NASDAQ: DAIO

Data I/O Corporation
May 2020
Investor Presentation

Safe Harbor

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.

At a Glance

Founded in 1972

NASDAQ: DAIO

ISO 9001:2015 Certifications

Global Service & Support

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

100
Employees

1B
Devices Programmed Annually

~300
Automated Programming Systems Globally

>40
Countries with Sales & Service

Company Snapshot

Data iO

Recent Achievements and Trends

- 5+ consecutive years of profitability (2014-2018); Cycle peaked in 2017 and appeared to bottom before COVID-19
- Strong momentum in Automotive and IoT devices
  - 8 of top 9 Automotive Electronics companies are customers
  - 5-year global supply agreement with Bosch extended by 2.5 years in 2018
  - ~60% of revenue from Automotive Electronics customers
- Expand new markets with introduction of PSV2800
- Industry and technology awards for Lumen®X, Universal Flash Storage (UFS), PSV Lines and SentriX®
- Over 290 PSV systems sold
- Traction for SentriX Security Provisioning Platform

Committed to Growing Shareholder Value

- Focusing programmable core competencies on higher growth, higher margin vertical markets
- Differentiated market position through technology leadership and global support
- Approx. 16% of stock held by insiders so that management and Board are aligned with shareholders
- 3 buybacks since 2012 for $8.1 million returned to shareholders

Company Snapshot [1][2]

NASDAQ:	DAIO
Headquarters:	Redmond, WA
Established:	1972
Stock Price:	$3.06
Market Cap:	$25M
Diluted Shares:	8.2M
3-M Daily Avg. Volume:	19,500 shares
Sales (TTM):	$20.3M
Net Income (TTM):	$(1.8)M
Diluted EPS (TTM):	$(0.12)
Adj. EBITDA[3] (TTM):	$240,000
Cash & Sec. (3/31/20):	$13.8M ($1.68/share)
Debt (3/31/20):	$0.0

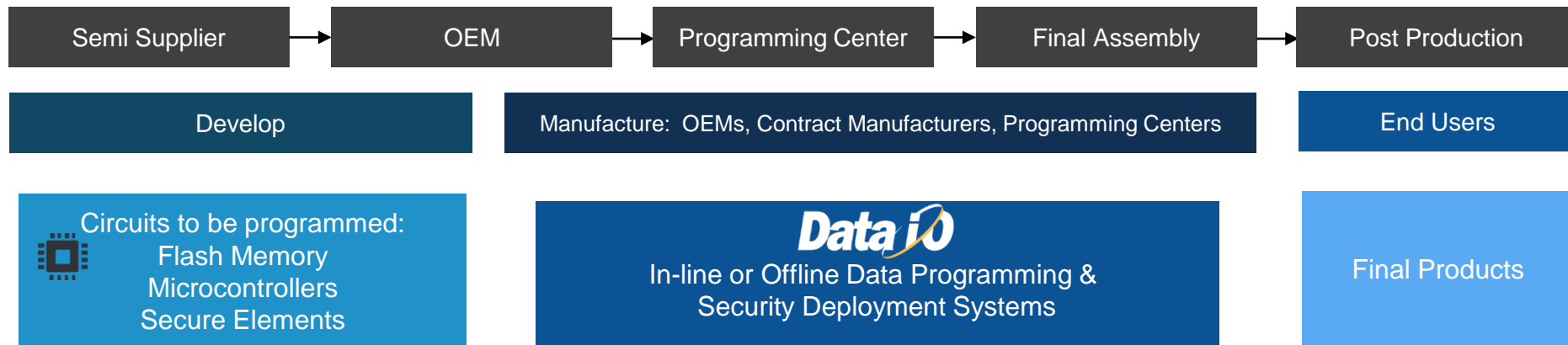(1) Stock price, market cap and volume as of 5/1/20; Source: Yahoo
(2) Financials for the TTM period ended 3/31/20 or as noted
(3) Adj. EBITDA is a non-GAAP financial measure. A reconciliation is provided in this presentation

4

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.
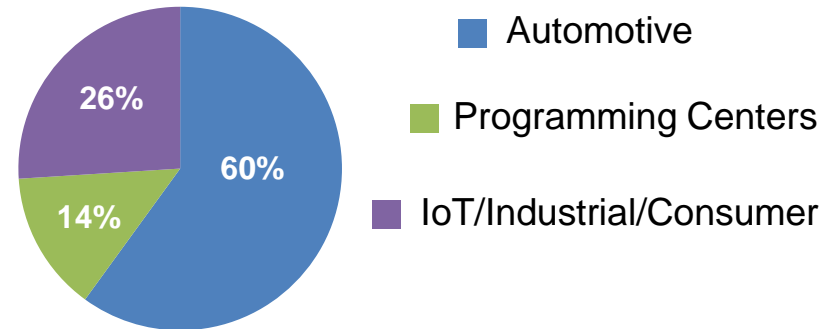
Semi Supplier	OEM	Programming Center	Final Assembly	Post Production

Develop	Manufacture: OEMs, Contract Manufacturers, Programming Centers	End Users

Circuits to be programmed: Flash Memory Microcontrollers Secure Elements	In-line or Offline Data Programming & Security Deployment Systems	Final Products

Serving Customers Globally in Growing Markets

Data iO

- 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 automotive electronics suppliers
- Providing mission critical medical applications for Class I and II devices
- Global footprint with headquarters in Redmond, WA, USA and subsidiary offices in Shanghai, China and Munich, Germany

2019 Annual Orders by End Markets

- Automotive — 60%
- Programming Centers — 14%
- IoT/Industrial/Consumer — 26%

Sample Customers

Automotive

BOSCH · Continental · KOSTAL · ALPINE · DESAY SV · DENSO · BYD · Visteon · Panasonic · HARMAN A SAMSUNG COMPANY · btv technologies · APTIV · Valeo · ADAYO · TRW · DELPHI

IoT/ Industrial/Consumer

amazon · SONY · Apple · Honeywell · WATLOW · Schindler · TCL · R · Microsoft · Schneider Electric · hp · SIEMENS · LG · Google · TOSHIBA · INSTA · Miele · Danfoss · BHARAT ELECTRONICS

Programming Centers and EMS

JABIL · ARROW · AVNET · Celestica · SCC · Kimball · 深南电路 · PLEXUS · PEGATRON · flex · SiiX · wistron · Zollner
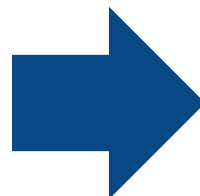
How Data I/O Markets Grow

Market Forces

Programming Impact
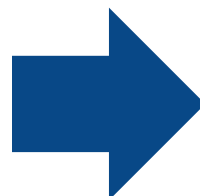
- **IoT and Automotive Growth**
  - **Devices Get Smaller**
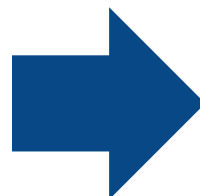 - **Move towards Automation**

Unit Growth

- **Products will increase their code size as customers want more features**

Bit Growth

- **Products will be more secure, creating new opportunities**

Added Complexity +

Security Requirements

Programming Demand = Units x Bits x Security

7

Market Leading Technology

Industry Leading Products

Automated Handlers

Programming Engines

Managed and Secure Programming Systems

History of Innovation

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

- Research and Development focused on:

  - Breakthroughs in programming technology to support explosive demand for automotive infotainment solutions using large FLASH memories and microcontrollers

  - Security Deployment Platform technology for Internet of Things applications

  - Introduced Universal Flash Storage (UFS) solution and SentriX™ Security Platform

- During the past 15 years, Data I/O has been granted ~50 U.S. and International utility patents. Currently, Data I/O has ~20 U.S. and International utility patents pending

Data I/O Sets Blistering Pace for Programming Market

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

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

Technology Award, 5th Industry Award for Universal Flash Storage **(UFS) Support** on LUMENX

November 2019: Machine Learning-Based Automated Teach Capability for PSV7000

October 2019: PSV2800 Automated Programming System for 3,000 units per hour production

2X Doubles Programming Performance w/ TurboBoost™ for LUMENX Programmers

2x increase in programming performance for eMMC devices shown at IPC APEX Expo 2019

2X ↓ LUMENX Programming Platform Doubles Download Speed & Support Next-Generation Microcontrollers

Data I/O — SECURE THINGZ

Scripting Interface Upgrade to SentriX® Secure Provisioning System

SentriX

Data I/O — digicert

*DigiCert's **Certificate Signing Services** via Data I/O's **SentriX®** Secure Provisioning System*
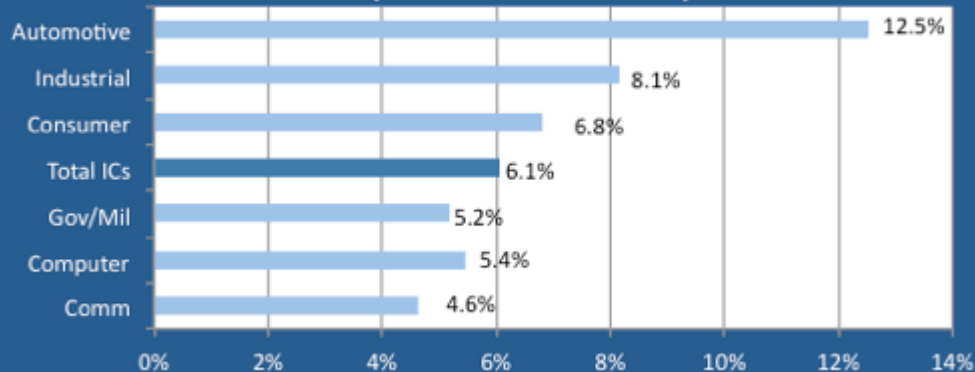
SentriX

Market Outlook

Automotive & Industrial Semi Growth Drives Programming Market

IC Market Growth Rates by End-Use Application (2017-2021F CAGR)

Application	CAGR
Automotive	12.5%
Industrial	8.1%
Consumer	6.8%
Total ICs	6.1%
Gov/Mil	5.2%
Computer	5.4%
Comm	4.6%

Source: IC Insights

Automotive & Industrial continue to be fastest growing segments

Automotive electronics cost as a percentage of total car cost worldwide from 1950 to 2030

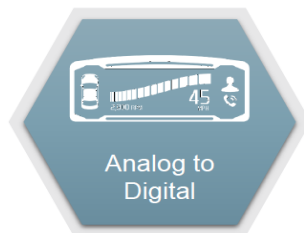| Year	Share of total cost
1950	1%
1960	3%
1970	4%
1980	10%
1990	15%
2000	20%
2010	30%
2020	35%
2030	50%
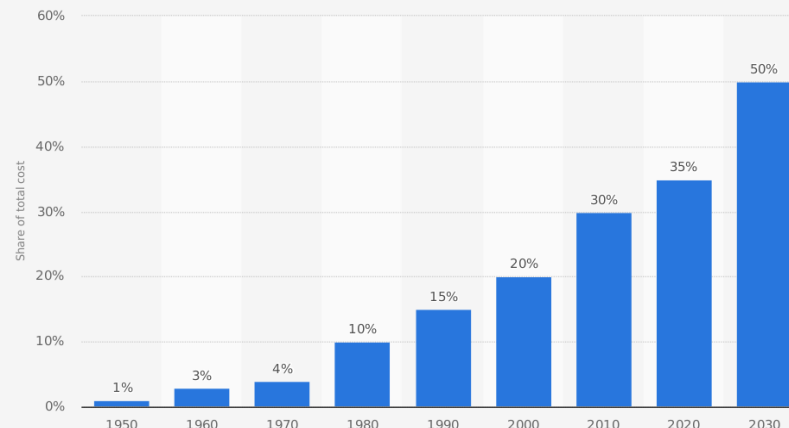
Source
PwC
© Statista 2018

Additional Information:
Worldwide

11

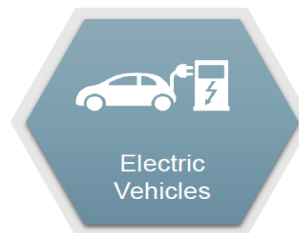# Automotive Electronics Evolution

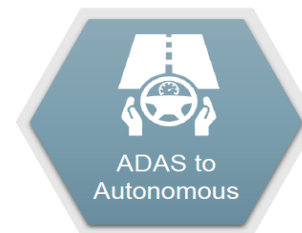## Addressing Macro Trends in Automotive

Visteon

Analog to Digital

Device & Cloud Connectivity

Electric Vehicles

ADAS to Autonomous

Cockpit of the Future

Visteon

Smart Mobile Assistant

Fully Digital
- Large, curved digital displays
- Haptic, knob-on-glass for tactile feedback

Connected
- Access to cloud data and services
- Hybrid cloud/edge computing

Automated
- Advanced active safety features
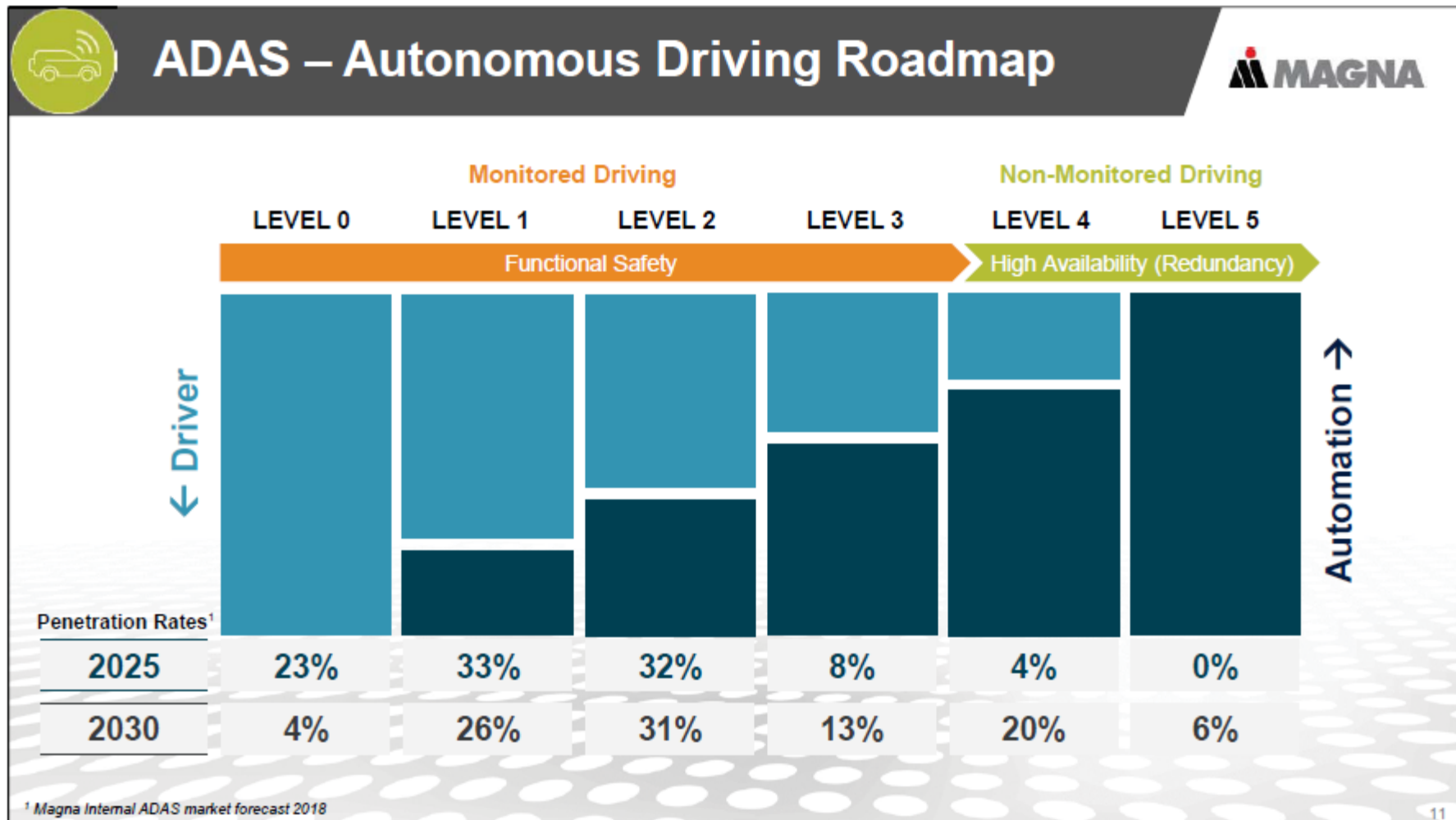- Self-driving under specific conditions

Learning
- Machine learning based solutions
- Improved voice and identification features

Voice Enabled
- Conversational cockpit assistant
- Natural language voice interaction

ADAS Penetration Over Time

ADAS – Autonomous Driving Roadmap

Monitored Driving | **Non-Monitored Driving**

	LEVEL 0	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
	Functional Safety				High Availability (Redundancy)	
Penetration Rates[1]						
2025	23%	33%	32%	8%	4%	0%
2030	4%	26%	31%	13%	20%	6%

[1] Magna Internal ADAS market forecast 2018

Substantial Growth in Electronics Subsystems Well Before Fully Autonomous Driving

FLASH Memory Growth in the Connected and Autonomous Vehicle

ADAS / Autonomous Car
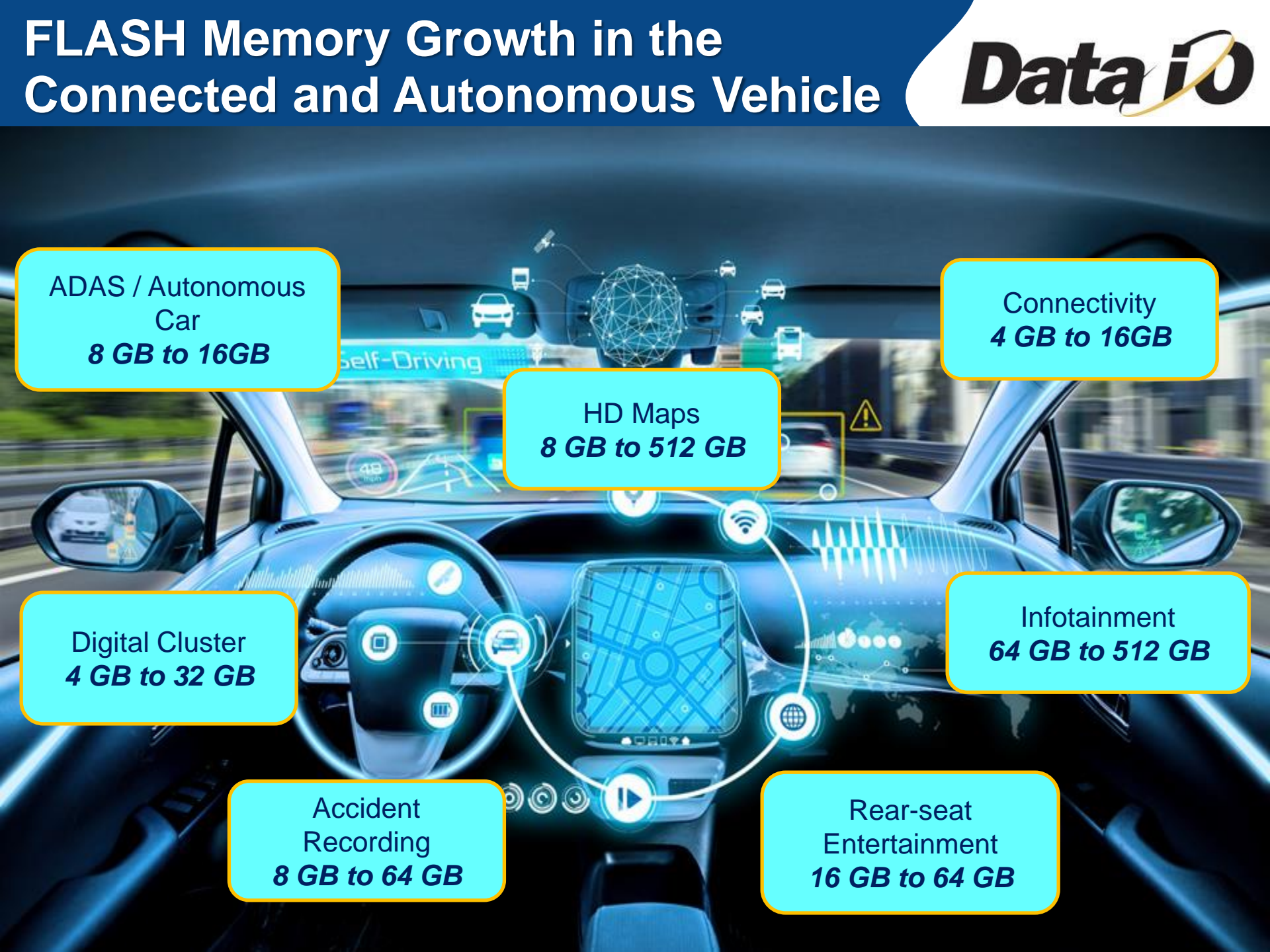*8 GB to 16GB*

Connectivity
4 GB to 16GB

HD Maps
8 GB to 512 GB

Digital Cluster
4 GB to 32 GB

Infotainment
64 GB to 512 GB

Accident Recording
8 GB to 64 GB

Rear-seat Entertainment
16 GB to 64 GB

Automotive is Moving to UFS FLASH

Western Digital, Samsung, Micron & Toshiba support Automotive Grade UFS devices

6 out of the top 9 **automotive electronics manufacturers are transitioning from eMMC to UFS**

8 out of the top 9 **automotive electronics suppliers choose Data I/O**

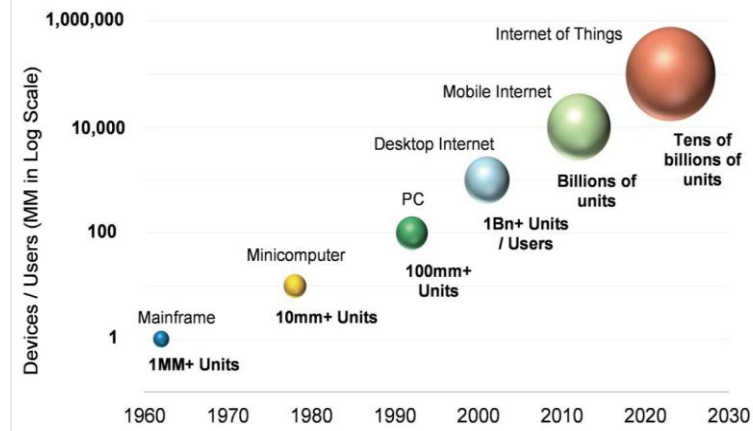# IoT Market Drivers - Multi-year Secular Growth

- The IoT is forecast to be bigger than the mobile internet and desktop markets

"We believe nearly every single industry will eventually migrate to an IoT model yielding 50 billion connected devices by 2020."
Needham & Company, November 27, 2015

- ...But Security Issues are top of mind and must be addressed

Computing Growth Drivers over Time, 1960-2030e

Computing

NSA Hacking Chief: Internet of Things Security Keeps Me Up at Night

The leader of the National ... putting industrial control s... secure.

by Tom Simonite   January ...

The trend to connect devic... the Internet is making life ... hackers—but also keeping ...

Internet of Things: Shoddy security and IoT hackers are putting human lives at risk

Experts say need for IoT security isn't overhyped

NEWS ANALYSIS
Hackers demonstrated first ransomware for IoT thermostats at DEF CON

MORE LIKE THIS

Over 90% of respondents are incorporating security along with their MCU products

How Incorporating Security for IoT Applications
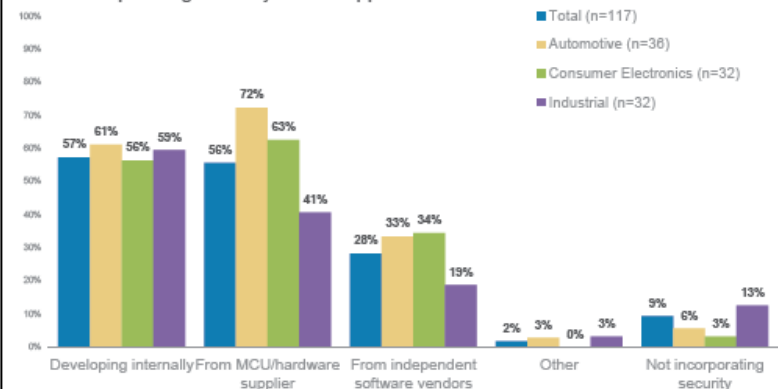
Source: AlphaWise Survey, Morgan Stanley Research

SentriX® Security Deployment Platform

Secure Programming Center Premise

OEM

OEM Provisioning with provided tools

Blank Inventory from Semi Supplier or Distributor

Certificates, Reports

Provisioned Devices

Physical security and controlled access

Best of Show with Embedded Award for the SentriX Security Provisioning Platform

embeddedworld2018
Exhibition&Conference
... it's a smarter world

Flexible Data and Security Solutions

Data iO

Flexibility ↑

Security →

- **At programming center or factory**
- **30 minute changeover**
- **No minimum order quantity**
- **Low to high volume flexibility**
- **Robust security**

**Silicon Chip
Pre-programming**

SentriX
Embedding Security for a Connected World

- Low throughput
- Custom software
- Large threat surface
- Keys exposed in manufacturing
- Long Lead times

- High minimum order quantity
- Low configurability
- Long lead time—up to 3 months
- Strong security

**In System
Programming**
(end of factory line test)

**Wafer Level
Programming**
(at semi vendor)

SentriX Benefits

Cost effective and scalable

Integrated with Data I/O automated high-volume programmers

Secure provisioning as-a-Service up to 1,000 parts per hour

Supply chain flexibility

Deployed at leading distributors and programming centers

Easily deployed at individual factory or contract manufacturing facilities

High security deployment

Integrated FIPS 140 hardware security module (HSM)

Uses public key infrastructure (PKI) and offers certificate authority (CA) choice

Protects IP

Air gapped and works offline

Works with encrypted firmware

Data iO

Technology Partners

arm

digicert

IAR SYSTEMS

SECURE THINGZ

Silicon Partners

CYPRESS EMBEDDED IN TOMORROW

infineon

maxim integrated

MICROCHIP

NXP SECURE CONNECTIONS FOR A SMARTER WORLD

RENESAS

Distribution Partners

ARROW

AVNET SILICA

EBV Elektronik | An Avnet Company |
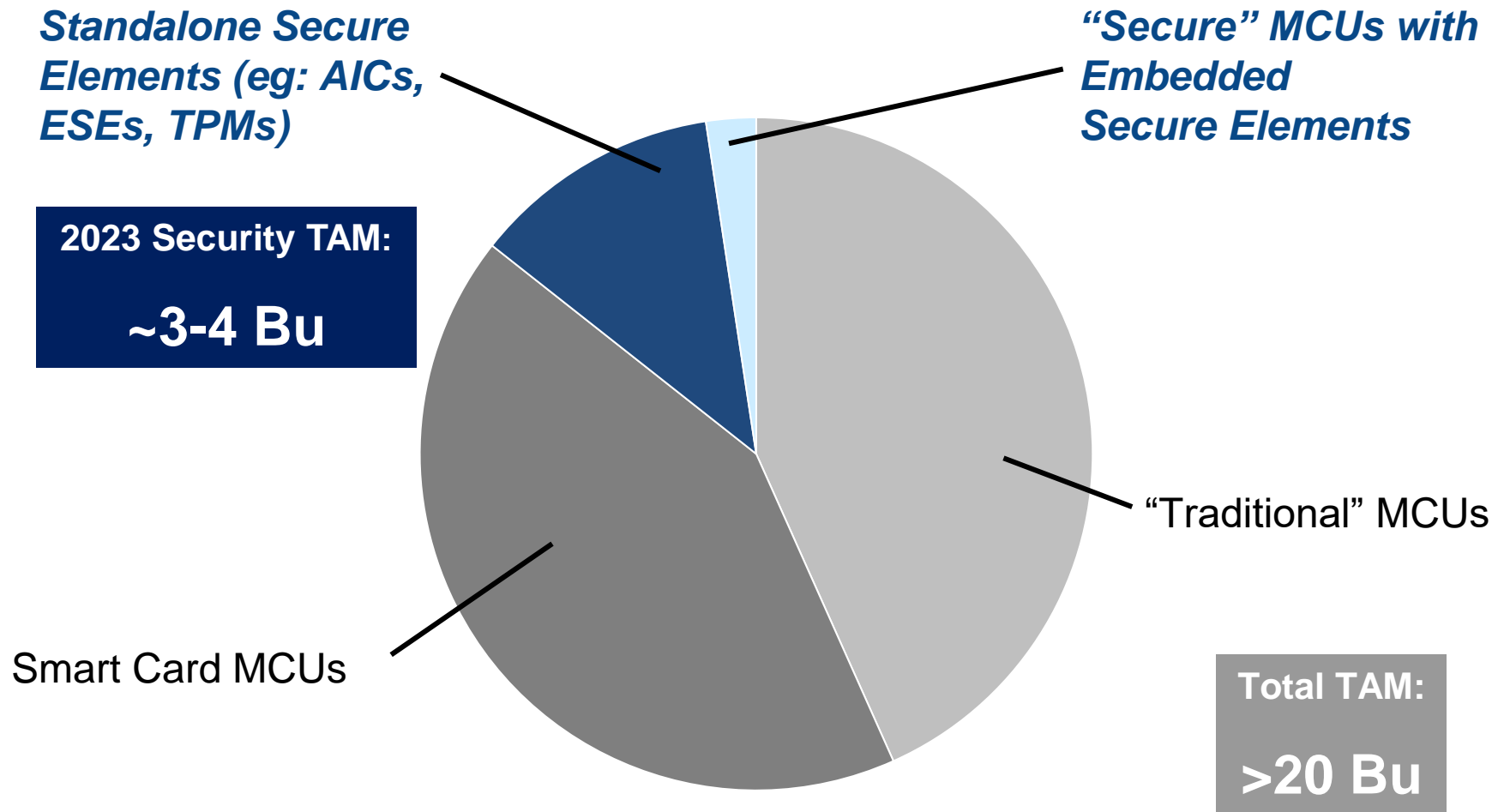
SentriX Plan: Securing IoT Devices for OEMs of any Size and Volume

- Deployment in October 2017 of first SentriX Security System; 5 deployed at 3/31/20
- Momentum with additional industry support announcements since 2018
- Revenue Recognition: scaling begins 2020/21 with multiyear ramp from win to revenue

The Opportunity: Billions of Security Enabled Devices

Data iO

Standalone Secure Elements (eg: AICs, ESEs, TPMs)

"Secure" MCUs with Embedded Secure Elements

2023 Security TAM:

~3-4 Bu

"Traditional" MCUs

Smart Card MCUs

Total TAM:

>20 Bu

Source: ABI Research

Convergence of Microcontroller Programming and Security Deployment Solutions

Automotive Electronics

Industry 4.0

Internet of Things

Technology Stack

Immediate Term – COVID-19
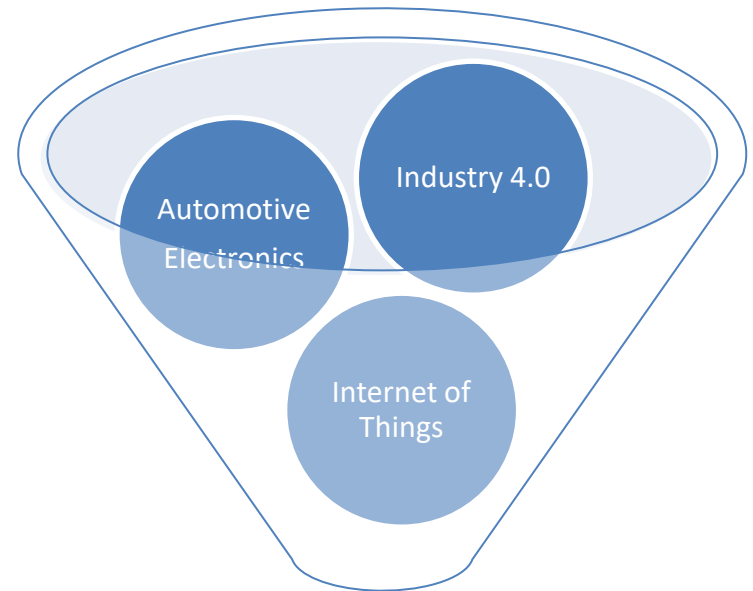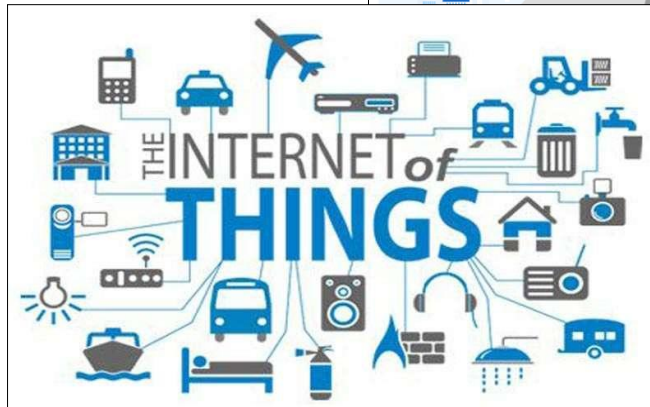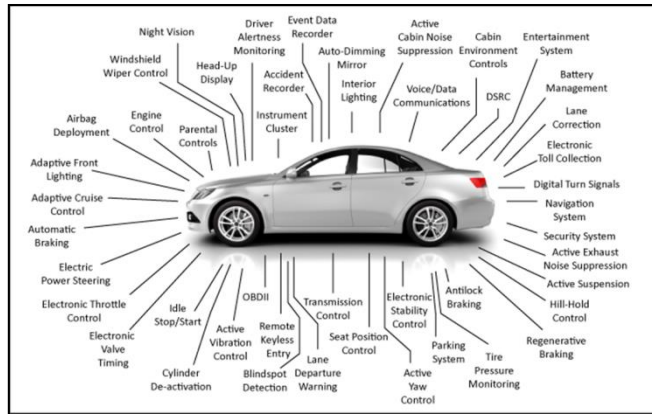
- Protecting our team and facilities
- Quick transition of global work from home for 85% of employees
- Tools for global collaboration
- Strict policies for the health and safety of our essential workers
- Continue to serve our customers as an essential supplier
  - Remote install & diagnostics capability keep our customer factories running
  - Quick deploy program for new medical device customers; retool production to support COVID-19 efforts
  - Securing new devices & systems against hacking
- Strong financial condition bolstered by expense management

Financial Overview

Financial Overview

First Quarter 2020 Highlights

o Net sales of $4.8 million; bookings of $4.3 million

o Gross margin as a percentage of sales of 58.2%

o Net loss of ($554,000) or ($0.07) per share

o Adjusted earnings before interest, taxes, depreciation and amortization (EBITDA)*, excluding equity compensation, of ($110,000)

o Cash & Equivalents of $13.8 million; no debt

o Automotive electronics, advanced programming and secure provisioning leadership

- Automotive Electronics represented 55% of first quarter 2020 bookings
- New distribution partnership with NOA Leading Co., Ltd. in Japan
- Three new automotive wins in the quarter in Asia, Americas and Europe
- Growth in SentriX® devices provisioned, device types supported, and design wins

*Adjusted EBITDA is a non-GAAP financial measure. A reconciliation is provided in the Appendix section of this presentation.

Operational Performance

Long Term Performance Improvements & Resiliency Through Innovation and Operational Excellence

Revenue and Net Income ($M)

■ Revenue ■ Net Income

Adjusted EBITDA ($M)

EBITDA adjusted for restructuring charges and stock-based compensation
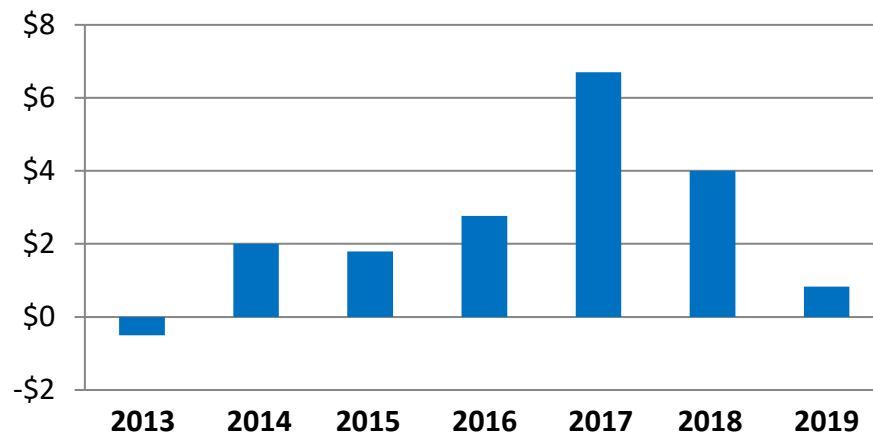
Long Term Growth Drivers
- Semi-cap equip. cycle
- Automotive Electronics
- Internet-of-Things
- Recurring revenues from installed base
- SentriX revenues (ramping in 2020/21)

Near Term Growth Catalyst
- Down cycle now more than 2 years old
- New norms for COVID-19 require more smart devices, increased memory, IoT demands, security
- Reinvestment in capital equipment

27

Balance Sheet and Capital Structure Overview

Balance Sheet Highlights

At March 31, 2020:

- $13.8 million in cash and cash equivalents
- No debt
- $18.4 million of net working capital
- Total stockholders' equity of $21.0 million, or approx. $2.56 per diluted share outstanding
- EV/Sales at 0.6x[3]
- NOLs of approximately $13.0 million

Enterprise Value ($K)

Market Cap[1]	$ 25,000
Plus Total Debt[2]	0
Less Total Cash[2]	$ 13,800
Enterprise Value	$ 11,200
Diluted Shares Outstanding[2]	8,200,000

[1] At 5/1/20; Source: Yahoo

[2] At 3/31/20

[3] Sales based on TTM through 3/31/20 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

Capital Equipment to Recurring Revenue

Data I/O

Capital Equipment	Consumables	
	Adapters	**Software and Maintenance**

Capital Equipment

- Approx. 65% of 2019 sales; 54% in 1Q20
- 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. 28% of 1Q20 sales
- Usually last 3-24 months

Software and Maintenance

- Approx. 18% of 1Q20 sales
- Annual software upgrades

- *SentriX drives strategy shift toward consumable and recurring revenues over time*
- *SentriX revenue for security deployment is a higher percentage recurring than traditional business*
- *Lower % capital equipment sales reduces cyclicality*

Investment Merits:
Positioned for Long-Term Growth

End Market Expansion in Automotive and Internet of Things

Strong Global Brand with Industry Leading Products

Strong Balance Sheet and Operating Leverage

Financially Sound & Positioned For Growth
NASDAQ: DAIO

Seasoned Management

Growth in Security Deployment

Cycle Trending Favorable as Under-investments Extended by COVID-19

Global Sales, Support and Infrastructure

Thank You!

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

NASDAQ: DAIO

Appendix

Adjusted EBITDA Reconciliation – 1Q20

NON-GAAP FINANCIAL MEASURE RECONCILIATION

(in thousands)	Three Months Ended March 31, 2020	2019
Net Income(loss)	($554)	$26
Interest (income)	(8)	(12)
Taxes	5	(29)
Depreciation and amortization	198	204
EBITDA earnings(loss)	($359)	$189
Equity compensation	249	287
Adjusted EBITDA earnings(loss), excluding equity compensation	($110)	$476

Income Statement – 1Q20

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

	Three Months Ended March 31,	
	2020	**2019**
Net Sales	$4,785	$6,058
Cost of goods sold	2,001	2,373
Gross margin	2,784	3,685
Operating expenses:		
Research and development	1,582	1,681
Selling, general and administrative	1,811	1,975
Total operating expenses	3,393	3,656
Operating income(loss)	(609)	29
Non-operating income:		
Interest income	8	12
Gain on sale of assets	-	60
Foreign currency transaction gain (loss)	52	(104)
Total non-operating income	60	(32)
Income(loss) before income taxes	(549)	(3)
Income tax (expense) benefit	(5)	29
Net income(loss)	($554)	$26
Basic earnings(loss) per share	($0.07)	$0.00
Diluted earnings(loss) per share	($0.07)	$0.00
Weighted-average basic shares	8,219	8,303
Weighted-average diluted shares	8,219	8,417

Balance Sheet – 1Q20

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

	March 31, 2020	December 31, 2019
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$13,814	$13,936
Trade accounts receivable, net of allowance for		
doubtful accounts of $79 and $80, respectively	3,107	4,099
Inventories	4,804	5,020
Other current assets	1,709	924
TOTAL CURRENT ASSETS	23,434	23,979
Property, plant and equipment – net	1,813	1,668
Income tax receivable	-	640
Other assets	1,850	1,994
TOTAL ASSETS	$27,097	$28,281
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$1,072	$1,151
Accrued compensation	1,214	1,541
Deferred revenue	1,421	1,387
Other accrued liabilities	1,286	1,372
Income taxes payable	28	31
TOTAL CURRENT LIABILITIES	5,021	5,482
Operating lease liabilities	1,045	1,178
Long-term other payables	67	91
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, 8,221,447 shares as of March 31,		
2020 and 8,212,748 shares as of December 31, 2019	19,001	18,748
Accumulated earnings	1,954	2,508
Accumulated other comprehensive income	9	274
TOTAL STOCKHOLDERS' EQUITY	20,964	21,530
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$27,097	$28,281

Adjusted EBITDA Reconciliation – 2019

NON-GAAP FINANCIAL MEASURE RECONCILIATION

(in thousands)	Three Months Ended December 31,		Twelve Months Ended December 31,	
	2019	**2018**	**2019**	**2018**
Net Income(loss)	($496)	$648	($1,187)	$1,606
Interest (income)	(6)	(11)	(53)	(37)
Taxes	(21)	24	31	291
Depreciation and amortization	196	219	868	955
EBITDA earnings(loss)	($327)	$880	($341)	$2,815
Equity compensation	260	298	1,171	1,230
Adjusted EBITDA earnings(loss), excluding equity compensation	($67)	$1,178	$830	$4,045

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

	Three Months Ended December 31,		Twelve Months Ended December 31,	
	2019	**2018**	**2019**	**2018**
Net Sales	$5,868	$7,857	$21,568	$29,224
Cost of goods sold	2,588	3,284	9,018	11,868
Gross margin	3,280	4,573	12,550	17,356
Operating expenses:				
Research and development	1,583	1,811	6,451	7,361
Selling, general and administrative	2,039	2,018	7,377	8,257
Total operating expenses	3,622	3,829	13,828	15,618
Operating income(loss)	(342)	744	(1,278)	1,738
Non-operating income:				
Interest income	6	11	53	37
Gain on sale of assets	4	15	64	19
Foreign currency transaction gain (loss)	(185)	(98)	5	103
Total non-operating income	(175)	(72)	122	159
Income(loss) before income taxes	(517)	672	(1,156)	1,897
Income tax (expense) benefit	21	(24)	(31)	(291)
Net income(loss)	($496)	$648	($1,187)	$1,606
Basic earnings(loss) per share	($0.06)	$0.08	($0.14)	$0.19
Diluted earnings(loss) per share	($0.06)	$0.08	($0.14)	$0.19
Weighted-average basic shares	8,212	8,431	8,247	8,378
Weighted-average diluted shares	8,212	8,509	8,247	8,514

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

	December 31, 2019	December 31, 2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$13,936	$18,343
Trade accounts receivable, net of allowance for		
doubtful accounts of $80 and $75, respectively	4,099	3,771
Inventories	5,020	5,185
Other current assets	924	621
TOTAL CURRENT ASSETS	23,979	27,920
Property, plant and equipment – net	1,668	1,985
Income tax receivable	640	598
Other assets	1,994	220
TOTAL ASSETS	$28,281	$30,723
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$1,151	$1,755
Accrued compensation	1,541	2,872
Deferred revenue	1,387	1,392
Other accrued liabilities	1,372	789
Income taxes payable	31	47
TOTAL CURRENT LIABILITIES	5,482	6,855
Operating lease liabilities	1,178	-
Long-term other payables	91	511
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, 8,212,748 shares as of December 31,		
2019 and 8,338,628 shares as of December 31, 2018	18,748	19,254
Accumulated earnings	2,508	3,695
Accumulated other comprehensive income	274	408
TOTAL STOCKHOLDERS' EQUITY	21,530	23,357
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$28,281	$30,723

38

Financial Overview

Fourth Quarter and Full Year 2019 Highlights

o Net sales of $21.6 million; bookings of $22.5 million

o Gross margin as a percentage of sales of 58.2%

o Net loss of ($1.2) million or ($0.14) diluted earnings per share. Adjusted earnings before interest, taxes, depreciation and amortization (EBITDA)*, excluding equity compensation, of $830,000

o Automotive Electronics represented 60% of bookings for 2019

o Repurchased 302,000 shares in 2019 (404,00 shares in total) to complete $2 million buyback authorized in October 2018

o Ended year with 5 system deployments, 12 partners and 10 supported devices for SentriX secure provisioning platform

*Adjusted EBITDA is a non-GAAP financial measure. A reconciliation is provided in the Appendix section of this presentation.