

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of Earliest Event Reported):

December 2, 2020

Cohu, Inc.

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction  
of incorporation)

001-04298  
(Commission  
File Number)

95-1934119  
(I.R.S. Employer  
Identification No.)

12367 Crosthwaite Circle,  
Poway, California  
(Address of principal executive  
offices)

92064

(Zip Code)

Registrant's telephone number, including area code:

858-848-8100

Not Applicable

Former name or former address, if changed since last report

Securities registered pursuant to Section 12(b) of the Act:

Title of each class  
Common Stock, \$1.00 par value

Trading Symbol(s)  
COHU

Name of each exchange on which registered  
The NASDAQ Stock Market LLC

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934.

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

### Item 7.01 Regulation FD Disclosure

Cohu, Inc. (“Cohu”) a global leader in back-end semiconductor equipment and services, is hosting a Virtual Analyst and Investor Conference on Wednesday, December 2, 2020 at 10:00 a.m. Pacific Time/1:00 p.m. Eastern Time.

The investor presentation and Q&A session will be led by Luis A. Müller, Chief Executive Officer and Jeffrey D. Jones, Chief Financial Officer, with additional comments from industry leaders and the Company’s management team. The event will last approximately 90 minutes and interested investors can access the event and accompanying presentation on the investor relations section of the Company’s website, [www.cohu.com](http://www.cohu.com).

The information furnished pursuant to this Item 7.01, including Exhibit 99.1 furnished herewith, will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), nor will it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

The information furnished pursuant to this Item 7.01, including Exhibit 99.1 furnished herewith, contains “forward-looking statements” within the meaning of the safe harbor provisions of the federal securities laws. They should be read in conjunction with the “Cautionary Statement Regarding Forward-Looking Statements” disclosure contained in the Virtual Analyst and Investor Conference Presentation, the risk factors included in the Company’s periodic reports filed with the SEC, and the other public announcements that the Company may make, by press release or otherwise, from time to time.

### Item 9.01 Financial Statements and Exhibits.

The exhibit listed below is being furnished with this Current Report on Form 8-K.

(d) Exhibit

<b>Exhibit No.</b>	<b>Description</b>
99.1	<a href="#">December 2, 2020 Cohu Virtual Analyst and Investor Conference Presentation</a>
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Cohu, Inc.

*December 2, 2020*

*By: /s/ Jeffrey D. Jones  
Name: Jeffrey D. Jones  
Title: Chief Financial Officer*

December 2, 2020  
1:00 p.m. – 2:30 p.m. EST  
Presentation and Q&A

# Virtual Analyst and Investor Conference





**Jeff Jones**  
**CFO**

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## **Welcome and Agenda**

December 2, 2020

# Cautionary Statement Regarding Forward-Looking Statements

## Forward-Looking Statements:

Certain statements contained in this presentation may be considered forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, including statements regarding strategies to extend leadership in high-growth RF test, deliver high yield test and inspection for 5G, ADAS and xEV applications, increase contactor attachment rates and goal to double rate, and to provide analytics to optimize productivity, estimated total market CAGR, secular tailwinds driving end-market growth, estimated market segments CAGR sales growth, Semi Test target revenue growth CAGRs, 5G and RF Semi Test incremental revenue 1H'21, est. 5G device growth, Test and Inspection Handler target revenue growth CAGRs, Interface Solutions target revenue growth CAGRs, "Cohu Strategy" for each business unit, any comments on Cohu's Q1'21 and FY2021 outlook, momentum or growth, Cohu "Target Model" and "Target Financial Model" strategies and all associated financial forecasts, est. growth, revenue split by business, free cash flows, R&D exp., cap ex, and est. margin improvements and quarterly Model estimates, Cohu's fourth quarter 2020 sales forecasts, updated guidance, sales mix, est. of record orders, non-GAAP operating expenses, gross margin, adjusted EBITDA and effective tax rate, est. second half and full year 2020 financial results, and cash and shares outstanding, estimated minimum cash needed, potential M&A, est. op ex variability with sales and % of incremental sales falling to op income, any future Term Loan B principal reductions and goals, and any other statements that are predictive in nature and depend upon or refer to future events or conditions, and include words such as "may," "will," "should," "would," "expect," "anticipate," "plan," "likely," "believe," "estimate," "project," "intend," and other similar expressions among others. Statements that are not historical facts are forward-looking statements. Forward-looking statements are based on current beliefs and assumptions that are subject to risks and uncertainties and are not guarantees of future performance. Any third-party industry forecasts, comments or presentations are for reference only and Cohu does not adopt or affirm any such materials.

Actual results could differ materially from those contained in any forward-looking statement as a result of various factors, including, without limitation: The ongoing global COVID-19 pandemic has adversely affected, and is continuing to adversely affect, our business, financial condition and results of operations, and COVID-19 could re-surge at any time and our business could be abruptly impacted again to an even greater extent; October 2020 COVID-19 related government movement control orders reinstated in Malaysia and actual adverse impacts that have begun to reoccur among Malaysia-based and/or other suppliers; Recently increasing COVID-19 cases in countries where Cohu's principal facilities are located including the United States, the Philippines, Malaysia, Switzerland and Germany; Other significant risks associated with the Xcerra acquisition, integration and synergies including the failure to achieve the expected benefits of the acquisition, and mandatory ongoing impairment evaluation of goodwill and other intangibles whereby Cohu could be required to write off some or all of this goodwill and other intangibles; Continued availability of capital and financing and additional rating agency downgrade actions, and limited market access given our high debt levels; Our Credit Agreement contains various representations and negative covenants that limit our business flexibility; Changes to or replacement of LIBOR may adversely affect interest rates; Adverse investor reaction to the recently suspended cash dividend; Other risks associated with acquisitions; inventory, goodwill and other asset write-downs; Our ability to convert new products into production on a timely basis and to support product development and meet customer delivery and acceptance requirements for new products; Lost productivity, project delays and internal control risks due to ongoing employee "work from home" programs; Our reliance on third-party contract manufacturers and suppliers; Failure to obtain customer acceptance resulting in the inability to recognize revenue and accounts receivable collection problems; Market demand and adoption of our new products; Customer orders may be canceled or delayed; Design-wins may or may not result in future orders or sales; The concentration of our revenues from a limited number of customers; Intense competition in the semiconductor equipment industry; Our reliance on patents and intellectual property; Compliance with U.S. export regulations; Impacts from the Tax Cuts and Jobs Act of 2017 and ongoing tax examinations; Geopolitical issues, trade wars and Huawei/HiSilicon export restrictions (including new restrictions effective in May and August 2020); Retention of key staff; Other health epidemics or natural disasters; ERP system implementation issues particularly as Cohu recently launched a new ERP system in first quarter 2020 and plans a broader rollout in 2020; The seasonal, volatile and unpredictable nature of capital expenditures by semiconductor manufacturers particularly in light of weakened demand in 2019 followed by the COVID-19 global pandemic in 2020, and Rapid technological change.

These and other risks and uncertainties are discussed more fully in Cohu's filings with the SEC, including the most recently filed Form 10-K and Form 10-Q, and the other filings made by Cohu with the SEC from time to time, which are available via the SEC's website at [www.sec.gov](http://www.sec.gov). Except as required by applicable law, Cohu does not undertake any obligation to revise or update any forward-looking statement, or to make any other forward-looking statements, whether as a result of new information, future events or otherwise.



# Agenda



Jeff Jones, CFO  
Welcome



Ganesh Moorthy, Microchip  
Keynote Speaker



Luis Müller, CEO  
Driving Growth & Differentiation



Chris Bohrson, GM  
Test & Inspection Handler Group



Michael Campbell, Qualcomm  
Keynote Speaker



Devin Sheridan, GM  
Interface Solutions Group



Ian Lawee, GM  
Semiconductor Test Group



Jeff Jones, CFO  
Profitability & Shareholder Value

Q&A Cohu Management

December 2, 2020



**Luis Müller**  
**CEO**

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## **Driving Growth and Differentiation**

December 2, 2020

# Global Technology and Market Leader



...in \$6.5 billion<sup>(1)</sup> Semiconductor and PCB Markets

~\$631M

Est. 2020 Revenue<sup>(2)</sup>

~45%

Recurring Revenue

~12%

Operating Income<sup>(2) (3)</sup>

21%

2017-20 Revenue CAGR<sup>(2)</sup>  
(organic growth & acquisitions)

28,000+

Equipment Installed Base

7%

Est. Market CAGR<sup>(1)</sup>

(1) Source: Gartner, June 2020 and Company estimates

(2) Reflects actual YTD 2020 results plus the mid-point of the Company's Q4 '20 guidance as updated on December 1, 2020

(3) Non-GAAP figure; See Appendix for GAAP to Non-GAAP reconciliations, and notes regarding use of forward-looking non-GAAP figures



December 2, 2020

 **Cohu**

## Target Model

Revenue

**\$940M**

Gross Margin

**48%**

Operating Income

**23%**

Mid-term (3-5 years) Target Model;  
Gross Margin and Operating Income are Non-GAAP figures; See  
Appendix for notes regarding use of forward-looking non-GAAP figures

## Cohu Strategy

**Extend leadership in high-growth RF test with scalable, precision instrumentation**

**Deliver high yield test and inspection for 5G, ADAS and xEV applications**

**Increase contactor attachment rate with differentiated test cell solutions**

**Provide analytics to optimize productivity**



December 2, 2020

# Driving Growth in Select End-Markets

## Applications



Auto ADAS & Electrification



Industrial Automation



Sensing & Power



Data Processing & Storage



Data Generation & Display



Communications & Networking

Mobility 5G, data generation & transmission, automotive ADAS, electrification and telematics

Secular tailwinds driving end-market growth  
(fct. 3-year growth)

- 1.5X** RF content growth driven by 5G-enabled smartphones <sup>(1)</sup>
- 1.4X** Increase in global data <sup>(1)</sup>
- 2X** ADAS and EV / HEV Semi content growth in autos <sup>(1)</sup>

Leader in Semiconductor Test & Inspection



(1) Source: Gartner, June 2020

(2) Cohu SAM, Serviceable Addressable Market are company estimates for 2021

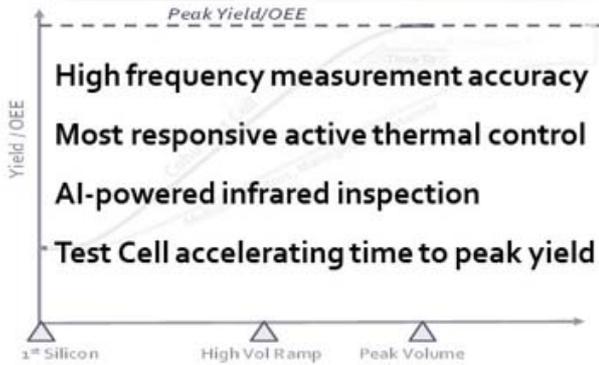
(3) 3-year target revenue CAGR per business segment to achieve Cohu mid-term target model

December 2, 2020

# Delivering Customer Value

Accelerating ***time to yield*** and ***greater productivity*** through the test cell  
*2% higher yield in the semiconductor test and inspection ~ pays for Capex*

One-stop-shop for leading-edge solutions in test & inspection



### Test Cell Solutions

The diagram illustrates three main test cell solutions: Semi Test, Test Contactor, and Test Handler. Each solution is associated with specific capabilities and icons: Test Analytics (cloud with arrow), Higher Signal Integrity (3D surface plot), Active Thermal Control (thermometer), and Efficiency Analytics (cloud with gear). Below the icons are images of the respective equipment: a Semi Test machine, a Test Contactor (with a 'core' label), and a Test Handler machine.

Test Analytics

Higher Signal Integrity

Active Thermal Control

Efficiency Analytics

Semi Test

Test Contactor

Test Handler

December 2, 2020

# Path for Growth and Differentiation<sup>(1)</sup>

Above-Market Revenue Growth	Accelerating Profitability	Disciplined Capital Allocation
<i>~14% revenue CAGR; 2x the market</i>	<i>Significant operating leverage 23% operating income<sup>(2)</sup></i>	<i>Generating \$160M+ annual free-cash-flow</i>
<i>Share gain with leading edge solutions in test &amp; inspection</i>	<i>Accelerating time to yield and greater productivity</i>	<i>Term loan repayment; targeting \$60M+ annually</i>
<i>Accelerating Tester and Contactor revenue growth</i>	<i>New product developments with 30%+ ROIC</i>	<i>Enabling a smarter, safer, and more connected future</i>

## Creating Shareholder Value

ROIC – Return on invested capital

(1) All values are based on achieving Target Model

(2) Non-GAAP figure; See Appendix for notes regarding use of forward-looking non-GAAP figures

December 2, 2020



**Michael Campbell**  
**Qualcomm**

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**Keynote Speaker**

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December 2, 2020

Michael Campbell  
Senior Vice President  
Qualcomm Technologies Inc.

Qualcomm

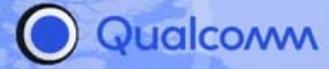
# Qualcomm overview for COHU

November 2020

A world where  
virtually everyone  
and everything is  
intelligently connected



The world's  
leading wireless  
technology  
innovator



# Leading wireless innovation for 35 years

Digitized mobile communications



Analog to digital

Redefined computing



Desktop to smartphones

Transforming industries



Connecting virtually everything

Transforming how the world connects, computes and communicates



## The R&D Engine

**\$64B+**

in cumulative R&D

**140,000+**

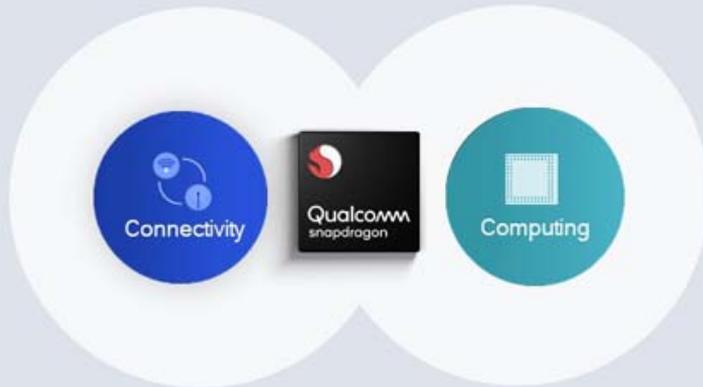
Granted patents / pending applications

**300+**

License agreements

Source: Company data as of Q3 FY20; R&D is cumulative expenditure since 1985

# World-class technology portfolio



## Wireless connectivity

2G/3G/4G/5G  
802.11 n/ac/ax (Wi-Fi 6)  
802.11ad (60GHz)  
Bluetooth  
802.15.4  
C-V2X  
GNSS/Location

## RF-Front End

Power amps  
Acoustic filters  
RF switches  
LNAs  
Antenna tuner  
Envelope tracker

## Processors

CPU/GPU/DSP/AI processor  
Memory controller  
Secure processing

## Multimedia

Camera processing  
Video  
Voice UI  
Display processing  
Computer vision  
Audio processing  
AR/VR  
Sensors

## Components

Audio codecs  
Audio amplifiers  
Power management  
Fingerprint

Qualcomm Snapdragon is a product of Qualcomm Technologies, Inc and/or its subsidiaries.

# Key business segments

## QCT: semiconductors

- 649M MSM™ chipsets shipped in FY19
- FY19 revenues: \$14.6B

## QTL: technology licensing

- 14B+ devices licensed
- FY19 revenues: \$4.6B



# Qualcomm growth vectors

Strategy playing out as planned resulting in substantial growth and opportunity



Increase in content  
with 5G



Scale in adjacent  
businesses



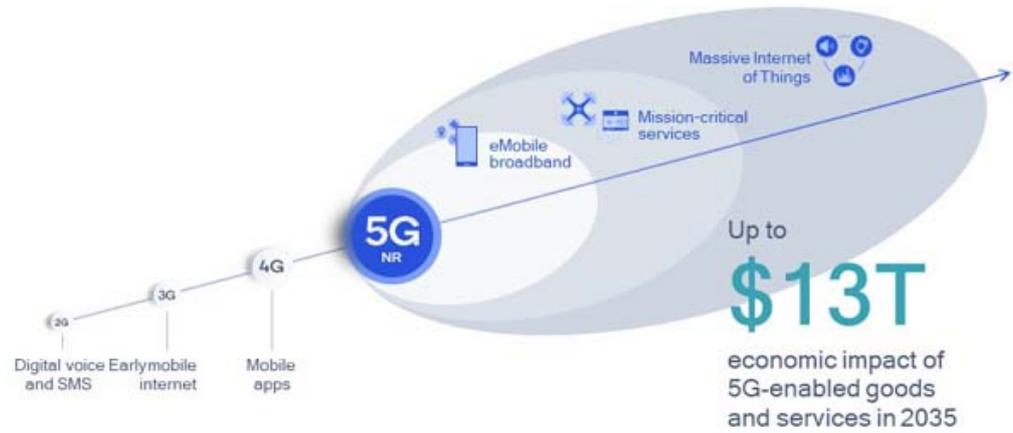
New opportunities enabled by  
5G and changes in computing

Transforming how the world connects, computes, and communicates.



With 5G, wireless becomes  
the superior network technology,  
disrupting everything

# With 5G, wireless becomes the superior network technology, disrupting everything



Based on ITU vision for IMT-2020 compared to IMT-advanced. URLLC: Ultra Reliable Low Latency Communications; IAB: Integrated Access & Backhaul  
Source: The 5G Economy, IHS Markit - commissioned by Qualcomm, October 2020

# Not just another handset upgrade cycle

**10x**

Decrease in  
end-to-end latency

**10x**

Greater experienced  
throughput

**3x**

More spectrum  
efficiency

**100x**

Higher traffic  
capacity

**100x**

Greater network  
efficiency

**10x**

Increased  
connection density

Based on ITU vision for IMT-2020 compared to IMT-advanced



# 5G

accelerating  
globally

85+

Operators with 5G  
commercially deployed

310+

Additional operators  
investing in 5G

750M+

5G smartphones  
to ship in 2022

1B+

5G connections by 2023 –  
2 years faster than 4G

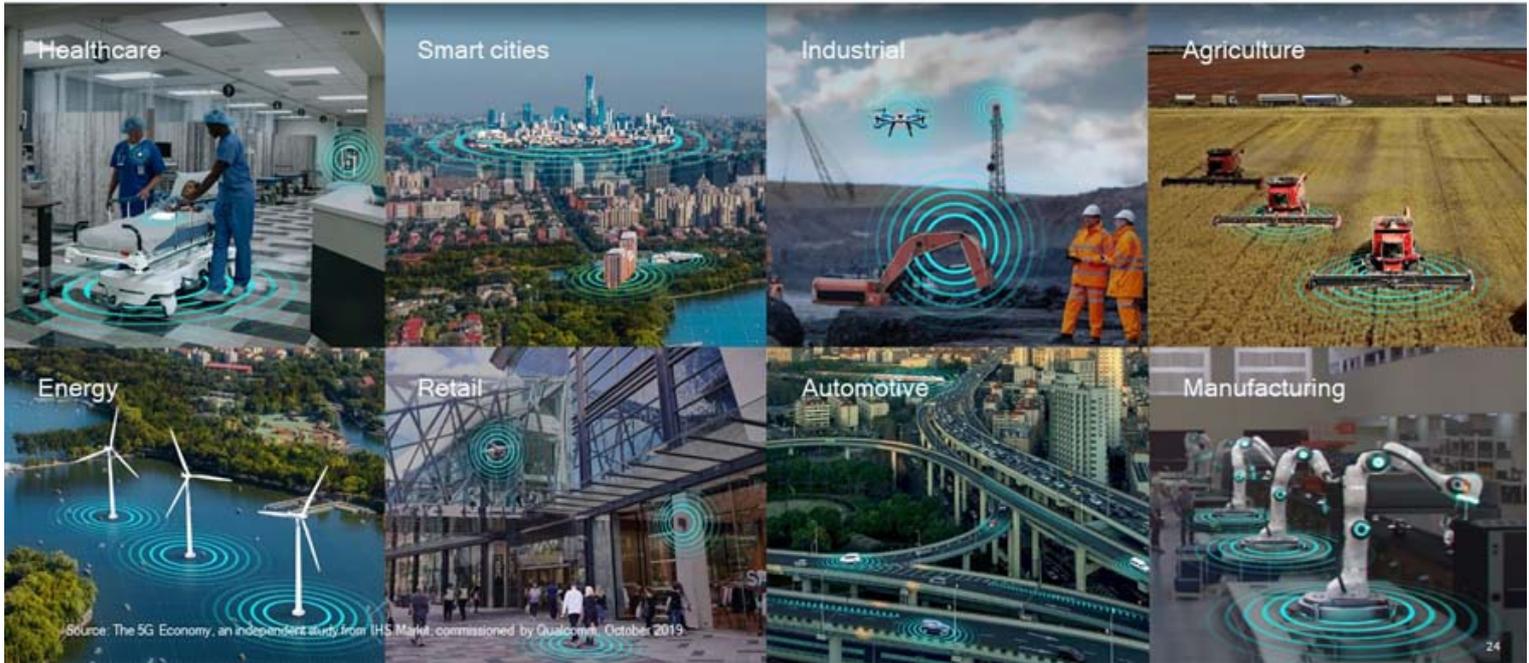
2.8B

5G connections  
by 2025

Sources – 5G commercial networks and devices: operator and OEM public announcements.  
Operators investing in 5G: GSA, Sep 2020. 5G device shipment projections: Qualcomm estimates, Nov 2019. 5G connection  
projections: 2023 – average of GSMA Intelligence (Aug 2020), ABI (Nov 2019); 2025 – average of ABI (Oct 2019), Ericsson (Nov 2019).

# Fueling digital transformation across industries

5G will enable up to \$13 trillion of global economic output in 2035



When we break through,  
**the ecosystem**  
leaps forward





# Multimedia streaming

Paradigm shift in entertainment

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Our technologies are foundational to innovative services, such as:

- Netflix
- Spotify
- Prime Video
- Apple Music
- Hulu

This is an age when  
**truly immersive VR**  
on your smartphone  
is a reality

Connectivity and  
intelligence everywhere

Immediate, rich  
social interactions



Wow! It's like I'm right there.



# Powering amazing experiences



Artificial intelligence



Stunning photos and videos



Intelligent architectures

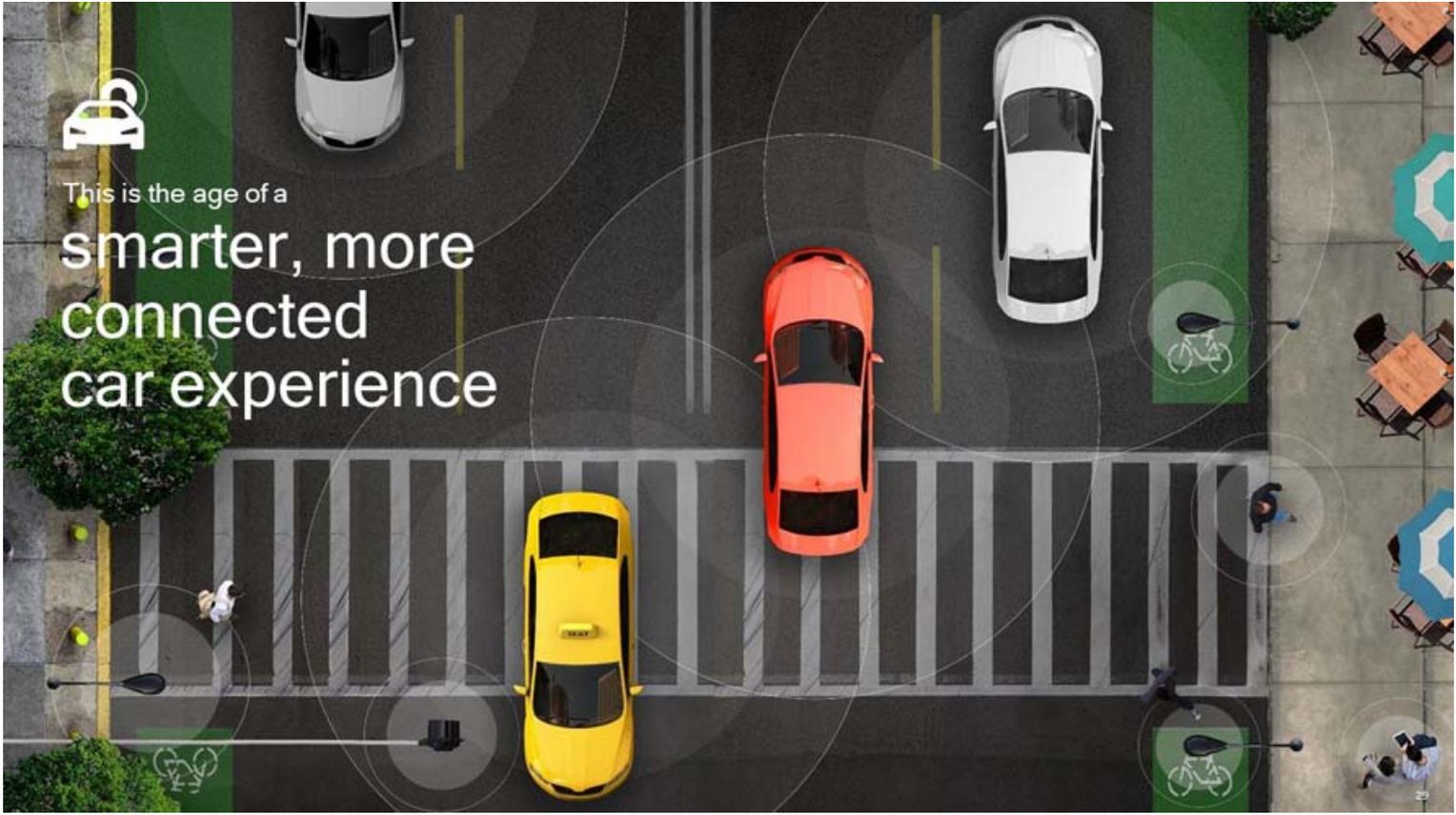


Immersive entertainment





This is the age of a  
**smarter, more  
connected  
car experience**





This is the age that is making

**virtually  
everything  
smarter**

This is the age of  
real 5G, made real  
by Qualcomm



Inventing breakthrough technologies

Enabling customers

Transforming industries

Enriching lives

# Thank you

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For more information, visit us at:

[www.qualcomm.com](http://www.qualcomm.com) & [www.qualcomm.com/blog](http://www.qualcomm.com/blog)

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## Ian Lawee

# Semiconductor Test Group

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Portfolio of instrumentation and universal platform for testing semiconductor devices with best-in-class solutions in RF, digital and mixed signal applications, enables faster time to yield.

### **Cohu**

Joined in April 2019. More than 25 years experience in both semiconductor and test instrumentation businesses

### **Analog Devices**

2009 – 2019: Isolation, Precision Converter and Energy markets

### **Teradyne**

1994 – 2009: product, marketing and engineering in semiconductor test division

MSc Management and MSc Electrical Engineering: Massachusetts Institute of Technology

MSc Electrical Engineering and BSc Computer Science Engineering: University of Pennsylvania

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# Increasing Test Intensity Driving Growth

Segments		Focused Applications	Inflection Points
 <p><b>5G</b></p> <p><i>Cohu SAM</i> <b>\$600M<sup>(1)</sup></b></p> <p><i>Target Rev. CAGR</i> <b>18%</b></p>	<ul style="list-style-type: none"> <li>○ Sub-6G and mmWave 5G RF enabling higher data bandwidth, lower latency and new products</li> </ul>	<ul style="list-style-type: none"> <li>○ <i>More frequencies and bandwidths increasing test intensity</i></li> </ul>	
<p><b>Mobility</b></p>	<ul style="list-style-type: none"> <li>○ Wi-Fi 6E and Ultra-Wideband RF growth driven by increasing network connectivity and Internet of Things (IoT)</li> </ul>		
 <p><b>Automotive &amp; Industrial</b></p> <p><i>Cohu SAM</i> <b>\$400M<sup>(1)</sup></b></p> <p><i>Target Rev. CAGR</i> <b>13%</b></p>	<ul style="list-style-type: none"> <li>○ Application Processors, Flat Panel Display Drivers, Sensors and Power Management</li> </ul>	<ul style="list-style-type: none"> <li>○ <i>New Wi-Fi spectrum requires new tester capabilities</i></li> <li>○ <i>Expanding RF standards enabling new IoT applications</i></li> <li>○ <i>Increasing Structural Test insertions for advanced packages</i></li> </ul>	

(1) Company estimates

# Semi Test Strategy Accelerating Time to Yield



(1) SoC – System-on-Chip

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Value Proposition	
<b>RedDragon RF Instrument Suite</b>	<ul style="list-style-type: none"> <li>Higher frequency and modulation bandwidth covering emerging and legacy RF standards</li> <li>Modular upgrade option for mmWave devices</li> <li>Established high volume production platform is an attractive alternative to home grown rack &amp; stack</li> </ul>
<b>Air-Cooled Universal Test Platform</b>	<ul style="list-style-type: none"> <li>Scalable from 5-slot, zero footprint test head to high test parallelism (100's of devices)</li> <li>Platform breadth covering &gt;35% of SoC available market is attractive to Semi customers and test subcontractors</li> </ul>
<b>Test Cell Solutions</b>	<ul style="list-style-type: none"> <li>Tester-to-Contactor calibration replaces time-consuming customer design effort and solves critical time to yield mmWave challenge</li> </ul>

# RF Test Solutions



## Semi Test

*Cohu SAM*

**\$1,100M**

*Target Revenue CAGR*

**17%**

(1) Company estimates

## Cohu Strategy

Delivering best-in-class solutions to 5G and IoT applications in expanding \$400M<sup>(1)</sup> RF test segment

Expanding capabilities of the low-cost universal test platform to address multiple markets

Solving the hardest test cell integration challenges enabling faster time to yield



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**Ganesh Moorthy**  
**Microchip**

**Keynote Speaker**

December 2, 2020

# Cohu Investor Conference



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A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



**Ganesh Moorthy**  
**President & COO**  
December 2, 2020

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# Corporate Overview

## Leading Total Systems Solutions Provider:

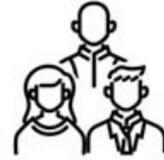
- High-performance standard and specialized Microcontrollers, Digital Signal Controllers and Microprocessors
- Mixed-Signal, Analog, Interface and Security solutions
- Clock and Timing solutions
- Wireless and Wired Connectivity solutions
- FPGA solutions
- Non-volatile EEPROM and Flash Memory solutions
- Flash IP solutions



\$5.3 Billion Revenue  
FY2020



Headquartered near  
Phoenix in Chandler, AZ



~18,000  
Employees

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40

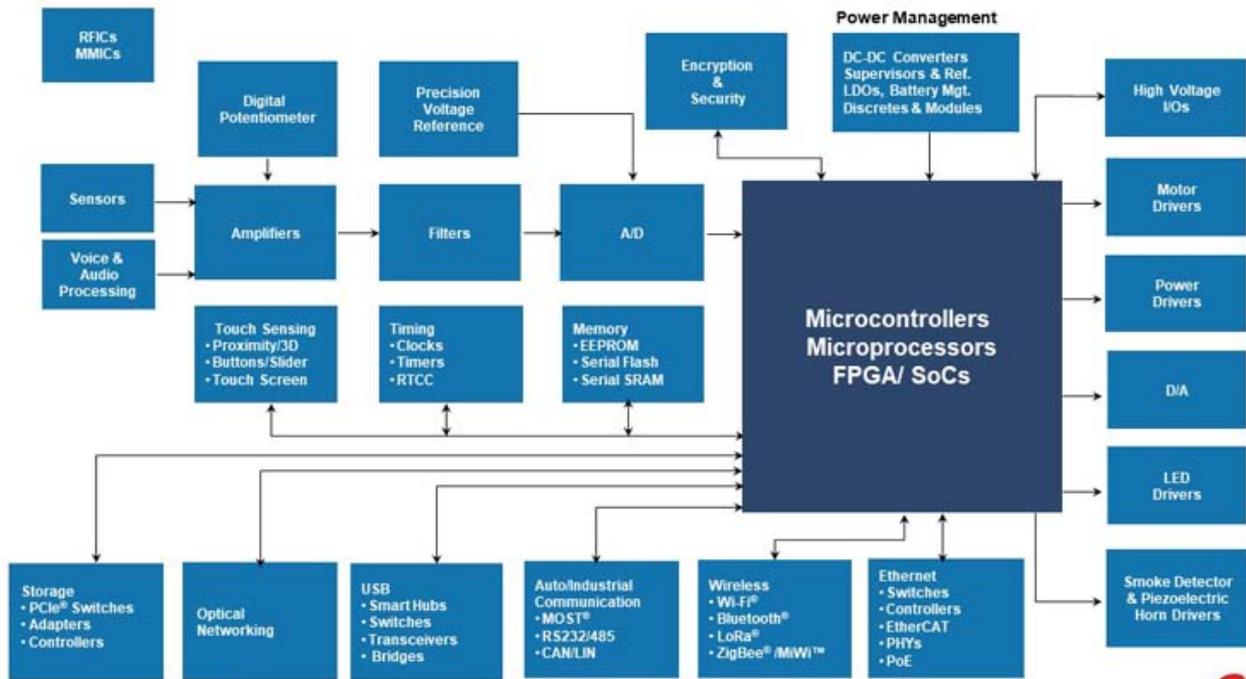
# Our Vision

**Be The Very Best  
Embedded Control Solutions  
Company Ever**



SMART | CONNECTED | SECURE

# Providing Total System Solutions



**Long product life times – customer driven obsolescence**

# Annual Net Sales Growth



# Worldwide Microcontroller Market Share

No.	1991 Rank	1996 Rank	2003 Rank	2008 Rank	2009 Rank	2014 Rank	2018 Rank	2019 Rank
1	Motorola	Motorola	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas
2	Intel	NEC	Motorola	NEC	NEC	Freescale	NXP	NXP
3	Philips	Philips	NEC	Freescale	Freescale	ST-Micro	Microchip	Microchip
4	Mitsubishi	Hitachi	Matsushita	Infineon	Samsung	Microchip	ST-Micro	ST-Micro
5	NEC	Mitsubishi	Infineon	Samsung	Microchip	NXP	TI	Infineon
6	Hitachi	Toshiba	Fujitsu	Microchip	TI	TI	Infineon	TI
7	Toshiba	Matsushita	Toshiba	ST-Micro	Infineon	Infineon	Cypress	Cypress
8	Siemens	SGS-Thom	Microchip	TI	St-Micro	Atmel	Samsung	Samsung
9	TI	Intel	Samsung	Fujitsu	Fujitsu	Spansion	Toshiba	CEC Huada
10	Matsushita	Microchip	ST-Micro	NXP	NXP	Samsung	CEC Huada	Toshiba
23	Microchip							

9.0%  
7.5%

1991 & 1996 data extrapolated from 8-bit MCU; Source: Gartner and Microchip

Microchip Proprietary and Confidential

# Analog Market Share

## Leading Analog IC Suppliers (\$M)

2019 Rank	Company	2018	2019	% Change	% Marketshare
1	Texas Instruments	10,801	10,223	-5%	19%
2	Analog Devices	5,505	5,169	-6%	10%
3	Infineon	3,810	3,755	-1%	7%
4	ST	3,373	3,283	-3%	6%
5	Skyworks Solutions	3,686	3,205	-13%	7%
6	NXP	2,645	2,564	-3%	5%
7	Maxim	2,125	1,850	-13%	4%
8	ON Semi	1,990	1,740	-13%	4%
9	Microchip	1,389	1,532	10%	3%
10	Renesas	900	860	-4%	2%

Source: IC Insights, company reports

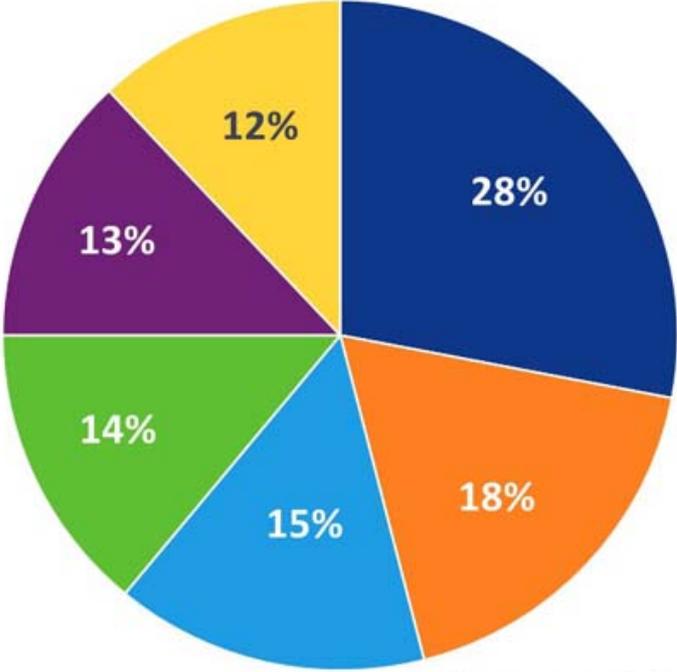
***The only Analog company to grow in 2019!***

# Market Megatrends



Microchip Proprietary and Confidential

# Revenue By End Market



- Industrial
- Data Center & Computing
- Automotive
- Communication
- Consumer
- Aerospace & Defense

Microchip Proprietary and Confidential



# Industrial

28% of Sales



28%

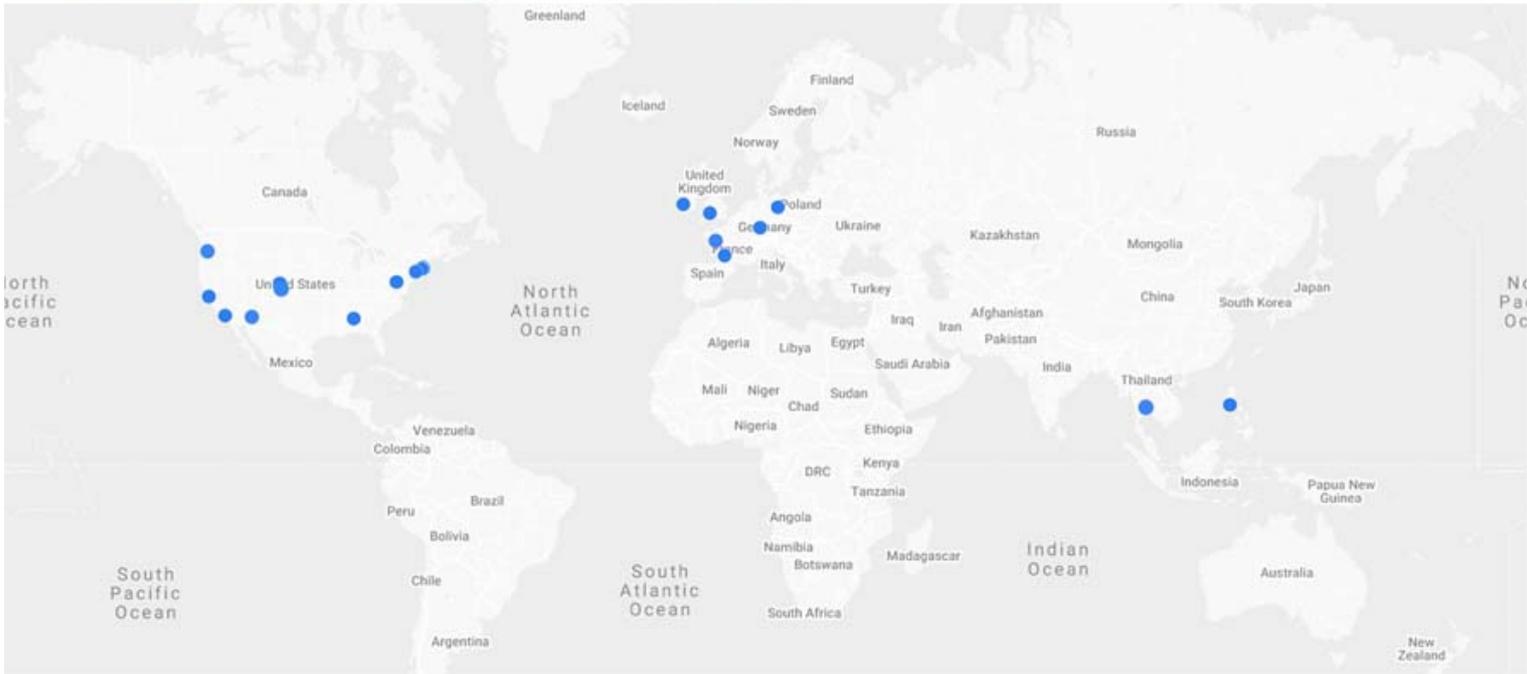


# Automotive

15% of Sales



# Manufacturing Locations



- **6 high volume factories; 14 specialty factories**

Microchip Proprietary and Confidential

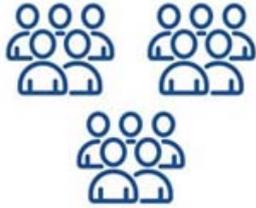
# Suppliers Are Our Partners

## Microchip's Partnership with CoHu

- **Partnership developed since 2005**
- **CoHu listens to us and seeks our input in their equipment roadmaps**
- **CoHu understands that capital equipment requires a long-term view**
- **Use of Microchip semiconductor solutions in their products**

# Cohu Enables Manufacturing Efficiency

Typical Test



High Parallel Test



Reduced Footprint by 90%

Reduced Labor Requirements by 85%

Microchip Proprietary and Confidential



# Thank You

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# Chris Bohrson

## Test and Inspection Handler Group

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Portfolio of equipment used to automate movement of semiconductor devices, control temperature during test and provide vision inspection; ensures quality and optimizes yield in volume production.

### **Cohu**

Joined in May 2016. More than 30 years experience in both semiconductor and test instrumentation businesses

### **Bosch Automotive Services Solutions/SPX**

2011 – 2016: general management, automotive diagnostics and information solutions

### **Teradyne and Spirent Communications**

1984 – 2010: general management, engineering, product marketing and sales management roles in semiconductor test, broadband test, network test and automotive diagnostics

MSc Management: Sloan School of Management, Massachusetts Institute of Technology

BSc Materials Engineering: Brown University

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# Package Evolution Stressing Handling and Inspection

Segments		Focused Applications	Inflection Points
 <p><b>Automotive</b></p> <p>Cohu SAM \$300M<sup>(4)</sup></p> <p>Target Rev. CAGR 21%</p>	<ul style="list-style-type: none"> <li>○ ADAS semis for driver monitoring, collision warning, auto parking, autonomous driving</li> <li>○ xEVs<sup>(1)</sup>; &gt;50% of unit sales by 2027; 3x growth in \$ content vs. ICE<sup>(2)</sup></li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Managing power dissipation to mitigate overheating and optimize yield</i></li> <li>○ <i>Preventing arcing during high voltage testing</i></li> </ul>	
 <p><b>Mobility &amp; Inspection</b></p> <p>Cohu SAM \$400M<sup>(4)</sup></p> <p>Target Rev. CAGR 7%</p>	<ul style="list-style-type: none"> <li>○ WLCSP<sup>(3)</sup> driven by complex packages (2.5D – 3D tech.) to support miniaturization applications for mobile devices</li> <li>○ MEMS for microphone and other applications</li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Identifying micro-scale defects in advanced packages, reducing over-rejection</i></li> <li>○ <i>Multi-site precision measurement</i></li> </ul>	

(1) Electrified vehicles: battery electric, plug-in hybrid, full hybrid and mild hybrid

(2) Internal combustion engine

(3) Wafer level chip scale package

(4) Company estimates

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# Test and Inspection Delivering Higher Yield

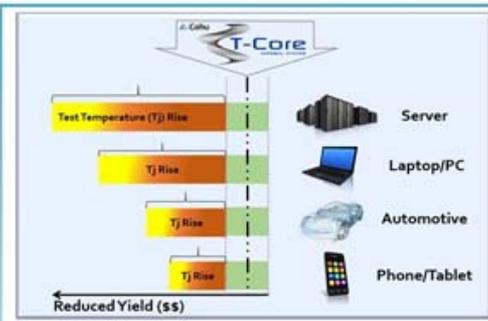


Fig 1: T-Core Thermal Control Limits Temperature (Tj) Rise

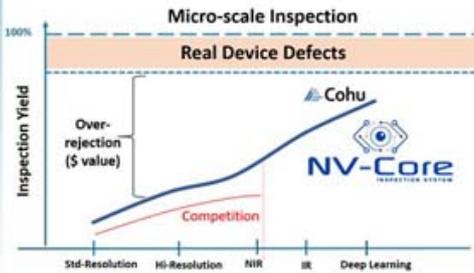


Fig 2: Deep learning algorithms minimize over-rejection

Value Proposition	
<b>Active Thermal Control (ATC)</b>	<ul style="list-style-type: none"> <li>Cohu's T-Core (ATC) dynamically compensates device overheating, minimizing yield loss</li> </ul>
<b>Advanced Inspection</b>	<ul style="list-style-type: none"> <li>Cohu's NV-Core advanced vision with infrared technology inspects below the silicon surface</li> <li>NV-Core uses deep learning algorithms to distinguish micro-cracks from cosmetic issues (scratches)</li> </ul>
<b>Handler Architecture</b>	<ul style="list-style-type: none"> <li>Isolates MEMS stimulus modules from automation to deliver "quiet" environment for precision testing</li> </ul>
<b>Test Cell Solutions</b>	<ul style="list-style-type: none"> <li>Handler T-Core architecture working with PROTRACE contactor to precisely monitor and control device temperature during testing</li> <li>Handler incorporating inert gas chamber with Cohu contactors ensures arc-free testing for high voltage applications</li> </ul>

# Handler & Inspection

*Cohu SAM*  
**\$900M**

*Target Revenue CAGR*  
**12%**

(1) Company estimates

## Cohu Strategy

**Focused on fast growing Automotive ADAS, xEV and Mobility applications**

**Deploying AI to accelerate growth in \$200M<sup>(1)</sup> Inspection market**

**Improving test cell yield with differentiated thermal and interface technologies**

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## Devin Sheridan

### Interface Solutions Group

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Full suite of test contactors that provide the electrical interface between the tester and the semiconductor device presented by the handler; optimizes signal performance via an array of consumable probe pins.

#### **Cohu**

Joined in May 2020. More than 27 years experience in the semiconductor industry

#### **Motorola/Freescale/NXP**

1993 – 2020: multiple engineering and operations management roles from production to new product introduction.

- Process engineering wafer processing and wafer test
- Global wafer test operations
- New product introduction test centers
- Test Innovation

MSc Technology Commercialization: University of Texas

BSc Mechanical Engineering: Marquette University

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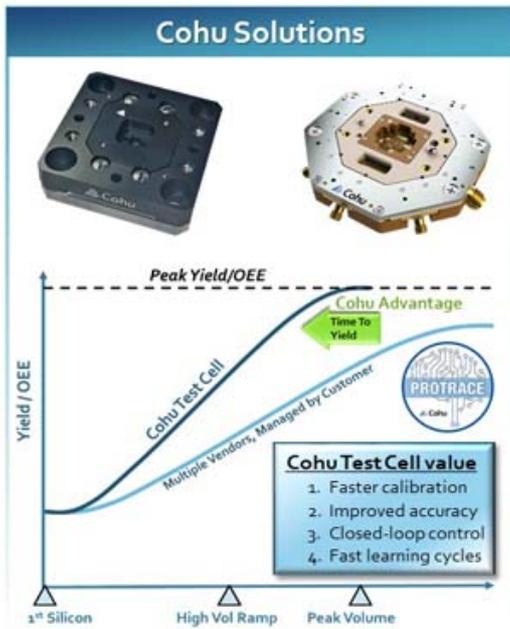
# Test Contactor Growth Opportunity

Segments		Focused Applications	Inflection Points
 <p><b>Mobility &amp; Consumer</b></p>	<p><i>Cohu SAM</i> <b>\$200M<sup>(1)</sup></b></p> <p><i>Target Rev. CAGR</i> <b>26%</b></p>	<ul style="list-style-type: none"> <li>RF Mobility ramping to higher frequencies (18 GHz – 54 GHz)</li> </ul>	<ul style="list-style-type: none"> <li><i>Expanding Wi-Fi spectrum and RF bands</i></li> <li><i>Increasing port counts</i></li> <li><i>Complex signal management</i></li> </ul>
 <p><b>Automotive &amp; Industrial</b></p>	<p><i>Cohu SAM</i> <b>\$100M<sup>(1)</sup></b></p> <p><i>Target Rev. CAGR</i> <b>16%</b></p>	<ul style="list-style-type: none"> <li>xEV driving higher power, smaller packages &amp; multisite test</li> <li>ADAS processor test requires tighter temperature control</li> </ul>	<ul style="list-style-type: none"> <li><i>High power (&gt;10 kV, 4 kA)</i></li> <li><i>Precision across temperature</i></li> <li><i>Higher test parallelism</i></li> <li><i>Safety and quality</i></li> </ul>
 <p><b>Computing &amp; Network</b></p>	<p><i>Cohu SAM</i> <b>\$200M<sup>(1)</sup></b></p> <p><i>Target Rev. CAGR</i> <b>23%</b></p>	<ul style="list-style-type: none"> <li>Cloud, AI, edge processing increasing interface speed, electro-mechanical tolerances</li> </ul>	<ul style="list-style-type: none"> <li><i>Higher data rates (&gt;50 Gbps) and pin counts (&gt;10,000 / device)</i></li> <li><i>2D and 3D package integration</i></li> </ul>

(1) Company estimates

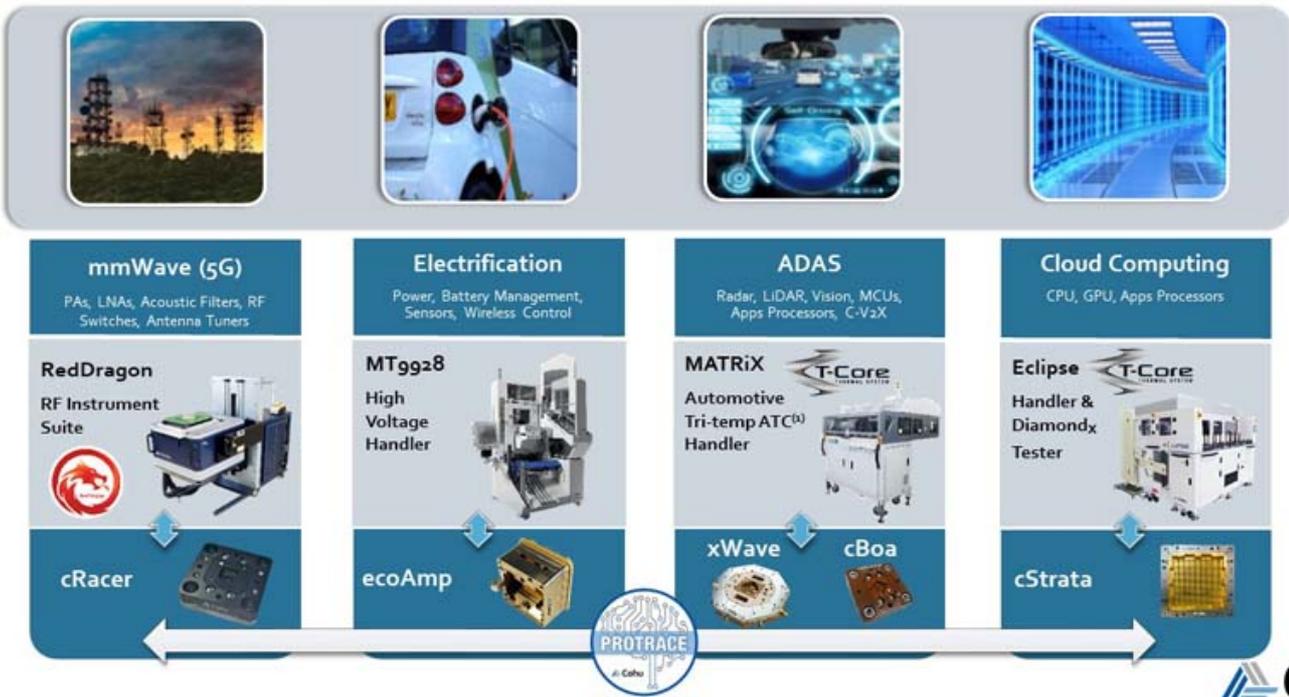
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# Test Contactors Extending Value in Key Segments



Value Proposition	
<b>High Fidelity RF</b>	<ul style="list-style-type: none"> <li>○ Contactor platform with direct signal path for mmWave applications up to 100 GHz</li> <li>○ Probe technology spanning 5G FR1 and FR2</li> </ul>
<b>High Performance Digital</b>	<ul style="list-style-type: none"> <li>○ Coaxial solutions provide exceptional signal isolation and impedance control, scalable for large package platforms up to 60 Gbps</li> </ul>
<b>Precision Analog</b>	<ul style="list-style-type: none"> <li>○ Kelvin contact solutions that scale to high power and small footprint to enable high test site density</li> </ul>
<b>Intelligent and Embedded Sensors</b>	<ul style="list-style-type: none"> <li>○ PROTRACE intelligent contactors closing the loop on thermal control to enable peak yield</li> <li>○ 5G Interceptor extending test instrumentation to mmWave and calibration to the device under test</li> </ul>

# Cohu Test Cell Solving Time to Yield



(1) Active Thermal Control

## Test Contactor

*Cohu SAM*  
**\$500M**

*Target Revenue CAGR*  
**20%**

## Cohu Strategy

Innovating conventional probe technology to address both 5G and data center markets

Leverage Cohu's leadership position in automotive to win applications in ADAS and vehicle electrification

Deploying differentiated test cell solutions that create strong competitive barriers in high growth markets

December 2, 2020



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**Jeff Jones**  
**CFO**

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**Delivering Profitability and  
Shareholder Value**

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## Q4'20 Update and Q1'21 Outlook

	Q4'20 Guidance <sup>(1)</sup>	Q4'20 Update
Revenue	\$176 - \$192M	\$195 - \$200M
Gross Margin <sup>(2)</sup>	44% - 45%	45% - 46%
Operating Expenses <sup>(2)</sup>	~ \$51M	~ \$53M
Adjusted EBITDA <sup>(2)</sup>	~ 18% (mid-point of guidance)	~ 20% (mid-point of guidance)

### Share gain in RF test and accelerating automotive demand

Est. test cell utilization improved to 84% at the end of October

Forecasting record orders in Q4'20 with automotive demand improving to 2018 levels

**Updated Q4'20 revenue guidance mid-point is 31% higher than Q3'20**

**Q1'21 revenue projected to be ~ 5% higher than updated Q4'20**

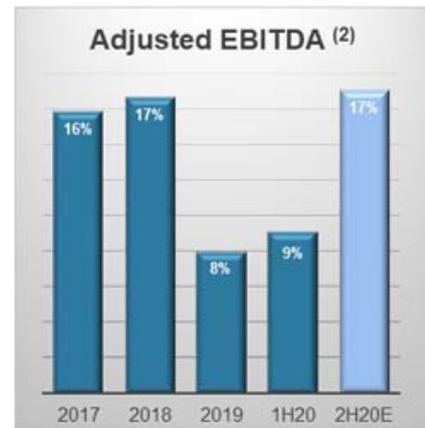
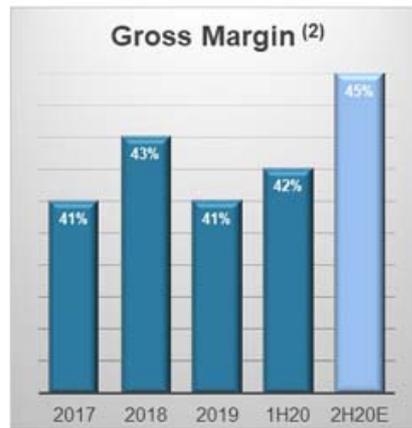
**Reduced term loan B debt by \$20.9 million quarter-to-date in Q4'20**

<sup>(1)</sup> Provided in the October 29, 2020 press release and earnings call

<sup>(2)</sup> The Q4'20 non-GAAP guidance excludes estimated pre-tax charges related to stock-based compensation of \$0.2M (CoS) and \$3.1M (Opex), and amortization of purchased intangibles of \$9.6M (Opex), and other costs as further described and reconciled, if available, in the Appendix

December 2, 2020

# Strategy & Execution Yielding Results



**Driving revenue growth through value-added, differentiated technologies and products focused on select end-markets**

**Strong operating leverage driving increased profitability**

(1) Reflects actual YTD 2020 results plus the mid-point of the Company's Q4 '20 guidance as updated on December 1, 2020

(2) Amounts are Non-GAAP. See Appendix for GAAP to Non-GAAP reconciliations, and notes regarding use of forward-looking non-GAAP figures  
December 2, 2020

# Target Financial Model

Updated Model delivers \$3.60 Non-GAAP EPS on revenue of \$940M

	2020 Est. <sup>(1)</sup>	Mid-term Model <sup>(3)</sup>	Target Quarterly Model			
Revenue	\$631M	\$940M	\$190M	\$210M	\$235M	\$250M
Gross Margin	44%	48%	46%	47%	48%	49%
Operating Expenses	32%	25%	28%	27%	25%	24%
Adjusted EBITDA	14%	24%	20%	22%	24%	25%
Non-GAAP EPS	\$1.05	\$3.60	\$0.55	\$0.70	\$0.90	\$1.00
Free Cash Flow <sup>(2)</sup>	7%	> 17%	> 13%	> 15%	> 17%	> 18%

Except for Revenue and Free Cash Flow, "Target Financial Model" assumptions are non-GAAP forward-looking figures; See Appendix for notes regarding use of forward-looking non-GAAP figures

<sup>(1)</sup> Reflects actual YTD 2020 results plus the mid-point of the Company's Q4'20 guidance as updated on December 3, 2020

<sup>(2)</sup> Reflects cash from operating activities minus capital expenditures

<sup>(3)</sup> Mid-term is 3 – 5 years

December 3, 2020



# Capital Allocation

[\$Million]	Q3'20
Cash and Investments	\$171
Total Debt	\$346
Net Debt / Adjusted EBITDA <sup>(1)</sup>	3.2X

## Reinvest in the business

Strong organic growth opportunities  
Targeting R&D at ~ 12% of sales

## Repayment of the term loan B

Targeting annual repayments of ~ \$60M

## M&A to expand SAM and technology portfolio

## Minimum cash for operations ~ \$80M

Production ramps may require additional cash to fund inventory and receivables

## Term Loan B ~ \$328M at Q3'20

Balance reduced to ~ \$307M in Q4'20  
Covenant-lite with no minimum coverage ratios requirement  
Minimum quarterly payments of \$875K (principal) plus ~ \$3M of interest at current LIBOR + 300 bps  
Maturity date is 10/1/2025

(1) For the last 12 months ending September 26, 2020; Non-GAAP figure - see Appendix for GAAP to Non-GAAP reconciliations

December 2, 2020

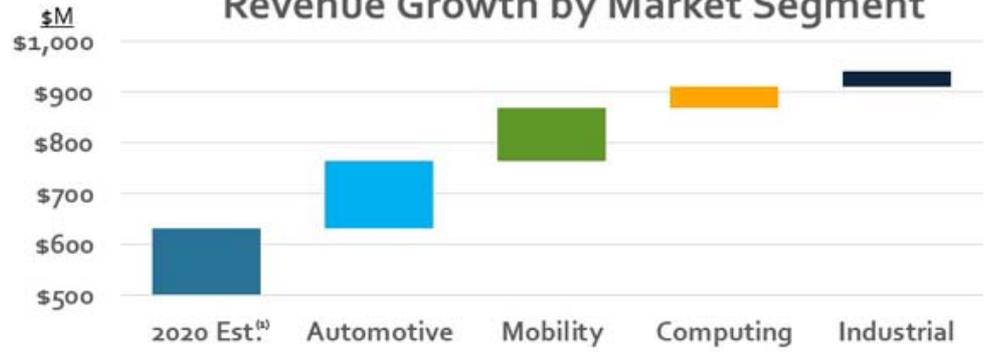


# Path to \$940M Target

Revenue Distribution <sup>(1)</sup>



Revenue Growth by Market Segment



Est. 2020 Revenue <sup>(1)</sup> is ~ 55% systems and ~ 45% recurring

Recurring by Business: Test & Inspection Handlers 49%, Semi Test 11%, Test Interface 100%, PCB Test 34%

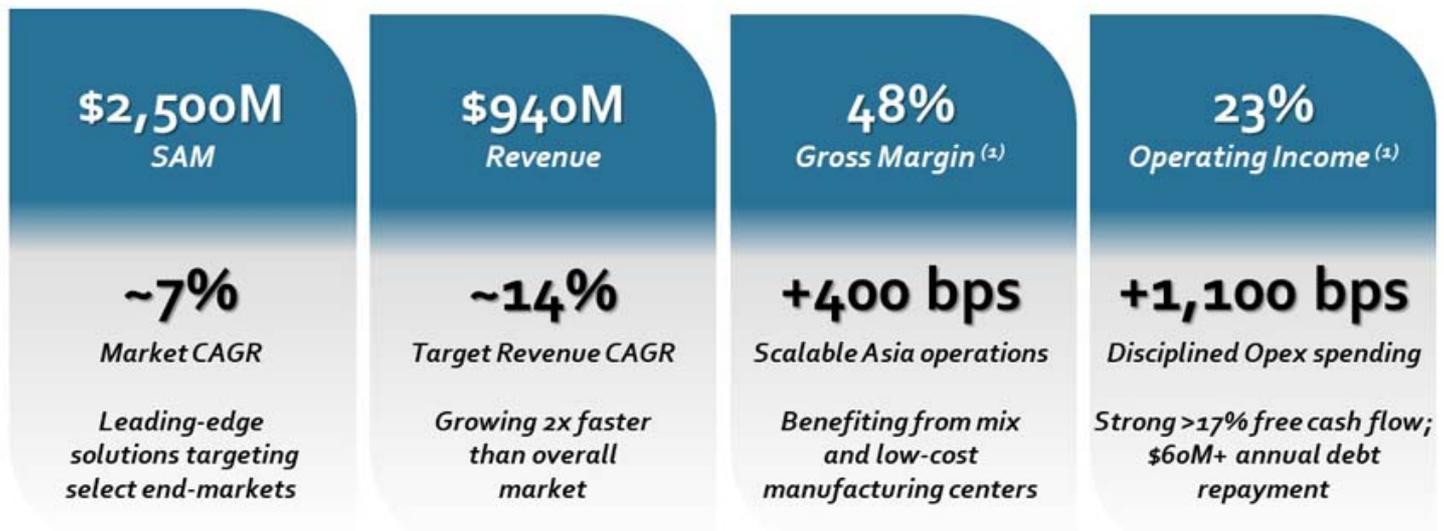
**Leveraging market position and leading-edge products to drive revenue in high-growth applications including ADAS, xEV, RF test and inspection**

**Unique cross-selling and test cell solutions accelerate time to yield driving revenue growth and creating strong competitive barriers**



(1) Reflects actual YTD 2020 results plus the mid-point of the Company's Q4 '20 guidance as updated on December 1, 2020  
December 2, 2020

# Investment Thesis



(1) Non-GAAP forward looking figures; See Appendix for notes regarding use of forward-looking non-GAAP figures  
December 2, 2020

# Q&A



**Luis Müller, CEO**  
Driving Growth & Differentiation



**Chris Bohrson, GM**  
Test & Inspection Handler Group



**Jeff Jones, CFO**  
Profitability & Shareholder Value



**Devin Sheridan, GM**  
Interface Solutions Group



**Ian Lawee, GM**  
Semiconductor Test Group

# Appendix

## Use of Non-GAAP Financial Information:

This presentation includes non-GAAP financial measures, including non-GAAP Gross Margin/Profit, Income and Income (adjusted earnings) per share, Operating Income, Operating Expense and Adjusted EBITDA that supplement the Company's Condensed Consolidated Statements of Operations prepared under generally accepted accounting principles (GAAP). These non-GAAP financial measures adjust the Company's actual results prepared under GAAP to exclude charges and the related income tax effect for: share-based compensation, the amortization of purchased intangible assets including favorable/unfavorable lease adjustments, restructuring costs, manufacturing transition and severance costs, asset impairment charges, acquisition-related costs and associated professional fees, reduction of indemnification receivable, depreciation of purchase accounting adjustments to property, plant and equipment, purchase accounting inventory step-up included in cost of sales, and amortization of cloud-based software implementation costs (Adjusted EBITDA only). Reconciliations of GAAP to non-GAAP amounts for the periods presented herein are provided in this Appendix and should be considered together with the Condensed Consolidated Statements of Operations.

These non-GAAP measures are not meant as a substitute for GAAP, but are included solely for informational and comparative purposes. The Company's management believes that this information can assist investors in evaluating the Company's operational trends, financial performance, and cash generating capacity. Management uses non-GAAP measures for a variety of reasons, including to make operational decisions, to determine executive compensation in part, to forecast future operational results, and for comparison to our annual operating plan. However, the non-GAAP financial measures should not be regarded as a replacement for (or superior to) corresponding, similarly captioned, GAAP measures.

## Use of Forward-Looking Non-GAAP Information:

This presentation includes non-GAAP forward looking figures that exclude estimated charges related to stock-based compensation, amortization of purchased intangibles, restructuring costs, acquisition-related costs, manufacturing transition/severance costs, inventory step-up costs, amortization of cloud-based software implementation costs (Adjusted EBITDA only), or other non-operational or unusual items, which we are unable predict without unreasonable efforts due to their inherent uncertainty, therefore, reconciliation of these non-GAAP forward looking figures to GAAP is not provided. Where a non-GAAP figure includes historical data and forward-looking estimates, we have reconciled the historical data, but for the foregoing reasons have not reconciled the forward-looking estimates.

# GAAP to Non-GAAP Reconciliation

	12 Months Ending		12 Months Ending		12 Months Ending		6 Months Ending		3 Months Ending		9 Months Ending	
	Dec 30, 2017	% of Net Sales	Dec 29, 2018	% of Net Sales	Dec 28, 2019	% of Net Sales	Jun 27, 2020	% of Net Sales	Sep 26, 2020	% of Net Sales	Sep 26, 2020	% of Net Sales
<b>Gross Margin Reconciliation</b>												
Net Sales	\$ 352,704		\$ 451,768		\$ 583,329		\$ 283,005		\$ 150,647		\$ 433,652	
Gross Profit - GAAP	143,407	40.7%	159,308	35.3%	229,829	39.4%	117,041	41.4%	63,500	42.2%	180,541	41.6%
Share Based Compensation	423	0.1%	546	0.1%	736	0.1%	423	0.1%	218	0.1%	641	0.1%
Manufacturing transition and severance costs	0	0.0%	416	0.1%	1,211	0.2%	0	0.0%	0	0.0%	0	0.0%
Restructuring costs related to inventory in COS	0	0.0%	19,053	4.2%	2,729	0.5%	1,675	0.6%	2,606	1.7%	4,281	1.0%
Inventory Step-Up	1,404	0.4%	14,782	3.3%	6,038	1.0%	0	0.0%	0	0.0%	0	0.0%
Gross Profit - Non-GAAP	\$145,234	41.2%	\$194,105	43.0%	\$240,543	41.2%	\$119,139	42.1%	\$66,324	44.0%	\$185,463	42.8%

	12 Months Ending		12 Months Ending		12 Months Ending		6 Months Ending		3 Months Ending		9 Months Ending		12 Months Ending	
	Dec 30, 2017	% of Net Sales	Dec 29, 2018	% of Net Sales	Dec 28, 2019	% of Net Sales	Jun 27, 2020	% of Net Sales	Sep 26, 2020	% of Net Sales	Sep 26, 2020	% of Net Sales	Sep 26, 2020	% of Net Sales
<b>Adjusted EBITDA Reconciliation</b>														
Net loss attributable to Cohu - GAAP Basis	\$ 32,843	9.3%	\$ (32,181)	-7.1%	\$ (69,700)	-11.9%	\$ (22,016)	-7.8%	\$ (6,646)	-4.4%	\$ (28,662)	-6.6%	\$ (45,928)	-8.0%
Income from discontinued operations	278	0.1%	(119)	0.0%	\$ 697	0.1%	(42)	0.0%	0	0.0%	(42)	0.0%	997	0.2%
Income tax provision	2,244	0.6%	631	0.1%	\$ (3,082)	-0.5%	(855)	-0.3%	1,116	0.7%	261	0.1%	(2,982)	-0.5%
Interest expense	54	0.0%	4,977	1.1%	\$ 20,556	3.5%	7,883	2.8%	3,021	2.0%	10,904	2.5%	15,671	2.7%
Interest income	(671)	-0.2%	(1,187)	-0.3%	\$ (764)	-0.1%	(168)	-0.1%	(42)	0.0%	(210)	0.0%	(371)	-0.1%
Amortization of purchased intangible assets	4,208	1.2%	17,197	3.8%	\$ 39,590	6.8%	19,065	6.7%	9,783	6.5%	28,848	6.7%	38,463	6.7%
Depreciation	4,978	1.4%	8,850	2.0%	\$ 19,246	3.3%	6,973	2.5%	3,462	2.3%	10,435	2.4%	14,328	2.5%
Amortization of cloud-based software implementation costs	0	0.0%	0	0.0%	0	0.0%	513	0.2%	318	0.2%	831	0.2%	831	0.1%
Other Non-GAAP Adjustments	11,878	3.4%	76,171	16.9%	39,534	6.8%	13,738	4.9%	9,328	6.2%	23,066	5.3%	32,872	5.7%
Adjusted EBITDA	\$ 55,812	15.8%	\$ 74,339	16.5%	\$ 46,077	7.9%	\$25,091	8.9%	\$20,340	13.5%	\$ 45,430	10.5%	\$ 53,880	9.4%

December 2, 2020



# GAAP to Non-GAAP Reconciliation

	<u>9 Months Ending</u>	
	<u>Sep 26,</u>	<u>Diluted</u>
	<u>2020</u>	<u>EPS</u>
<u>Earnings Reconciliation</u>		
Loss From Continuing Operations - GAAP	\$ (28,704)	\$ (0.68)
Share based compensation	10,313	0.24
Amortization of purchased intangible assets	28,848	0.68
Manufacturing transition and severance costs	318	0.01
Restructuring costs related to inventory in COS	4,281	0.10
Restructuring costs	1,400	0.03
PP&E step-up included in COS and SG&A	729	0.02
Impairment charge	11,249	0.26
Gain on sale of facility	(4,495)	(0.11)
Tax effect of Non-GAAP adjustments	(5,051)	(0.12)
Income (Loss) From Continuing Operations - Non-GAAP	<u>\$ 18,888</u>	<u>\$ 0.44</u>
Weighted Average Shares - GAAP	Basic	41,764
Weighted Average Shares - Non-GAAP	Diluted	42,457
<u>Operating Expense Reconciliation</u>		
	<u>Sep 26,</u>	<u>% of Net</u>
	<u>2020</u>	<u>Sales</u>
Operating Expense - GAAP	\$ 196,055	45.2%
Share based compensation	(9,672)	-2.2%
Amortization of purchased intangible assets	(28,848)	-6.7%
Manufacturing transition and severance costs	(318)	-0.1%
Restructuring costs	(1,400)	-0.3%
PP&E step-up included in SG&A	(729)	-0.2%
Impairment charge	(11,249)	-2.6%
Gain on sale of facility	4,495	1.0%
Operating Expense - Non-GAAP	<u>\$ 148,334</u>	<u>32.1%</u>

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