

**Prospectus Supplement
(To Prospectus Dated July 19, 2023)****Up to \$25,000,000****Common Stock**

We entered into a Sales Agreement dated August 1, 2023 (the “Sales Agreement”) with Needham & Company, LLC (“Needham”), relating to sales of shares of our common stock, par value \$0.001 per share, offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the Sales Agreement, under this prospectus supplement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$25,000,000 from time to time through Needham acting as our agent (the “Sales Agent”).

Our common stock is quoted on The Nasdaq Global Market (“Nasdaq”) under the symbol “GSIT.” On July 31, 2023, the last reported sales price of our common stock on Nasdaq was \$4.39 per share. The trading price of our common stock has fluctuated, and is likely to continue to fluctuate, due to a variety of factors.

We are a “smaller reporting company” as defined under the federal securities laws and are subject to reduced public company reporting requirements.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made by any method permitted that is deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended (the “Securities Act”). The Sales Agent is not required to sell any specific number or dollar amount of shares of common stock, but will act as a sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between the Sales Agent and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to the Sales Agent for sales of common stock sold pursuant to the Sales Agreement will be an amount equal to 3% of the gross proceeds of any shares of common stock sold under the Sales Agreement. In connection with the sale of the common stock on our behalf, the Sales Agent will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of the Sales Agent will be deemed to be underwriting commissions or discounts. We have also agreed in the Sales Agreement to provide indemnification and contribution to the Sales Agent with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended (the “Exchange Act”). See “Plan of Distribution” beginning on page [S-12](#) regarding the compensation to be paid to the Sales Agent.

INVESTING IN OUR COMMON STOCK INVOLVES RISK. SEE “RISK FACTORS” BEGINNING ON PAGE [S-5](#) OF THIS PROSPECTUS SUPPLEMENT, PAGE [5](#) OF THE ACCOMPANYING PROSPECTUS, AND IN THE DOCUMENTS INCORPORATED BY REFERENCE HEREIN.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

Needham & Company

The date of this prospectus supplement is August 1, 2023.

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PROSPECTUS

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus dated July 19, 2023 are part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in the accompanying prospectus in one or more offerings. Under this prospectus supplement, we may from time to time sell shares of our common stock having an aggregate offering price of up to \$25,000,000, at prices and on terms to be determined by market conditions at the time of the offering.

This prospectus supplement describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference into this prospectus supplement or the accompanying prospectus that was filed with the SEC before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference into this prospectus supplement—the statement in the document having the later date modifies or supersedes the earlier statement.

We have not, and the Sales Agent has not, authorized anyone to provide you with any information other than that contained or incorporated by reference in this prospectus supplement, the accompanying prospectus or, if permitted, any related free writing prospectus to which we have referred you. Neither we nor the Sales Agent take any responsibility for, and can provide no assurance as to the reliability of, any other information others may give you. We are not, and the Sales Agent is not, making an offer to sell the shares of common stock in any jurisdiction where the offer or sale is not permitted or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein and therein and, if permitted, any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein and therein and, if permitted, any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision.

Unless the context otherwise requires, references in this prospectus supplement to:

- “GSI” and “GSI Technology” refer to GSI Technology, Inc., a Delaware corporation; and
- “we,” “us,” and “our” or the “Company” refer to GSI Technology, Inc., a Delaware corporation.

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

We file reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is <http://www.sec.gov>.

Our website address is www.gsitechnology.com. The information on our website, however, is not, and should not be deemed to be, a part of this prospectus supplement.

This prospectus supplement is part of a registration statement that we filed with the SEC and does not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Statements in this prospectus supplement about these documents are summaries, and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement through the SEC's website, as provided above.

Incorporation by Reference

The SEC allows us to "incorporate by reference" information into this prospectus supplement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The documents incorporated by reference into this prospectus supplement contain important information about us that you should read before investing in our common stock.

The following documents are incorporated by reference into this document (other than the portions of these documents deemed to be "furnished" or not deemed to be "filed," including the portions of these documents that are furnished under Item 2.02 or Item 7.01 of a Current Report on Form 8-K, including any exhibits included with such Items):

- [our Annual Report on Form 10-K for the year ended March 31, 2023, filed with the SEC on June 28, 2023](#);
- Our Definitive Proxy Statement on Schedule 14A, filed with the SEC on July 17, 2023 (excluding those portions that are not incorporated by reference into our Annual Report on Form 10-K for the year ended March 31, 2023);
- our Current Reports on Form 8-K filed with the SEC on [June 2, 2023](#) and [July 13, 2023](#); and
- [the description of our common stock contained in our registration statement on Form 8-A, as filed with the SEC on March 27, 2007 \(File No. 001-33387\), including any amendments or reports for the purpose of updating such description.](#)

We also incorporate by reference into this prospectus supplement all documents (other than the portions of such documents deemed to be "furnished" or not deemed to be "filed," including the portions of these documents that are furnished under Item 2.02 or Item 7.01 of a Current Report on Form 8-K, including any exhibits included with such Items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus supplement but not delivered with the prospectus supplement, including exhibits which are specifically incorporated by reference into such documents. Requests should be directed to: GSI Technology, Inc., Attn: Investor Relations, 1213 Elko Drive, Sunnyvale, California 94089.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained in other parts of this prospectus supplement and in the accompanying prospectus, or incorporated by reference in this prospectus supplement from the filings with the SEC listed above under the heading “Where You Can Find More Information; Incorporation by Reference.” It does not contain all of the information you should consider before making an investment decision. Before you decide to invest in our common stock, you should carefully read the entire prospectus supplement and the accompanying prospectus, including the risk factors and the financial statements and related notes included or incorporated by reference herein and therein. See “Special Note Regarding Forward-Looking Statements.”

Overview

GSI provides in-place associative computing solutions for applications in high growth markets such as artificial intelligence (“AI”) and high-performance computing, including natural language processing and computer vision. Our associative processing unit (“APU”) products are focused on applications using similarity search. Similarity search is used in visual search queries for ecommerce, computer vision, drug discovery, cyber security and service markets such as NoSQL, Elasticsearch, and OpenSearch. Our extensive historical experience in developing high speed synchronous static random access memory (“SRAM”), facilitated our ability to transform the focus of our business to the development of reliable hardware AI products and solutions like the APU.

Even as we expand our offering of in-place associative computing solutions, we continue to be committed to the synchronous SRAM market, by making available exceedingly high density performance memory products for incorporation into high-performance networking and telecommunications equipment, such as routers, switches, wide area network infrastructure equipment, wireless base stations and network access equipment. Our position in the synchronous SRAM market is well established and we have long-term supplier relationships with many of the leading original equipment manufacturer (“OEM”) customers, including Nokia. The revenue generated by these sales of high-speed synchronous SRAM products is being used to finance the development of our new in-place associative computing solutions and new types of SRAM products. We also serve the ongoing needs of the military/defense and aerospace markets by offering robust high-quality radiation-tolerant and radiation-hardened space grade SRAMs in addition to new in-place associative computing solutions including synthetic aperture radar image processing.

We utilize a fabless business model for the manufacture of our APU and SRAM products, which allows us both to focus our resources on research and development, product design and marketing, and to gain access to advanced process technologies with only modest capital investment and fixed costs.

Recent Developments

Our financial statements for the three months ended June 30, 2023 are not yet available. Accordingly, the information presented below reflects our preliminary estimates subject to the completion of our financial closing procedures. As a result, these preliminary estimates may differ from the actual results that will be reflected in our financial statements when they are completed and publicly disclosed. These preliminary estimates may change and those changes may be material.

Our expectations with respect to our preliminary estimates for the three months ended June 30, 2023 are based upon management estimates and are the responsibility of management. Our independent registered public accounting firm has not audited, reviewed or performed any procedures with respect to these preliminary results and, accordingly, does not express an opinion or any other form of assurance about them.

We estimate our total net revenue for the three months ended June 30, 2023 will be \$5.6 million and we estimate our gross profit for the three months ended June 30, 2023 will be \$3.1 million.

Corporate Information

We were incorporated in California in 1995 under the name Giga Semiconductor, Inc. We changed our name to GSI Technology in December 2003 and reincorporated in Delaware in June 2004 under the name GSI Technology, Inc. Our principal executive offices are located at 1213 Elko Drive, Sunnyvale, California, 94089, and our telephone number is (408) 331-8800.

THE OFFERING

Common stock offered by us	Shares of our common stock having an aggregate offering price of up to \$25,000,000.
Common stock to be outstanding after this offering	Up to 30,379,820 shares of our common stock, based on an assumed public offering price of \$4.39 per share, which was the last reported sale price of our common stock on the Nasdaq on July 31, 2023, for aggregate proceeds of up to \$25 million. The actual number of shares we sell will vary depending on the sales price under this offering.
Manner of offering	“At the market offering” that may be made from time to time through the Sales Agent. See “Plan of Distribution.”
Use of proceeds	We intend to use the net proceeds from this offering, if any, for working capital and general corporate purposes. See “Use of Proceeds.”
Risk factors	Investing in our common stock involves significant risks. See the disclosure under the heading “Risk Factors” on page S-5 in this prospectus supplement and under similar headings in other documents incorporated by reference into this prospectus supplement.
Nasdaq symbol	“GSIT”

The number of shares of common stock to be outstanding after this offering is based on 24,685,059 shares of common stock outstanding as of March 31, 2023, and excludes, in each case as of March 31, 2023:

- 8,809,160 shares of common stock issuable upon the exercise of outstanding stock options, having a weighted average exercise price of \$5.62 per share; and
- 3,594,851 shares of common stock reserved for issuance under our 2007 Equity Incentive Plan, our 2016 Equity Incentive Plan and our 2007 Employee Stock Purchase Plan.

Unless otherwise stated, all information contained in this prospectus supplement, including the number of shares of common stock to be outstanding after this offering, reflects an assumed public offering price of \$4.39 per share, which was the last reported sale price of our common stock on the Nasdaq on July 31, 2023.

RISK FACTORS

You should consider carefully the risks described below and discussed under the section captioned “Risk Factors” contained in our most recent annual report on Form 10-K as revised and supplemented by our Quarterly Reports on Form 10-Q filed since the filing of our most recent Annual Report on Form 10-K, each of which is incorporated by reference herein, and any subsequent reports we file after the date of this prospectus supplement, which are incorporated by reference in this prospectus supplement in their entirety, together with other information in this prospectus supplement, and the information and documents incorporated by reference in this prospectus supplement, and any free writing prospectus that we have authorized for use in connection with this offering before you make a decision to invest in our common stock. If any of the following events actually occur, our business, operating results, prospects or financial condition could be materially and adversely affected. This could cause the trading price of our common stock to decline and you may lose all or part of your investment. The risks described below are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business operations.

Risks Relating to this Offering

If you purchase shares of our common stock sold in this offering, you may experience immediate and substantial dilution in the net tangible book value of your shares. In addition, we may issue additional equity or convertible debt securities in the future, which may result in additional dilution to you.

The price per share of our common stock being offered may be higher than the net tangible book value per share of our outstanding common stock prior to this offering. Assuming that an aggregate of 5,694,761 shares of our common stock are sold at an assumed offering price of \$4.39 per share, the last reported sale price of our common stock on Nasdaq on July 31, 2023, for aggregate gross proceeds of approximately \$25,000,000, and after deducting commissions and estimated offering expenses payable by us, new investors in this offering will incur immediate dilution of \$2.23 per share. For a more detailed discussion of the foregoing, see the section entitled “Dilution” below. To the extent outstanding stock options are exercised or earnout shares are issued, there will be further dilution to new investors. In addition, to the extent we need to raise additional capital in the future and we issue additional shares of common stock or securities convertible, exercisable or exchangeable for our common stock, our then existing stockholders may experience dilution and the new securities may have rights senior to those of our common stock offered in this offering.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section entitled “Use of Proceeds,” and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. We expect to use the net proceeds from this offering, if any, for working capital and general corporate purposes. The failure by our management to apply these funds effectively could harm our business. Pending their use, we plan to invest the net proceeds from this offering in money market funds, certificates of deposit and agency bonds. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

The actual number of shares we will issue under the Sales Agreement, at any one time or in total, is uncertain.

Subject to certain limitations in the Sales Agreement and compliance with applicable law, we have the discretion to deliver a placement notice to the Sales Agent at any time throughout the term of the Sales Agreement. The number of shares that are sold by the Sales Agent after delivering a placement notice will fluctuate based on the market price of the common stock during the sales period and limits we set with the Sales Agent. Because the price per share of each share sold will fluctuate based on the market price of our common stock during the sales period, it is not possible at this stage to predict the number of shares that will be ultimately issued or the aggregate proceeds to be raised in connection with sales under the Sales Agreement.

The common stock offered hereby will be sold in “at the market offerings”, and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and so may experience different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold, and there is no minimum or maximum sales price. Investors may experience a decline in the value of their shares as a result of share sales made at prices lower than the prices they paid.

The trading price of our common stock is subject to fluctuation and is likely to be volatile.

The trading price of our common stock may fluctuate significantly in response to a number of factors, some of which are beyond our control, including:

- the establishment of a market for our new associative computing products;
- actual or anticipated declines in operating results;
- changes in financial estimates or recommendations by securities analysts;
- the institution of legal proceedings against us or significant developments in such proceedings;
- announcements by us or our competitors of financial results, new products, significant technological innovations, contracts, acquisitions, strategic relationships, joint ventures, capital commitments or other events;
- changes in industry estimates of demand for APU, RadHard and RadTolerant and Very Fast SRAM products;
- the gain or loss of significant orders or customers;
- recruitment or departure of key personnel; and
- market conditions in our industry, the industries of our customers and the economy as a whole.

In recent years, the stock market in general, and the market for technology stocks in particular, have experienced extreme price fluctuations, which have often been unrelated to the operating performance of affected companies. We have recently experienced price volatility in our common stock and, while we are continuing to execute our business strategy, we have not had any recent changes in our financial condition or results of operations that are consistent with the recent change in our stock price. The market price of our common stock might experience significant fluctuations in the future, including fluctuations unrelated to our performance. These fluctuations could materially adversely affect our business relationships, our ability to obtain future financing on favorable terms or otherwise harm our business. In addition, in the past, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. This risk is especially acute for us because the extreme volatility of market prices of technology companies has resulted in a larger number of securities class action claims against them. Due to the potential volatility of our stock price, we may in the future be the target of similar litigation. Securities litigation could result in substantial costs and divert management’s attention and resources. This could harm our business and cause the value of our stock to decline.

We have identified a material weakness in our internal control over financial reporting, and if our remediation of such material weakness is not effective, or if we fail to develop and maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable laws and regulations could be impaired.

In the course of preparing our financial statements for the fiscal year ended March 31, 2022, we identified a material weakness in our internal control over financial reporting which remained unremediated at March 31, 2023. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weakness identified pertains to the design and maintenance of controls over the review of the forecasts and the probability of achievement of the forecast used to calculate the contingent consideration liability, used in the

goodwill impairment test and used in the recoverability test for intangible assets. This material weakness has not been remediated as of March 31, 2023. Our management is taking steps to remediate our material weakness, including re-evaluating the methodology and procedures involved in developing forecasts as well as the review and oversight of the forecasting process. We are in the process of implementing a detailed plan for the remediation of the material weakness, including enhancing management's review controls over the forecasts used to calculate the contingent consideration liability, used in the recoverability test for intangible assets and used in the goodwill impairment test. Although we have begun implementing the enhancements described above, the material weakness will not be considered remediated until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. Until this material weakness is remediated, we plan to continue to perform additional analyses and other procedures to ensure that our consolidated financial statements are prepared in accordance with GAAP.

If we are unable to further implement and maintain effective internal control over financial reporting or disclosure controls and procedures, our ability to record, process and report financial information accurately, and to prepare financial statements within required time periods, could be adversely affected, which could subject us to litigation or investigations requiring management resources and payment of legal and other expenses, negatively affect investor confidence in our financial statements and adversely impact our stock price. If we are unable to assert that our internal control over financial reporting is effective, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could be adversely affected and we could become subject to litigation or investigations by Nasdaq, the SEC or other regulatory authorities, which could require additional financial and management resources.

Furthermore, we cannot assure you that the measures we have taken to date, and actions we may take in the future, will be sufficient to remediate the control deficiencies that led to our material weakness in our internal control over financial reporting or that they will prevent or avoid potential future material weaknesses. Our current controls and any new controls that we develop may become inadequate because of changes in conditions in our business. Further, weaknesses in our disclosure controls and internal control over financial reporting may be discovered in the future. Any failure to develop or maintain effective controls or any difficulties encountered in their implementation or improvement could harm our operating results or cause us to fail to meet our reporting obligations and may result in a restatement of our financial statements for prior periods. Any failure to implement and maintain effective internal control over financial reporting could adversely affect the results of periodic management evaluations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain matters discussed in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein may constitute forward-looking statements for purposes of the Securities Act and the Exchange Act, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from the future results, performance or achievements expressed or implied by such forward-looking statements. The words “anticipate,” “believe,” “estimate,” “may,” “expect” and similar expressions are generally intended to identify forward-looking statements. Our actual results may differ materially from the results anticipated in these forward-looking statements due to a variety of factors, including, without limitation, those discussed in the section entitled “Risk Factors,” and elsewhere in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, where such forward-looking statements appear. All written or oral forward-looking statements attributable to us are expressly qualified in their entirety by these cautionary statements. Such forward-looking statements include (but are not limited to) the following:

Risks Related to Our Business and Financial Condition

- Unpredictable fluctuations in our operating results could cause our stock price to decline.
- Our largest OEM customer accounts for a significant percentage of our net revenues. If this customer, or any of our other major customers, reduces the amount they purchase, stops purchasing our products or fails to pay us, our financial position and operating results will suffer.
- Rising interest rates, worldwide inflationary pressures, bank failures, the military conflict in Ukraine, significant fluctuations in energy prices and the decline in the global economic environment may continue to adversely affect our financial condition.
- We have incurred significant losses and may incur losses in the future.
- We have identified a material weakness in our internal control over financial reporting, and, if our remediation of such material weakness is not effective, our ability to produce timely and accurate financial statements could be impaired.
- Goodwill impairment and related charges, as well as other accounting charges or adjustments, could negatively impact our operating results.
- We depend upon the sale of our Very Fast SRAMs for most of our revenues and the market for Very Fast SRAMs is highly competitive.
- If we do not successfully implement certain cost reduction initiatives, we may suffer adverse impacts on our business and operations.
- We are dependent on a number of single source suppliers.
- If we do not successfully develop and introduce the new in-place associative computing products, which entails certain significant risks, our business will be harmed.
- If we are unable to offset increased wafer fabrication and assembly costs, our gross margins will suffer.
- We are subject to the highly cyclical nature of the networking and telecommunications markets.
- We rely heavily on distributors and our business will be negatively impacted if we are unable to develop and manage distribution channels and accurately forecast future sales through our distributors.
- The average selling prices of our products are expected to decline.
- We are substantially dependent on the continued services of our senior management and other key personnel. If we are unable to recruit or retain qualified personnel, our business could be harmed.
- Cyber-attacks could disrupt our operations or the operations of our partners, and result in reduced revenue, increased costs, liability claims and harm our reputation or competitive position.
- Demand for our products may decrease if our OEM customers experience difficulty manufacturing, marketing or selling their products.

- Our products have lengthy sales cycles that make it difficult to plan our expenses and forecast results.
- Our business could be negatively affected as a result of actions of activist stockholders or others.
- Our acquisition of companies or technologies could prove difficult to integrate, disrupt our business, dilute stockholder value and adversely affect our operating results.
- Our business will suffer if we are unable to protect our intellectual property or if there are claims that we infringe third party intellectual property rights.
- Current unfavorable economic and market conditions may adversely affect our business, financial condition, results of operations and cash flows.
- If our business grows, such growth may place a significant strain on our management and operations.

Risks Related to Manufacturing and Product Development

- We may experience difficulties in transitioning our manufacturing process technologies, which may result in reduced manufacturing yields, delays in product deliveries and increased expenses.
- Manufacturing process technologies are subject to rapid change and require significant expenditures.
- Our products may contain defects, which could reduce revenues or result in claims against us.

Risks Related to Our International Business and Operations

- The international political, social and economic environment, particularly as it relates to Taiwan, may affect our business performance.
- Certain of our independent suppliers and OEM customers have operations in the Pacific Rim, an area subject to significant risk of natural disasters and outbreak of contagious diseases, such as COVID-19.
- The United States could materially modify certain international trade agreements, or change tax provisions related to the global manufacturing and sales of our products.
- Some of our products are incorporated into advanced military electronics, and changes in international geopolitical circumstances and domestic budget considerations may hurt our business.

Risks Relating to Our Common Stock and the Securities Market

In addition, you should refer to the “Risk Factors” section of this prospectus supplement for a discussion of other important factors that may cause actual results to differ materially from those expressed or implied by the forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus supplement will prove to be accurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. The forward-looking statements in this prospectus supplement represent our views as of the date of this prospectus supplement. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so, and we disclaim any obligation to do so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus supplement.

USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to \$25,000,000 from time to time. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares under or fully utilize the Sales Agreement as a source of financing.

We currently intend to use any net proceeds from the sale of common stock under this prospectus supplement for working capital and general corporate purposes.

The amounts and timing of our actual expenditures will depend on numerous factors, including the factors described under “Risk Factors” in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, as well as the amount of cash used in our operations. We may find it necessary or advisable to use the net proceeds for other purposes, and we will have broad discretion in the application of the net proceeds. Pending the uses described above, we plan to invest the net proceeds from this offering in money market funds, certificates of deposit and agency bonds.

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock immediately after this offering. Our net tangible book value of our common stock as of March 31, 2023 was \$41.6 million, or \$1.69 per share of common stock based upon 24,685,059 shares outstanding. Net tangible book value per share is equal to our total tangible assets, less our total liabilities, divided by the total number of shares outstanding as of March 31, 2023.

After giving effect to the sale of our common stock in the aggregate amount of \$25,000,000 million at an assumed offering price of \$4.39 per share, the last reported sale price of our common stock on Nasdaq on July 31, 2023, and after deducting commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2023 would have been \$65.6 million, or \$2.16 per share of common stock. This represents an immediate increase in net tangible book value of \$0.47 per share to our existing stockholders and an immediate dilution in net tangible book value of \$2.23 per share to new investors in this offering.

The following table illustrates this calculation on a per share basis. The as-adjusted information is illustrative only and will change based on the actual price per share to the public, the actual number of shares sold and other terms of the offering determined at the time shares of our common stock are sold pursuant to this prospectus supplement. The as-adjusted information assumes that all of our common stock in the aggregate amount of \$25,000,000 million is sold at the assumed offering price of \$4.39 per share, the last reported sale price of our common stock on Nasdaq on July 31, 2023. The shares sold in this offering, if any, will be sold from time to time at various prices.

Assumed public offering price per share	\$4.39
Net tangible book value per share as of March 31, 2023	\$1.69
Increase in net tangible book value per share attributable to the offering	<u>\$0.47</u>
As-adjusted net tangible book value per share after this offering	\$2.16
Dilution per share to new investors	<u><u>\$2.23</u></u>

An increase of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$4.39 per share shown in the table above, assuming that all of our common stock in the aggregate amount of \$25,000,000 million during the term of the Sales Agreement with the Sales Agent is sold at that price, would increase our as adjusted net tangible book value per share to \$2.24 and would increase the dilution in net tangible book value per share to new investors in this offering to \$3.15, after deducting commissions and estimated offering expenses payable by us. A decrease of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$4.39 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$25,000,000 million during the term of the Sales Agreement with the Sales Agent is sold at that price, would decrease our as adjusted net tangible book value per share to \$2.05 and would decrease the dilution in net tangible book value per share to new investors in this offering to \$1.34, after deducting commissions and estimated offering expenses payable by us.

The number of shares of common stock to be outstanding after this offering is based on 24,685,059 shares of common stock outstanding as of March 31, 2023, and excludes, in each case as of March 31, 2023:

- 8,809,160 shares of common stock issuable upon the exercise of outstanding stock options, having a weighted average exercise price of \$5.62 per share; and
- 3,594,851 shares of common stock reserved for issuance under our 2007 Equity Incentive Plan, our 2016 Equity Incentive Plan and our 2007 Employee Stock Purchase Plan.

PLAN OF DISTRIBUTION

We have entered into the Sales Agreement with the Sales Agent relating to the sale of shares of our common stock offered by this prospectus supplement. Under this prospectus supplement, in accordance with the terms of the Sales Agreement, we may sell shares of our common stock for an aggregate offering price of up to \$25,000,000 from time to time through or to the Sales Agent, acting as sales agent, subject to certain limitations, including the number or dollar amount of shares registered under the registration statement to which the offering relates. The sales, if any, of shares made under the Sales Agreement will be made by any method that is deemed an “at the market offering” as defined in Rule 415 promulgated under the Securities Act. We may instruct the Sales Agent not to sell common stock if the sales cannot be effected at or above the price designated by us from time to time. We or the Sales Agent may suspend the offering of common stock upon notice and subject to other conditions.

Each time we wish to issue and sell common stock under the Sales Agreement, we will notify the Sales Agent of the number or dollar value of shares to be issued, the dates on which such sales are anticipated to be made, any minimum price below which sales may not be made and other sales parameters as we deem appropriate. Once we have so instructed the Sales Agent, unless it declines to accept the terms of the notice, the Sales Agent has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of the Sales Agent under the Sales Agreement to sell our common stock is subject to a number of conditions that we must meet.

We will pay the Sales Agent commission equal to 3% of the gross proceeds from the sale of common stock offered hereby for its services in acting as agent in the sale of common stock. In addition, we have agreed to reimburse certain expenses of the Sales Agent in an amount not to exceed \$60,000 in connection with the establishment of this “at the market offering,” and \$10,000 for each periodic update of such offering. In accordance with Financial Industry Regulatory Authority, Inc. Rule 5110, these fees and reimbursed expenses are deemed sales compensation in connection with this offering. We estimate that the total expenses for the offering, excluding compensation payable to the Sales Agent under the terms of the Sales Agreement, will be approximately \$220,000.

Settlement for sales of common stock will generally occur on the second trading day following the date on which any sales are made, or on some other date that is agreed upon by us and the Sales Agent in connection with a particular transaction, in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sale of shares of our common stock on our behalf, the Sales Agent will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of the Sales Agent will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to the Sales Agent against certain civil liabilities, including liabilities under the Securities Act. We have also agreed to reimburse the Sales Agent for certain other specified expenses.

The offering of our common stock pursuant to this prospectus supplement will terminate upon the earlier of (i) the sale of all of our common stock provided for in this prospectus supplement or (ii) termination of the Sales Agreement as provided therein.

Our common stock is traded on the Nasdaq under the symbol “GSIT.” The transfer agent for our common stock is Computershare Limited.

The Sales Agent and its respective affiliates may in the future provide various investment banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, the Sales Agent will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus supplement.

LEGAL MATTERS

DLA Piper LLP (US), Palo Alto, California, will pass upon certain legal matters relating to the issuance and sale of the shares of common stock offered hereby on behalf of the Company. Covington & Burling LLP, New York, New York, is counsel to the Sales Agent in connection with this offering.

EXPERTS

The consolidated financial statements as of March 31, 2023 and 2022 and for each of the three years in the period ended March 31, 2023 incorporated by reference in this Prospectus have been so incorporated in reliance on the report of BDO USA, LLP (n/k/a BDO USA, P.A.), an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

SUBJECT TO COMPLETION, DATED JUNE 28, 2023

PROSPECTUS

**\$100,000,000**

**Common Stock
Preferred Stock
Debt Securities
Warrants
Units**

We may, from time to time in one or more offerings, offer and sell up to \$100.0 million in the aggregate of common stock, preferred stock, debt securities, warrants to purchase shares of common stock or preferred stock or debt securities, or any combination of the foregoing, either individually or as units comprised of one or more of the other securities.

This prospectus provides a general description of the securities we may offer. We will provide the specific terms of the securities offered in one or more supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may add, update or change information contained in this prospectus. Please read carefully this prospectus, the applicable prospectus supplement, any related free writing prospectus, and the documents incorporated by reference before you invest in any of our securities. **This prospectus may not be used to offer or sell any securities unless accompanied by the applicable prospectus supplement.**

Our common stock is listed on the Nasdaq Stock Market, LLC under the symbol "GSIT." On June 27, 2023, the last reported sale price of our common stock was \$6.53 per share. We have recently experienced price volatility in our stock and, while we are continuing to execute our business strategy, we have not had any recent changes in our financial condition or results of operations that is consistent with the recent change in our stock price.

Investing in our securities involves a high degree of risk. See "Risk Factors" on page 5 of this prospectus and in the documents incorporated by reference into this prospectus, as updated by the applicable prospectus supplement, any related free writing prospectus and other future filings we make with the Securities and Exchange Commission that are incorporated by reference into this prospectus, for a discussion of the factors we urge you to consider carefully before deciding to purchase our securities.

We may sell these securities directly to investors, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, please see the section titled "*Plan of Distribution*" in this prospectus. If any underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such underwriters and any applicable commissions or discounts will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

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

The date of this prospectus is

, 2023

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, under the Securities Act of 1933, as amended, or the Securities Act, using a “shelf” registration process. Under this shelf registration process, we may, from time to time, offer and sell any combination of the securities described in this prospectus in one or more offerings, up to a total dollar amount of \$100.0 million.

This prospectus provides a general description of the securities we may offer. Each time we sell securities under this prospectus, we will, to the extent required by law, provide a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to a particular offering. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus or in any documents that we have incorporated by reference into this prospectus. To the extent there is a conflict between any statement contained in this prospectus, any applicable prospectus supplement, any related free writing prospectus or any document incorporated by reference into this prospectus, the statement in the document having the later date modifies or supersedes the earlier statement.

The information appearing in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document, and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or the time of any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

You may rely only on the information contained in, or incorporated by reference into, this prospectus and any applicable prospectus supplement, or the information contained in any free writing prospectus we have authorized for use in connection with a specific offering. We have not authorized anyone to provide you with different or additional information. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

As permitted by SEC rules and regulations, the registration statement of which this prospectus forms a part includes additional information not contained in this prospectus. This prospectus also contains summaries of certain provisions of the documents described herein, but all summaries are qualified in their entirety by reference to the actual documents. You may read the registration statement and the other reports we file with the SEC, and you may obtain copies of the actual documents summarized herein (if and when filed with the SEC), at the SEC’s website or at its offices described in the section of this prospectus titled “*Where You Can Find More Information.*”

The representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference into this prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

SUMMARY

This summary highlights information contained elsewhere in this prospectus. Before making an investment decision, please carefully read this entire prospectus and the documents incorporated by reference into this prospectus, especially the “Risk Factors” section of this prospectus and our financial statements and the related notes incorporated by reference into this prospectus. In this prospectus, unless the context otherwise requires, the terms “GSI,” “we,” “us” or “our” refer to GSI Technology, Inc.

Overview

GSI provides in-place associative computing solutions for applications in high growth markets such as artificial intelligence (“AI”) and high-performance computing, including natural language processing and computer vision. Our associative processing unit (“APU”) products are focused on applications using similarity search. Similarity search is used in visual search queries for ecommerce, computer vision, drug discovery, cyber security and service markets such as NoSQL, Elasticsearch, and OpenSearch. Our extensive historical experience in developing high speed synchronous static random access memory (“SRAM”), facilitated our ability to transform the focus of our business to the development of reliable hardware AI products and solutions like the APU.

Even as we expand our offering of in-place associative computing solutions, we continue to be committed to the synchronous SRAM market, by making available exceedingly high density performance memory products for incorporation into high-performance networking and telecommunications equipment, such as routers, switches, wide area network infrastructure equipment, wireless base stations and network access equipment. Our position in the synchronous SRAM market is well established and we have long-term supplier relationships with many of the leading original equipment manufacturer, or OEM, customers including Nokia. The revenue generated by these sales of high-speed synchronous SRAM products is being used to finance the development of our new in-place associative computing solutions and new types of SRAM products. We also serve the ongoing needs of the military/defense and aerospace markets by offering robust high-quality radiation-tolerant and radiation-hardened space grade SRAMs in addition to new in-place associative computing solutions including synthetic aperture radar image processing.

We utilize a fabless business model for the manufacture of our APU and SRAM products, which allows us both to focus our resources on research and development, product design and marketing, and to gain access to advanced process technologies with only modest capital investment and fixed costs.

Corporate Information

We were incorporated in California in 1995 under the name Giga Semiconductor, Inc. We changed our name to GSI Technology in December 2003 and reincorporated in Delaware in June 2004 under the name GSI Technology, Inc. Our principal executive offices are located at 1213 Elko Drive, Sunnyvale, California, 94089, and our telephone number is (408) 331-8800.

The Securities We May Offer

Under this prospectus, we may, from time to time in one or more offerings, offer and sell up to \$100.0 million in the aggregate of common stock, preferred stock, debt securities, warrants to purchase common stock, preferred stock or debt securities, or any combination of the foregoing, either individually or as units comprised of one or more of the other securities. The prices and terms of our offer and sale of such securities will be determined by market conditions at the time of offering. Each time we offer securities under this prospectus, we will provide offerees with a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities being offered, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- maturity, if applicable;
- original issue discount, if any;

- rates and times of payment of interest or dividends, if any;
- redemption, conversion, exchange or sinking fund terms, if any;
- conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;
- ranking;
- restrictive covenants, if any;
- voting or other rights, if any; and
- important U.S. federal income tax considerations.

The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus forms a part.

The following is a general summary of the securities we may offer with this prospectus. For more specific information regarding any offering of securities, please read the prospectus supplement and any free writing prospectus that we may authorize to be provided to you in connection with a particular offering, together with any exhibits that may be filed setting forth the terms of the securities.

Common Stock

Our Amended and Restated Certificate of Incorporation (“Certificate of Incorporation”) currently authorizes the issuance of up to 150,000,000 shares of common stock. The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. Holders of a majority of the shares of common stock entitled to vote in any election of directors may elect all of the directors standing for election. Subject to preferences applicable to any outstanding preferred stock, holders of common stock are entitled to receive ratably any dividends declared by our Board of Directors. In the event of a liquidation, dissolution or winding-up of the Company, holders of common stock are entitled to share ratably with the holders of any outstanding preferred stock in the assets remaining after payment of liabilities and the liquidation preferences of any outstanding preferred stock. Holders of common stock have no preemptive, conversion or redemption rights.

Preferred Stock

Our Board of Directors has the authority, without further action by our stockholders, to designate and issue up to 5,000,000 shares of preferred stock in one or more series. In addition, the Board may fix the rights, preferences and privileges of any preferred stock it determines to issue. Any or all of these rights may be superior to the rights of the common stock. Preferred stock could thus be issued quickly with terms calculated to delay or prevent a change in control of the Company or to make removal of management more difficult. Additionally, the issuance of preferred stock may dilute the voting power and decrease the market price of the common stock, and reduce the likelihood that the holders of common stock will receive payments in the event of a liquidation, dissolution or winding-up of the Company.

Debt Securities

We may offer general debt obligations, which may be secured or unsecured, senior or subordinated and convertible into common stock. In this prospectus, we refer to debt securities having any or all of these features as “debt securities.” We may issue debt securities under a note purchase agreement or under an indenture to be entered between us and a trustee. We will issue any senior debt securities under the senior indenture that we will enter into with the trustee named in the senior indenture. We will issue any subordinated debt securities under the subordinated indenture that we will enter into with the trustee named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a

part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC. Our board of directors will determine the terms of each series of debt securities we may offer.

Warrants

We may offer warrants for the purchase of common stock, preferred stock or debt securities. We may issue the warrants by themselves or together with shares or common stock or preferred stock or with debt securities, and the warrants may be attached to or separate from any offered securities. Our board of directors will determine the terms of the warrants, including the class and number of underlying shares, the purchase price and any other rights and privileges, which will be set forth in the form of warrant or the warrant agreement and warrant certificate.

Units

We may offer units comprised of any combination of our common stock, preferred stock, debt securities or warrants to purchase any of these securities, in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent, which will be a bank or trust company that we select. We will indicate the name and address of any unit agent in the applicable prospectus supplement relating to a particular series of units.

RISK FACTORS

Investing in our securities involves significant risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in GSI. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading “*Risk Factors*” in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under the heading “*Risk Factors*” included in our most recent annual report on Form 10-K, as revised or supplemented by our subsequent quarterly reports on Form 10-Q or our current reports on Form 8-K that we have filed with the SEC, all of which are incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain forward-looking statements that are based on management's beliefs and assumptions and on information currently available to management. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words.

These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain. Actual events or results may differ substantially. Important factors that could cause our actual results to be materially different from the forward-looking statements include (but are not limited to) the following:

Risks Related to Our Business and Financial Condition

- Unpredictable fluctuations in our operating results could cause our stock price to decline.
- Our largest OEM customer accounts for a significant percentage of our net revenues. If this customer, or any of our other major customers, reduces the amount they purchase, stops purchasing our products or fails to pay us, our financial position and operating results will suffer.
- Rising interest rates, worldwide inflationary pressures, bank failures, the military conflict in Ukraine, significant fluctuations in energy prices and the decline in the global economic environment may continue to adversely affect our financial condition.
- We have incurred significant losses and may incur losses in the future.
- We have identified a material weakness in our internal control over financial reporting, and if our remediation of such material weakness is not effective, our ability to produce timely and accurate financial statements could be impaired.
- Goodwill impairment and related charges, as well as other accounting charges or adjustments could negatively impact our operating results.
- We depend upon the sale of our Very Fast SRAMs for most of our revenues and the market for Very Fast SRAMs is highly competitive.
- If we do not successfully implement certain cost reduction initiatives, we may suffer adverse impacts on our business and operations.
- We are dependent on a number of single source suppliers.
- If we do not successfully develop and introduce the new in-place associative computing products, which entails certain significant risks, our business will be harmed.
- If we are unable to offset increased wafer fabrication and assembly costs, our gross margins will suffer.
- We are subject to the highly cyclical nature of the networking and telecommunications markets.
- We rely heavily on distributors and our business will be negatively impacted if we are unable to develop and manage distribution channels and accurately forecast future sales through our distributors.
- The average selling prices of our products are expected to decline.
- We are substantially dependent on the continued services of our senior management and other key personnel. If we are unable to recruit or retain qualified personnel, our business could be harmed.
- Cyber-attacks could disrupt our operations or the operations of our partners, and result in reduced revenue, increased costs, liability claims and harm our reputation or competitive position.
- Demand for our products may decrease if our OEM customers experience difficulty manufacturing, marketing or selling their products.

- Our products have lengthy sales cycles that make it difficult to plan our expenses and forecast results.
- Our business could be negatively affected as a result of actions of activist stockholders or others.
- Our acquisition of companies or technologies could prove difficult to integrate, disrupt our business, dilute stockholder value and adversely affect our operating results.
- Our business will suffer if we are unable to protect our intellectual property or if there are claims that we infringe third party intellectual property rights.
- Current unfavorable economic and market conditions may adversely affect our business, financial condition, results of operations and cash flows.
- If our business grows, such growth may place a significant strain on our management and operations.

Risks Related to Manufacturing and Product Development

- We may experience difficulties in transitioning our manufacturing process technologies, which may result in reduced manufacturing yields, delays in product deliveries and increased expenses.
- Manufacturing process technologies are subject to rapid change and require significant expenditures.
- Our products may contain defects, which could reduce revenues or result in claims against us.

Risks Related to Our International Business and Operations

- The international political, social and economic environment, particularly as it relates to Taiwan, may affect our business performance.
- Certain of our independent suppliers and OEM customers have operations in the Pacific Rim, an area subject to significant risk of natural disasters and outbreak of contagious diseases such as COVID-19.
- The United States could materially modify certain international trade agreements, or change tax provisions related to the global manufacturing and sales of our products.
- Some of our products are incorporated into advanced military electronics, and changes in international geopolitical circumstances and domestic budget considerations may hurt our business.

Risks Relating to Our Common Stock and the Securities Market

- The trading price of our common stock is subject to fluctuation and is likely to be volatile.
- We may need to raise additional capital in the future, which may not be available on favorable terms or at all, and which may cause dilution to existing stockholders.
- Use of a portion of our cash reserves to repurchase shares of our common stock presents potential risks and disadvantages to us and our continuing stockholders.
- Our executive officers, directors and their affiliates hold a substantial percentage of our common stock.
- The provisions of our charter documents might inhibit potential acquisition bids that a stockholder might believe are desirable, and the market price of our common stock could be lower as a result.

In addition, you should refer to the “*Risk Factors*” section of this prospectus for a discussion of other important factors that may cause actual results to differ materially from those expressed or implied by the forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so, and we disclaim any obligation to do so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of our securities offered hereby. Except as described in any prospectus supplement or any related free writing prospectus that we may authorize to be provided to you, we currently intend to use the net proceeds from the sale of our securities offered hereby for working capital and general corporate purposes, which may include capital expenditures, debt repayment, research and development, sales and marketing and general and administrative expenses. We may also use a portion of the net proceeds to acquire or invest in businesses, products and technologies that are complementary to our own, although we have no current plans, commitments or agreements with respect to any such acquisitions or investments as of the date of this prospectus. We will set forth in the applicable prospectus supplement or free writing prospectus our intended use for the net proceeds received from the sale of any securities sold pursuant to the prospectus supplement or free writing prospectus.

Pending the application of the net proceeds, we may invest the net proceeds in short-term, investment grade, interest-bearing securities, certificates of deposit or direct or guaranteed obligations of the U.S. government.

SECURITIES WE MAY OFFER

We may offer and sell, from time to time in one or more offerings, shares of common stock and preferred stock, various series of debt securities and warrants to purchase any of such securities, or any combination of the foregoing, either individually or in units. We may offer up to \$100.0 million of securities under this prospectus. The prices and terms of any offering will be determined by market conditions at the time of offering. This prospectus provides a general description of the securities we may offer. Each time we offer securities under this prospectus, we will, to the extent required by law, provide offerees with a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities being offered. The prospectus supplement may also add, update or change information in this prospectus. For more information, see “*About this Prospectus.*”

DESCRIPTION OF COMMON STOCK AND PREFERRED STOCK

The following is a summary of the material terms of our Common Stock and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Certificate of Incorporation and our Amended and Restated Bylaws (the “Bylaws”), each of which have been filed with the Securities and Exchange Commission. We encourage you to read our Certificate of Incorporation, our Bylaws and the applicable provisions of the Delaware General Corporation Law, for additional information.

General

GSI has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), our Common Stock, \$0.001 par value per share (“Common Stock”).

Our authorized capital stock consists of 150,000,000 shares of Common Stock, and 5,000,000 shares of undesignated preferred stock, \$0.001 par value per share. The outstanding shares of Common Stock are fully paid and nonassessable.

Common Stock

The holders of Common Stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. Holders of a majority of the shares of common stock entitled to vote in any election of directors may elect all of the directors standing for election. Subject to preferences applicable to any outstanding preferred stock, holders of common stock are entitled to receive ratably any dividends declared by our Board of Directors. In the event of a liquidation, dissolution or winding-up of the Company, holders of Common Stock are entitled to share ratably with the holders of any outstanding preferred stock in the assets remaining after payment of liabilities and the liquidation preferences of any outstanding preferred stock. Holders of Common Stock have no preemptive, conversion or redemption rights.

Preferred Stock

Our Board of Directors has the authority, without further action by our stockholders, to designate and issue up to 5,000,000 shares of preferred stock in one or more series. In addition, the Board may fix the rights, preferences and privileges of any preferred stock it determines to issue. Any or all of these rights may be superior to the rights of the Common Stock. Preferred stock could thus be issued quickly with terms calculated to delay or prevent a change in control of the Company or to make removal of management more difficult. Additionally, the issuance of preferred stock may dilute the voting power and decrease the market price of the Common Stock, and reduce the likelihood that the holders of Common Stock will receive payments in the event of a liquidation, dissolution or winding-up of the Company.

Antitakeover Provisions in our Governing Documents and Under Delaware Law

We are subject to Section 203 of the Delaware General Corporation Law regulating corporate takeovers, which prohibits a Delaware corporation from engaging in any business combination with an “interested stockholder,” unless:

- prior to the date of the transaction, the Board of Directors of the corporation approved either the business combination or the transaction, which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers, and (b) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the Board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 $\frac{2}{3}$ % of the outstanding voting stock which is not owned by the interested stockholder.

Except as otherwise specified in Section 203, an “interested stockholder” is defined to include:

- any person that is the owner of 15% or more of the outstanding voting securities of the corporation, or is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation at any time within three years immediately prior to the date of determination and
- the affiliates and associates of any such person.

Certificate of Incorporation and Bylaws

Our Certificate of Incorporation and Bylaws provide that:

- no action can be taken by stockholders except at an annual or special meeting of the stockholders called in accordance with the Bylaws, and stockholders may not act by written consent;
- the approval of holders of two-thirds of the shares entitled to vote at an election of directors will be required to adopt, amend or repeal the Bylaws or amend or repeal the provisions of the Certificate of Incorporation regarding the election and removal of directors and the ability of stockholders to take action;
- our Board of Directors will be expressly authorized to make, alter or repeal our Bylaws;
- our Board of Directors will be authorized to issue preferred stock without stockholder approval; and
- we will indemnify officers and directors against losses that may incur as a result of investigations and legal proceedings resulting from their services to us, which may include services in connection with takeover defense measures.

Our Bylaws provide that directors may be removed from office at any time by the affirmative vote of the holders of a majority of the voting power of all of the then outstanding shares of capital stock entitled to vote generally in the election of directors, voting together as a single class.

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is Computershare Limited.

DESCRIPTION OF DEBT SECURITIES

This section describes the general terms and provisions of our debt securities that we may issue from time to time. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any future debt securities we may offer under this prospectus, the applicable prospectus supplement or free writing prospectus will describe the specific terms of any debt securities offered through that prospectus supplement or free writing prospectus. The terms of any debt securities we offer under a prospectus supplement or free writing prospectus may differ from the terms we describe below. Unless the context requires otherwise, whenever we refer to the “indentures,” we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue any senior debt securities under the senior indenture that we will enter into with the trustee named in the senior indenture. We will issue any subordinated debt securities under the subordinated indenture that we will enter into with the trustee named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The indentures will be qualified under the Trust Indenture Act of 1939, as amended (the “Trust Indenture Act”). We use the term “trustee” to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplement or free writing prospectus and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete applicable indenture that contains the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

We will describe in the applicable prospectus supplement or free writing prospectus the terms of the series of debt securities being offered, including as applicable:

- the title;
- the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form, and, if so, the terms and who the depository will be;
- the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place where payments will be payable;

- restrictions on transfer, sale or other assignment, if any;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, the conditions upon which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option, to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- whether the indenture will restrict our ability or the ability of our subsidiaries to:
 - incur additional indebtedness;
 - issue additional securities;
 - create liens;
 - pay dividends or make distributions in respect of our capital stock or the capital stock of our subsidiaries;
 - redeem capital stock;
 - place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
 - make investments or other restricted payments;
 - sell or otherwise dispose of assets;
 - enter into sale-leaseback transactions;
 - engage in transactions with shareholders or affiliates;
 - issue or sell stock of our subsidiaries;
 - effect a consolidation or merger;
- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of certain material or special United States ("U.S.") federal income tax considerations applicable to the debt securities;
- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;
- the applicability of the provisions in the indenture on discharge;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement or free writing prospectus the terms on which a series of debt securities may be convertible into or exchangeable for our common stock, our preferred stock or

other securities (including securities of a third-party). We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock, our preferred stock or other securities (including securities of a third-party) that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the indentures will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the debt securities, as appropriate. If the debt securities are convertible into or exchangeable for other securities of ours or securities of other entities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default under the Indenture

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the following are events of default under the indentures with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended;
- if we fail to pay the principal, premium or sinking fund payment, if any, when due and payable at maturity, upon redemption or repurchase or otherwise, and the time for payment has not been extended;
- if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

We will describe in each applicable prospectus supplement or free writing prospectus any additional events of default relating to the relevant series of debt securities.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the unpaid principal, premium, if any, and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity or security satisfactory to it against any loss, liability or expense. Subject to the terms of the indentures, the holders of a majority in principal amount of the outstanding debt securities of any series 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, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

Subject to the terms of the indentures, a holder of the debt securities of any series will have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the trustee or security satisfactory to it against any loss, liability or expense or to be incurred in compliance with instituting the proceeding as trustee; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities, or other defaults that may be specified in the applicable prospectus supplement or free writing prospectus.

We expect to periodically file statements with the trustee regarding our compliance with specified covenants in the indentures.

Modification of Indenture; Waiver

Subject to the terms of the indenture for any series of debt securities that we may issue, we and the trustee may change an indenture without the consent of any holders with respect to the following specific matters:

- to fix any ambiguity, defect or inconsistency in the indenture;
- to comply with the provisions described above under “Description of Debt Securities – Consolidation, Merger or Sale”;
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under “Description of Debt Securities — General,” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment hereunder by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the benefit of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred to us in the indenture; or
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, subject to the terms of the indenture for any series of debt securities that we may issue or as otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the stated maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption or repurchase of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture provides that, subject to the terms of the indenture and any limitation otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We plan to issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement or free writing prospectus, in denominations of \$1,000 and any integral multiple thereof. We may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement or free writing prospectus with respect to that series.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement or free writing prospectus, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement or free writing prospectus, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement or free writing prospectus the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series. If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs.

Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement or free writing prospectus any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

We expect the indentures and the debt securities to be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Ranking of Debt Securities

The subordinated debt securities will be subordinate and junior in priority of payment to any of our other indebtedness to the extent described in a prospectus supplement or free writing prospectus. The subordinated indenture does not limit the amount of subordinated debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

The senior debt securities will rank equally in right of payment to any of our other senior unsecured debt. The senior indenture does not limit the amount of senior debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements or related free writing prospectuses, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement or related free writing prospectus. If we indicate in the prospectus supplement or related free writing prospectus, the terms of any warrants offered under that prospectus supplement or related free writing prospectus may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement, which includes this prospectus.

General

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities. We plan to evidence each series of warrants by warrant certificates that we will issue under a separate warrant agreement. We will enter into the warrant agreement with a warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement or related free writing prospectus relating to a particular series of warrants.

We will describe in the applicable prospectus supplement or related free writing prospectus the terms of the series of warrants, including as applicable:

- the offering price, currency, and aggregate number of warrants offered;
- the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants; any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants; the periods during which, and places at which, the warrants are exercisable;
- the manner of exercise;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

DESCRIPTION OF UNITS

We may issue units comprised of shares of common stock, shares of preferred stock, debt securities and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement and any related free writing prospectus. If so described in a particular supplement or related free writing prospectus, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement and any related free writing prospectus related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

The applicable prospectus supplement and any related free writing prospectus may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;
- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under “*Description of Capital Stock*,” “*Description of Debt Securities*” and “*Description of Warrants*” will apply to the securities included in each unit, to the extent relevant and as may be updated in any prospectus supplements and any related free writing prospectuses. We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of a particular series of units will be described in the applicable prospectus supplement and any related free writing prospectus.

Unit Agreements

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement and any related free writing prospectus.

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement and any related free writing prospectus:

Modification Without Consent

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder: (1) to cure any ambiguity in any provisions of the governing unit agreement that differ from those described below; (2) to correct or supplement any defective or inconsistent provision; or (3) to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected

holders in any material respect. We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

Modification With Consent

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would: (1) impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or (2) reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval: (1) if the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or (2) if the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document.

In each case, the required approval must be given by written consent.

Unit Agreements Will Not be Qualified Under Trust Indenture Act

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default

The unit agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the unit agreements. We will then be relieved of any further obligation under these agreements.

The unit agreements will not include any restrictions on our ability to put liens on our assets, nor will they restrict our ability to sell our assets. The unit agreements also will not provide for any events of default or remedies upon the occurrence of any events of default.

Form, Exchange and Transfer

We will issue each unit in global-i.e., book-entry-form only. Units in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depositary's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement and any related free writing prospectus.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them:

- The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.
- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder's proof of legal ownership. The transfer agent may also require an indemnity before replacing any units.
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement. Only the depository will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

Payments and Notices

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement and any related free writing prospectus.

PLAN OF DISTRIBUTION

We may sell these securities directly to one or more investors. We may also sell these securities through agents designated from time to time or to or through underwriters or dealers. We may sell these securities through “at the market” offerings, within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise. The applicable prospectus supplement and any related free writing prospectus will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any agents, underwriters or dealers;
- the purchase price of the securities being offered and the net proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents’ or underwriters’ compensation;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges or markets on which such securities may be listed.

We may distribute the securities from time to time in one or more transactions at:

- a fixed price or prices, which may be changed from time to time;
- market prices prevailing at the time of sale;
- prices related to such prevailing market prices; or
- negotiated prices.

Agents

We may designate agents who agree to use their reasonable efforts to solicit purchases of our securities for the period of their appointment or to sell our securities on a continuing basis. We will name any agent involved in the offering and sale of securities and we will describe any fees or commissions we will pay the agent in the applicable prospectus supplement.

Underwriters

If we use underwriters for a sale of securities, the underwriters will acquire the securities for their own account. The underwriters may resell the securities in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. Subject to certain conditions, the underwriters will be obligated to purchase all the securities of the series offered if they purchase any of the securities of that series. We may change from time to time any public offering price and any discounts or concessions the underwriters allow or reallow or pay to dealers. We may use underwriters with whom we have a material relationship. We will name any underwriter involved in the offering and sale of securities, describe any discount or other compensation and describe the nature of any material relationship in any applicable prospectus supplement. Only underwriters we name in the prospectus supplement will be underwriters of the securities offered by that prospectus supplement.

We may have agreements with the agents and underwriters to indemnify them against specified civil liabilities related to offerings under this prospectus, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities.

Underwriters, dealers and agents that participate in the distribution of the securities may be underwriters as defined in the Securities Act, and any discounts or commissions they receive from us and any profit on their resale of the securities may be treated as underwriting discounts and commissions under the Securities Act. We will identify in the applicable prospectus supplement any underwriters, dealers or agents and will describe their compensation. We may have agreements with the underwriters, dealers and agents to indemnify them against specified civil liabilities related to offerings under this prospectus, including liabilities under the

Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Underwriters, dealers and agents may engage in transactions with or perform services for us in the ordinary course of their businesses.

Trading Markets and Listing of Securities

Unless otherwise specified in the applicable prospectus supplement, each class or series of securities will be a new issue with no established trading market, other than our common stock, which is currently listed on the Nasdaq Stock Market. We may elect to list or qualify for trading any other class or series of securities on any securities exchange or other market, but we are not obligated to do so. It is possible that one or more underwriters may make a market in a class or series of securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for any of the securities.

At-the-Market Offerings

To the extent that we make sales through one or more underwriters or agents in at-the-market offerings, we will do so pursuant to the terms of a sales agency financing agreement or other at-the-market offering arrangement between us and the underwriters or agents. If we engage in at-the-market sales pursuant to any such agreement, we will issue and sell our securities through one or more underwriters or agents, which may act on an agency basis or a principal basis. During the term of any such agreement, we may sell securities on a daily basis in exchange transactions or otherwise as we agree with the underwriters or agents. Any such agreement will provide that any securities sold will be sold at prices related to the then prevailing market prices for our securities. Therefore, exact figures regarding proceeds that will be raised or commissions to be paid cannot be determined at this time. Pursuant to the terms of the agreement, we may agree to sell, and the relevant underwriters or agents may agree to solicit offers to purchase blocks of our common stock or other securities. The terms of any such agreement will be set forth in more detail in the applicable prospectus supplement.

Stabilization Activities

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of these activities at any time.

Passive Market Making

Any underwriter who is a qualified market maker on the Nasdaq Stock Market may engage in passive market making transactions in securities listed on the Nasdaq Stock Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. A passive market maker must comply with applicable volume and price limitations and must be identified as a passive market maker. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security. If all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of any common stock, preferred stock, debt securities, warrants or units offered under this prospectus and any supplement hereto will be passed upon for us by DLA Piper LLP (US), Palo Alto, California.

EXPERTS

The consolidated financial statements as of March 31, 2023 and 2022 and for each of the three years in the period ended March 31, 2023 incorporated by reference in this Prospectus have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

INFORMATION INCORPORATED BY REFERENCE

SEC rules permit us to incorporate information by reference into this prospectus and any applicable prospectus supplement. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus and any applicable prospectus supplement, except for information superseded by information contained in this prospectus or the applicable prospectus supplement itself or in any subsequently filed incorporated document. This prospectus and any applicable prospectus supplement incorporate by reference the documents set forth below that we have previously filed with the SEC, other than information in such documents that is deemed to be furnished and not filed. These documents contain important information about us and our business and financial condition. Any report or information within any of the documents referenced below that is furnished, but not filed, shall not be incorporated by reference into this prospectus.

- [Our Annual Report on Form 10-K for the fiscal year ended March 31, 2023, filed with the SEC on June 28, 2023; and](#)
- [The description of our common stock contained in our registration statement on Form 8-A, as filed with the SEC on March 27, 2007 \(File No. 001-33387\), including any amendments or reports for the purpose of updating such description.](#)

All documents that we file (but not those that we furnish) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of the initial registration statement of which this prospectus is a part and prior to the effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, and any previously filed documents. All documents that we file (but not those that we furnish) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus and prior to the termination of the offering of any of the securities covered under this prospectus shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, the applicable prospectus supplement and any previously filed documents.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this prospectus or the applicable prospectus supplement shall be deemed to be modified or superseded for purposes of this prospectus and such applicable prospectus supplement to the extent that a statement contained in this prospectus or such applicable prospectus supplement, or in any other subsequently filed document which also is or is deemed to be incorporated by reference into this prospectus and such applicable prospectus supplement, modifies or supersedes such earlier statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus or such applicable prospectus supplement.

Documents incorporated by reference are available from us without charge, excluding all exhibits unless specifically incorporated by reference as an exhibit to this prospectus and the applicable prospectus supplement.

Prospective investors may obtain documents incorporated by reference into this prospectus and the applicable prospectus supplement at no cost by requesting them in writing or by telephone from us at our executive offices at:

GSI Technology Inc.
1213 Elko Drive,
Sunnyvale, California 94089
(408) 331-8800

WHERE YOU CAN FIND MORE INFORMATION

As permitted by SEC rules, this prospectus omits certain information that is included in the registration statement of which this prospectus forms a part and its exhibits. Since this prospectus may not contain all of the information that you may find important, we urge you to review the full text of these documents. If we have filed a contract, agreement or other document as an exhibit to the registration statement of which this prospectus forms a part, please read the exhibit for a more complete understanding of the document or matter involved. Each statement in this prospectus, including statements incorporated by reference as discussed above, regarding a contract, agreement or other document is qualified in its entirety by reference to the actual document.

We are subject to the information reporting requirements of the Exchange Act and, in accordance with these requirements, we file annual, quarterly and current reports, proxy statements, information statements, and other information with the SEC. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room located at 100 F Street, NE, Washington, D.C., 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains an internet site that contains these materials at www.sec.gov.

\$25,000,000



Common Stock

PROSPECTUS SUPPLEMENT

Needham & Company

August 1, 2023
