



High Performance Memory
Technology for for Leading-
Edge Applications

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SAFE HARBOR

The statements contained in this presentation that are not purely historical are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding GSI Technology's expectations, beliefs, intentions, or strategies regarding the future. All forward-looking statements included in this presentation are based upon information available to GSI Technology as of the date hereof, and GSI Technology assumes no obligation to update any such forward-looking statements. Forward-looking statements involve a variety of risks and uncertainties, which could cause actual results to differ materially from those projected. These risks include those associated with the normal quarterly and fiscal year-end closing process. Examples of risks that could affect our current expectations regarding future revenues and gross margins include those associated with fluctuations in GSI Technology's operating results; GSI Technology's historical dependence on sales to a limited number of customers and fluctuations in the mix of customers and products in any period; global public health crises that reduce economic activity (including the ongoing COVID-19 global pandemic and the governmental and regulatory actions relating thereto); the rapidly evolving markets for GSI Technology's products and uncertainty regarding the development of these markets; the need to develop and introduce new products to offset the historical decline in the average unit selling price of GSI Technology's products; the challenges of rapid growth followed by periods of contraction; intensive competition; and delays or unanticipated costs that may be encountered in the development of new products based on our in-place associative computing technology and the establishment of new markets and customer and partner relationships for the sale of such products. Many of these risks are currently amplified by and will continue to be amplified by, or in the future may be amplified by, the COVID-19 global pandemic. Further information regarding these and other risks relating to GSI Technology's business is contained in the Company's filings with the Securities and Exchange Commission, including those factors discussed under the caption "Risk Factors" in such filings.

GSI TECHNOLOGY

OVERVIEW

LEVERAGING OVER 25 YEARS OF MEMORY CHIP DESIGN AND DEVELOPMENT TO BRING REVOLUTIONARY CHANGE TO COMPUTING

- **Founded 1995** in Silicon Valley; IPO in 2007
- **Fabless** memory chip company
- Leading provider of “**Very Fast**” SRAM¹
- **Largest portfolio** of high-performance memory
- Launching **Gemini** Associative Processing Unit (APU)
- **35% insider** ownership
- **\$122 million** market cap²

\$31M

LTM Annual Revenue

172

Employees Worldwide

110

Engineers

116

Patents Granted

\$51M

Cash and cash equivalents³

\$71M

Enterprise value

1. Static Random Access Memory (SRAM) operates at speeds less than 10 nanoseconds, as defined by Gartner Dataquest

2. Based on closing share price as of October 26, 2021.

3. Includes cash and cash equivalents, short-term investments, and long-term investments as of September 30, 2021.

CAPITAL EFFICIENT

CORE BUSINESS FUNDS OUR GROWTH

- Cap-ex light semiconductor business model – manufacture with TSMC using master die production process
- Strong cash generation historically
- 100% of R&D budget focused on new AI solution
 - \$5+ million quarterly R&D spend to develop Gemini APU and the software and algorithm libraries
- Core business and strong balance sheet provide funding for Gemini APU development and marketing

LEVERAGING EXPERTISE INTO NEW PRODUCT CATEGORIES

Legacy SRAM Memory

- Industry leading, largest portfolio of high-performance memory products
- SigmaQuad™ and SigmaDDR™ core business growth drivers
- SigmaQuad™ SRAMs recognized for industry-leading density and speeds
- 3rd and 4th Generation SRAM fastest off-the-shelf SRAM on market

Radiation Hardened SRAM

- 85%+ gross margin, ~\$30K ASP
- Satellites, missiles, high altitude flights

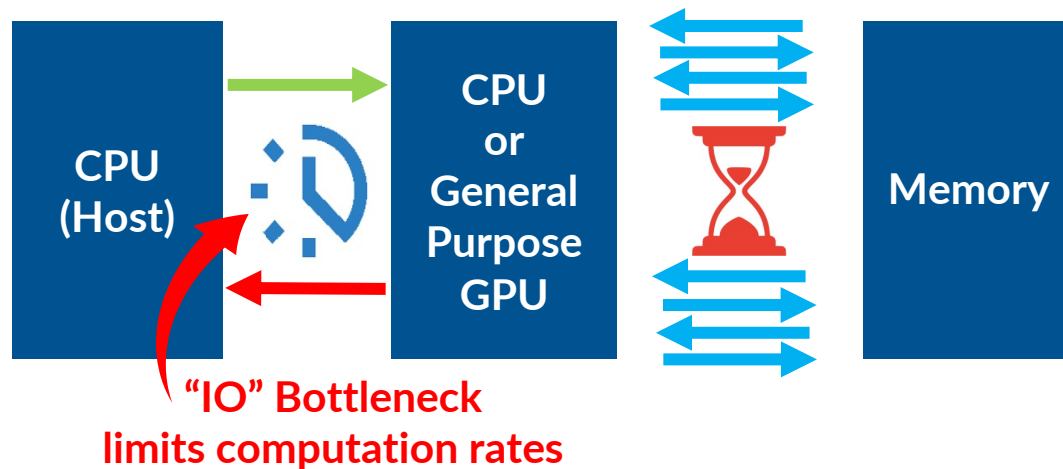
Gemini Associative Processing Unit (APU)

- Memory-centric parallel processing
- Speed and accuracy for extremely large data sets
- Scalable and customizable

Higher ASP, Higher Margin Products with Larger TAMs

AI PROCESSING LIMITATIONS

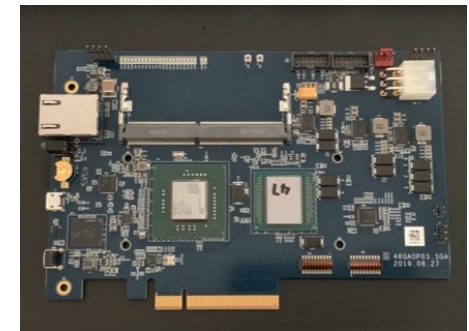
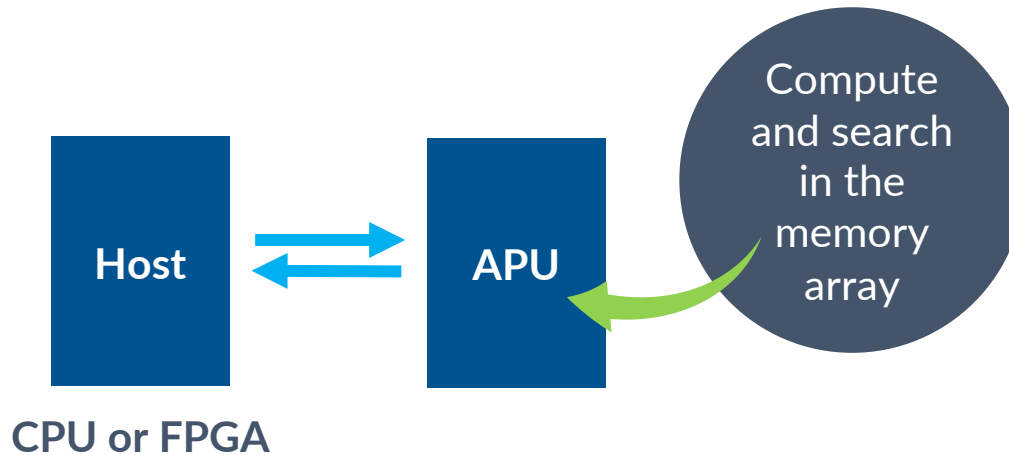
VON NEUMANN ARCHITECTURE CREATES A MASSIVE IO BOTTLENECK



- CPU/GPU limited by “von Neumann” bottleneck with large datasets
- Slower computation rates due to throughput limitations
- Significant power consumption
- Not a scalable system

APU REMOVES BOTTLENECK

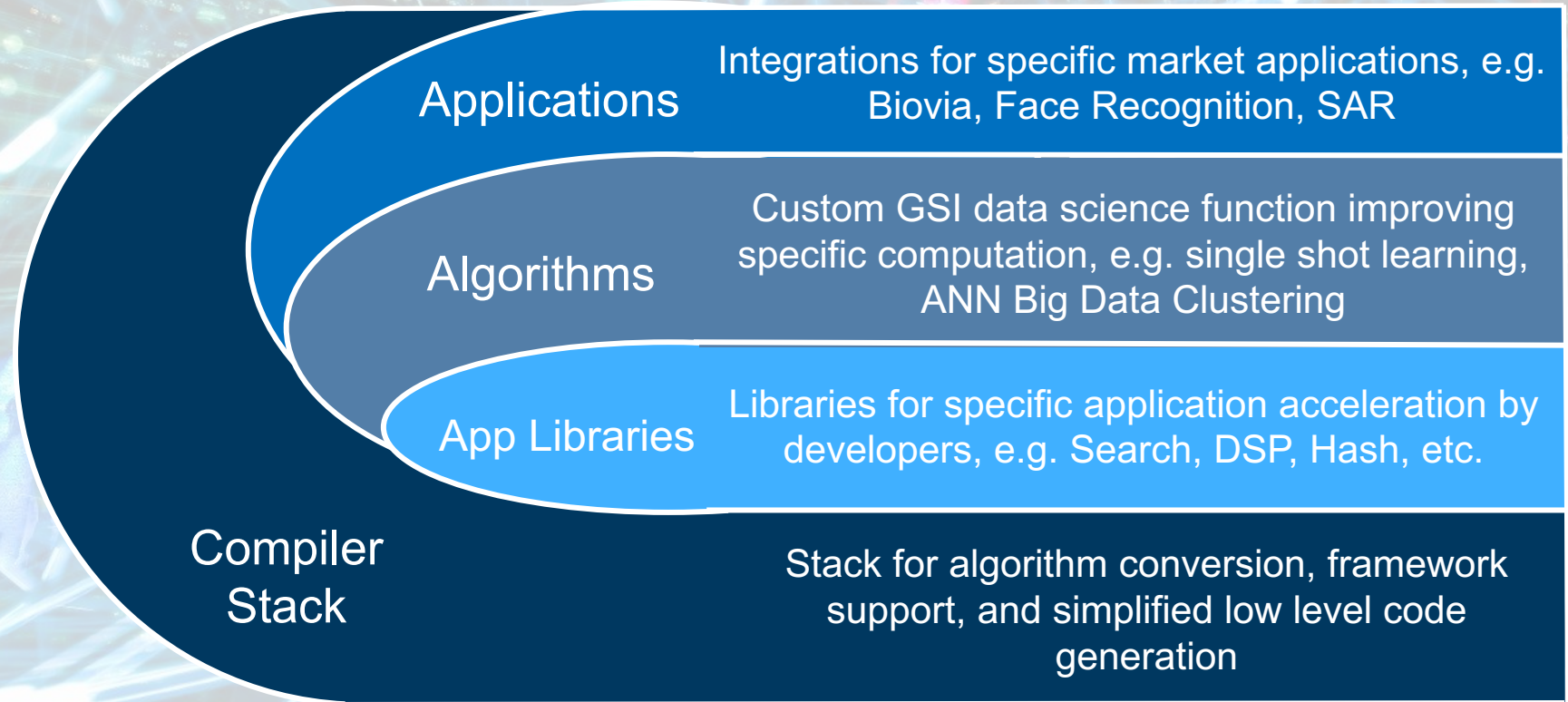
A REVOLUTIONARY COMPUTING MODEL



APU on Leda-G Board


- In-memory processing **reduces computation time** from minutes to seconds, milliseconds, or microseconds
- Significantly **reduced power consumption** and total cost of ownership
- Massive parallel data processing with **2 million-bit processors** per chip versus 1,000's in a GPU
- **Scalable** - unique feature to Gemini

APU SOFTWARE AND ALGORITHMS



TARGET APPLICATIONS

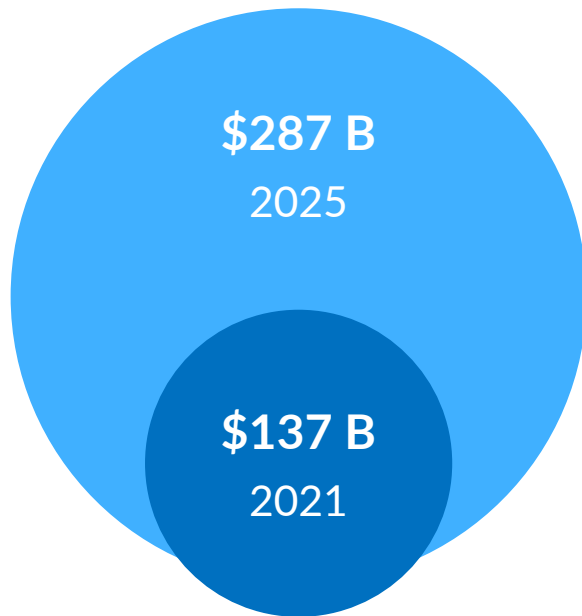
GEMINI-I EXCELS IN SIMILARITY SEARCH

Search Markets for Gemini-I	Nvidia GPU Google TPU Intel HABANA Graphcore IPU	CPU	FPGA	Gemini-I
Facial Recognition Drug Discovery & Toxicity SAR, ATR Signal Classification Object Detection Cryptography Visual & Video Search Elastic, AWS Open Search		x	x	
Gemini outperforms all current search solutions				

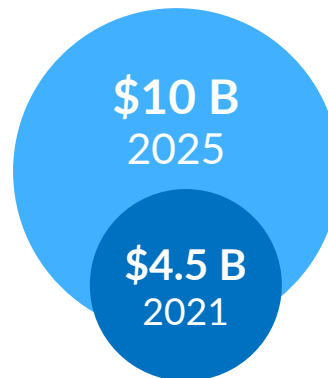
APU TAM/SAM

OPPORTUNITIES ACROSS MULTIPLE SEARCH MARKETS

TAM



SAM



Targeted SAM Applications

- Computer Vision
- SAR
- Drug Discovery
- Cybersecurity
- NoSQL Search Engine (SaaS)
- Elasticsearch; OpenSearch (SaaS)

Targeting High ASP, High Margin Markets

Source materials referenced for addressable market analysis and sizes cited on appendix slide 22.

THE POWER SAVING SOLUTION

COMPARISONS FOR A 5 KM BY 5 KM SAR IMAGE IN 1 SECOND AT 0.5 M RESOLUTION

Power Used	84 M KW	19.9 M KW	2.2 M KW
5-Year Total Cost ¹	\$13.4 M	\$3.2 M	\$0.35 M

GSI's APU
uses on
average
93%
less power

Intel Xeon Gold Based
~ 23 cabinets



NVIDIA V-100 based
~ 5 cabinets



GSI APU based
1/3 cabinet and portable

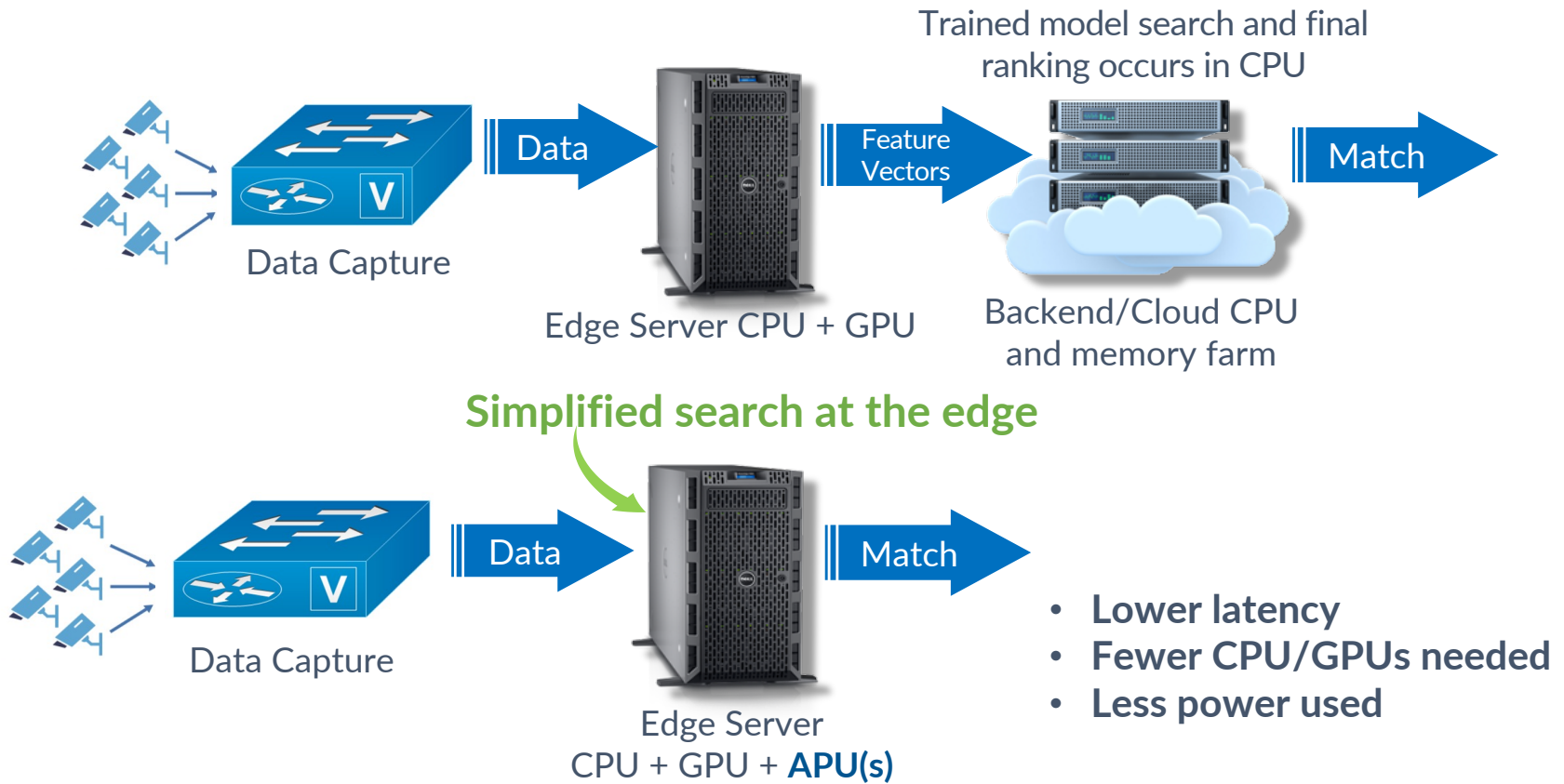


Lower power cost, lower system cost, lower cost overall¹

1. "Total Cost of Ownership" reflects hardware systems cost plus power cost calculated at average \$0.13 per kilowatt hour for US-based systems.

REAL-TIME EDGE RESULTS

TRADITIONAL FACIAL RECOGNITION VS APU LOCAL PROCESSING



GEMINI APU IN SPACE

RADIATION TOLERANT ONBOARD PROCESSING

Challenge

Sensor-intensive satellites processing massive datasets

- Insufficient satellite bandwidth for exchanging large amounts of data with ground stations
- Safe satellite constellation navigation requires rapid response

Rad Tolerant Gemini-I Solution

- Onboard AI, multiple data source integration, automatic target recognition, and weather analysis
- Crash avoidance and improved communications



With near real-time response
Gemini can avoid costly
collisions for the thousands
of satellites in space.

CHEMINFORMATIC

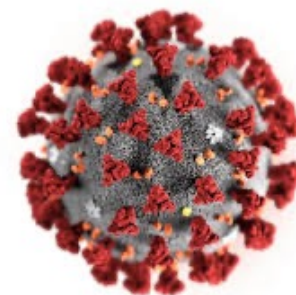
FASTER, LOWER-COST DRUG DEVELOPMENT

Challenge

- Drug discovery requires searching extensive molecular databases for molecules with similar properties to a known drug
- CPU-based systems require several minutes to complete only one molecule similarity search

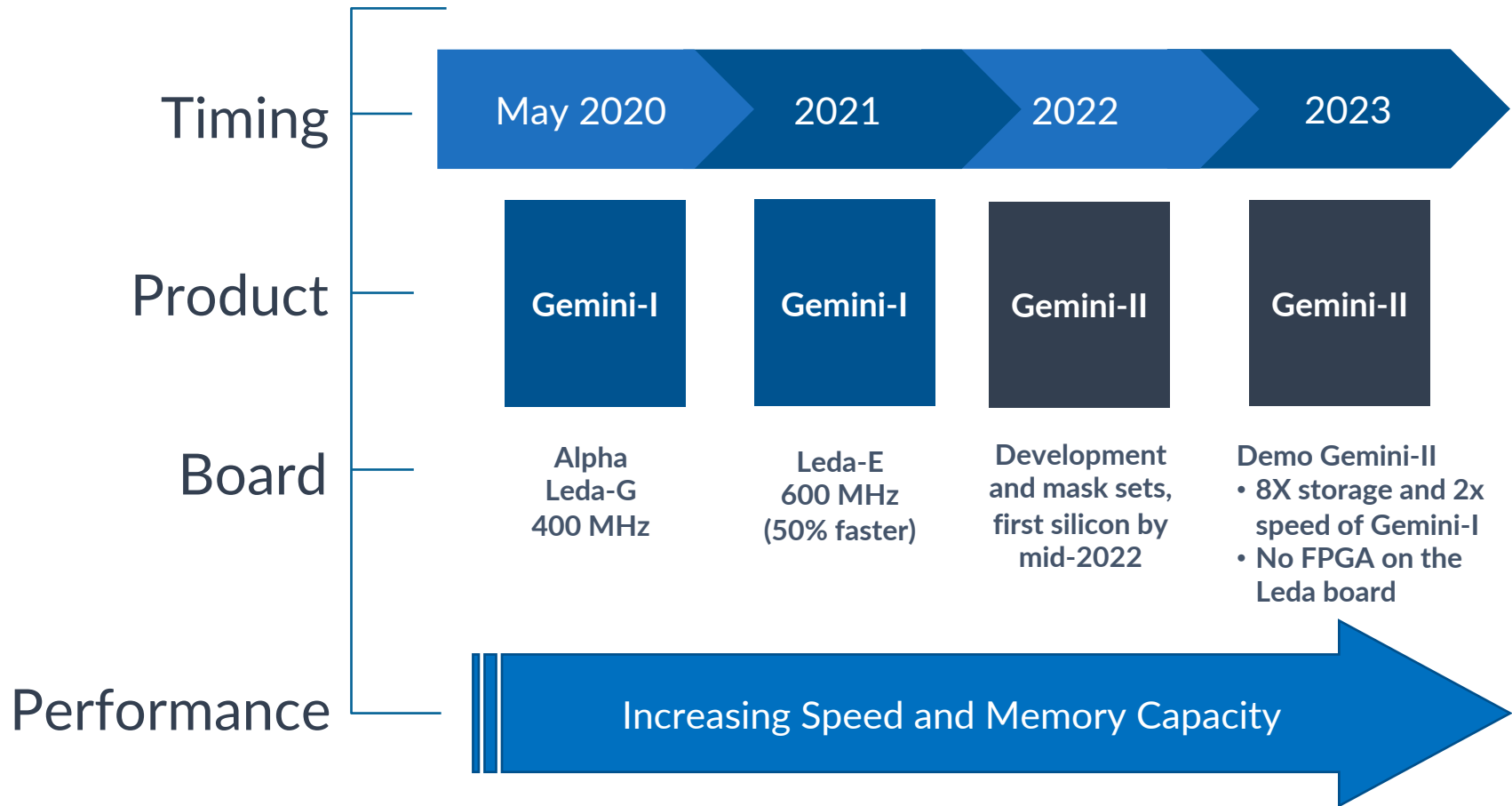
Gemini-I Solution

- Gemini-I's hyper-scale computational search is many orders of magnitude faster and can perform multiple searches simultaneously, with more frequent exact matches



In the fight against COVID-19, the Weizmann Institute is using Gemini-I in their search for an antiviral medications.

APU ROADMAP



WHY INVEST NOW?

- **Gemini APU expected to deliver significant future value**
 - **Timing** – recognition that a memory-centric processor is the ultimate solution to the “system bottleneck” problem
 - **Trends** – systems processing data sets approaching 1 billion need a smaller footprint, lower power usage, and lower total cost of ownership
 - **Validated** – Selected as a partner in **AWS Open Search project**
 - **Awareness** – with alpha and beta Gemini customers
- **Attractive risk/reward profile:**
 - Limited downside given ~40% of the company’s market cap is in cash with a low cash burn rate
 - Significant upside given the AI opportunity over three-to-five-year horizon



Thank you!



GSI TECHNOLOGY

High Performance Components
for Leading-Edge Technology

GSITechnology.com / IR Contact: GSIT@HaydenIR.com

APPENDIX

KEY TAKEAWAYS

- **Gemini-I targeting multiple applications in similarity search**
 - k-NN search plug-ins for elastic and AWS Open Search
 - Facial Recognition / Computer Vision
 - Drug Discovery and Toxicity
 - Elasticsearch & OpenSearch
 - Signal Classification and Object Detection
 - Cryptography
- **Executing on building sales pipeline for Gemini-I**
- **Trading below comparable valuations at 2.3X EV/TTM Sales and 2.4X market cap/total cash**
 - Gemini-I potential not reflected in current valuation

AI PROCESSOR OVERVIEW

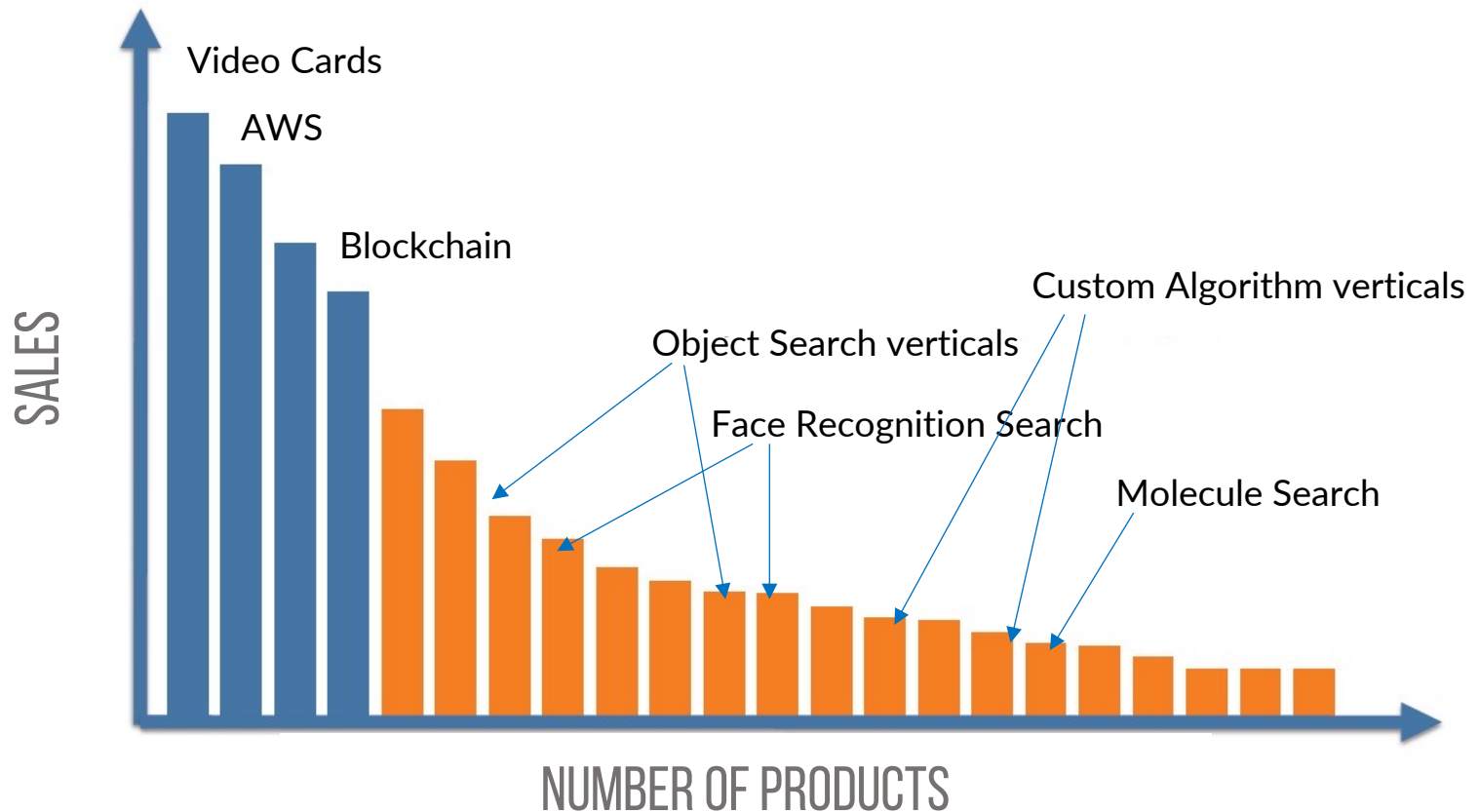
GEMINI-I EXCELS IN SIMILARITY SEARCH

- Visual search requires high processing speeds and accuracy
- Gemini-I speed and accuracy is ideal for visual search
- Gemini-II targeting inference and training (2022)

Application \ Processor	Nvidia GPU Google TPU Intel NERVANA NPP Graphcore IPU	ASIC	FPGA	Gemini-I
Similarity search	x	x	x	✓+
Training	✓	x	⊖	x
Inference	⊖	✓	✓	✓

DIVERSE MARKETS

LONG TAIL MARKET FOR AI SEARCH



NOTE: vertical height is for illustration and not indicative of scaled volume.

APU TAM/SAM

REFERENCED SOURCES FOR APU TAM

Computer Visions/ Face Recognition:

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2. <https://www.fortunebusinessinsights.com/industry-reports/image-recognition-market-101855><https://www.fortunebusinessinsights.com/industry-reports/image-recognition-market-101855>
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4. \$US86B in 2025
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SAR:

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4. <https://www.verifiedmarketresearch.com/product/nosql-database-market/><https://www.verifiedmarketresearch.com/product/nosql-database-market/>

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2. <https://www.vynzresearch.com/ict-media/artificial-intelligence-in-cyber-security-market><https://www.vynzresearch.com/ict-media/artificial-intelligence-in-cyber-security-market>
3. <https://industrygrowthinsights.com/report/artificial-intelligence-in-cybersecurity-market/><https://industrygrowthinsights.com/report/artificial-intelligence-in-cybersecurity-market/>
4. <https://www.marketdataforecast.com/market-reports/ai-in-cyber-security-market><https://www.marketdataforecast.com/market-reports/ai-in-cyber-security-market>
5. <https://www.marketsandmarkets.com/Market-Reports/artificial-intelligence-security-market-220634996.html><https://www.marketsandmarkets.com/Market-Reports/artificial-intelligence-security-market-220634996.html>

INCOME STATEMENT

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (in thousands, except per share data) (Unaudited)

	<u>Three Months Ended</u>			<u>Six Months Ended</u>	
	<u>Sept. 30,</u> <u>2021</u>	<u>June 30,</u> <u>2021</u>	<u>Sept. 30,</u> <u>2020</u>	<u>Sept. 30,</u> <u>2021</u>	<u>Sept. 30,</u> <u>2020</u>
Net revenues	\$ 7,797	\$ 8,791	\$ 6,659	\$ 16,588	\$ 13,280
Cost of goods sold	3,620	4,009	3,547	7,629	7,118
Gross profit	4,177	4,782	3,112	8,959	6,162
Operating expenses:					
Research & development	5,907	6,103	5,659	12,010	11,484
Selling, general and administrative	2,787	3,040	2,606	5,827	5,526
Total operating expenses	8,694	9,143	8,265	17,837	17,010
Operating loss	(4,517)	(4,361)	(5,153)	(8,878)	(10,848)
Interest and other income, net	(8)	(20)	(16)	(28)	90
Loss before income taxes	(4,525)	(4,381)	(5,169)	(8,906)	(10,758)
Provision for income taxes	42	(172)	62	(130)	549
Net loss	<u>\$ (4,567)</u>	<u>(\$4,209)</u>	<u>\$ (5,231)</u>	<u>\$ (8,776)</u>	<u>\$ (11,307)</u>
Net loss per share, basic	\$ (0.19)	(\$0.17)	\$ (0.22)	\$ (0.36)	\$ (0.48)
Net loss per share, diluted	\$ (0.19)	(\$0.17)	\$ (0.22)	\$ (0.36)	\$ (0.48)
Weighted-average shares used in computing per share amounts:					
Basic	24,229	24,095	23,617	24,162	23,529
Diluted	24,229	24,095	23,617	24,162	23,529

SUMMARY BALANCE SHEET

CONDENSED CONSOLIDATED BALANCE SHEETS (in thousands) (Unaudited)

	<u>Sept. 30,</u> <u>2021</u>	<u>March 31,</u> <u>2021</u>
Cash and cash equivalents	\$40,943	\$44,234
Short-term investments	9,791	9,717
Accounts receivable	3,653	3,665
Inventory	4,449	4,343
Other current assets	1,899	1,487
Net property and equipment	7,335	7,328
Long-term investments	2,759	5,792
Other assets	10,727	11,046
Total assets	<u>\$81,556</u>	<u>\$87,612</u>
Current liabilities	\$7,144	\$7,462
Long-term liabilities	4,491	4,558
Stockholders' equity	69,921	75,592
Total liabilities and stockholders' equity	<u>\$81,556</u>	<u>\$87,612</u>

EXPERIENCED MANAGEMENT TEAM

Name	Title	Years of Experience	Years with GSI	Prior Companies
Lee-Lean Shu	Chairman and CEO	43	26	Sony, AMD
Doug Schirle	Chief Financial Officer	43	22	Cypress, Pericom
Didier Lasserre	VP Sales and IR	33	24	Cypress, Solectron
Avidan Akerib	VP of Associative Computing	41	6	MikaMonu, NeoMagic
Patrick Chaung	SR VP of Memory Design	45	12	Sony, AMD
Robert Yau	VP of Engineering	44	26	Sony, Mosel Vitelic
Bor-Tay Wu	VP of Taiwan Operations	41	25	Atalent, AMD



Thank you!



GSI TECHNOLOGY

High Performance Components
for Leading-Edge Technology

GSITechnology.com / IR Contact: GSIT@HaydenIR.com