



Nasdaq: DAIO

Anthony Ambrose  
September 2022



# Safe Harbor

Statements in this presentation concerning economic outlook, expected revenue, expected margins, expected savings, expected results, orders, deliveries, backlog and financial positions, semiconductor chip shortages, supply chain expectations, as well as any other statement that may be construed as a prediction of future performance or events are forward-looking statements which involve known and unknown risks, uncertainties and other factors which may cause actual results to differ materially from those expressed or implied by such statements. Forward-looking statement disclaimers also apply to the global COVID-19 pandemic, including the expected effects on the Company's business from Shanghai's COVID-19 lockdowns, the duration and scope, impact on the demand for the Company's products, the pace of recovery for the COVID-19 pandemic to subside, and the Russian invasion of Ukraine including any related international trade restrictions. These factors include uncertainties as to the ability to record revenues based upon the timing of product deliveries, shipping availability, installations and acceptance, accrual of expenses, coronavirus related business interruptions, changes in economic conditions, part shortages and other risks including those described in the Company's filings on Forms 10-K and 10-Q with the Securities and Exchange Commission (SEC), press releases and other communications.

Furthermore, the matters that we discuss today will include forward-looking statements that involve risks factors that could cause Data I/O Corporation's results to differ materially from management's current expectations. We encourage you to review the Safe Harbor statement contained in the earnings releases as well as our most recent SEC filings for a complete description.

Additionally, those forward-looking statements are made as of today, and we take no obligation to update them.

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# Data I/O at a Glance

## What We Do

- Silicon Device Programming Equipment
- Security Deployment as-a-Service

## Solutions

We deliver the most secure and efficient systems to deploy firmware, data and secrets into IoT and automotive devices in high volume electronics manufacturing



Founded in  
1972



Patents



ISO 9001:2015  
Certifications



Global Service  
& Support



100

Employees

>57

US &  
International  
Patents

1.5

Billions of  
Devices  
Programmed  
Annually

>400

Automated  
Programming  
Systems Globally

>40

Countries with  
Sales & Service

# Company Snapshot

## Recent Achievements and Trends

- Global Leader in programming revenue. Over 420 PSV systems sold since inception representing over 1.5 billion units/year capacity in the installed base. Installed base growth drives increase in recurring revenue over time.
- Strong Bookings Momentum throughout 2022. Second Half '22 Revenue growth driven by record backlog and recovery from Shanghai COVID lockdown. Sales funnel remains strong despite Global Macro headwinds.
- Strong momentum in Automotive Electronics for long term growth
  - 8 of top 9 and 18 of top 20 Automotive Electronics companies are customers. ~58% of 2021 orders from Automotive Electronics customers.
  - Analysts forecast 10-15% CAGR for Automotive Semiconductors to 2030.
- Emerging SentiX® Security Provisioning Platform; Doubling of Revenue in 2021 with key wins in Automotive, Artificial Intelligence, Intelligent metering

## Committed to Growing Shareholder Value

- Focusing programming core competencies on higher growth, higher margin vertical markets with greater recurring/consumable sales. Target to reach over 50% recurring revenue within 5 years.
- Differentiated market position through technology leadership and global support
- Approx. 13% of stock (fully diluted) held or managed by insiders so that management and Board are aligned with shareholders
- 3 buybacks since 2012 for \$8.1 million returned to shareholders

## Company Snapshot <sup>(1)(2)</sup>

NASDAQ:	DAIO
Headquarters:	Redmond, WA
Established:	1972
Stock Price:	\$3.15
Market Cap:	\$27M
Diluted Shares:	8.7M
3-M Daily Avg. Volume:	8,350 shares
Sales (TTM):	\$22.9M
Net Income (TTM):	\$(2.7)M
Diluted EPS (TTM):	\$(0.31)
Adj. EBITDA <sup>(3)</sup> (TTM):	\$(316,000)
Cash & Sec. (6/30/22):	\$10.3M (\$1.18/share)
Debt (6/30/22):	\$0.0

(1) Stock price, market cap and volume as of 7/28/22 intraday; Source: Yahoo

(2) Financials for the TTM period ended 6/30/22 or as noted

(3) Adj. EBITDA is a non-GAAP financial measure. A reconciliation is provided in this presentation

# Investment in DAIO



- Publicly traded pure play targeting the rapidly growing automotive electronics market



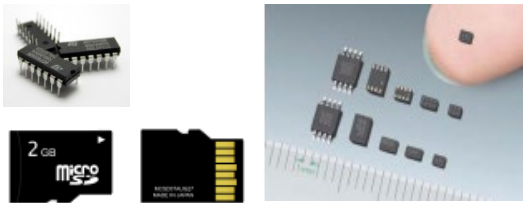
- Strong cash generator, high operating leverage and no debt -- \$1.18 per share in cash



- Optionality with SentiX security deployment; multiple ways of software monetization targeting all cloud-based and IoT ecosystems

# Supporting the Secure Digital World

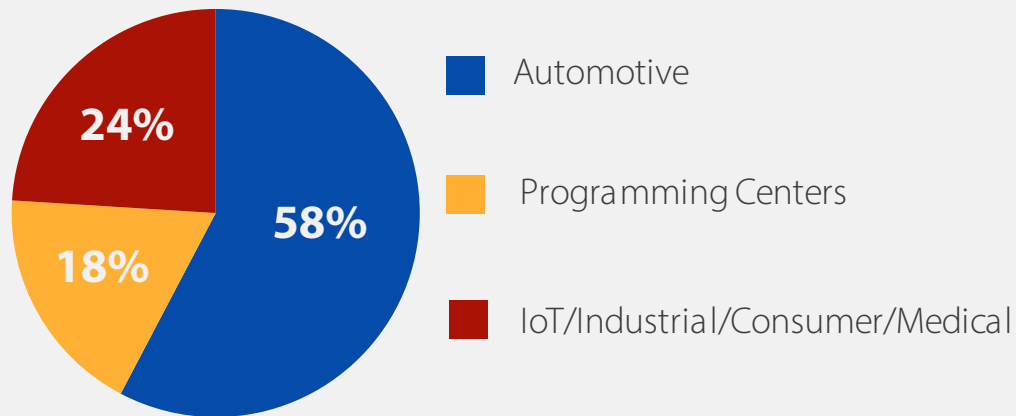
Data I/O's programming systems are used by the world's leading manufacturers, programming centers, and contract manufacturers, to securely program integrated circuits and bring their devices to life.



# Serving Customers Globally in Growing Markets

- The largest programming company in the world, 2-3 times larger than the next programming company
- Trusted supplier to 8 out of the top 9 and 18 of the top 20 automotive electronics suppliers
- Providing mission critical medical applications for Class I and Class II devices
- Global footprint with headquarters in Redmond, WA, USA and subsidiary offices in Shanghai, China and Munich, Germany

2021 Annual Orders by End Markets





# Market Leading Technology

## Industry Leading Products

Automated Handlers



Programming Engines



Security Deployment Platforms



## History of Innovation

Data I/O's products are viewed as the "gold standard" for advanced programming equipment, IP management and security solutions

Research and Development focused on:

- Security Deployment Platform technology for Internet of Things and Automotive applications
- Programming technology to support explosive demand for automotive electronics using large FLASH Memory and microcontroller devices
- Integration into the Cloud and Factory MES Systems

During the past 15 years, Data I/O has been granted ~57 U.S. and International utility patents. Currently, Data I/O has approximately 20 patents related to the SentiX platform and security provisioning technology

## Over 35 Industry Awards



Service Excellence Award for World-Class **Device Programming**



NPI Award & Mexico Technology Award for New **Job Composer** Software Application



Technology Award, 5<sup>th</sup> Industry Award for Universal Flash Storage (**UFS**) Support on LumenX



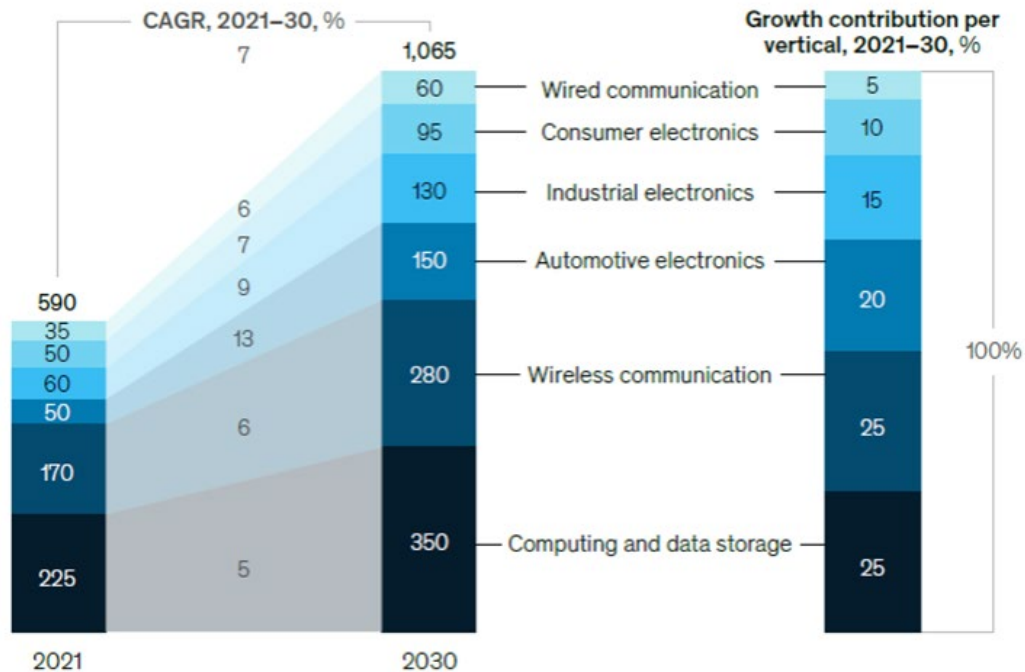
# Market Outlook

Bringing Devices to Life



# Analysts Predict Strong Growth in Automotive Semiconductor Content, Led by Electrification

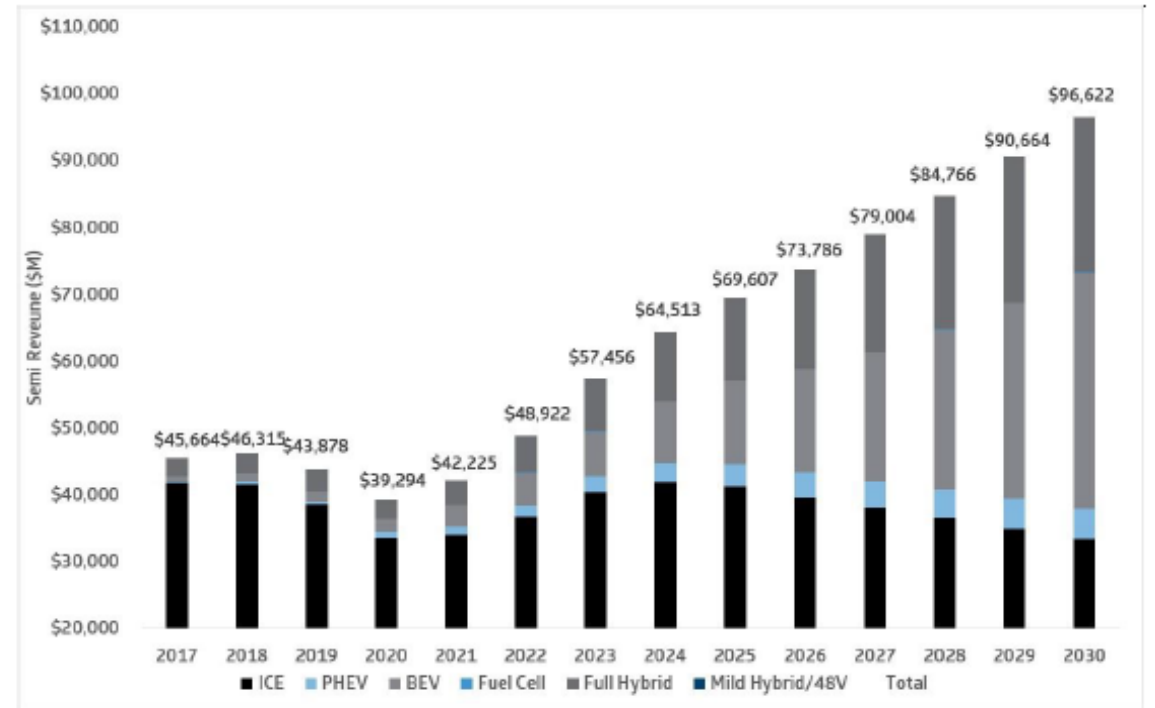
## Growth in Global Semiconductor Market Value by Vertical Market (\$ billions)



Note: Figures are approximate.

Source: McKinsey & Company report, April 2022

## Total Automotive Semiconductor Forecast (\$ millions)



Source: Cowen and Company Estimates 2021 and beyond

# Automotive Electronics Growth Areas



## Infotainment/ IVI

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2D map / application

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Heads-up display

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Digital Cluster

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## Electrification

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New powertrain

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Charging  
infrastructure

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Better technology

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Modularization

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## ADAS/Autonomous Driving

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Sensors

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High performance  
computing

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Big data/Analytics

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Artificial intelligence/Deep  
learning

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Navigation & guidance

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## Connectivity

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Vehicle

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Infrastructure

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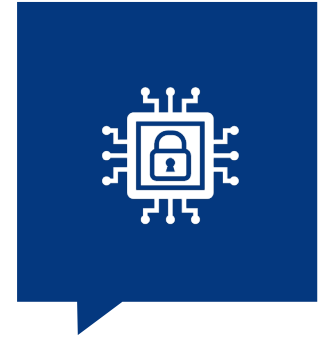
Cloud

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Wearables & personal  
devices

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## Security

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Ridesharing

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Car sharing

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Flexible bus

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Micromobility

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Delivery

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# How Data I/O Markets Grow

## Market Forces

IoT and Automotive Growth

- More Semiconductor Content
- Devices Get Smaller
- Move Towards Automation

Products will increase their code size as customers want more features

Products will be more secure, creating new opportunities



## Programming Impact

Unit Growth

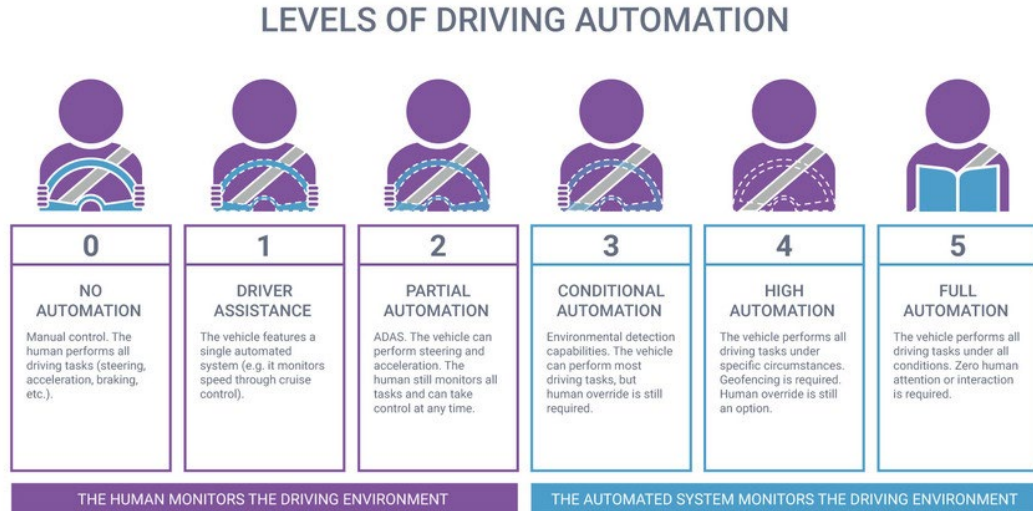
Bit Growth

Added Complexity + Security Requirements

**Programming Demand = Units x Bits x Security**

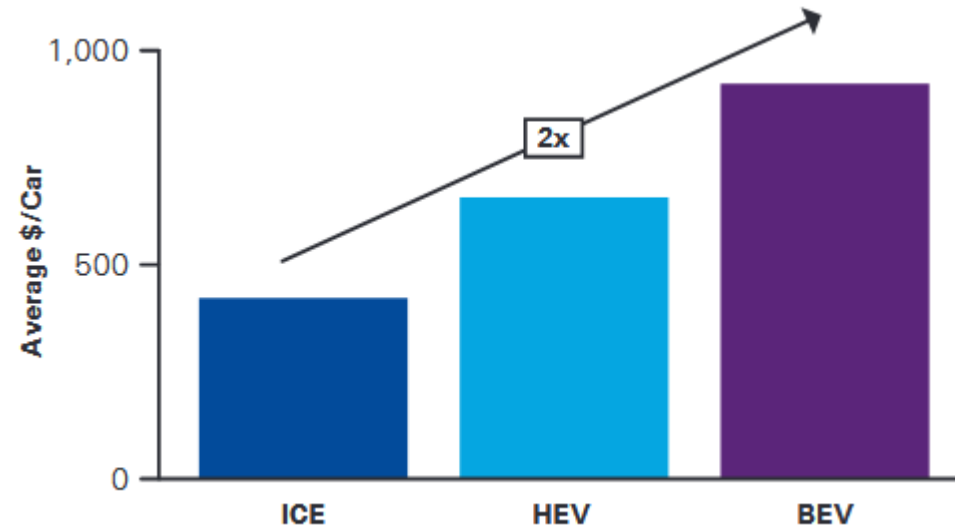
# Automotive Electronics Primary Market Catalysts

## Autonomous Driving



New Systems Deployed Increase in Memory Size

## Electrification of Vehicles (EVs)

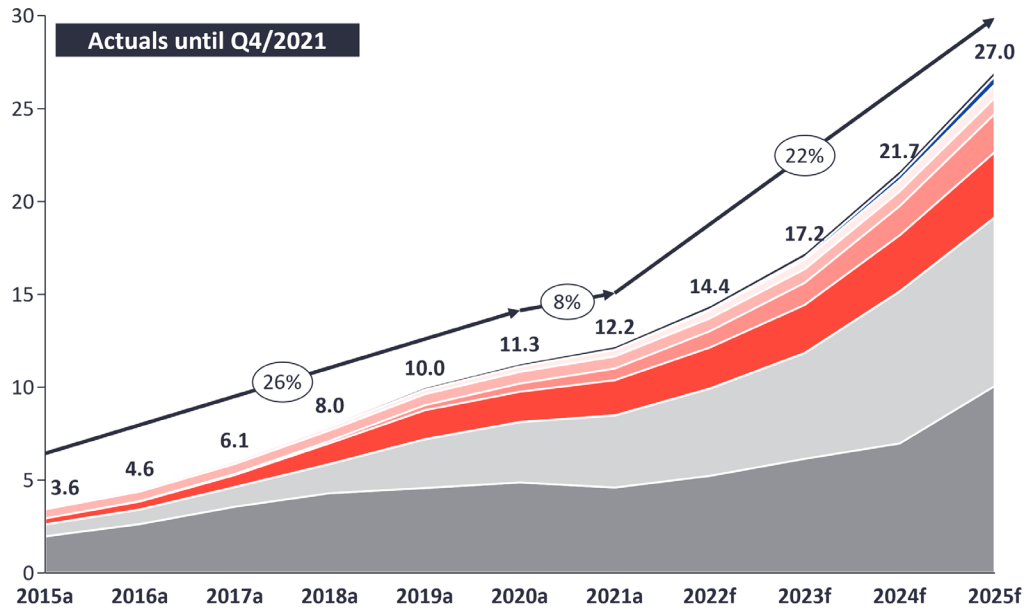


Increase in # and Size of Programmable Silicon

# IoT Growth Across a Number of Markets

## Global IoT Market Forecast [in billion connected IoT devices]

Number of global active IoT Connections (installed base) in Bn



CONNECTIVITY TYPE	CAGR 20-21	CAGR 21-25
Wireless Neighborhood Area Networks (WNAN)	17%	11%
5G IoT	-	159%
Other	22%	20%
Wired IoT	4%	7%
LPWA	42%	34%
Legacy Cellular (2G/3G/4G)	16%	17%
Wireless Local Area Networks (WLAN)	19%	24%
Wireless Personal Area Networks (WPAN)	-6%	22%

XX% = CAGR

**Note:** IoT Connections do not include any computers, laptops, fixed phones, cellphones or tablets. Counted are active nodes/devices or gateways that concentrate the end-sensors, not every sensor/actuator. Simple one-directional communications technology not considered (e.g., RFID, NFC). Wired includes Ethernet and Fieldbuses (e.g., connected industrial PLCs or I/O modules); Cellular includes 2G, 3G, 4G; LPWAN includes unlicensed and licensed low-power networks; WPAN includes Bluetooth, Zigbee, Z-Wave or similar; WLAN includes Wi-fi and related protocols; WNAN includes non-short range mesh, such as Wi-SUN; Other includes satellite and unclassified proprietary networks with any range.

**Source:** IoT Analytics Research 2022. We welcome republishing of images but ask for source citation with a link to the original post and company website.

# IoT Device Security by SentiX®

Based on Data I/O's award-winning PSV family of products, the SentiX security deployment platform supports hardware-based security for mass-market IoT edge devices and enables OEMs to protect revenue generating business models and secure their supply chain.

OEMs require robust hardware and software security for IoT devices to protect their brand and meet regulation, data privacy, and safety requirements. The best design approach is to build hardware-based security into their products.

SentiX secures the global electronics supply chain and protects IoT device intellectual property from point of inception to deployment in the field and provisions security objects and secrets into semiconductor devices for low volume prototyping applications and high-volume production through an automated programming system which enables secure provisioning of credentials into security ICs and microcontrollers.

With more than 20 security patents granted, SentiX from Data I/O offers a unique and highly differentiated approach for a large and fast-growing market addressing unmet cybersecurity concerns.



Brand Protection



IP Protection



Regulation



Supply Chain Integrity





# OEMs Using Our Technology

## Smart Lock Company

Smart locks and the brands of the OEMs manufacturing them depend on robust security and low power consumption found in hardware security-based microcontrollers.



## Water Meter OEM

Heated and chilled water metering is being mandated in Germany and requires strong security to protect revenue and meet regulations.



## Electric Meter OEM

A large smart meter manufacturer is using pre-programmed provisioning to secure their supply chain and protect their revenue and brand.



## Electric Vehicle Manufacturer

An electric vehicle manufacturer is using a trusted platform module to secure its supply chain and prevent cloning of its charging network.



## Industrial Marking OEM

An industrial marking and traceability solutions OEM protects accessory revenue and enables supply chain integrity with a secure microcontroller.



## Logistics Solution Provider

A logistics technology provider uses hardware RoT to protect user data and maintain privacy.



# New Partnerships for Growth

SentriX  
Deployments



Silicon Partners



Technology Partners

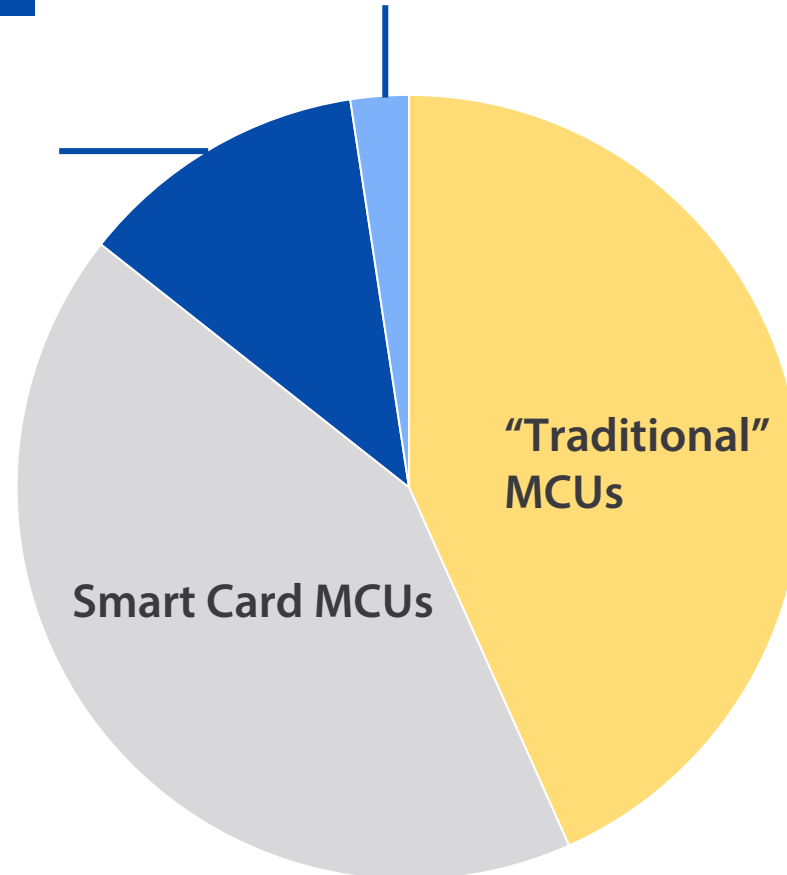


# Billions of Security Enabled Devices

2023 Security Market:  
3-4 Billion Units

Standalone Secure  
Elements  
AICs, ESEs, TPMs

“Secure” MCUs with  
Embedded Secure Elements



Total Market:  
>25 Billion Units

# Our Opportunity with SentiX

- The Internet of Things is a huge growth market, with security of supply chain and protection of firmware top of mind
- Data I/O and SentiX partners provide a scalable, easy to develop and deploy service for customers of all sizes. Initial applications are the 'tip of the iceberg' of what is possible with SentiX
- Data I/O can now scale SentiX capabilities to over 420 PSV family systems already deployed
- Per Part Fees and Licensing drives high margin recurring revenue growth
- Capital equipment system sale with annual software license made available in 2021 – recorded first sale
- Next generation SentiX Security Deployment as-a-Service including updated hardware and SentiX Product Creator™ to support fully customizable and SentiX GO™ pre-configured security profiles

# Financial Overview

Bringing Devices to Life



# Financial Overview

## Second Quarter 2022 Highlights

- Net sales of \$4.8 million; bookings of \$6.4 million
- Quarter-end backlog of \$5.8 million
- Gross margin as a percentage of sales of 57.8%
- Net loss of (\$657,000) or (\$0.08) per share
- Adjusted EBITDA\* of (\$65,000)
- Cash & Equivalents of \$10.3 million; no debt
- Automotive Electronics represented 55% of second quarter 2022 bookings
- SentiX<sup>®</sup> customer moving to volume production
- 6 new customer wins

\*Adjusted EBITDA is a non-GAAP financial measures. A reconciliation is provided in the tables of this presentation.

# Balance Sheet and Capital Structure Overview

## Balance Sheet Highlights

### At June 30, 2022:

- \$10.3 million in cash and cash equivalents
- No debt
- \$15.9 million of net working capital
- Total stockholders' equity of \$17.4 million, or approx. \$2.00 per diluted share outstanding
- EV/Sales at 0.75<sup>(3)</sup>
- NOLs of approximately \$13.0 million

## Enterprise Value (\$K)

Market Cap <sup>(1)</sup>	\$ 27,433
Plus Total Debt <sup>(2)</sup>	0
Less Total Cash <sup>(2)</sup>	<u>\$ 10,291</u>
Enterprise Value	\$ 17,142
Diluted Shares Outstanding <sup>(2)</sup>	8,709,000

<sup>(1)</sup> At 7/28/22 (intraday)

<sup>(2)</sup> At 6/30/22

<sup>(3)</sup> Sales based on TTM through 6/30/22 financial results

## Balance Sheet Strategy

- Important to maintain strong balance sheet in a cyclical industry, with about 60% of revenues from capital equipment sales
- Financial flexibility allows the company to:
  - Withstand, and advance during, downturns in semi cycle and COVID-19
  - Invest in organic and acquisitive growth opportunities for the long term
  - Develop recurring revenue streams
- \$2 million buyback completed in quarter ended 9/30/19
- Approx. \$8.1 million returned to shareholders from buybacks authorized in '12, '16 and '18



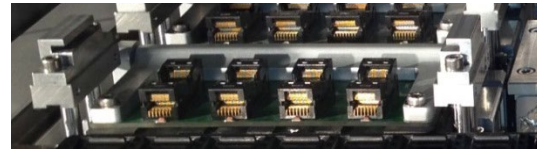
# Growing Recurring Revenue Mix

## Capital Equipment

- Approx. 58% of 2021 sales
- Off-line and in-line programming systems
- Automated systems cost \$68K-\$677K
- Manual systems cost \$10K-\$52K
- Usually last 5-7 years
- Adapters fit to these products
- Installed base drives recurring consumables sales

## Adapters

- Approx. 30% of 2021 sales
- Usually last 3-24 months



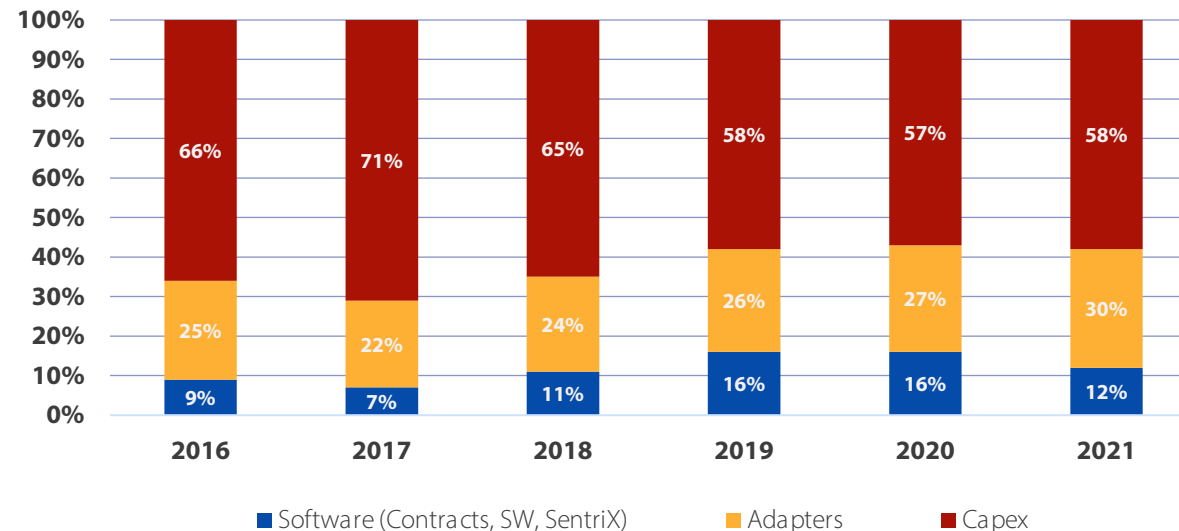
## Software, SentiX, Service

- Approx. 12% of 2021 sales
- Annual Software/Service Contracts
- Device Supports
- SentiX Revenues



### 2021 Highlight

Total consumable revenue grew for the fourth consecutive year on strength of adapter sales



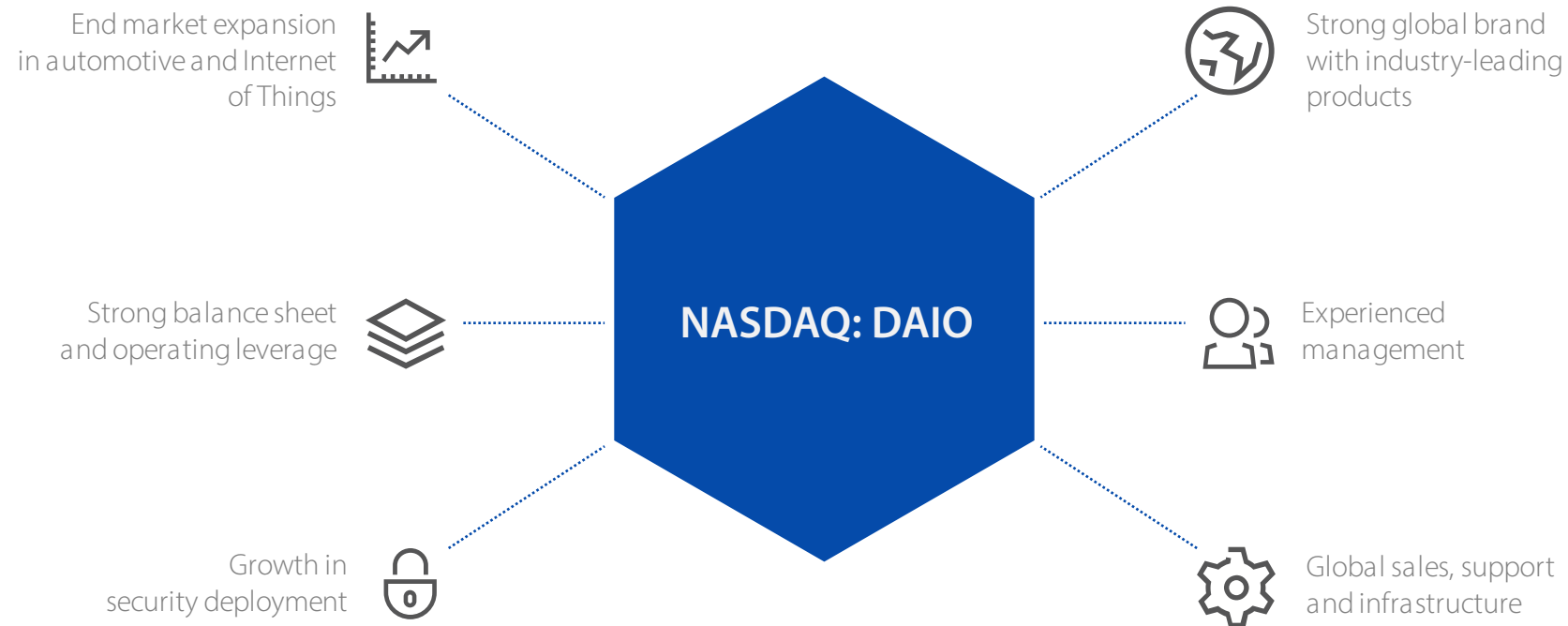
# Operations Update

Data I/O Shanghai Operations partially re-opened in May and fully re-opened June 1. We are now shipping systems and adapters from Shanghai. We cleared out the systems backlog from the first quarter by the end of June, and in July became fully operational.

Data I/O Redmond Operations maintained full systems production during this time, and expanded adapter manufacturing capacity.

We are currently running at full capacity in both locations, with systems lead times extending. Demand is strong despite Global Macro Economic conditions.

# Investment Merits: Positioned for Long-Term Growth



**Strong Bookings Through 1H22 and Record Backlog Create Forward Upside**

**Impact of Semi Shortages Abating**

**...with Near Term Catalysts**

A large conference room with a stage at the front. A screen on the stage displays the Data IO logo. A person is standing on the stage. The room is filled with people seated at tables, each with a laptop. The scene is dimly lit, with the stage area being brighter.

*Data IO*

**Thank You!**

**NASDAQ: DAIO**

For more information, please go to  
<https://www.dataio.com/Company/Investor-Relations/Data-I-O-Profile>

**Data IO**

# Management Team & Backup Financial Reconciliation

Bringing Devices to Life



# An Experienced Team of Technology Leaders

## Anthony Ambrose - President and CEO



Anthony Ambrose joined Data I/O in October 2012 as President, CEO and a Board Member. With a passion for product development and new technology, he led product divisions and global engineering teams at Intel and Radisys for over a decade, creating the standard high-volume server platforms in enterprise and telecom markets. Mr. Ambrose earned a Bachelor of Science in Engineering, Magna cum Laude, from Princeton University, and completed the Stanford Graduate School of Business Director Symposium. He has two US patents granted and is often requested to speak on connected and mobility innovations within the automotive electronics, industrial information technology, IoT and medical industries.

## Joel Hatlen - Vice President, COO and CFO



Joel Hatlen joined Data I/O in September 1991 and has been our Vice President, Chief Financial Officer, Secretary and Treasurer since January 1998. He served as Chief Accounting Officer since February 1997 and served as Corporate Controller from December 1993 to December 1997. Previously, he was Tax Manager and Senior Tax Accountant. From September 1981 until joining Data I/O, Joel was employed by Ernst & Young LLP as a Certified Public Accountant, where his most recent position was Senior Manager. Joel holds a Master's in Taxation from Golden Gate University and a Bachelor's in Business Administration in Accounting from Pacific Lutheran University.

## Rajeev Gulati - Vice President and CTO



Rajeev Gulati joined Data I/O in July 2013 and is our Chief Technology Officer and Vice President of Engineering. Prior to Data I/O, Rajeev served as Director of Software Engineering for AMD responsible for tools, compiler strategy and execution from 2006 to 2013. He has an extensive background in software, systems and applying technology to develop new markets. Previously, he served as Director of Strategy and Planning at Freescale from 2004 to 2006; as Director of Embedded Products at Metrowerks from 2000 to 2004 and Director of Compilers, Libraries & Performance Tools from 1997 to 2000 and programmer positions at Apple Computer, IBM and Pacific-Sierra Research. Rajeev holds a Master's of Science in Electrical & Computer Engineering from the University of Texas, Austin and a BE in Electrical Engineering from Delhi College of Engineering, New Delhi.

## Michael Tidwell - Vice President Marketing & Business Development



Michael joined Data I/O in May 2019 and brings a wealth of experience in Software, Security and Product Management to Data I/O. Prior to Data I/O, he was Vice President of Marketing & Business Development at Tignis, an AI and machine learning startup. From 2012 to 2018 Michael was head of Marketing and Business Development at Sansa Security, a leading software security IP provider that was sold to ARM Holdings. Prior to Sansa, Michael was Vice President of Business and Market Development at BSQUARE Corporation. Michael has a Master's of Science in Electrical Engineering from the University of Washington and a Bachelor's of Electrical Engineering (Summa Cum Laude) from Georgia Institute of Technology.



# Adjusted EBITDA Reconciliation

## NON-GAAP FINANCIAL MEASURE RECONCILIATION

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
(in thousands)				
Net Income (loss)	(\$657)	(\$29)	(\$2,477)	(\$362)
Interest (income)	(1)	-	(2)	(3)
Taxes	61	75	519	107
Depreciation and amortization	152	150	293	348
EBITDA earnings (loss)	(\$445)	\$196	(\$1,667)	\$90
Equity compensation	380	401	671	680
Adjusted EBITDA, excluding equity compensation	(\$65)	\$597	(\$996)	\$770



# Adjusted EBITDA Reconciliation – 2014-2021

## NON-GAAP FINANCIAL MEASURE RECONCILIATION

(in thousands)	Twelve Months Ended December 31,							
	2021	2020	2019	2018	2017	2016	2015	2014
Net Income (loss)	(\$555)	(\$3,964)	(\$1,187)	\$1,606	\$5,449	\$1,656	\$927	\$1,099
Interest (income) expense	(\$11)	(\$14)	(\$53)	(\$37)	(\$29)	(\$44)	(\$105)	(\$159)
Taxes	\$112	\$387	\$31	\$291	(\$288)	\$36	(\$5)	\$7
Depreciation and amortization	\$667	\$815	\$868	\$955	\$822	\$602	\$542	\$593
EBITDA earnings (loss)	\$213	(\$2,776)	(\$341)	\$2,815	\$5,954	\$2,250	\$1,359	\$1,540
Equity compensation	\$1,238	\$1,467	\$1,171	\$1,230	\$714	\$520	\$435	\$400
Restructure/Impairment charge	-	943	-	-	-	-	-	\$13
Adjusted EBITDA earnings (loss), excluding equity compensation and restructure/impairment charge	\$1,451	(\$366)	\$830	\$4,045	\$6,668	\$2,770	\$1,794	\$1,953

# Income Statement

**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(in thousands, except per share amounts)  
(UNAUDITED)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net Sales	\$4,769	\$6,733	\$9,734	\$12,748
Cost of goods sold	<u>2,011</u>	<u>2,896</u>	<u>4,673</u>	<u>5,573</u>
Gross margin	2,758	3,837	5,061	7,175
Operating expenses:				
Research and development	1,557	1,673	3,173	3,279
Selling, general and administrative	<u>1,928</u>	<u>2,054</u>	<u>3,976</u>	<u>4,116</u>
Total operating expenses	<u>3,485</u>	<u>3,727</u>	<u>7,149</u>	<u>7,395</u>
Operating income (loss)	(727)	110	(2,088)	(220)
Non-operating income (loss):				
Interest income	1	-	2	3
Gain on sale of assets	-	-	57	-
Foreign currency transaction gain (loss)	<u>130</u>	<u>(64)</u>	<u>71</u>	<u>(38)</u>
Total non-operating income (loss)	<u>131</u>	<u>(64)</u>	<u>130</u>	<u>(35)</u>
Income (loss) before income taxes	(596)	46	(1,958)	(255)
Income tax (expense) benefit	<u>(61)</u>	<u>(75)</u>	<u>(519)</u>	<u>(107)</u>
Net income (loss)	<u><u>(\$657)</u></u>	<u><u>(\$29)</u></u>	<u><u>(\$2,477)</u></u>	<u><u>(\$362)</u></u>
Basic earnings (loss) per share	(\$0.08)	\$0.00	(\$0.29)	(\$0.04)
Diluted earnings (loss) per share	(\$0.08)	\$0.00	(\$0.29)	(\$0.04)
Weighted-average basic shares	8,709	8,517	8,665	8,469
Weighted-average diluted shares	8,709	8,517	8,665	8,469

# Balance Sheet

## CONSOLIDATED BALANCE SHEETS (in thousands, except per share data) (UNAUDITED)

	June 30, 2022	December 31, 2021
<b>ASSETS</b>		
CURRENT ASSETS:		
Cash and cash equivalents	\$10,291	\$14,190
Trade accounts receivable, net of allowance for doubtful accounts of \$83 and \$89, respectively	4,165	3,995
Inventories	6,925	6,351
Other current assets	575	737
TOTAL CURRENT ASSETS	<u>21,956</u>	<u>25,273</u>
Property, plant and equipment – net	1,040	946
Other assets	2,542	2,838
TOTAL ASSETS	<u>\$25,538</u>	<u>\$29,057</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
CURRENT LIABILITIES:		
Accounts payable	\$1,848	\$1,373
Accrued compensation	1,557	2,496
Deferred revenue	1,252	1,507
Other accrued liabilities	1,374	1,413
Income taxes payable	60	-
TOTAL CURRENT LIABILITIES	<u>6,091</u>	<u>6,789</u>
Operating lease liabilities	1,897	2,277
Long-term other payables	198	138
COMMITMENTS	-	-
STOCKHOLDERS' EQUITY		
Preferred stock -		
Authorized, 5,000,000 shares, including 200,000 shares of Series A Junior Participating		
Issued and outstanding, none	-	-
Common stock, at stated value -		
Authorized, 30,000,000 shares		
Issued and outstanding, 8,814,279 shares as of June 30, 2022 and 8,621,007 shares as of December 31, 2021	21,386	20,886
Accumulated earnings (deficit)	(4,488)	(2,011)
Accumulated other comprehensive income	454	978
TOTAL STOCKHOLDERS' EQUITY	<u>17,352</u>	<u>19,853</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$25,538</u>	<u>\$29,057</u>