hereof shall be the maximum amount that we and our subsidiaries may become obligated to pay upon the maturity of, or pursuant to any mandatory redemption provisions of, such disqualified stock, exclusive of accrued dividends.

Limitation on Dividends and Other Payment Restrictions

We will not and we will not permit our subsidiaries to, directly or indirectly, create or otherwise permit, cause or suffer to exist or become effective any consensual encumbrance or restriction on the ability of any subsidiary to pay dividends or to make any other distributions on its capital stock us or any of our subsidiaries or with respect to any other interest or participation in, or measured by, its profits or pay any indebtedness owed to us or any of our subsidiaries; make loans or advances to us or any of our subsidiaries; or sell, lease or transfer any of its properties or assets to us or any of our subsidiaries. However, the indenture permits such encumbrances or restrictions existing under or by reason of:

- the indenture, the Notes and the Guarantee;
- agreements governing existing indebtedness and credit facilities as in effect on the date of the indenture and any amendments, restatements, modifications, renewals, supplements, refundings, replacements or refinancings of those agreements; provided that the amendments, restatements, modifications, renewals, supplements, refundings, replacements or refinancings are not materially more restrictive with respect to such dividend and other payment restrictions than the agreements existing on the date of the indenture;
- any instrument governing indebtedness or capital stock of a person acquired by us or any of our subsidiaries as in effect at the time of such acquisition (except to the
 extent the indebtedness or capital stock was incurred in connection with or in contemplation of such acquisition), which encumbrance or restriction is not applicable
 to any entity, or the properties or assets of any entity, other than the entity, or the property or assets of the entity, so acquired; provided that, in the case of
 indebtedness, the indebtedness was permitted by the terms of the indenture;
- certain purchase money obligations for property acquired in the ordinary course of business and capital lease obligations that impose restrictions on the property purchased or leased;
- certain permitted refinancing indebtedness; provided that the restrictions contained in the agreements governing such permitted refinancing indebtedness are not materially more restrictive, taken as a whole, than those in the agreements governing the indebtedness being refinanced;

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- applicable law, rule, regulation or order;
- customary non-assignment provisions in contracts and licenses entered into in the ordinary course of business;

- any agreement for the sale or other disposition of a subsidiary that restricts distributions by that subsidiary pending the sale or other disposition
- certain liens permitted to be incurred under the indenture provisions that limit the right of the debtor to dispose of the assets subject to such liens;
- provisions limiting the disposition or distribution of assets or property in joint venture agreements, asset sale agreements, sale-leaseback agreements, stock sale
 agreements and other similar agreements entered into with the approval of the our Board of Directors, which limitation is applicable only to the assets that are the
 subject of such agreements; and
- restrictions on cash or other deposits or net worth imposed by customers under contracts entered into in the ordinary course of business.

Limitation on Asset Sales

For so long as the aggregate principal amount of all Notes then outstanding is greater than \$10.0 million, we will not and will not permit any of our subsidiaries to sell, lease, convey or otherwise dispose of any assets or rights other than the sale, lease, conveyance or other disposition of all or substantially all of the assets of us and our subsidiaries taken as a whole or to issue equity interests in any of the subsidiaries or sell equity interests in any of its subsidiaries (each an "asset sale"). However, certain asset sales will be permitted (each a "permitted asset sale") as set forth below. It will be a permitted asset sale if we or our subsidiary, as the case may be, receives consideration at the time of the asset sale at least equal to the fair market value of the assets or equity interests issued or sold or otherwise disposed of; and at least 75% of the consideration received is in cash; provided, however, that the amounts of the following will be deemed to be cash for purposes of this provision: (i) any liabilities shown on our most recent consolidated balance sheet or in the notes thereto, for us or any of our subsidiaries (other than contingent liabilities on liabilities that are by their terms subordinated in right of payment or as to security interests to the Notes or the Guarantee) that are assumed by the transferee of any such assets pursuant to a customary novation agreement that releases us or our subsidiary from further liability, (ii) any securities, notes or other obligations received by us or any of our subsidiary settlement periods, converted by us or the subsidiary into cash (to the extent of the cash received in that conversion) and (iii) any stock or assets received by us or any subsidiary used to acquire all or substantially all of the assets of, or any capital stock of, another permitted business if, after giving effect to any such acquisition of capital stock, the permitted business is or becomes our subsidiary and a guarantor or other assets that are not classified as current a

Additionally, the following transactions will be considered permitted asset sales: any single or series of related transactions that involves assets having an aggregate fair market value less than \$5.0 million; the transfer, sale or lease of products, services or accounts receivable by us or any subsidiary in the ordinary course of business and any sale or other disposition of damaged, worn-out, replaced, retired or obsolete assets by us or any subsidiary in the ordinary course of business; the sale or other disposition by us or any subsidiary of cash or cash equivalents; a transfer of assets by us to a subsidiary or by a subsidiary to us or another subsidiary; an issuance of equity interests by a subsidiary to us or to another of our subsidiaries; and any restricted payment, permitted investment or permitted line that is permitted under the indenture; leases or subleases in the ordinary course of business to third persons not interfering in any material respect with our business and otherwise not prohibited by the indenture; dispositions of accounts receivable in connection with the collection or compromise thereof in the ordinary course of business; licensing of intellectual property in accordance with industry practice in the ordinary course of business.

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Limitation on Transactions with Affiliates

For so long as the aggregate principal amount of all Notes then outstanding is greater than \$10.0 million, we will not and will not permit any of our subsidiaries to, make any payment to, or sell, lease, transfer or otherwise dispose of any of its properties or assets to, or purchase any property or assets from, or enter into or make or amend any contract, agreement, understanding, loan, advance, transaction or guarantee with, or for the benefit of, any of our affiliates (each of the foregoing, an "affiliate transaction"), unless the affiliate transaction is on terms that are not materially less favorable to us or our subsidiary than those that could reasonably have been obtained in a comparable transaction by us or our subsidiary with an unrelated individual or entity and we deliver to the trustee with respect to any affiliate transaction or series of related affiliate transactions involving aggregate consideration in excess of \$1.0 million, a resolution of the Board of Directors set forth in an officers' certificate certifying that such affiliate transaction complies with the above requirements and that such affiliate transaction has been approved by a majority of the disinterested members of our Board of Directors; with respect to any affiliate transaction or series of related affiliate transactions involving aggregate consideration in excess of \$1.0 million; provided, however, that we will not be required to comply with requirements in certain circumstances set forth below.

The following circumstances are excluded from the application of the preceding paragraph: any employment agreement, employee benefit plan, officer or director indemnification agreement or any similar arrangement entered into by us or any of our subsidiaries in the ordinary course of business and payments made pursuant thereto; transactions between or among us and/or the guarantor; restricted payments that do not violate certain provisions of the indenture; payment of reasonable directors' fees to an individual who is not otherwise our affiliate; loans or advances to employees for expenses incurred or to be incurred in connection with the permitted business and such employee's employment in the ordinary course of business not to exceed \$250,000 in the aggregate at any time outstanding, in each case. As used in the indenture, "permitted business" means any business similar in nature to any business conducted by us or our subsidiaries on the date of the indenture and any business reasonably ancillary, incidental, complementary or related thereto or a reasonable extension, development or expansion thereof, in each case, as determined in good faith by our Board of Directors.

Optional Redemption

We may redeem the Notes, in whole or in part, at any time and from time to time on or after June 9, 2023 at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest on such principal, if any, up to the redemption date. The Notes will become subject to the Company's right to redeem as follows: (i) on or after June 9, 2023, up to one-third of the aggregate principal amount of the Notes initially issued; (ii) on or after June 9, 2024, up to two-thirds of the aggregate principal amount of the Notes initially issued; and (iii) on or after June 9, 2025, up to 100% of the aggregate principal amount of the Notes initially issued; provided, that at any time the Company exercises the redemption right, (1) the closing sale price per share of the Company's common stock is greater than 150% of the then-effective conversion price for each of 20 consecutive days of the 30 consecutive trading day period immediately preceding the Company's redemption notice and (2) a registration statement registering the resale of all shares of common stock into which the principal amount of the Notes is convertible and all shares of Common Stock issuable as interest or as interest make-whole payments upon conversion or redemption of any Notes is effective and a current prospectus related thereto remains available throughout the period from the date the redemption notice is delivered to the holders to and including the redemption date.

If the Company redeems the Notes prior to the Interest Make-Whole Date, the holder will also receive an interest make-whole payment equal to the remaining scheduled interest payments that would have been made on the Notes redeemed had such Notes remained outstanding through the Interest Make-Whole Date. The Company will have the option to pay such interest make-whole payment in cash and/or common stock, subject to certain limitations, valued at 95% of the volume weighted average price of the Common Stock for the ten trading days ending on and including the trading day immediately preceding the redemption date.

Notices to Trustee and Notice of Redemption

If we elect to exercise our optional redemption right, we will notify the trustee in writing of the optional redemption date and the principal amount of the Notes to be redeemed and will deliver an officers' certificate stating that all conditions precedent for the redemption have been satisfied and the redemption will comply with the provisions of the indenture.

We will give such notice to each of the trustee and the registrar at least 5 business days prior to the date that any optional redemption notice is to be sent to holders unless the trustee consents to a shorter period.

At least 30 days but not more than 60 days before an optional redemption date, we will deliver a notice of redemption (an "optional redemption notice") to each holder of the Notes that we intend to redeem at the holder's registered address. We will also deliver a copy of the optional redemption notice to the trustee prior to delivery to the holders of the Notes. At our request, the trustee will give the optional redemption notice in our name and at our expense and, in that case, we will provide the trustee with the information required to be in that notice.

The optional redemption notice will identify the Notes to be redeemed and will state:

- each date when we elect to redeem the Notes in whole or in part (the "optional redemption date");
- the optional redemption price;
- the conversion price;
- The amount, form (i.e. cash or freely tradeable common stock) and procedures for payment of the Interest Make-Whole Payment);
- the name and address of the paying agent where the Notes are to be surrendered;
- that Notes called for redemption may be converted at any time before the close of business on the business day immediately preceding the optional redemption date;
- that Notes called for redemption must be surrendered to the paying agent to collect the optional redemption price and interest make-whole payment;
- if fewer than all the outstanding Notes are to be redeemed, the identification and principal amounts of the particular Notes to be redeemed;
- that, unless we default in making a redemption payment or interest make-whole payment, the interest on the Notes or the portion thereof called for redemption will
 cease to accrue on and after the optional redemption date; and
- the CUSIP number or ISIN number, if any, printed on the Notes being redeemed.

Effect of Notice of Redemption

Once an optional redemption notice is delivered to the holders, the Notes or portions thereof called for redemption will become irrevocably due and payable on the optional redemption date and at the optional redemption price, together with any interest make-whole payment, each as stated in the optional redemption notice. The optional redemption notice may not be conditional and will be irrevocable. Upon surrender to the paying agent, the Notes will be paid at the optional redemption price, together with any interest make-whole payment, each as stated in the optional redemption notice. Even if the Notes are surrendered, if the optional redemption date is on or after a regular record date and on or prior to the interest payment date, the accrued and unpaid interest will be payable to the holder of the redeemed Notes registered on the relevant record date (other than the interest make-whole payment which shall be payable to the holder entitled to receive payment of the optional redemption price). Failure to give notice or the existence of any defect in the notice to any holder will not affect the validity of the notice to any other holder.

Deposit of Redemption Price and Interest Make-Whole Payment

We will deposit with the paying agent and, if applicable, provide to the transfer agent, money sufficient to pay the redemption price on all Notes to be redeemed on the applicable redemption date other than Notes or portions of the Notes called for redemption that are owned by us or one of our subsidiaries and have been delivered by us or one of our subsidiaries to the trustee for cancellation no later than 11:00 a.m., New York City time, on the business day prior to the date on which any redemption price on any Note is due and payable. If we or our subsidiary is the paying agent, we will segregate the money to pay the redemption price and hold it in trust. If we comply with the foregoing requirements, then on and after the applicable redemption date, interest will cease to accrue on the Notes or portions of the Note called for redemption.

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Notes Redeemed in Part

Upon cancellation of a Note that is redeemed in part, at our expense, we will issue and the trustee will authenticate for the holder a new Note equal in principal amount to the unredeemed portion of the Note surrendered. The trustee will notify the registrar of the issuance of such new Note.

If less than all of the outstanding Notes are to be redeemed, Notes shall be selected, with respect to global notes, in accordance with DTC's applicable policies and procedures and, with respect to certificated Notes, by lot, pro rata or by such other method as the trustee deems fair and reasonable. The Notes or portions of them selected will be redeemed in principal amounts of \$1,000 or whole multiples of \$1,000. If a portion of a holder's Notes is selected for partial redemption and such holder converts a portion of its Notes before termination of the conversion right in respect to the portion of the Note selected, the converted portion will be deemed to be of the portion selected for redemption and the amount designated for partial redemption will be reduced by the converted amount.

We may not redeem the Notes if we have failed to pay any interest or premium on the Notes and such failure to pay is continuing. We will issue a press release if we redeem the Notes

Conversion Rights

General

On or after December 9, 2022, holders may convert all or any portion of their Notes at their option at any time prior to the close of business on the business day immediately preceding the maturity date.

The conversion rate is initially 212.3142 shares of common stock per \$1,000 principal amount of Notes (equivalent to an initial conversion price of approximately \$4.71 per share of Common Stock). The conversion rate is subject to adjustment if certain events occur. The conversion price at any given time will be computed by dividing \$1,000 by the applicable conversion rate at such time. Accordingly, an adjustment to the conversion rate will result in a corresponding (but inverse) adjustment to the conversion price.

Upon conversion of a Note, we will satisfy our conversion obligation by delivering shares of our Common stock, together with a cash payment in lieu of delivering any fractional share, as set forth below under "—Settlement upon Conversion" and an interest make-whole payment, if applicable. We will settle our conversion obligation on the second business day immediately following the relevant conversion date. The trustee will initially act as the conversion agent.

A holder may convert fewer than all of such holder's Notes so long as the Notes converted are an integral multiple of \$1,000 principal amount.

Upon conversion, a holder will not receive any separate cash payment for accrued and unpaid interest, if any, except as described below and under "—Interest Make-Whole Payment upon Certain Conversions." We will not issue fractional shares of our Common Stock upon conversion of Notes. Instead, we will pay cash in lieu of delivering any fractional share as described under "—Settlement upon Conversion." Our delivery to the holder of the full number of shares, together with a cash payment for any fractional share, into which a Note is convertible will be deemed to satisfy in full our obligation to pay:

- the principal amount of the Note; and
- · accrued and unpaid interest, if any, to, but not including, the relevant conversion date.

As a result, accrued and unpaid interest, if any, to, but not including, the relevant conversion date will be deemed to be paid in full rather than cancelled, extinguished or forfeited.

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Notwithstanding the immediately preceding paragraph, if Notes are converted after the close of business on a regular record date for the payment of interest, but prior to the open of business on the immediately following interest payment date, holders of such Notes at the close of business on such regular record date will receive the full amount of interest payable on such Notes on the corresponding interest payment date notwithstanding the conversion. However, Notes surrendered for conversion during the period from the close of business on any regular record date to the open of business on the immediately following interest payment date must be accompanied by funds equal to the amount of interest payable on the Notes so converted on the corresponding interest payment date (regardless of whether the holder was the holder of record on the corresponding regular record date); provided that no such payment need be made:

- for conversions following the regular record date immediately preceding the maturity date;
- for conversions in respect of which an interest make-whole payment is payable upon conversion;
- if we have specified a fundamental change repurchase date that is after a regular record date and on or prior to the business day immediately following the corresponding interest payment date, in respect of Notes converted; or
- to the extent of any overdue interest, if any overdue interest exists at the time of conversion with respect to such Note.

Therefore, for the avoidance of doubt, all record holders on the regular record date immediately preceding the maturity date, any record holders entitled to receive an interest make-whole payment upon conversion described in the second bullet in the immediately preceding paragraph and any fundamental change repurchase date described in the third bullet in the immediately preceding paragraph will receive the full interest payment due on the maturity date or other applicable interest payment date in cash regardless of whether their Notes have been converted or repurchased following such regular record date.

"Trading day" means a day on which (i) trading in our common stock (or other security for which a closing sale price must be determined) generally occurs on the Nasdaq Capital Market or, if our common stock (or such other security) is not then listed on the Nasdaq Capital Market, on the principal other U.S. national or regional securities exchange on which our Common Stock (or such other security) is then listed or, if our common stock (or such other security) is not then listed on a U.S. national or regional securities exchange, on the principal other market on which our common stock (or such other security) is then traded, and (ii) a last reported sale price for our Common Stock (or closing sale price for such other security) is available on such securities exchange or market. If our Common Stock (or such other security) is not so listed or traded, "trading day" means a "business day."

Notwithstanding anything to the contrary in the indenture, unless we have obtained the requisite approval of our stockholders pursuant to the applicable Nasdaq Marketplace rule or listing requirements of the relevant stock exchange, the number of shares we may deliver in respect of the Notes, including those delivered in lieu of cash interest, in connection with an interest make-whole payment, or as a qualifying fundamental change payment, will not exceed 19.99% of our Common Stock outstanding (as adjusted for stock splits, reverse stock splits, stock combinations, reclassifications and reorganizations) as of the close of the trading day immediately preceding the date of the indenture that governs the Notes without shareholder approval or as otherwise required pursuant to the listing requirements of the Nasdaq Capital Market or such other national securities exchange on which the Common Stock is then listed.

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Conversion Procedures

If you hold a beneficial interest in a global note, to convert you must comply with DTC's procedures for converting a beneficial interest in a global note and, if required, pay funds equal to interest payable on the next interest payment date to which you are not entitled and, if required, pay all transfer or similar taxes, if any. As such, if you are a beneficial owner of the Notes, you must allow for sufficient time to comply with DTC's procedures if you wish to exercise your conversion rights. Your exercise of such conversion rights shall be irrevocable.

If you hold a certificated note, to convert you must:

- complete and manually sign the conversion notice on the back of the Note, or a facsimile of the conversion notice;
- deliver the conversion notice, which is irrevocable, and the Note to the conversion agent;
- if required, furnish appropriate endorsements and transfer documents;
- if required, pay funds equal to the interest payable on the next interest payment date to which you are not entitled; and
- if required, pay all transfer or similar taxes, if any.

We will pay any documentary, stamp or similar issue or transfer tax on the issuance of the shares of our Common Stock upon conversion of the Notes, unless the tax is due

because the holder requests such shares to be issued in a name other than the holder's name, in which case the holder must pay the tax.

We refer to the date you comply with the relevant procedures for conversion described above as the "conversion date."

If a holder has already delivered a repurchase notice as described under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" with respect to a Note, the holder may not surrender that Note for conversion until the holder has withdrawn the repurchase notice in accordance with the relevant provisions of the indenture. If a holder submits its Notes for required repurchase, the holder's right to withdraw the repurchase notice and convert the Notes that are subject to repurchase will terminate at the close of business on the business day immediately preceding the relevant fundamental change repurchase date.

Settlement upon Conversion

Upon conversion, we will deliver to holders in respect of each \$1,000 principal amount of Notes being converted a number of shares of our Common Stock equal to the conversion rate, together with a cash payment, if applicable, in lieu of delivering any fractional share of Common Stock issuable upon conversion based on the last reported sale price of our Common Stock on the relevant conversion date and an interest make-whole payment or a qualifying fundamental change payment, if applicable. We will deliver the consideration due in respect of conversion on the second business day immediately following the relevant conversion date.

Each conversion will be deemed to have been effected as to any Notes surrendered for conversion on the conversion date, and the person in whose name the shares of our common stock shall be issuable upon such conversion will become the holder of record of such shares as of the close of business on such conversion date.

The "last reported sale price" of our Common Stock on any date means, as determined by us, the closing sale price per share (or if no closing sale price is reported, the average of the bid and ask prices or, if more than one in either case, the average of the average bid and the average ask prices) on that date as reported in composite transactions for the principal U.S. national or regional securities exchange on which our Common Stock is traded. If our Common Stock is not listed for trading on a U.S. national or regional securities exchange on the relevant date, the "last reported sale price" will be the last quoted bid price for our Common Stock in the over-the-counter market on the relevant date as reported by OTC Markets Group Inc. or a similar organization. If our Common Stock is not so quoted, the "last reported sale price" will be the average of the mid-point of the last bid and ask prices for our Common Stock on the relevant date from each of at least three nationally recognized independent investment banking firms selected by us for this purpose.

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Conversion Limitation

We will not effect any conversion of a Note and no holder will have the right to convert any portion of a Note to the extent that after giving effect to such conversion, the holder (together with the holder's affiliates, associates and any other persons whose beneficial ownership would be aggregated for the purposes of Section 13(d) of the Exchange Act) would beneficially own in excess of 4.9% of the number of shares of our Common Stock outstanding immediately after giving effect to such conversion (the "conversion limitation"). The number of shares of Common Stock beneficially owned by a holder and its affiliates will include the number of shares of Common Stock issuable upon the conversion of a Note with respect to which the determination is being made. The number of shares of Common Stock beneficially owned by a holder and its affiliates will exclude the number of shares of Common Stock which would be issuable upon (i) conversion of the remaining, nonconverted portion of any Note beneficially owned by the holder or any of its affiliates and (ii) exercise or conversion of the unexercised or nonconverted portion of any of our other securities subject to a limitation on conversion or exercise analogous to the conversion limitation beneficially owned by such holder or any of its affiliates. For purposes of the indenture, beneficial ownership will be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended.

In determining the number of outstanding shares of our Common Stock, the holder may rely on the number of outstanding shares of Common Stock reflected in our most recent annual, quarterly or current report on Form 10- K, Form 10-Q or Form 8-K, respectively, as the case may be; a more recent public announcement by us or any other notice by us setting forth the number of shares of our Common Stock outstanding. For any reason at any time, upon the written or oral request of a holder, we will within two business days confirm orally and in writing to the holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock will be determined after giving effect to the conversion or exercise of our securities, including the Note, by the holder or its affiliates since the date as of which such number of outstanding shares of Common Stock was reported. By written notice to us, any holder may increase or decrease the conversion limitation to any other percentage not in excess of 9.99% specified in such notice; provided that any such increase will not be effective until the 61st day after the notice of the change in the conversion limitation is delivered to us and any such increase will apply only to the holder sending such notice and not to any other holder of the Notes.

Interest Make-Whole Payment upon Certain Conversions

If a holder surrenders its Notes for conversion at any time on or after December 9, 2022 and prior to the Interest Make-Whole Date (other than a conversion in connection with a qualifying fundamental change with a qualifying fundamental change payment greater than any interest make-whole payment), we will make an interest make-whole payment to the holder of such Notes equal to the sum of the remaining scheduled payments of interest that would have been made on the Notes to be converted had such Notes remained outstanding from the conversion date through, and including, the Interest Make-Whole Date (the "interest make-whole payment").

If a conversion date occurs after the close of business on a regular record date but prior to the open of business on the interest payment date corresponding to such regular record date, the interest make-whole payment will not include the accrued interest to any converting holder and instead we will pay the full amount of the relevant interest payment on such interest payment date to the holder of record on such regular record date. In such case, the interest make-whole payment to such converting holders will equal the value of all remaining interest payments, starting with the next interest payment date for which interest has not been provided for through the interest make-whole date.

We will have the option to pay any interest make-whole payment in cash and/or by delivering freely tradable shares of our common stock, subject to certain limitations described under "Share Limitation." The number of shares a converting holder will receive will be the number of shares equal to the amount of the interest make-whole payment to be paid in Common Stock to such holder, divided by the product of (x) 95% and (y) the simple average of the daily VWAP (as defined below) of the shares for the ten consecutive trading days ending on and including the trading day immediately preceding the conversion date.

The "daily VWAP" means, for each of the ten consecutive trading days for the calculation of the interest make-whole payment, the per share volume-weighted average price as displayed under the heading "Bloomberg VWAP" on Bloomberg page "AKTS <equity> AQR" (or its equivalent successor if such page is not available) in respect of the period from the scheduled open of trading until the scheduled close of trading of the primary trading session on such trading day (or if such volume-weighted average price is unavailable, the market value of one share of our common stock on such trading day determined, using a volume-weighted average method, by a nationally recognized independent investment banking firm retained for this purpose by us). The "daily VWAP" will be determined without regard to after-hours trading or any other trading outside of the regular trading session trading hours.

(i) there is no "market disruption event" (as defined below) and (ii) trading in our Common Stock generally occurs on the relevant stock exchange on which our Common Stock is then listed or, if our Common Stock is not then listed on a U.S. national or regional securities exchange, on the principal other market on which our Common Stock is then listed or admitted for trading. If our Common Stock is not so listed or admitted for trading day" means a "business day." "Relevant stock exchange" means the Nasdaq Capital Market or, if our Common Stock is not then listed on the Nasdaq Capital Market, the principal other U.S. national or regional securities exchange or market on which our Common Stock is listed or admitted for trading.

"Scheduled trading day" means a day that is scheduled to be a trading day on the relevant stock exchange. If our Common Stock is not listed or admitted for trading on any U.S. national or regional securities exchange, "scheduled trading day" means a "business day."

"Market disruption event" means (i) a failure by the relevant stock exchange to open for trading during its regular trading session or (ii) the occurrence or existence prior to 1:00 p.m., New York City time, on any scheduled trading day for our Common Stock for more than one half-hour period in the aggregate during regular trading hours of any suspension or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the relevant stock exchange or otherwise) in our Common Stock or in any options contracts or futures contracts relating to our Common Stock.

Conversion Rate Adjustments

The conversion rate will be adjusted by us as described below, except that we will not make any adjustments to the conversion rate if holders of the Notes participate (other than in the case of (x) a share split or share combination or (y) a tender or exchange offer), at the same time and upon the same terms as holders of our Common Stock and solely as a result of holding the Notes, in any of the transactions described below without having to convert their Notes as if they held a number of shares of our Common Stock equal to the conversion rate, *multiplied by* the principal amount (expressed in thousands) of Notes held by such holder.

(1) If we exclusively issue shares of our Common Stock as a dividend or distribution on shares of our Common Stock, or if we effect a share split or share combination, the conversion rate will be adjusted based on the following formula:

$$CR_1 = CR_0 \times \frac{OS_1}{OS_0}$$

where,

CR₀ = the conversion rate in effect immediately prior to the close of business on the record date (as defined below) of such dividend or distribution, or immediately prior to the open of business on the effective date of such share split or share combination, as applicable;

CR₁ = the conversion rate in effect immediately after the close of business on such record date or immediately after the open of business on such effective date, as applicable;

OS₀ = the number of shares of our Common Stock outstanding immediately prior to the close of business on such record date or immediately prior to the open of business on such effective date, as applicable (before giving effect to any such dividend, distribution, share split or share combination); and

OS₁ = the number of shares of our Common Stock outstanding immediately after giving effect to such dividend, distribution, share split or share combination.

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Any adjustment made under this clause (1) shall become effective immediately after the close of business on the record date for such dividend or distribution, or immediately after the open of business on the effective date for such share split or share combination, as applicable. If any dividend or distribution of the type described in this clause (1) is declared but not so paid or made, the conversion rate shall be immediately readjusted, effective as of the date our board of directors or a committee thereof determines not to pay such dividend or distribution, to the conversion rate that would then be in effect if such dividend or distribution had not been declared.

(2) If we distribute to all or substantially all holders of our Common Stock any rights, options or warrants (other than pursuant to a stockholder rights plan) entitling them, for a period of not more than 45 calendar days after the announcement date of such distribution, to subscribe for or purchase shares of our Common Stock at a price per share that is less than the average of the last reported sale prices of our Common Stock for the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of such distribution, the conversion rate will be increased based on the following formula:

$$CR_1 = CR_0 \times OS_0 + X$$
 $OS_0 + Y$

where,

CR₀ = the conversion rate in effect immediately prior to the close of business on the record date for such distribution;

CR₁ = the conversion rate in effect immediately after the close of business on such record date;

OS₀ = the number of shares of our Common Stock outstanding immediately prior to the close of business on such record date;

X = the total number of shares of our Common Stock distributable pursuant to such rights, options or warrants; and

Y = the number of shares of our Common Stock equal to the aggregate price payable to exercise such rights, options or warrants, *divided by* the average of the last reported sale prices of our common stock over the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of the distribution of such rights, options or warrants.

Any increase made under this clause (2) will be made successively whenever any such rights, options or warrants are distributed and shall become effective immediately after the close of business on such record date for such distribution. To the extent that such rights, options or warrants are not exercised prior to their expiration or shares of our Common Stock are not delivered after the expiration of such rights, options or warrants, the conversion rate shall be decreased to the conversion rate that would then be in effect had the increase with respect to the distribution of such rights, options or warrants been made on the basis of delivery of only the number of shares of Common Stock actually delivered. If such rights, options or warrants are not so distributed or if no such rights, options or warrants are not exercised prior to their expiration, the conversion rate shall be decreased to the conversion rate that would then be in effect if such record date for such distribution had not occurred.

For the purpose of this clause (2), in determining whether any rights, options or warrants entitle the holders to subscribe for or purchase shares of our common stock at less than such average of the last reported sale prices for the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement

(3) If we distribute shares of our capital stock, evidences of our indebtedness, other assets or property of ours or rights, options or warrants to acquire our capital stock or other securities, to all or substantially all holders of our Common Stock, excluding:

- dividends, distributions or issuances as to which an adjustment was effected or will be so effected in accordance with the 1% provision (as defined below) pursuant to clause (1) or (2) above;
- · except as otherwise described below, rights issued pursuant to any stockholder rights plan of ours then in effect;
- dividends or distributions paid exclusively in cash as to which the provisions set forth in clause (4) below shall apply;
- any dividends or distributions of reference property issued in exchange for our common stock as described under "—Recapitalizations, Reclassifications and Changes of Our Common Stock;" and
- spin-offs as to which the provisions set forth below in this clause (3) shall apply;

then the conversion rate will be increased based on the following formula:

$$CR_1 = CR_0 \times \frac{SP_0}{SP_0 - FMV}$$

where,

CR₀ = the conversion rate in effect immediately prior to the close of business on such record date for the distribution;

CR₁ = the conversion rate in effect immediately after the close of business on such record date;

SP₀ = the average of the last reported sale prices of our Common Stock over the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the ex-dividend date for such distribution; and

miniculatory preceding the ex-dividend date for such distribution, and

FMV = the fair market value (as determined by us in good faith and in a commercially reasonable manner) of the shares of capital stock, evidences of indebtedness, assets, property, rights, options or warrants distributed with respect to each outstanding share of our Common Stock on the record date for such distribution.

Any increase made under the portion of this clause (3) above will become effective immediately after the close of business on the record date for such distribution. If such distribution is not so paid or made, the conversion rate shall be decreased to be the conversion rate that would then be in effect if such distribution had not been declared. In the case of any distribution of rights, options or warrants, to the extent such rights options or warrants expire unexercised, the applicable conversion rate shall be immediately readjusted to the applicable conversion rate that would then be in effect had the increase made for the distribution of such rights, options or warrants been made on the basis of delivery of only the number of shares of our common stock actually delivered upon exercise of such rights, options or warrants. Notwithstanding the foregoing, if "FMV" (as defined above) is equal to or greater than "SP₀" (as defined above), in lieu of the foregoing increase, each holder of a Note shall receive, in respect of each \$1,000 principal amount thereof, at the same time and upon the same terms as holders of our common stock, the amount and kind of our capital stock, evidences of our indebtedness, other assets or property of ours or rights, options or warrants to acquire our capital stock or other securities that such holder would have received if such holder owned a number of shares of Common Stock equal to the conversion rate in effect on the record date for the distribution.

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With respect to an adjustment pursuant to this clause (3) where there has been a payment of a dividend or other distribution on our Common Stock of shares of capital stock of any class or series, or similar equity interest, of or relating to a subsidiary or other business unit, that are, or, when issued, will be, listed or admitted for trading on a U.S. national securities exchange, which we refer to as a "spin-off," the conversion rate will be increased based on the following formula:

$$CR_1 = CR_0 \times \frac{FMV_0 + MP_0}{MP_0}$$

where,

CR₀ = the conversion rate in effect immediately prior to the end of the valuation period (as defined below);

CR₁ = the conversion rate in effect immediately after the end of the valuation period;

FMV₀ = the average of the last reported sale prices of the capital stock or similar equity interest distributed to holders of our common stock applicable to one share of our common stock (determined by reference to the definition of last reported sale price set forth under "—Settlement Upon Conversion" as if references therein to our common stock were to such capital stock or similar equity interest) over the first 10 consecutive trading day period after, and including, the ex-dividend date of the spin-off (the "valuation period"); and

 MP_0 = the average of the last reported sale prices of our Common Stock over the valuation period.

The increase to the conversion rate under the preceding paragraph will occur at the close of business on the last trading day of the valuation period provided that in respect of any conversion of Notes, if the relevant conversion date occurs during the valuation period, the reference to "10" in the preceding paragraph shall be deemed replaced with such lesser number of trading days as have elapsed between the ex-dividend date for such spin-off and such conversion date in determining the conversion rate. If any dividend or

distribution that constitutes a spin-off is declared but not so paid or made, the conversion rate shall be immediately decreased, effective as of the date our board of directors or a committee thereof determines not to pay or make such dividend or distribution, to the conversion rate that would then be in effect if such dividend or distribution had not been declared or announced.

(4) If we pay or make any cash dividend or distribution to all or substantially all holders of our Common Stock, the conversion rate will be adjusted based on the following formula:

$$CR_1 = CR_0 \times \frac{SP_0}{SP_0 - C}$$

where,

CR₀ = the conversion rate in effect immediately prior to the close of business on the record date for such dividend or distribution;

CR₁ = the conversion rate in effect immediately after the close of business on such record date for such dividend or distribution;

SP₀ = the last reported sale price of our Common Stock on the trading day immediately preceding the ex-dividend date for such dividend or distribution; and

C = the amount in cash per share we distribute to all or substantially all holders of our Common Stock.

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Any increase to the conversion rate made under this clause (4) shall become effective immediately after the close of business on the record date for such dividend or distribution. If such dividend or distribution is not so paid, the conversion rate shall be decreased, effective as of the date our board of directors or a committee thereof determines not to make or pay such dividend or distribution, to be the conversion rate that would then be in effect if such dividend or distribution had not been declared. Notwithstanding the foregoing, if "C" (as defined above) is equal to or greater than "SP₀" (as defined above), in lieu of the foregoing increase, each holder of a Note shall receive, for each \$1,000 principal amount of Notes, at the same time and upon the same terms as holders of shares of our Common Stock, the amount of cash that such holder would have received if such holder owned a number of shares of our Common Stock equal to the conversion rate on the record date for such cash dividend or distribution.

(5) If we or any of our subsidiaries make a payment pursuant to a tender or exchange offer for our Common Stock that is subject to the then-applicable tender offer rules under the Securities Exchange Act of 1934, as amended (the "Exchange Act") (other than any odd-lot tender offer), to the extent that the cash and value of any other consideration included in the payment per share of our Common Stock exceeds the average of the last reported sale prices of our Common Stock over the 10 consecutive trading day period commencing on, and including, the trading day next succeeding the last date on which tenders or exchanges may be made pursuant to such tender or exchange offer (the last date on which tenders or exchanges may be made pursuant to such tender or exchange offer, the "expiration date"), the conversion rate will be increased based on the following formula:

$$CR_1 = CR_0 x \qquad AC + (SP_1 x OS_1)$$

$$OS_0 x SP_1$$

where,

CR₀ = the conversion rate in effect immediately prior to the close of business on the 10th trading day immediately following, and including, the trading day next succeeding the expiration date;

CR₁ = the conversion rate in effect immediately after the close of business on the 10th trading day immediately following, and including, the trading day next succeeding the expiration date;

AC = the aggregate value of all cash and any other consideration (as determined by us in good faith and in a commercially reasonable manner) paid or payable for shares purchased or exchanged in such tender or exchange offer;

OS₀ = the number of shares of our Common Stock outstanding immediately prior to the expiration date (prior to giving effect to the purchase or exchange of all shares accepted for purchase or exchange in such tender or exchange offer);

OS₁ = the number of shares of our common stock outstanding immediately after the expiration date (after giving effect to the purchase or exchange of all shares accepted for purchase or exchange in such tender or exchange offer); and

SP₁ = the average of the last reported sale prices of our Common Stock over the 10 consecutive trading day period commencing on, and including, the trading day next succeeding the expiration date.

The increase to the conversion rate under the preceding paragraph will occur at the close of business on the 10th trading day immediately following, and including, the trading day next succeeding the date such tender or exchange offer expires; *provided* that in respect of any conversion of Notes, if the relevant conversion date occurs during the 10 trading days immediately following, and including, the trading day next succeeding the expiration date of any tender or exchange offer, references to "10" or "10th" in the preceding paragraph shall be deemed replaced with such lesser number of trading days as have elapsed between the expiration date of such tender or exchange offer and such conversion date in determining the conversion rate.

In the event that we or one of our subsidiaries is obligated to purchase shares of our Common Stock pursuant to any such tender offer or exchange offer described in clause (5), but we are, or such subsidiary is, permanently prevented by applicable law from effecting any such purchase or all such purchases are rescinded, then the conversion rate shall again be adjusted to be the conversion rate that would then be in effect if such tender offer or exchange offer had not been made or had been made only in respect of the purchases that have been effected.

As used in this section, "ex-dividend date" means the first date on which the shares of our Common Stock trade on the applicable exchange or in the applicable market, regular way, without the right to receive the issuance, dividend or distribution in question, from us or, if applicable, from the seller of our Common Stock on such exchange or market (in the form of due bills or otherwise) as determined by such exchange or market, and "effective date" means the first date on which the shares of our Common Stock trade on the applicable exchange or in the applicable market, regular way, reflecting the relevant share split or share combination, as applicable. For the avoidance of doubt, any alternative trading convention on the applicable exchange or market in respect of shares of our Common Stock under a separate ticker symbol or CUSIP number will not be considered "regular way" for this purpose.

As used in this section, "record date" means, with respect to any dividend, distribution or other transaction or event in which the holders of our Common Stock (or other applicable security) have the right to receive any cash, securities or other property or in which our common stock (or such other security) is exchanged for or converted into any combination of cash, securities or other property, the date fixed for determination of holders of our Common Stock (or such other security) entitled to receive such cash, securities or other property (whether such date is fixed by our board of directors or a duly authorized committee thereof, statute, contract or otherwise).

We are permitted to increase the conversion rate of the Notes by any amount for a period of at least 20 business days if we determine that such increase would be in our best interest. We may also (but are not required to) increase the conversion rate to avoid or diminish income tax to holders of our common stock or rights to purchase shares of our Common Stock in connection with a dividend or distribution of shares (or rights to acquire shares) or similar event.

A holder may, in some circumstances, including a distribution of cash dividends to holders of our shares of Common Stock, be deemed to have received a distribution subject to U.S. federal income tax as a result of an adjustment or the nonoccurrence of an adjustment to the conversion rate. For a discussion of the U.S. federal income tax treatment of an adjustment to the conversion rate, see "Certain U.S. Federal Income Tax Considerations."

If we have a rights plan in effect upon conversion of the Notes into Common Stock, you will receive, in addition to the shares of Common Stock received in connection with such conversion, the rights under the rights plan. However, if, prior to any conversion, the rights have separated from the shares of common stock in accordance with the provisions of the applicable rights plan, the conversion rate will be adjusted at the time of separation as if we distributed to all or substantially all holders of our common stock, shares of our capital stock, evidences of indebtedness, assets, property, rights, options or warrants as described in clause (3) above, subject to readjustment in the event of the expiration, termination or redemption of such rights.

Notwithstanding any of the foregoing, the conversion rate will not be adjusted:

- upon the issuance of shares of our Common Stock at a price below the conversion price or otherwise, other than any such issuance described in clause (1), (2) or (3) above;
- upon the issuance of any shares of our Common Stock pursuant to any present or future plan providing for the reinvestment of dividends or interest payable on our securities and the investment of additional optional amounts in shares of our common stock under any plan;
- upon the issuance of any capital stock, rights, warrants or options to subscribe for or purchase Common Stock or Convertible Securities (as hereinafter defined) ("Options") issued to directors, officers, employees or consultants of the Company or its subsidiaries in connection with their service as directors of the Company, their employment by the Company or its subsidiaries or their retention as consultants by the Company or its subsidiaries pursuant to an employee benefit plan approved by the Board of Directors of the Company or the compensation committee of the Board of Directors of the Company;

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- upon the issuance of any shares of Common Stock issued upon the conversion or exercise of Options or any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock ("Convertible Securities") that were issued and outstanding as of the date the Notes were first issued (the "Effective Time"), provided such securities are not amended after the Effective Time to increase the number of shares of Common Stock issuable thereunder, lower the exercise or conversion price thereof or extend the term thereof;
- for a third-party tender offer by any party other than a tender offer by one or more of our subsidiaries as described in clause (5) above;
- upon the repurchase of any of shares of our Common Stock pursuant to an open market share purchase program or other buy-back transaction, including structured or derivative transactions such as accelerated share repurchase transactions or similar forward derivatives, or other buy-back transaction, that is not a tender offer or exchange offer of the kind described under clause (5) above;
- solely for a change in the par value of our Common Stock;
- for accrued and unpaid interest, if any; or
- upon the issuance of any securities issued pursuant to the purchase agreement pursuant to which the Notes were originally sold and the issuance of any shares of Common Stock issued in respect of such securities.

If an adjustment to the conversion rate otherwise required by the provisions described above would result in a change of less than 1% to the conversion rate, then, notwithstanding the foregoing, we may, at our election, defer and carry forward such adjustment, except that all such deferred adjustments must be given effect immediately upon the earliest to occur of the following: (i) when all such deferred adjustments would result in an aggregate change of at least 1% to the conversion rate, and (ii) on the conversion date for any Notes, in each case, unless the adjustment has already been made. The provisions described in the preceding sentence are referred to herein as the "1% provision."

Adjustments to the conversion rate will be calculated by us to the nearest 1/10,000th of a share.

Recapitalizations, Reclassifications and Changes of Our Common Stock

In the case of:

- any recapitalization, reclassification or change of our Common Stock (other than a change to par value, or from par value to no par value, or changes resulting from a share split or share combination),
- · any consolidation, merger or combination involving us,
- any sale, lease or other transfer to a third party of all or substantially all of our and our subsidiaries' consolidated assets, taken as a whole, or
- any statutory share exchange,

in each case, as a result of which our Common Stock would be converted into, or exchanged for, stock, other securities, other property or assets (including cash or any combination thereof) (any such event, a "share exchange event"), then we or the successor or acquiring company, as the case may be, will execute with the trustee, without the consent of the holders, a supplemental indenture providing that, at and after the effective time of the share exchange event, the right to convert each \$1,000 principal amount of Notes will be changed into a right to convert such principal amount of Notes into the kind and amount of shares of stock, other securities or other property or assets (including cash or any combination thereof) that a holder of a number of shares of Common Stock equal to the conversion rate immediately prior to such share exchange event would have owned or been entitled to receive (the "reference property") upon such share exchange event. However, at and after the effective time of the share exchange event, the number of shares of our Common Stock otherwise deliverable upon conversion of the Notes as set forth under "—Settlement upon Conversion" and "—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions" above will be deliverable in the amount and type of reference property that a holder of that number of shares of our Common Stock would have received in such transaction. If the share exchange event causes our Common Stock to be converted into, or exchanged for, the right to receive more than a single type of consideration (determined based in part upon any form of stockholder election), the reference property into which the Notes will be convertible will be deemed to be (i) the weighted average of the types and amounts of consideration actually received by the holders of our Common Stock. We will notify holders, the trustee and the conversion agent (if other than the trustee) in writing of the weighted average as soon as practicable after such determination is made.

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If the reference property in respect of any share exchange event includes, in whole or in part, shares of common equity, the supplemental indenture providing that the Notes will be convertible into reference property will also provide for anti-dilution and other adjustments that are as nearly equivalent as possible to the adjustments described under "— Conversion Rate Adjustments" above with respect to the portion of the reference property consisting of such common equity. If the reference property in respect of any such share exchange event includes shares of stock, securities or other property or assets (other than cash and/or cash equivalents) of a company other than us or the successor or purchasing company, as the case may be, in such share exchange event, such other company, if an affiliate of us or the successor or acquiring company, will also execute such supplemental indenture, and such supplemental indenture will contain such additional provisions to protect the interests of the holders, including the right of holders to require us to repurchase their Notes upon a fundamental change as described under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" below, as we in good faith reasonably consider necessary by reason of the foregoing. We agree in the indenture not to become a party to any such share exchange event unless its terms are consistent with the foregoing.

Adjustments of Prices

Whenever any provision of the indenture requires us to calculate the last reported sale prices over a span of multiple days (including, without limitation, the period, if any, for determining "stock price" for purposes of a qualifying fundamental change), we will make appropriate adjustments in good faith and in a commercially reasonable manner (to the extent no corresponding adjustment is otherwise made pursuant to the provisions described under "—Conversion Rate Adjustments" above) to each to account for any adjustment to the conversion rate that becomes effective, or any event requiring an adjustment to the conversion rate where the ex-dividend date, effective date or expiration date of the event occurs, at any time during the period when the last reported sale prices are to be calculated.

For the avoidance of doubt, the adjustments made pursuant to the foregoing paragraph will be made, solely to the extent we determine in good faith and in a commercially reasonable manner that any such adjustment is appropriate, without duplication of any adjustment made pursuant to the provision set forth under "—Conversion Rate Adjustments."

Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change

If the "effective date" (as hereinafter defined) of a "qualifying fundamental change" (as hereinafter defined) occurs prior to the maturity date of the Notes and a holder elects to convert its Notes in connection with such qualifying fundamental change, we will, under certain circumstances, increase the conversion rate by an additional number of shares of Common Stock ("qualifying fundamental change additional shares"). The number of qualifying fundamental change additional shares will be determined by reference to the table below, based on the effective date of the qualifying fundamental change and the price paid (or deemed to be paid) per share of Common Stock in the qualifying fundamental change (the "stock price"). The number of qualifying fundamental change additional shares set forth in the table below shall be adjusted in the same manner as and as of any date on which the conversion rate of the Notes is adjusted pursuant to the indenture. The stock prices set forth in the first row of the table below (i.e., the column headers) shall be simultaneously adjusted to equal the stock prices immediately prior to such adjustment, multiplied by a fraction, the numerator of which shall be the conversion rate immediately prior to the adjustment and the denominator of which shall be the conversion rate as so adjusted.

	Stock Price																
Effective Date	\$ 4.00	\$ 5.00	\$ 6.00	\$ 7.00	\$ 8.00	\$ 9.00	\$10.00	\$11.00	\$12.00	\$13.00	\$14.00	\$15.00	\$16.00	\$17.00	\$18.00	\$19.00	\$20.00
June 9, 2022	38.14	26.22	18.02	12.39	8.52	5.86	4.03	2.77	5.69	4.83	4.10	3.49	2.96	2.51	2.12	1.79	1.49
June 15, 2023	38.14	24.91	17.12	11.77	8.09	5.56	3.83	2.63	4.20	3.57	3.04	2.59	2.20	1.87	1.58	1.32	1.10
June 15, 2024	38.14	23.66	16.27	11.18	7.69	5.29	3.63	2.50	2.37	2.03	1.74	1.49	1.27	1.08	0.92	0.77	0.64
June 15, 2025	38.14	22.48	15.45	10.62	7.30	5.02	3.45	2.37	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00
June 15, 2026	38.14	21.35	14.68	10.09	6.94	4.77	3.28	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June 15, 2027	38.14	20.29	13.95	9.59	6.59	4.53	3.12	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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If the exact stock price is between two stock prices listed in the table above or if the exact effective date of such qualifying fundamental change is between two effective dates listed in the table above, then the number of qualifying fundamental change additional shares by which the conversion rate shall be increased shall be determined by a straight-line interpolation between the number of qualifying fundamental change additional shares set forth for the higher and lower stock prices and the earlier and later effective dates based on a 365-day year.

If the exact stock price is greater than \$20.00 per share (subject to adjustment in the same manner and at the same time as the stock prices listed in the table above), then the conversion rate shall not be increased. If the exact stock price is less than \$4.00 per share (subject to adjustment in the same manner and at the same time as the stock prices listed in the table above), then the conversion rate shall not be increased.

A "qualifying fundamental change" means any transaction or event that constitutes a fundamental change defined below in clause (1), (2) or (4) of the definition of "fundamental change" under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes", after giving effect to any exceptions or exclusions from such definition, but without regard to the proviso in clause (2) of the definition thereof. A conversion of Notes will be deemed for these purposes to be "in connection with" such qualifying fundamental change if the relevant conversion date occurs during the period from, and including, the effective date of the qualifying fundamental change up to, and including, the business day immediately prior to the related fundamental change repurchase date (or, in the case of a qualifying fundamental change that would have been a fundamental change but for the proviso in clause (2) of the definition thereof, the 35th trading day immediately following the effective date of such qualifying fundamental change period").

We will have the option to pay any portion of the qualifying fundamental change additional shares in cash and/or by delivering freely tradeable Common Stock (the "qualifying fundamental change payment"). Subject to the limitation described below above under "—Share Limitation," any fundamental change interest payments will be made all in shares of Common Stock unless the Company gives written notice to the holders that it intends to make future qualifying fundamental change payments either all or partially in cash. Such notice will not be effective until the end of the 15th trading day after such notice is given.

Upon surrender of Notes for conversion in connection with a qualifying fundamental change we will deliver shares of common stock as described under "—Settlement upon Conversion." However, for any conversion of Notes following the effective date of such qualifying fundamental change, the conversion obligation will be calculated by us based solely on the stock price for the transaction and will be deemed to be an amount of cash per \$1,000 principal amount of converted Notes equal to the conversion rate, multiplied by such stock price. We will notify the trustee, the conversion agent (if other than the trustee) and holders, in writing, of the effective date of any qualifying fundamental change no later than five business days after such effective date. If the holders of our Common Stock receive in exchange for their Common Stock only cash in a qualifying fundamental change described in clause (2) of the definition of fundamental change, the stock price shall be the cash amount paid per share. Otherwise, the stock price shall be the average of the closing sale prices of our Common Stock over the five consecutive trading day period ending on, and including, the trading day immediately preceding the relevant effective date.

Notwithstanding the foregoing, if a holder of Notes converted in connection with a qualifying fundamental change is entitled to a qualifying fundamental change payment, then the holder of such converted Notes shall be entitled to receive the greater of the interest make-whole payment and such qualifying fundamental change payment, but not both, with respect to such converted Notes.

Our obligation to make a qualifying fundamental change payment for Notes converted in connection with a qualifying fundamental change could be considered a penalty, in which case the enforceability thereof would be subject to general principles of reasonableness and equitable remedies.

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Share Limitation

Notwithstanding the foregoing or anything to the contrary in the indenture, unless we have obtained the requisite approval of our stockholders pursuant to the applicable Nasdaq Marketplace rule or listing requirements of the relevant stock exchange, the number of shares we may deliver in respect of the Notes, including those delivered in lieu of cash interest, in connection with an interest make-whole payment, or as a qualifying fundamental change additional shares will not exceed 19.99% of our Common Stock outstanding (as adjusted for stock splits, reverse stock splits, stock combinations, reclassifications and reorganizations) as of the close of the trading day immediately preceding the date of the indenture that governs the Notes (the "maximum share reserve").

We will keep available at all times an amount of authorized and unissued shares of Common Stock to provide for issuance upon conversion of the Notes from time to time. No such shares shall be issued to the extent that the shares of Common Stock remaining in the maximum share reserve would, after giving effect to such issuance, be less than the remaining shares that could be issued upon the conversion of then outstanding Notes (assuming the maximum increase to the conversion rate upon a dilutive issuance described in "—Adjustment to Conversion Rate upon Dilutive Issuances of Common Stock"). We may increase the maximum share reserve to the extent that we obtain the requisite approval of our stockholders pursuant to the applicable Nasdaq Marketplace rule or listing requirements of the relevant stock exchange.

We will not be required to make any cash payments in lieu of any fractional shares or have any further obligation to deliver any shares of our Common Stock in excess of the threshold described above; provided, however, that we will make a cash payment in lieu of any whole shares of Common Stock that are not able to be delivered in excess of such threshold, calculated based upon the simple average of the daily VWAP (as defined above under the heading "—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions") of our shares for the ten consecutive trading days ending on and including the trading day immediately preceding relevant payment date.

Neither the trustee nor paying agent shall be responsible for determining or calculating the number of shares issuable in lieu of cash interest on the Notes, the amount of the interest make-whole payment, the daily VWAP, or the stock price.

Fundamental Change Permits Holders to Require Us to Repurchase Notes

If a "fundamental change" (as defined below in this section) occurs at any time prior to the maturity date, holders will have the right, at their option, to require us to repurchase for cash all of their Notes, or any portion of the principal amount thereof that is equal to \$1,000 or an integral multiple of \$1,000. The fundamental change repurchase date will be a date specified by us that is not less than 20 or more than 35 business days following the date of our fundamental change notice as described below.

The fundamental change repurchase price we are required to pay will be equal to 100% of the principal amount of the Notes to be repurchased and unpaid interest to, but excluding, the fundamental change repurchase date (unless the fundamental change repurchase date falls after a regular record date but on or prior to the interest payment date to which such regular record date relates, in which case we will instead pay the full amount of accrued and unpaid interest (to, but not including, such interest payment date) to the holder of record on such regular record date, and the fundamental change repurchase price will be equal to 100% of the principal amount of the Notes to be repurchased).

A "fundamental change" will be deemed to have occurred at the time after the Notes are originally issued if any of the following occurs:

(1) a "person" or "group" within the meaning of Section 13(d) of the Exchange Act, other than us, our wholly owned subsidiaries and our and their employee benefit plans, files a Schedule TO (or any successor schedule, form or report) or any schedule, form or report under the Exchange Act that discloses that such person or group has become the direct or indirect "beneficial owner," as defined in Rule 13d-3 under the Exchange Act, of our Common Stock representing more than 50% of the voting power of our Common Stock, unless such beneficial ownership arises solely as a result of a revocable proxy delivered in response to a public proxy or consent solicitation made pursuant to the applicable rules and regulations under the Exchange Act; provided that no person or group shall be deemed to be the beneficial owner of any securities tendered pursuant to a tender or exchange offer made by or on behalf of such person or group until such tendered securities are accepted for purchase or exchange under such offer;

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(2) the consummation of (A) any recapitalization, reclassification or change of our Common Stock (other than changes resulting from a subdivision or combination or solely a change in par value) as a result of which our Common Stock would be converted into, or exchanged for, stock, other securities, other property or assets; (B) any share exchange, consolidation or merger of us pursuant to which our common stock will be converted into cash, securities or other property or assets; or (C) any sale, lease or other transfer in one transaction or a series of transactions of all or substantially all of the consolidated assets of us and our subsidiaries, taken as a whole, to any person other than one or more of our direct or indirect wholly owned subsidiaries; provided, however, that a transaction described in clauses (A) or (B) in which the holders of all classes of our common equity immediately prior to such transaction own, directly or indirectly, more than 50% of all classes of common equity of the continuing or surviving company or transferee or the parent thereof immediately after such transaction in substantially the same proportions (relative to each other) as such ownership immediately prior to such transaction shall not be a fundamental change pursuant to this clause (2);

- (3) our stockholders approve any plan or proposal for our liquidation or dissolution; or
- (4) our Common Stock (or other Common Stock, American depositary receipts, ordinary shares or other common equity interests underlying the Notes) ceases to be listed or quoted on any of the Nasdaq Capital Market, The New York Stock Exchange, The Nasdaq Global Select Market or The Nasdaq Global Market (or any of their respective successors) or an established over-the-counter trading market in the United States.

A transaction or transactions described in clause (1) or clause (2) above will not constitute a fundamental change, however, if at least 90% of the consideration received or to be received by our common stockholders, excluding cash payments for fractional shares and cash payments made pursuant to dissenters' appraisal rights, in connection with such transaction or transactions consists of shares of Common Stock, American depositary receipts, ordinary shares or other common equity interests, in each case, that are listed or quoted on any of the Nasdaq Capital Market, The New York Stock Exchange, The Nasdaq Global Select Market or The Nasdaq Global Market (or any of their respective successors) or an established over-the-counter trading market in the United States or will be so listed or quoted when issued or exchanged in connection with such transaction or transactions and as a result of such transaction or transactions such consideration becomes reference property for the Notes, excluding cash payments for fractional shares and cash payments made pursuant to dissenters' appraisal rights (subject to the provisions set forth above under "—Conversion Rights—Settlement upon Conversion").

Any event, transaction or series of related transactions that constitute a fundamental change under both clause (1) and clause (2) above (determined without regard to the proviso in clause (2) above) will be deemed to be a fundamental change solely under clause (2) above.

If any transaction in which our Common Stock is replaced by the securities of another entity occurs, following completion of any related qualifying fundamental change period (or, in the case of a transaction that would have been a fundamental change or a qualifying fundamental change but for the immediately preceding paragraph, following the effective date of such transaction), references to us in the definition of "fundamental change" above shall instead be references to such other entity.

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On or before the 20th business day after the occurrence of a fundamental change, we will provide to all holders of the Notes, the trustee, the conversion agent (if other than the trustee) and paying agent (if other than the trustee) a notice of the occurrence of the fundamental change and of the resulting repurchase right. Such notice shall state, among other things:

- the events causing a fundamental change;
- the effective date of the fundamental change;
- the last date on which a holder may exercise the repurchase right or if the fundamental change is a qualifying fundamental change, convert its Notes;
- the fundamental change repurchase price;
- the fundamental change repurchase date;
- the name and address of the paying agent and the conversion agent, if applicable;
- if applicable, the conversion rate and any adjustments to the conversion rate;
- that the Notes with respect to which a fundamental change repurchase notice has been delivered by a holder may be converted only if the holder withdraws the fundamental change repurchase notice in accordance with the terms of the indenture; and
- the procedures that holders must follow to require us to repurchase their Notes.

If Notes are held in certificated form, to exercise the fundamental change repurchase right, holders of certificated Notes must deliver, prior to the close of business on the 2^d business day immediately preceding the fundamental change repurchase date, the Notes to be repurchased, duly endorsed for transfer, together with a written repurchase notice, to the paying agent. Each repurchase notice must state:

- if certificated, the certificate numbers of the Notes to be delivered for repurchase;
- the portion of the principal amount of Notes to be repurchased, which must be \$1,000 or an integral multiple thereof; and
- that the Notes are to be repurchased by us pursuant to the applicable provisions of the Notes and the indenture.

If the Notes are not in certificated form, such repurchase notice must comply with applicable DTC procedures.

Holders of certificated Notes may withdraw any repurchase notice (in whole or in part) by a written notice of withdrawal delivered to the paying agent prior to the close of business on the 2nd business day immediately preceding the fundamental change repurchase date. The notice of withdrawal shall state:

- the principal amount of the withdrawn Notes, which must be \$1,000 aggregate principal amount or an integral multiple thereof;
- if certificated Notes have been issued, the certificate numbers of the withdrawn Notes; and
- the principal amount, if any, which remains subject to the repurchase notice, which must be \$1,000 aggregate principal amount or an integral multiple thereof.

If the Notes are not in certificated form, such notice of withdrawal must comply with applicable DTC procedures.

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- the Notes will cease to be outstanding and interest will cease to accrue (whether or not book-entry transfer of the Notes is made or whether or not the Notes are
 delivered to the paying agent); and
- all other rights of the holder will terminate (other than the right to receive the fundamental change repurchase price).

In connection with any repurchase offer pursuant to a fundamental change repurchase notice, we will, if required:

- comply with the tender offer rules under the Exchange Act that may then be applicable;
- file a Schedule TO or any other required schedule under the Exchange Act; and
- otherwise comply in all material respects with all federal and state securities laws in connection with any offer by us to repurchase the Notes;

in each case, so as to permit the rights and obligations under this "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" to be exercised in the time and in the manner specified in the indenture.

No Notes may be repurchased by us on any date at the option of holders upon a fundamental change if the principal amount of the Notes has been accelerated, and such acceleration has not been rescinded, on or prior to such date (except in the case of an acceleration resulting from a default by us in the payment of the fundamental change repurchase price with respect to such Notes).

The repurchase rights of the holders upon a fundamental change could discourage a potential acquirer of us. The fundamental change repurchase feature, however, is not the result of management's knowledge of any specific effort to obtain control of us by any means or part of a plan by management to adopt a series of anti-takeover provisions.

Notwithstanding anything to the contrary in the foregoing, we will not be required to repurchase or make an offer to repurchase the Notes upon a fundamental change if a third party makes such an offer in the same manner, at the same time and otherwise in compliance with the requirements for an offer made by us as set forth in the indenture and such third party purchases all Notes properly surrendered and not validly withdrawn under its offer in the same manner, at the same time and otherwise in compliance with the requirements for an offer made by us as set forth in the indenture.

To the extent that the provisions of any securities laws or regulations conflict with the provisions of the indenture relating to our obligations to repurchase the Notes upon a fundamental change, we will comply with the applicable securities laws and regulations and will not be deemed to have breached our obligations under such provisions of the indenture by virtue of such conflict.

The term fundamental change is limited to specified transactions and may not include other events that might adversely affect our financial condition. In addition, the requirement that we offer to repurchase the Notes upon a fundamental change may not protect holders in the event of a highly leveraged transaction, reorganization, merger or similar transaction involving us.

Furthermore, holders may not be entitled to require us to repurchase their Notes upon a fundamental change or entitled to a qualifying fundamental change payment upon conversion as described under "—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change" in circumstances involving a significant change in the composition of our board, unless such change is in connection with a fundamental change or qualifying fundamental change, as the case may be, as described herein.

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The definition of fundamental change includes a phrase relating to the sale, lease or other transfer of "all or substantially all" of the consolidated assets of us and our subsidiaries, taken as a whole. There is no precise, established definition of the phrase "substantially all" under applicable law. Accordingly, the ability of a holder of the Notes to require us to repurchase its Notes as a result of the sale, lease or other transfer of less than all of the consolidated assets of us and our subsidiaries, taken as a whole may be uncertain.

We may not have sufficient future cash flow from operations to make any required repurchase in cash or the ability to arrange additional financing, if necessary, on acceptable terms. See "Risk Factors—We face several risks regarding holders' potential rights to require us to repurchase the Notes upon a fundamental change." If we fail to repurchase the Notes when required following a fundamental change, we will be in default under the indenture.

Consolidation, Merger and Sale of Assets

The indenture provides that we shall not consolidate with or merge with or into, or sell, convey, transfer or lease all or substantially all of the consolidated properties and assets of us and our direct or indirect subsidiaries, taken as a whole, to another person (other than one or more of our direct or indirect wholly owned subsidiaries), unless (i) the resulting, surviving or transferee person (if not us) is a corporation organized and existing under the laws of the United States of America, any State thereof or the District of Columbia, and such corporation (if not us) expressly assumes by supplemental indenture all of our obligations under the Notes and the indenture; and (ii) immediately after giving effect to such transaction, no default or event of default has occurred and is continuing under the indenture. Upon any such consolidation, merger or sale, conveyance, transfer or lease, the resulting, surviving or transferee person (if not us or any of our direct or indirect wholly owned subsidiaries) shall succeed to, and may exercise every right and power of, ours under the Notes and the indenture, and we shall be discharged from our obligations under the Notes and the indenture except in the case of any such lease.

Although these types of transactions are permitted under the indenture, certain of the foregoing transactions could constitute a fundamental change permitting each holder to require us to repurchase the Notes of such holder as described above.

This covenant includes a phrase relating to the sale, conveyance, transfer and lease of "all or substantially all" of the consolidated assets of us and our subsidiaries. There is no precise, established definition of the phrase "all or substantially all" under applicable law. Accordingly, whether a sale, conveyance, transfer or lease of less than all of the consolidated assets of us and our subsidiaries, taken as a whole, constitutes a sale or other disposition of "all or substantially all" may be uncertain.

Additional Covenants

Maintenance of Properties and Insurance

We will and will cause each of our subsidiaries to maintain all material properties in good working order and condition in all material respects (subject to ordinary wear and tear) and make all necessary repairs, renewals, replacements, additions, betterments and improvements thereto and actively conduct and carry on its business. However, this will not prevent us or our subsidiaries from discontinuing the operation and maintenance of any of its properties if discontinuance is, in the good faith judgment of our Board of Directors or other governing body of us or the subsidiary concerned desirable in the conduct of our business and is not disadvantageous in any material respect to the holders.

We have agreed to maintain insurance (including appropriate self-insurance) against loss or damage of the kinds that, in our good faith judgment, are adequate and appropriate for the conduct of our and our subsidiaries' business in a prudent manner, with reputable insurers or with the U.S. government or an agency or instrumentality thereof, in

amounts, with deductibles, and by such methods as will be customary, in our good faith judgment, for companies similarly situated in the industry.

Issuance or Sale of Subsidiary Stock

We will not and will not permit any of our subsidiaries to sell any capital stock of a subsidiary, except to us or to one of our wholly owned subsidiaries, unless we and our subsidiaries, as the case may be, sell 100% of the capital stock of the subsidiary that we own in accordance with the applicable indenture requirements. In addition, none of our subsidiaries will issue any capital stock, other than to us or one of our subsidiaries.

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Line of Business; Corporate Existence

We will not and will not permit any of our subsidiaries to, engage in any business other than permitted businesses, except to such extent as would not be material to us or our subsidiaries taken as a whole. As used in the indenture, "permitted business" means any business similar in nature to any business conducted by us and our subsidiaries on the date of the indenture and any business reasonably ancillary, incidental, complementary or related thereto or a reasonable extension, development or expansion thereof, in each case, as determined in good faith by our Board of Directors.

We will do or cause to be done all things necessary to preserve and keep in full force and effect our corporate existence, and the corporate, partnership or other existence of each of our subsidiaries, in accordance with the respective organizational documents (as the same may be amended from time to time) of us and each subsidiary and our and our subsidiaries' rights (charter and statutory), licenses and franchises. However, we will not be required to preserve any such right, license or franchise, or the corporate, partnership or other existence of any of our subsidiaries, if the preservation thereof is no longer desirable in the conduct of the business, taken as a whole, and that the loss thereof would not reasonably be expected to have a material adverse effect.

Taxes

We will pay and will cause each of our subsidiaries to pay, prior to delinquency, all material taxes, assessments, and governmental levies except such as are contested in good faith and by appropriate proceedings or where the failure to effect such payment would not reasonably be expected to have a material adverse effect.

Events of Default

An "event of default" means any of the following events:

- our failure to comply with our obligation to convert the Notes in accordance with the indenture upon exercise of a holder's conversion right, including the payment of any interest make-whole payment or qualifying fundamental change payment, and such failure continues for a period of five (5) business days;
- our Common Stock is not listed on an eligible market;
- we default in the payment when due of interest (whether in cash or shares, as determined by us) on the Notes and such default continues for a period of 30 days;
- we default in the payment when due of principal of or premium, if any, on the Notes when the same becomes due and payable at maturity, upon redemption (including in connection with an offer to purchase) or otherwise;
- we or any of our subsidiaries fail to comply with certain provisions regarding restricted payments, incurrence of indebtedness and issuance of preferred stock, asset sales and events of loss, liens, offers to repurchase upon a change of control and merger, consolidation or sale of assets;
- our failure to give a fundamental change notice as described under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" or notice of a qualifying fundamental change as described under "Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," in each case, when due and such failure continues for three (3) business days after the due date for such notice;
- we or the guarantor fail to observe or perform any covenant, representation, warranty or other agreement in the indenture (other than a default specified above), the Notes, or the Guarantee for 30 days after notice to us by the trustee or the holders of at least 25% in aggregate principal amount of the notes then outstanding voting as a single class;

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- a default occurs under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any indebtedness for money borrowed by us or any of our subsidiaries (or the payment of which is guaranteed by us or any of our subsidiaries), whether such indebtedness or guarantee now exists, or is created after the date of the indenture, which default is caused by a failure to pay principal of, or interest or premium, if any, on such indebtedness prior to the expiration of the grace period provided in such indebtedness on the date of such default (a "payment default") or results in the acceleration of the indebtedness prior to its express maturity and, in each case, the principal amount of the indebtedness, together with the principal amount of any other such indebtedness under which there has been a payment default or the maturity of which has been so accelerated, aggregates \$2.5 million or more, in any such case, after notice to us by the trustee or the holders of at least 25% in aggregate principal amount of the Notes then outstanding voting as a single class;
- a final judgment or final judgments for the payment of money are entered by a court or courts of competent jurisdiction against us or any of our subsidiaries and the judgment or judgments remain undischarged, unpaid or unstayed for a period (during which execution will not be effectively stayed) of 60 days, provided that the aggregate of all such undischarged judgments exceeds \$10.0 million (excluding amounts covered by insurance), after notice to us by the trustee or the holders of at least 25% in aggregate principal amount of the Notes then outstanding voting as a single class;
- except as otherwise permitted by the indenture, the Guarantee is held in any judicial proceeding to be unenforceable or invalid or ceases for any reason to be in full force and effect, or the guarantor, or any person acting on behalf of the guarantor, denies or disaffirms its obligations under the Guarantee;

• we, any of our significant subsidiaries (as defined in Rule 1-02 of Regulation S-X under the Securities Act and Exchange Act or any successor rule) or any group of subsidiaries that, taken as a whole, would constitute a significant subsidiary, under bankruptcy law commences a voluntary case, consents to the entry of an order for relief against it in an involuntary case, consents to the appointment of a custodian, receiver, trustee, assignee, liquidator or similar official under bankruptcy law of it or for all or substantially all of its property, makes a general assignment for the benefit of its creditors, or generally is not paying its debts as they become due; or a court of competent jurisdiction enters an order or decree under any bankruptcy law that is for relief against any of the aforementioned entities in an involuntary case; appoints a custodian, receiver, trustee, assignee, liquidator or similar official under bankruptcy law of any of the aforementioned entities or for all or substantially all of the property of any of the aforementioned entities and the order or decree remains unstayed and in effect for 60 consecutive days;

Acceleration and Other Remedies

If any event of default (other than an event of default relating to bankruptcy law specified above), occurs and is continuing, the trustee or the holders of at least 25% in principal amount of the then outstanding Notes may declare all the Notes to be due and payable immediately. Upon any such declaration, the Notes will become due and payable immediately. Notwithstanding the foregoing, if an event of default relating to bankruptcy law specified above occurs with respect to us, any of our significant subsidiaries or any group of our subsidiaries that, taken as a whole, would constitute a significant subsidiary, all outstanding Notes will be due and payable immediately without further action or notice.

The majority holders (which mean the holders of a majority in aggregate principal amount of Notes outstanding at any time) by written notice to the trustee may, on behalf of all of the holders, rescind an acceleration and its consequences if the rescission would not conflict with any judgment or decree and if all existing events of default (except nonpayment of principal, interest or premium that has become due solely because of the acceleration) have been cured or waived.

In the event of a declaration of acceleration of the Notes solely because an event of default described in the eighth bullet point above has occurred and is continuing, the declaration of acceleration of the Notes shall be automatically rescinded and annulled if the payment default or acceleration triggering such event of default pursuant to such eight bullet point shall be remedied or cured or waived by the holders of the relevant debt within 20 business days after the declaration of acceleration with respect thereto and if the rescission and annulment of the acceleration of the Notes would not conflict with any judgment or decree of a court of competent jurisdiction obtained by the trustee for the payment of amounts due on the Notes.

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If an event of default occurs and is continuing, the trustee may pursue any available remedy to collect the payment of principal, premium, if any, and interest on the Notes then due or to enforce the performance of any provision of the Notes or the indenture. The trustee may maintain a proceeding even if it does not possess any of the Notes or does not produce any of them in the proceeding. A delay or omission by the trustee or any holder in exercising any right or remedy accruing upon an event of default will not impair the right or remedy or constitute a waiver of or acquiescence in the event of default and all remedies will be cumulative to the extent permitted by law.

However, the sole remedy for an event of default relating to any failure by us to file any annual or quarterly report with the SEC will, for the first 180 days after the occurrence of the event of default, consist exclusively of the right to receive special interest ("special interest") on the Notes at an annual rate equal to 0.50% of the principal amount of the Notes. Such special interest will be paid in arrears on each interest payment date, with the first payment due on the first interest payment date following the date on which such special interest began to accrue on the Notes and shall cease to accrue upon the cure or waiver of such event of default. Special interest will accrue on all outstanding Notes from and including the date on which an event of default relating to any failure by us to comply with the indenture reporting requirements first occurs to but not including the 180th day thereafter (or such earlier date on which such event of default will have been cured or waived). On the 180th day (or earlier, if such event of default is earlier cured or waived), the special interest will cease to accrue and, if the event of default relating to the reporting failure shall not have been cured or waived prior to such 180th day, the Notes will be subject to acceleration. The limitation on remedies related to reporting requirements will not affect the rights of holders in the event of the occurrence of any other event of default. Upon the occurrence of an event of default giving rise to the obligation to pay special interest, all references herein to interest accrued or payable on any date will include any special interest accrued or payable on any date will include any special interest accrued or payable.

Waiver of Past Defaults

The majority holders by notice to the trustee may on behalf of the holders of all of the Notes waive an existing default and its consequences, except a default or event of default relating to bankruptcy or in respect of a covenant or provision of the indenture that cannot be modified or amended without the consent of the holder of each outstanding Note affected (in which case such notice to waive such existing default and its consequences under the indenture shall be given to the trustee by all holders of affected Notes). Upon any such waiver, the default will cease to exist, and any event of default arising therefrom will be deemed to have been cured for every purpose of the indenture but the waiver will not extend to any subsequent or other default or impair any right consequent thereon.

Control by Majority

Subject to the rights of the trustee to abstain from exercising certain of its rights under the indenture, the majority holders will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee, provided that such direction is not in conflict with any rule of law or the indenture, the trustee may take any other action deemed proper by the trustee which is not inconsistent with such direction. The trustee may refuse to follow any direction that conflicts with law or that the trustee determines may involve the trustee in personal liability or may be prejudicial to the rights of the holders of Notes.

Limitation on Suits

No holder will have any right to institute any proceeding, judicial or otherwise with respect to the indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder (other than in the case of an event of default relating to bankruptcy law), unless such holder gives the trustee written notice of a continuing event of default; the holders of at least 25% in principal amount of the then outstanding Notes make a written request to the trustee to pursue the remedy; the holder or holders of the Notes offer and, if requested, provide the trustee indemnity reasonably satisfactory to the trustee against any loss, liability or expense; the trustee does not comply with the request within 60 days after receipt of the request and the offer and, if requested, the provision of indemnity; and during such 60-day period the majority holders do not give the trustee a direction inconsistent with the request.

No holders will have any right to avail itself of any provision of the indenture in a manner that will affect, disturb or prejudice the rights of any other holders, or to obtain or to seek to obtain priority or preference over any other holders or to enforce any right under the indenture, except in the manner herein provided and for the equal and ratable benefit of all the holders.

The right of any holder to receive payment of the principal, the redemption price, or interest, in respect of the Notes held by the holder, on or after the respective due dates expressed in the Notes or any redemption date, as applicable, and to convert the Notes, or to bring suit for the enforcement of any payment on or after such respective dates or the right to convert, will not be impaired or affected adversely without the consent of such holder.

Collection Suit and Proofs of Claim filed by Trustee

If an event of default relating to our failure to make certain payments of interest, principal, premium or other payments occurs and is continuing, the trustee is authorized to recover judgment in its own name and as trustee of an express trust against us and our subsidiaries for the whole amount of principal of, premium, if any, redemption price, interest and any other amounts remaining unpaid on the Notes and interest on overdue principal and, to the extent lawful, interest and such further amount as will be sufficient to cover the costs and expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the trustee, its agents and counsel.

The trustee is authorized to file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the trustee, its agents and counsel) and the holders of the Notes allowed in any judicial proceedings relative to us (or any other obligor upon the Notes and the Guarantee, including the guarantor), its creditors or its property and will be entitled and empowered to collect, receive and distribute any money or other property payable or deliverable on any such claims and any custodian in any such judicial proceeding is authorized by each holder to make such payments to the trustee, and in the event that the trustee will consent to the making of such payments directly to the holders, to pay to the trustee any amount due to it for the reasonable compensation, expenses, disbursements and advances of the trustee, its agents and counsel, and any other amounts due the trustee. To the extent that the payment of any such compensation, expenses, disbursements and advances of the trustee or its respective agents and counsel, and any other amounts due the trustee out of the estate in any such proceeding, is denied for any reason, payment of the same will be secured by a lien on, and will be paid out of, any and all distributions, dividends, money, securities and other properties that the holders may be entitled to receive in such proceeding whether in liquidation or under any plan of reorganization or arrangement or otherwise. The trustee is not authorized to authorize or consent to or accept or adopt on behalf of any holder any plan of reorganization, arrangement, adjustment or composition affecting the Notes or the rights of any holder, or to vote in respect of the claim of any holder in any such proceeding.

Priorities

If the trustee collects any money with respect to an event of default, it will pay out the money first to the trustee and its agents and attorneys for amounts due to each under the indenture, including payment of all compensation, expense and liabilities incurred, and all advances made, by the trustee and the costs and expenses of collection. Second, the money will be paid to holders of Notes for amounts due and unpaid on the Notes for principal, premium, if any, and interest, ratably, without preference or priority of any kind, according to the amounts due and payable on the Notes for principal, premium, if any, interest and any other amounts due, respectively. Finally, the remainder will be paid to us or to another party as a court of competent jurisdiction will direct. The trustee may fix a record date and payment date for any payment to holders of Notes.

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Undertaking for Costs

In any suit for the enforcement of any right or remedy under the indenture or in any suit against the trustee for any action taken or omitted by it as trustee, in either case in respect of the Notes, a court may require any party litigant in such suit to file an undertaking to pay the costs of the suit. The court may also assess reasonable costs, including reasonable attorney's fees, and expenses, against any party litigant in the suit having due regard to the merits and good faith of the claims or defenses made by the party litigant. However, the undertaking allowance will not apply to any suit instituted by us, to any suit instituted by the trustee, to any suit instituted by any holder, or group of holders, holding in the aggregate more than 10% in aggregate principal amount of the outstanding Notes, or to any suit instituted by any holder for the enforcement of the payment of the principal amount or interest, on any Note on or after the stated maturity of such Note or applicable redemption price on or after the applicable redemption date.

Waiver of Stay or Extension of Laws

We covenant (to the extent that we may lawfully do so) that we will not at any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, or extension law that may affect the covenants or the performance of the indenture. We, to the extent that we may lawfully do so, expressly waive all benefit or advantage of any such law and we covenant that we will not hinder, delay or impede the execution of any power granted to the trustee by the indenture.

Modification and Amendment

We and the trustee may amend or supplement the indenture, the Guarantee, and the Notes with the consent of the majority holders voting as a single class, any existing default or event of default (other than in the payment of the principal of, premium, if any, interest or any other amounts due on the Notes, except a payment default resulting from an acceleration that has been rescinded) or compliance with any provision of this indenture, the Guarantee, and the Notes may be waived with the consent of the majority holders voting as a single class (including consents obtained in connection with a tender offer or exchange offer for, or purchase of, the Notes), subject to certain conditions.

We will send a notice to the affected holders briefly describing the amendment, supplement or waiver. If we fail to send the notice or the notice is deficient, it will not impair or affect the validity of any amended or supplemented document or waiver. The majority holders may also waive compliance in a particular instance with any provision of the indenture, the Notes, or the Guarantee. Without the consent of each holder affected, an amendment or waiver may not with respect a non-consenting holder's Notes:

- reduce the principal amount of Notes whose holders must consent to an amendment, supplement or waiver;
- reduce the principal of, redemption price of, interest, premium, or any other amounts due under the indenture or change the fixed maturity of any Note or alter or waive any of the provisions with respect to the redemption of the Notes;
- reduce the rate of or change the time for payment of interest on any Note;
- waive a default or event of default in the payment of principal of or premium, if any, interest or any other amounts due on the Notes (except a rescission of acceleration of the Notes by the majority holders and a waiver of the payment default that resulted from such acceleration);
- make any Note payable in money or currency other than that stated in the Notes;
- make any change in the provisions of this indenture relating to waivers of past defaults or the rights of holders of Notes to receive payments of principal or interest or premium, if any, or any other amounts due on the Notes;
- make any change in certain provisions relating to events of default and the amendment and waiver provisions;
- impair the right to institute suit for the enforcement of any payment on or conversion of any Note;

- modify our obligation to purchase Notes at the option of holders or our right to redeem the Notes, in a manner adverse to the holders;
- make any change that adversely affects the repurchase option of holders upon a fundamental change;
- reduce the percentage in aggregate principal amount of Notes outstanding necessary to modify or amend this indenture or to waive any past default;
- modify the provisions requiring notice to the trustee in any manner adverse to holders;
- reduce the quorum or voting requirements under this indenture;
- modify in any manner the calculation of the interest make-whole or qualifying fundamental change payment;
- change the ranking of the Notes in a manner adverse to the holders;
- · adversely affect the conversion rights of the holders of the Notes; or
- release the guarantor from any of its obligations under the Guarantee or the indenture, except in accordance with the terms of the indenture.

Upon the satisfaction of and subject to certain conditions, the trustee will join us in the execution of such amended or supplemental indenture, the Notes, or the Guarantee.

We are permitted to modify certain provisions of the indenture without the consent of the holders of the Notes.

Neither we nor any of our subsidiaries will, directly or indirectly, pay or cause to be paid any consideration to or for the benefit of any holder of the Notes for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of the indenture or the Notes unless such consideration is offered to be paid or is paid to all holders of the Notes that consent, waiver or agree to amend in the time frame in solicitation documents relating to the consent, waiver or agreement.

Discharge

We may satisfy and discharge our obligations under the Notes and the indenture by delivering to the securities registrar for cancellation all outstanding Notes or by depositing with the trustee or delivering to the holders, as applicable, after the Notes have become due and payable, whether at maturity, at any fundamental change repurchase date, upon conversion or otherwise, cash and/or (in the case of conversion) shares of Common Stock sufficient to pay all of the outstanding Notes and paying all other sums payable under the indenture by us. Such discharge is subject to terms contained in the indenture.

Calculations in Respect of Notes

Except as otherwise provided above, we will be responsible for making all calculations called for under the Notes. These calculations include, but are not limited to, determinations of the stock price, the last reported sale prices of our common stock, accrued interest payable on the Notes, the interest make-whole payment, the daily VWAP and the conversion rate of the Notes (including any adjustments thereof). We will make all these calculations in good faith and, absent manifest error, our calculations will be final and binding on holders of Notes. We will provide a schedule of our calculations to each of the trustee and the conversion agent, and each of the trustee and the conversion agent is entitled to rely conclusively upon the accuracy of our calculations without independent verification. The trustee will forward our calculations to any holder of Notes upon the written request of that holder.

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Reports

The indenture provides that any annual or quarterly reports (on Form 10-K or Form 10-Q or any respective successor form) that we are required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act (excluding, for the avoidance of doubt, any such information, documents or reports, or portions thereof, subject to confidential treatment and any correspondence with the SEC) must be filed by us with the trustee within 15 days after the same are required to be filed with the SEC (giving effect to any grace period provided by Rule 12b-25 under the Exchange Act (or any successor rule)). Documents filed by us with the SEC via the EDGAR system (or any successor thereto) will be deemed to be delivered and filed with the trustee as of the time such documents are filed via EDGAR (or any successor thereto) it being understood that the trustee shall have no responsibility to determine if such filings have been made. Notwithstanding the foregoing, at any time we are otherwise not required to file documents or reports with the SEC pursuant to Section 13 or 15(d) of the Exchange Act and the conversion obligation for the Notes may be satisfied by the delivery of reference property consisting of, in whole or in part, another entity's common stock, American depositary receipts, ordinary shares or other common equity, as the case may be, we may satisfy our obligations under this covenant by delivering or filing the financial information of such entity within the same time periods and in the same manner described above. Delivery of reports to the trustee is for information purposes only, and the trustee's receipt thereof shall not constitute actual or constructive notice or knowledge of any information contained therein including our compliance with any covenants under the indenture (as to which the trustee is entitled to certificates).

Compliance Certificate

We and the guarantor will deliver to the trustee, within 90 days after the end of each fiscal year, an officers' certificate, one of the signatories of which will be our chief executive officer, chief financial officer or chief accounting officer, stating that a review of our activities and the activities of our subsidiaries during the preceding fiscal year has been made under the supervision of the signing officers with a view to determining whether we and each obligor under the Notes and the indenture has kept, observed, performed and fulfilled its obligations under the indenture and the Guarantee. The officers' certificate will also state, as to each such officer signing the certificate, that to the best of his or her knowledge we and each other obligor has kept, observed, performed and fulfilled each and every covenant contained in the indenture, the Notes, and the Guarantee and is not in default in the performance or observance of any of the terms, provisions and conditions of this indenture, the Notes, and the Guarantee (her Notes) an

As long as any of the Notes are outstanding, we will deliver to the trustee an officers' certificate specifying any event of default of which the officer becomes aware and specifying the event of default and what action we are taking or we propose to take with respect to the event of default.

Truste

We have appointed The Bank of New York Mellon Trust Company, N.A., the trustee under the indenture, as paying agent, conversion agent, note registrar, and custodian for the Notes. The trustee or its affiliates may provide banking and other services to us in the ordinary course of their business. The indenture contains certain limitations on the

rights of the trustee, as long as it or any of its affiliates remains our creditor, to obtain payment of claims in certain cases or to realize on certain property received on any claim as security or otherwise. The trustee and its affiliates will be permitted to engage in other transactions with us. However, if the trustee or any affiliate continues to have any conflicting interest and a default occurs with respect to the Notes, the trustee must eliminate such conflict or resign.

Maintenance of Office or Agency

We will maintain in the Borough of Manhattan, The City of New York, an office or agency (which may be an office of the trustee or an affiliate of the trustee, registrar or coregistrar) where the Notes may be surrendered for registration of transfer or for exchange. Notices and demands to or upon us in respect of the Notes or the indenture may also be served at that office or agency. We will give prompt written notice to the trustee of the location, and any change in the location, of the office or agency in the Borough of Manhattan and any other designation or rescission of any other office or agency. If we fail to maintain the required office or agency or we fail to furnish the trustee with the address of that office or agency, such presentations, surrenders, notices and demands may be made or served at the corporate trust office of the trustee. We may also designate one or more other offices or agencies where the Notes may be presented or surrendered for any or all such purposes and may from time to time rescind such designations. However, no additional designation or rescission will relieve us of our obligation to maintain an office or agency in the Borough of Manhattan, The City of New York. We have initially designated the office of the trustee, presently located at 240 Greenwich Street, New York, NY 10286, as one such office or agency.

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Notices

Any notice or communication by us, the guarantor or the trustee to the others is duly given if in writing and delivered in person or mailed by first class mail (registered or certified, return receipt requested), telecopier or overnight air courier guaranteeing next day delivery, to the addresses set forth in the indenture or as otherwise later designated.

All notices and communications (other than those sent to holders) will be deemed to have been duly given: at the time delivered by hand, if personally delivered; five business days after being deposited in the mail, postage prepaid, if mailed; when receipt acknowledged, if telecopied; and the next business day after timely delivery to the courier, if sent by overnight air courier guaranteeing next day delivery.

Any notice of communication to a holder will be with respect to global notes, sent in accordance with DTC's customary policies and procedures and, with respect to certificated Notes, mailed by first class mail, certified or registered, return receipt requested, or by overnight air courier guaranteeing next day delivery to its address shown in the registrar's records. Failure to mail a notice or communication to a holder or any defect in it shall not affect its sufficiency with respect to other holders.

If we or the guarantor mails a notice or communication to holders, we or the guarantor will mail a copy to the trustee and each agent at the same time.

Governing Law

The indenture provides that it and the Notes, and any claim, controversy or dispute arising under or related to the indenture or the Notes, will be governed by and construed in accordance with the laws of the State of New York.

Book-Entry, Settlement and Clearance

The Global Notes

The Notes were initially issued in the form of one or more registered notes in global form, without interest coupons (the "global notes"). Upon issuance, each of the global notes were deposited with the trustee as custodian for DTC and registered in the name of Cede & Co., as nominee of DTC.

Ownership of beneficial interests in a global note will be limited to persons who have accounts with DTC ("DTC participants") or persons who hold interests through DTC participants. We expect that under procedures established by DTC:

- upon deposit of a global note with DTC's custodian, DTC will credit portions of the principal amount of the global note to the accounts of the DTC participants designated by the underwriter; and
- ownership of beneficial interests in a global note will be shown on, and transfer of ownership of those interests will be effected only through, records maintained by DTC (with respect to interests of DTC participants) and the records of DTC participants (with respect to other owners of beneficial interests in the global note).

Beneficial interests in global notes may not be exchanged for Notes in physical, certificated form except in the limited circumstances described below.

Book-Entry Procedures for the Global Notes

All interests in the global notes will be subject to the operations and procedures of DTC and, therefore, you must allow for sufficient time in order to comply with these procedures if you wish to exercise any of your rights with respect to the Notes. We provide the following summary of those operations and procedures solely for the convenience of investors. The operations and procedures of DTC are controlled by that settlement system and may be changed at any time. Neither we nor the underwriter are responsible for those operations or procedures.

DTC has advised us that it is:

- a limited purpose trust company organized under the laws of the State of New York;
- a "banking organization" within the meaning of the New York State Banking Law;
- a member of the Federal Reserve System;
- a "clearing corporation" within the meaning of the Uniform Commercial Code; and
- a "clearing agency" registered under Section 17A of the Exchange Act.

entry changes to the accounts of its participants. DTC's participants include securities brokers and dealers, including the underwriter; banks and trust companies; clearing corporations and other organizations. Indirect access to DTC's system is also available to others such as banks, brokers, dealers and trust companies; these indirect participants clear through or maintain a custodial relationship with a DTC participant, either directly or indirectly. Investors who are not DTC participants may beneficially own securities held by or on behalf of DTC only through DTC participants or indirect participants in DTC.

So long as DTC's nominee is the registered owner of a global note, that nominee will be considered the sole owner or holder of the Notes represented by that global note for all purposes under the indenture. Except as provided below, owners of beneficial interests in a global note:

- will not be entitled to have Notes represented by the global note registered in their names;
- will not receive or be entitled to receive physical, certificated Notes; and
- will not be considered the owners or holders of the Notes under the indenture for any purpose, including with respect to the giving of any direction, instruction or approval to the trustee under the indenture.

As a result, each investor who owns a beneficial interest in a global note must rely on the procedures of DTC to exercise any rights of a holder of Notes under the indenture (and, if the investor is not a participant or an indirect participant in DTC, on the procedures of the DTC participant through which the investor owns its interest). Neither we nor the trustee, paying agent or conversion agent has any responsibility or liability for any act or omission of DTC.

Payments of principal and interest with respect to the Notes represented by a global note will be made by the trustee to DTC's nominee as the registered holder of the global note. Neither we nor the trustee will have any responsibility or liability for the payment of amounts to owners of beneficial interests in a global note, for any aspect of the records relating to or payments made on account of those interests by DTC, or for maintaining, supervising or reviewing any records of DTC relating to those interests.

Payments by participants and indirect participants in DTC to the owners of beneficial interests in a global note will be governed by standing instructions and customary industry practice and will be the responsibility of those participants or indirect participants and DTC.

Transfers between participants in DTC will be effected under DTC's procedures and will be settled in same-day funds.

Certificated Notes

Notes in physical, certificated form will be issued and delivered to each person that DTC identifies as a beneficial owner of the related Notes only if:

- DTC notifies us at any time that it is unwilling or unable to continue as depositary for the global notes and a successor depositary is not appointed within 90 days;
- DTC ceases to be registered as a clearing agency under the Exchange Act and a successor depositary is not appointed within 90 days; or
- an event of default with respect to the Notes has occurred and is continuing and such beneficial owner requests that its Notes be issued in physical, certificated form.

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MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

This section is a summary of certain material U.S. federal income tax considerations relating to the ownership and disposition of the Notes and any shares of our Common Stock into which the Notes may be converted. This summary does not provide a complete analysis of all potential tax considerations. The information provided below is based on existing U.S. federal income tax authorities, all of which are subject to change or differing interpretations, possibly with retroactive effect. There can be no assurance that the Internal Revenue Service (the "IRS") will not challenge one or more of the tax consequences described herein, and we have not obtained, and do not intend to obtain, a ruling from the IRS with respect to the U.S. federal income tax consequences of owning or disposing of the Notes or Common Stock. The summary generally applies only to beneficial owners of the Notes that purchase their Notes for an amount equal to the "issue price" of the Notes, which is the first price at which a substantial amount of the Notes is sold for money to the public (not including sales to bond houses, brokers or similar persons or organizations acting in the capacity of underwriters, initial purchasers, placement agents or wholesalers), and that hold the Notes and Common Stock as "capital assets" (generally, for investment). This discussion does not purport to deal with all aspects of U.S. federal income taxation that may be relevant to a particular beneficial owner in light of the beneficial owner's circumstances (for example, persons subject to the alternative minimum tax provisions of the Internal Revenue Code of 1986, as amended (the "Code"), a U.S. holder (as defined below) whose "functional currency" is not the U.S. dollar or purchasers of Notes in this offering whose shares of common stock we are repurchasing in certain privately negotiated transactions). Also, this discussion is not intended to be wholly applicable to all categories of investors, some of which may be subject to special rules (such as dealers in securities, traders in securities that elect to use a mark-tomarket method of accounting, banks, thrifts, regulated investment companies, real estate investment trusts, insurance companies, tax-exempt entities, tax-deferred or other retirement accounts, certain former citizens or residents of the United States, persons holding Notes or Common Stock as part of a conversion or integrated transaction or straddle, or persons deemed to sell Notes or Common Stock under the constructive sale provisions of the Code). Finally, the summary does not address the potential application of the Medicare contribution tax, the effects of the U.S. federal estate and gift tax laws or the effects of any applicable non-U.S., state or local laws.

INVESTORS CONSIDERING THE PURCHASE OF NOTES SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE CONSEQUENCES OF U.S. FEDERAL ESTATE OR GIFT TAX LAWS, NON-U.S., STATE AND LOCAL LAWS, AND TAX TREATIES.

As used herein, the term "U.S. holder" means a beneficial owner of Notes or the common stock into which the Notes may be converted that, for U.S. federal income tax purposes, is (1) a citizen or individual resident of the United States, (2) a corporation created or organized in or under the laws of the United States or any state of the United States, including the District of Columbia, (3) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (4) a trust if it (x) is subject to the primary supervision of a U.S. court and the control of one of more U.S. persons or (y) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

A "non-U.S. holder" is a beneficial owner (other than a partnership for U.S. federal income tax purposes) of Notes or the Common Stock into which the Notes may be converted that is not a U.S. holder.

If a partnership for U.S. federal income tax purposes is a beneficial owner of a note or shares of our Common Stock acquired upon conversion of a Note, the tax treatment of a partner in the partnership will depend upon the status of the partner and the activities of the partnership. A beneficial owner of Notes or shares of our Common Stock acquired upon conversion of a note that is a partnership, and partners in such a partnership, should consult their own tax advisors about the U.S. federal income tax consequences of owning and disposing of the Notes and the shares of our Common Stock into which the Notes may be converted.

U.S. Holders

The following discussion is limited to the U.S. federal income tax consequences relevant to a U.S. holder (as defined above).

Issue Price and Basis in the Notes

The "issue price" of a Note is generally the first price at which a substantial portion of the Notes are sold to persons other than bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers. In general, if the stated principal amount of a debt instrument exceeds its issue price by at least a statutorily defined *de minimis* amount, a U.S. holder will be required to include such excess in income as "original issue discount" over the term of the instrument in accordance with a constant-yield method, irrespective of the holder's regular method of tax accounting. Generally, original issue discount is considered to be *de minimis* if it is less than 0.25% of the instrument's stated principal amount multiplied by the number of complete years from the issue date to maturity. We believe, and therefore this discussion assumes, that the Notes were not issued with original issue discount for U.S. federal income tax purposes.

If the IRS were to successfully challenge our determination of the issue price for the Notes, the income tax consequences for a U.S. holder might be materially different than as described below. For example, the Notes may be considered to have original issue discount (or a greater amount of original issue discount) which may adversely affect the market value of the Notes. U.S. holders should consult their own tax advisors as to the income tax consequences to them of such a successful challenge under the circumstances of this offering.

A U.S. holder's initial tax basis in the Notes should be equal to the price paid by the holder (excluding any amounts attributable to pre-purchase accrued interest (as defined below)).

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Interest

A U.S. holder will be required to recognize as ordinary income any stated interest paid or accrued on the Notes and should be required to recognize as ordinary income any interest make-whole payment as described above under "Description of Notes—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions" and any payment made upon a conversion in connection with a qualifying fundamental change as described above under "Description of Notes—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," whether in cash or shares of Common Stock, in accordance with such holder's regular method of tax accounting.

We may be required to make payments of additional interest to holders of the Notes if we do not make certain filings, as described under "Description of Notes—Events of Default—Acceleration and Other Remedies," or upon certain conversions of the Notes, as described under "Description of Notes—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions" and "Description of Notes—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," above. Due to a lack of relevant authority regarding certain of these payments, the applicability to the Notes of Treasury Regulations governing contingent payment debt instruments is uncertain. In particular, the effect of the interest make-whole payment described in "Description of Notes—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions" on the tax treatment of the Notes is unclear. Although not free from doubt, we believe that there is only a remote possibility that we would be required to pay such additional interest, and we do not intend to treat the Notes as subject to the special rules governing certain "contingent payment debt instruments" (which, if applicable, would affect the timing, amount and character of income with respect to a Note). Our determination in this regard, while not binding on the IRS, is binding on U.S. holders unless they disclose their contrary position in the manner prescribed under applicable U.S. Treasury regulations. If the IRS successfully challenged this position, and the Notes were treated as contingent payment debt instruments, U.S. holders would, among other things, be required to accrue interest income at a higher rate than the stated interest rate on the Notes and to treat any gain recognized on the sale or other disposition of a Note (including gain realized on the conversion of a note) as ordinary income rather than as capital gain. In the event we pay additional interest on the Notes, U.S. holders should consult their own tax advisors regar

For investors who purchase their Notes after the date of original issuance of the Notes, a portion of the first stated interest payment received on the Notes will be allocable to interest that accrued prior to the date acquired by such holder ("pre-purchase accrued interest"). A U.S. holder may treat this portion as a non-taxable return of capital. All references to interest in the remainder of this discussion excludes pre-purchase accrued interest except where explicitly stated.

Sale, Exchange, Redemption or Other Taxable Disposition of the Notes

A U.S. holder generally will recognize capital gain or loss if such holder disposes of a Note in a sale, exchange, redemption or other taxable disposition (other than conversion of a Note, the U.S. federal income tax consequences of which are described under "—Conversion of Notes" below). The U.S. holder's gain or loss generally will equal the difference between the amount realized by it (other than amounts attributable to accrued and unpaid interest) and its tax basis in the Note. The U.S. holder's tax basis in the Note generally will equal the amount it paid for the Note. The portion of any amount realized that is attributable to accrued interest will not be taken into account in computing the U.S. holder's capital gain or loss. Instead, the portion attributable to accrued and unpaid interest will be recognized as ordinary interest income to the extent that the U.S. holder has not previously included the accrued interest in income. The gain or loss recognized by the U.S. holder on the disposition of the Note will be long-term capital gain or loss if it has held the Note for more than one year, or short-term capital gain or loss if it has held the Note for one year or less, at the time of the disposition. Long-term capital gains of non-corporate taxpayers currently are taxed at preferential rates. Short-term capital gains are taxed at ordinary income rates. The deductibility of capital losses is subject to limitations.

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Conversion of Notes

A U.S. holder generally should not recognize any gain or loss on the conversion of a Note solely into shares of Common Stock, except with respect to the fair market value of any cash or Common Stock attributable to (i) accrued and unpaid interest, (ii) any interest make-whole payment in connection with the conversion of a Note into shares of Common Stock as described in "Description of Notes—Conversion Rights—Interest Make-Whole Payment upon Certain Conversions," and/or (iii) any payment made upon a conversion in connection with a qualifying fundamental change as described in "Description of Notes—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change." The U.S. holder's tax basis in the Common Stock received (excluding shares attributable to accrued and unpaid interest, any interest make-whole payment, or any payment made upon a conversion in connection with a qualifying fundamental change) generally will equal its tax basis in the converted Note. The U.S. holder's holding period in the Common Stock (other than shares attributable to accrued and unpaid interest, any interest make-whole payment, or any payment made upon a conversion in connection with a qualifying fundamental change) will include the holding period in the converted Note.

Any portion of Common Stock that is attributable to accrued and unpaid interest on the Notes not yet included in income by a U.S. holder will be taxed as ordinary income, and any portion of Common Stock that is attributable to any interest make-whole payment in connection with the conversion of a Note into shares of Common Stock or any payment made upon a conversion in connection with a qualifying fundamental change should be taxed to such U.S. holder as ordinary income. A U.S. holder's basis in any shares of Common Stock attributable to accrued and unpaid interest, any interest make-whole payment, or any payment made upon conversion in connection with a qualifying fundamental change should equal the fair market value of such shares when received. A U.S. holder's holding period in any shares of Common Stock attributable to accrued and unpaid interest, any interest make-whole payment, or any payment made upon conversion in connection with a qualifying fundamental change should begin on the day after they

are received.

If we undergo a transaction of the type described under "Description of Notes—Conversion Rights—Recapitalizations, Reclassifications and Changes of our Common Stock," the conversion obligation may be adjusted so that holders would be entitled to convert the Notes into the type of consideration that they would have been entitled to receive upon such transaction had the Notes been converted into shares of Common Stock immediately prior to such transaction. Depending on the facts and circumstances at the time of such transaction, such adjustment may result in a deemed exchange of the outstanding Notes, which may be a taxable event for U.S. federal income tax purposes. U.S. holders are urged to consult their tax advisors regarding the U.S. federal income tax consequences of such an adjustment.

Distributions

If, after a U.S. holder acquires shares of Common Stock upon a conversion of a Note, we make a distribution in respect of such Common Stock from our current or accumulated earnings and profits (as determined for U.S. federal income tax purposes), the distribution will be treated as a dividend and will be includible in a U.S. holder's income as ordinary income when received. If the distribution exceeds our current and accumulated earnings and profits, the excess will be treated first as a tax-free return of the U.S. holder's tax basis in its shares of Common Stock and any remaining excess will be treated as capital gain from the sale or exchange of the Common Stock. If the U.S. holder is a U.S. corporation, it generally will be able to claim a dividends-received deduction on a portion of any distribution taxed as a dividend, provided that certain holding period requirements are satisfied. Subject to certain exceptions, dividends received by certain non-corporate U.S. holders currently are taxed at the preferential rates applicable to long-term capital gains, provided that certain holding period requirements are met.

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Constructive Distributions

The terms of the Notes allow for changes in the conversion rate of the Notes under certain circumstances. A change in conversion rate that allows beneficial owners of Notes to receive more shares of Common Stock on conversion may increase such beneficial owners' proportionate interests in our earnings and profits or assets. In that case, the beneficial owners of Notes may be treated as though they received a taxable distribution in the form of Common Stock or additional rights to acquire Common Stock. A taxable constructive distribution would result, for example, if the conversion rate is adjusted to compensate beneficial owners of Notes for distributions of cash or property to our stockholders. If an event occurs that dilutes the interests of stockholders or increases the interests of beneficial owners of the Notes and the conversion rate of the Notes is not adjusted (or not adequately adjusted), this also could be treated as a taxable stock distribution to beneficial owners of the Notes. Conversely, if an event occurs that dilutes the interests of beneficial owners of the Notes and the conversion rate is not adjusted (or not adequately adjusted), the resulting increase in the proportionate interests of our stockholders could be treated as a taxable stock distribution to the stockholders. Not all changes in the conversion rate that result in beneficial owners of Notes receiving more Common Stock on conversion, however, increase such beneficial owners' proportionate interests in us. For instance, a change in conversion rate could simply prevent the dilution of the beneficial owners' interests upon a stock split or other change in capital structure. Changes to the conversion rate made pursuant to a bona fide reasonable adjustment formula are not treated as constructive distributions. Any taxable constructive distribution would be treated for U.S. federal income tax purposes in the same manner as an actual distribution on Common Stock as described in "-Distributions" above. It would result in a taxable dividend to the beneficial owners to the extent of our current or accumulated earnings and profits (with the beneficial owner's tax basis in its Note or Common Stock (as the case may be) being increased by the amount of such dividend), with any excess treated first as a tax-free return of the beneficial owner's tax basis in its Note or Common Stock (as the case may be) and then as capital gain. Non-corporate U.S. holders should consult their tax advisors regarding whether any taxable constructive dividend would be eligible for the preferential rates and corporate holders should consult their tax advisors regarding the dividends-received deduction, both described in "-Distributions" above.

On April 12, 2016, the IRS issued proposed regulations that address the amount and timing of constructive distributions, obligations of withholding agents and filing and notice obligations of issuers. The proposed regulations, if adopted as proposed, would provide generally that (1) the amount of a constructive distribution is the excess of (a) the fair market value of the right to acquire shares immediately after an "applicable adjustment," over (b) the fair market value of the right to acquire shares without the adjustment, (2) the constructive distribution occurs at the earlier of (a) the date the adjustment occurs under the terms of the Notes, or (b) the date of the actual distribution of cash or property that results in the constructive distribution, and (3) information reporting is required regarding the amount of any constructive distribution. Although the regulations would be effective for constructive distributions occurring on or after the date on which the regulations are adopted as final regulations, investors and withholding agents may rely on them prior to that date under certain circumstances. Any backup withholding required with respect to such a constructive distribution may be satisfied by withholding such amounts from shares or current or subsequent payments of cash payable to such U.S. holder.

Sale, Exchange or Other Disposition of Common Stock

A U.S. holder generally will recognize capital gain or loss on a sale, exchange or other disposition of shares of Common Stock. The U.S. holder's gain or loss will equal the difference between the amount realized by the holder and its tax basis in the shares of Common Stock. The amount realized by the U.S. holder will include the amount of any cash and the fair market value of any other property received for the shares of Common Stock. The gain or loss recognized by a U.S. holder on a sale, exchange or other disposition of shares of Common Stock will be long-term capital gain or loss if its holding period in the shares of Common Stock is more than one year, or short-term capital gain or loss if its holding period in the shares of Common Stock is more taxpayers are currently taxed at preferential rates. Short-term capital gains are taxed at ordinary income rates. The deductibility of capital losses is subject to limitations.

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Non-U.S. Holders

The following discussion is limited to the U.S. federal income tax consequences relevant to a non-U.S. holder (as defined above).

Interest

Subject to the discussions below regarding FATCA and under "—Income or Gains Effectively Connected with a U.S. Trade or Business," payments of interest on the Notes to non-U.S. holders generally will qualify as "portfolio interest," and thus will be exempt from U.S. federal income tax, including withholding of such tax, if the non-U.S. holder certifies its non-U.S. status as described below.

The portfolio interest exemption will not apply to payments of interest to a non-U.S. holder that:

- owns, actually or constructively, shares of our stock representing at least 10% of the total combined voting power of all classes of our stock entitled to vote; or
- is a "controlled foreign corporation" that is related, directly or indirectly, to us through sufficient actual or constructive stock ownership.

The portfolio interest exemption applies only if the non-U.S. holder certifies its non-U.S. status. A non-U.S. holder can meet this certification requirement by providing a properly completed and executed IRS Form W-8BEN or W-8BEN-E or appropriate substitute form prior to the payment. If the non-U.S. holder holds the Note through a

financial institution or other agent acting on its behalf, it will be required to provide appropriate documentation to the agent. Special certification rules apply to non-U.S. holders that are pass-through entities.

Dividends

Subject to the discussion below under "—Income or Gains Effectively Connected with a U.S. Trade or Business" and the discussions below regarding backup withholding and FATCA, dividends paid to a non-U.S. holder on shares of our common stock received on conversion of a Note, as well as any taxable constructive dividends resulting from certain adjustments (or failures to make adjustments) to the number of shares of common stock to be issued on conversion of a Note (as described under "—U.S. Holders—Constructive Distributions" above), generally will be subject to U.S. withholding tax at a 30% rate. The withholding tax on dividends (including any taxable constructive dividends), however, may be reduced under the terms of an applicable income tax treaty between the United States and the non-U.S. holder's country of residence. A non-U.S. holder should demonstrate its eligibility for a reduced rate of withholding under an applicable income tax treaty by timely delivering a properly completed and executed IRS Form W-8BEN-E or appropriate substitute form. A non-U.S. holder that is eligible for a reduced rate of withholding under the terms of an applicable income tax treaty may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Because a taxable constructive dividend received by a non-U.S. holder would not give rise to any cash from which any applicable withholding tax could be satisfied, if a withholding agent pays withholding taxes on the non-U.S. holder's behalf with respect to amounts which are includible in the non-U.S. holder's income but which are not paid in cash, the withholding agent may set off any such withholding tax against any other payments owed to the non-U.S. holder, including cash payments of interest payable on the Notes, shares of Common Stock upon conversion, or proceeds from a sale subsequently paid or credited to the non-U.S. holder. Non-U.S. holders should consult their tax advisors as to whether they can obtain a refund for all or a port

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Sale, Exchange, Redemption, Conversion or Other Taxable Dispositions of Notes or Common Stock

Subject to the discussions below regarding backup withholding and FATCA, non-U.S. holders generally will not be subject to U.S. federal income or withholding tax on any gain realized on the sale, exchange, redemption, conversion or other disposition of Notes or shares of Common Stock (other than with respect to payments attributable to accrued interest, any interest make-whole payment, or any payment made upon conversion in connection with a qualifying fundamental change which will be taxed as described under "—Interest" above) unless:

- the gain is effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business (and, generally, if required by an applicable income tax treaty, is attributable to a U.S. permanent establishment or fixed base maintained by the non-U.S. holder), in which case the gain would be subject to tax as described below under "—Income or Gains Effectively Connected with a U.S. Trade or Business";
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the year of disposition and certain other conditions apply, in which case, except as otherwise provided by an applicable income tax treaty, the gain, which may be offset by certain U.S.-source capital losses, would be subject to a flat 30% tax, even though the individual is not considered a resident of the United States; or
- the rules of the Foreign Investment in Real Property Tax Act (or "FIRPTA") (described below) treat the gain as effectively connected with a U.S. trade or business.

The FIRPTA rules may apply to a sale, exchange or other disposition of Notes or shares of Common Stock by a non-U.S. holder if, at any time during the five-year period ending on the date of the sale, exchange or other disposition (or, if shorter, the non-U.S. holder's holding period for the Notes or Common Stock disposed of), we are or were a "U.S. real property holding corporation" (or "USRPHC") for U.S. federal income tax purposes. In general, we would be a USRPHC if interests in U.S. real estate composed at least 50% of the fair market value of our worldwide real property interests and assets used or held for use in a trade or business. We believe that we currently are not, and will not become in the future, a USRPHC.

Income or Gains Effectively Connected with a U.S. Trade or Business

If any interest or constructive dividends on the Notes, dividends on shares of Common Stock, or gain from the sale, exchange, redemption, conversion or other disposition of the Notes or shares of Common Stock is effectively connected with a U.S. trade or business conducted by a non-U.S. holder, then the income or gain will be subject to U.S. federal income tax on a net-income basis at the regular graduated rates and generally in the same manner applicable to U.S. holders. If the non-U.S. holder is eligible for the benefits of a tax treaty between the United States and its country of residence, any "effectively connected" income or gain generally will be subject to U.S. federal income tax on a net-income basis only if it is also attributable to a permanent establishment or fixed base maintained by it in the United States. Payments of interest or dividends that are effectively connected with a U.S. trade or business conducted by the non-U.S. holder (and, if an applicable tax treaty requires, attributable to a U.S. permanent establishment or fixed base), and therefore included in the gross income of a non-U.S. holder, will not be subject to 30% withholding, provided that it claims exemption from withholding by timely filing a properly completed and executed IRS Form W-8ECI, or any appropriate substitute or successor form as the IRS designates, as applicable, prior to payment. If the non-U.S. holder is a corporation for U.S. federal income tax purposes, that portion of its earnings and profits that is effectively connected with its U.S. trade or business generally will also be subject to a "branch profits tax." The branch profits tax rate is generally 30%, although an applicable income tax treaty might provide for a lower rate.

Backup Withholding and Information Reporting

The Code and the U.S. Treasury regulations generally require persons who make specified payments to report the payments to the IRS. Among the specified payments are interest, dividends, and proceeds paid by brokers to their customers. This reporting regime is reinforced by "backup withholding" rules, which generally require the payor to withhold from payments subject to information reporting if the recipient has failed to provide a taxpayer identification number to the payor, furnished an incorrect identification number, failed to comply with applicable certification requirements or been repeatedly notified by the IRS that it has failed to report interest or dividends on its U.S. federal income tax returns. The backup withholding rate is currently 24%.

Payments of interest or dividends (including constructive dividends) to U.S. holders of Notes or shares of Common Stock and payments made to U.S. holders by a broker upon a sale of Notes or Common Stock generally will be subject to information reporting and backup withholding, unless the U.S. holder (1) is an exempt recipient, or (2) in the case of backup withholding, provides the payor with a correct taxpayer identification number and complies with applicable certification requirements. If a sale is made through a foreign office of a foreign broker, however, the sale generally will not be subject to either information reporting or backup withholding. This exception may not apply if the foreign broker is owned or controlled by U.S. persons, or is engaged in a U.S. trade or business.

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non-U.S. holder certifies its non-U.S. status on a properly completed and executed IRS Form W-8BEN or W-8BEN-E or appropriate substitute form. Payments made to non-U.S. holders by a broker upon a sale of the Notes or Common Stock will not be subject to information reporting (except to the extent such payments are subject to withholding under FATCA, discussed below) or backup withholding as long as the non-U.S. holder certifies its non-U.S. status or otherwise establishes an exemption.

Any amounts withheld from a payment to a U.S. holder or non-U.S. holder with respect to the Notes or shares of Common Stock under the backup withholding rules generally will be allowed as a refund or can be credited against any U.S. federal income tax liability of the holder, provided the required information is timely furnished to the IRS.

FATCA

Provisions commonly referred to as FATCA generally impose a 30% U.S. withholding tax on certain U.S.- source payments, including interest (including original issue discount), dividends and other fixed or determinable annual or periodical gain, profits, and income, and on the gross proceeds from a sale or other disposition after December 31, 2018 of property of a type which can produce U.S.-source interest or dividends ("Withholdable Payments"), if paid to a foreign financial institution (whether as a beneficial owner or intermediary), unless such institution (i) enters into an agreement with the Treasury Department to collect and provide to the Treasury Department substantial information regarding its U.S. account holders, including certain account holders that are foreign entities with U.S. owners, (ii) satisfies the requirements of an intergovernmental agreement entered into by such institution's country of residence and the United States or (iii) qualifies for an exemption. The legislation also generally imposes a withholding tax of 30% on Withholdable Payments made to a non-financial foreign entity unless such entity provides the withholding agent with a certification that it does not have any substantial U.S. owners or a certification identifying the direct and indirect substantial U.S. owners of the entity, or unless an exemption applies. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements.

These withholding requirements generally currently apply to payments of interest and dividends (including constructive dividends) on the Notes or shares of Common Stock. Under proposed U.S. Treasury regulations, this withholding tax will not apply to the gross proceeds from the sale or other disposition of the notes or shares of Common Stock. The preamble to these proposed U.S. Treasury regulations indicates that taxpayers may rely on them pending their finalization. If FATCA withholding is imposed, a beneficial owner (other than certain foreign financial institutions) generally will be entitled to a refund of any amounts withheld by filing a U.S. federal income tax return and, in the case of a non-financial foreign entity, providing the IRS with certain information regarding its substantial U.S. owners (unless an exception applies). Holders are urged to consult their tax advisors regarding the possible implications of FATCA on their ownership and disposition of the Notes and any shares of Common Stock.

Dividend Equivalents

Section 871(m) of the Code requires withholding (of up to 30%, depending on whether a treaty applies) on certain financial instruments to the extent that the payments or deemed payments on the financial instruments are treated as being contingent upon or determined by reference to U.S.-source dividends. Under Treasury Regulations and other guidance issued in connection with Section 871(m), Section 871(m) will apply to financial instruments issued in 2022 only if they are "delta-one." A "delta-one" instrument is one in which, the ratio of the change in the fair market value of the instrument to a small change in the fair market value of the property referenced by the instrument is equal to 1.00. We do not believe that the Notes should be treated as delta-one instruments. Accordingly, non-U.S. holders of the Notes should not be subject to tax under Section 871(m). Non-U.S. holders should consult with their tax advisors regarding the application of Section 871(m) and the regulations thereunder in respect of their acquisition and ownership of the Notes.

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PLAN OF DISTRIBUTION

The Selling Security Holders may, from time to time, sell any or all of their Securities on any stock exchange, market or trading facility on which the Securities are traded or in private transactions; however, there is no public market for the Notes or Guarantee and we do not intend to list or quote the Notes or Guarantee on any securities exchange or quotation system. If the Securities are sold through underwriters, the Selling Security Holders will be responsible for underwriting discounts or commissions or agent's commissions. These sales may be at fixed prices, at prevailing market prices at the time of the sale (with respect to Common Stock), at varying prices determined at the time of sale or at negotiated prices. The Selling Security Holders may use any one or more of the following methods when selling Securities:

- any national securities exchange or quotation service on which the Securities may be listed or quoted at the time of sale;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the Securities 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;
- transactions other than on these exchanges or systems or in the over-the-counter market;
- through the writing of options, whether such options are listed on an options exchange or otherwise;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- · short sales;
- broker-dealers may agree with the Selling Security Holders to sell a specified number of such Securities at a stipulated price;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The Selling Security Holders may also sell Securities under Rule 144 under the Securities Act, if available, rather than under this prospectus, or they may engage in short sales against the box, puts and calls and other transactions in our securities or derivatives of our securities and may sell or deliver shares in connection with these trades.

Broker-dealers engaged by the Selling Security Holders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Security Holders (or, if any broker-dealer acts as agent for the purchaser of Securities, from the purchaser) in amounts to be negotiated. The Selling Security Holders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved. Any profits on the resale of Securities by a broker-dealer acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. Discounts, concessions, commissions and similar selling expenses, if any, attributable to the sale of Securities will be borne by a Selling Security Holders. Any Selling Security Holder may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares if liabilities are imposed on that person under the Securities Act.

In connection with the sale of the Securities or otherwise, the Selling Security Holders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the Securities in the course of hedging in positions they assume. The Selling Security Holders may also sell Securities short and deliver Securities covered by this prospectus to close out short positions and to return borrowed Securities in connection with such short sales. The Selling Security Holders may also loan or pledge Securities to broker-dealers that in turn may sell such Securities.

The Selling Security Holders may from time to time pledge or grant a security interest in some or all of the Securities owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the Securities from time to time under this prospectus after we have filed an amendment to this prospectus under Rule 424 or other applicable provision of the Securities Act amending the list of selling security holders to include the pledgee, transferee or other successors in interest as a Selling Security Holder under this prospectus.

The Selling Security Holders also may transfer the Securities 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 and may sell the Securities from time to time under this prospectus after we have filed an amendment to this prospectus under Rule 424 or other applicable provision of the Securities Act amending the list of selling security holders to include the pledgees, transferees or other successors in interest as a Security Holder under this prospectus. The Selling Security Holders also may transfer and donate the Securities in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The Selling Security Holders and any broker-dealers or agents that are involved in selling the Securities may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions paid, or any discounts or concessions allowed to, such broker-dealers or agents and any profit realized on the resale of the Securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the Securities is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of Securities being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the Selling Security Holders, as applicable, and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers. Under the securities laws of some states, the Securities may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the Securities may not be sold unless such securities have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with. There can be no assurance that any Selling Security Holders will sell any or all of the Securities registered pursuant to the registration statement of which this prospectus forms a part.

Each Selling Security Holder has informed us that it does not have any agreement or understanding, directly or indirectly, with any person to distribute the Securities. Based on information provided to us, none of the Selling Security Holders are broker-dealers or affiliates of broker-dealers.

We are paying all fees and expenses incident to the registration of the Securities. Except with respect to indemnification of the Selling Security Holders pursuant to the Registration Rights Agreement entered into in connection with the Notes offering, we are not obligated to pay any of the expenses of any attorney or other advisor engaged by a Selling Security Holder. We have agreed to indemnify the Selling Security Holders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

If we are notified by any Selling Security Holder that any material arrangement has been entered into with a broker-dealer for the sale of Securities, we will file a post-effective amendment to the registration statement. If the Selling Security Holders use this prospectus for any sale of the Securities, they will be subject to the prospectus delivery requirements of the Securities Act.

The anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of the Securities and activities of the Selling Security Holders, which may limit the timing of purchases and sales of any of the Securities by the Selling Security Holders and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the Securities to engage in passive market-making activities with respect to the Securities. Passive market making involves transactions in which a market maker acts as both our underwriter and as a purchaser of the Securities in the secondary market. All of the foregoing may affect the marketability of the Securities and the ability of any person or entity to engage in market-making activities with respect to the Securities.

Once sold under the registration statement of which this prospectus forms a part, the Securities will be freely tradable in the hands of persons other than our affiliates.

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LEGAL MATTERS

The validity of the Securities offered hereby were passed upon for us by K&L Gates LLP, Charlotte, North Carolina.

EXPERTS

The consolidated financial statements of Akoustis Technologies, Inc. as of June 30, 2022 and 2021 and for the years then ended incorporated by reference in this prospectus and the registration statement of which this prospectus forms a part, have been audited by Marcum LLP, independent registered public accounting firm, as set forth in its report thereon appearing in our annual report on Form 10-K for the fiscal year ended June 30, 2022 and are incorporated by reference in reliance on such report given upon such firm's authority as an expert in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual reports, quarterly reports, current reports and other information with the SEC. You may read or obtain a copy of these reports at our website address, www.akoustis.com, or at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference room and their copy charges by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains registration statements, reports, proxy information statements and other information regarding registrants that file electronically with the SEC. The address of the website is http://www.sec.gov.

We have filed with the SEC a Registration Statement on Form S-3 under the Securities Act to register the Securities offered by this prospectus. The term "registration statement" means the original registration statement and any and all amendments thereto, including the schedules and exhibits to the original registration statement or any amendment. This prospectus is part of that registration statement. This prospectus does not contain all of the information set forth in the registration statement or the exhibits to the registration statement. For further information with respect to us and the Securities being offered pursuant to this prospectus, you should refer to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract, agreement or other document referred to are not necessarily complete, and you should refer to the copy of that contract or other documents filed as an exhibit to the registration statement. You may read or obtain a copy of the registration statement at the SEC's public reference facilities and Internet sites referred to above.

The information found on, or otherwise accessible through, any website referenced in this prospectus is not incorporated into, and does not form a part of, this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus.

We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC:

- our annual report on Form 10-K for the fiscal year ended June 30, 2022 filed with the SEC on September 12, 2022;
- our Current Report on Form 8-K filed with the SEC on July 11, 2022; and
- the description of our Common Stock contained in our Registration Statement on Form 8-A (File No. 001-38029) filed with the SEC on March 10, 2017, including any amendment or report filed for the purpose of updating such description.

All documents we file with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any report or documents that is not deemed filed under such provisions, (1) on or after the date of filing of the registration statement containing this prospectus and prior to the effectiveness of the registration statement and (2) on or after the date of this prospectus until the earlier of the date on which all of the securities registered hereunder have been sold or the registration statement of which this prospectus is a part has been withdrawn, shall be deemed incorporated by reference in this prospectus and to be a part of this prospectus from the date of filing of those documents.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to Akoustis Technologies, Inc., 9805 Northcross Center Court, Suite A, Huntersville, North Carolina 28078, Attention: Corporate Secretary; Telephone: (704) 997-5735. Copies of the above reports may also be accessed from our web site at www.akoustis.com. We have authorized no one to provide you with any information that differs from that contained in this prospectus. Accordingly, you should not rely on any information that is not contained in this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of the front cover of this prospectus.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.

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AKOUSTIS TECHNOLOGIES, INC.

AKOUSTIS, INC.

\$44,000,000 of 6.0% Convertible Senior Notes due 2027 for sale by the Selling Security Holders (fully and unconditionally guaranteed by Akoustis, Inc.)

13,100,00 Shares of Common Stock issuable in respect of the Notes for sale by the Selling Security Holders

PROSPECTUS

September 21, 2022