

# Investor Relations Presentation

Plano, TX

May 2021



Any statements set forth herein that are not historical facts are forward-looking statements that involve risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements. Such forward-looking statements include, but are not limited to, statements regarding updates to Diodes Incorporated's second quarter 2021 business outlook as of May 6, 2021, which include the following: expect revenue to be approximately \$434 million, plus or minus 3.0 percent; expect GAAP gross margin to be 35.6 percent, plus or minus 1 percent; non-GAAP operating expenses, which are GAAP operating expenses adjusted for amortization of acquisition-related intangible assets, are expected to be approximately 20.5 percent of revenue, plus or minus 1 percent; expect non-GAAP net interest expense to be approximately \$1.6 million; expect tax rate to be 19 percent, plus or minus 3 percent; shares used to calculate diluted EPS for the first quarter are anticipated to be approximately 45.7 million; purchase accounting adjustments for Pericom and previous acquisitions of \$3.3 million after tax are not included in these non-GAAP estimates; and other statements identified by words such as "estimates," "expects," "projects," "plans," "will," and similar expressions.

Potential risks and uncertainties include, but are not limited to, such factors as: the risk that the COVID-19 pandemic may continue and have a material adverse effect on customer demand and staffing of our production, sales, and administration facilities; the risk that such expectations may not be met; the risk that the expected benefits of acquisitions may not be realized or that integration of acquired businesses may not continue as rapidly as we anticipate; the risk that the cost, expense, and diversion of management attention associated with the Lite-On Semiconductor Corp. acquisition may be greater than we currently expect; the risk that we may not be able to maintain our current growth strategy or continue to maintain our current performance, costs, and loadings in our manufacturing facilities; the risk that we may not be able to increase our automotive, industrial, or other revenue and market share; risks of domestic and foreign operations, including excessive operation costs, labor shortages, higher tax rates, and our joint venture prospects; the risk that we may not continue our share repurchase program; the risks of cyclical downturns in the semiconductor industry and of changes in end-market demand or product mix that may affect gross margin or render inventory obsolete; the risk of unfavorable currency exchange rates; the risk that our future outlook or guidance may be incorrect; the risks of global economic weakness or instability in global financial markets; the risks of trade restrictions, tariffs, or embargoes; the risk of breaches of our information technology systems; and other information, including the "Risk Factors" detailed from time to time in Diodes' filings with the United States Securities and Exchange Commission.

This presentation also contains non-GAAP measures. See the Company's press release on May 6, 2021 titled, "Diodes Incorporated Reports First Quarter 2021 Financial Results" for detailed information related to the Company's non-GAAP measures and a reconciliation of GAAP net income to non-GAAP net income.

## Dr. Keh-Shew Lu

Chairman, President and CEO

### Experience:

- Texas Instruments 27 years
  - Senior Vice President of TI Worldwide Analog and Logic
  - President of Texas Instruments – Asia

### Education:

- Doctorate and Master's Degree in Electrical Engineering  
Texas Tech University
- Bachelor's Degree in Engineering  
National Cheng Kung University - Taiwan



## Laura Mehrl (冯蓉媿)

**Company spokesperson,  
Director of Investor Relations**

**Since May 2010**

### **Experience:**

- Director of Investor Relations, Diodes Incorporated, Plano, Texas
- Senior Business Development Manager, STMicroelectronics, Carrollton, Texas
- Sales Director for Analog Devices Inc., Shanghai, China
- Product Marketing Manager at Texas Instruments (TI), Dallas, Texas
- Senior Engineer at Lattice Semiconductor Inc., Hillsboro, Oregon
- Wafer fab design engineer and product engineer at TI, Lubbock, Texas

### **Education:**

- MBA with concentration in International Marketing, Texas Tech University
- BS in Electrical and Computer Engineering, University of Iowa

Diodes delivers high-quality semiconductor products to the world's leading companies in the consumer electronics, computing, communications, industrial, and automotive markets



**Vision: Profitability Growth to Maximize Shareholder Value**

**Our Core Values: Integrity, Commitment, Innovation**



## Global Operations and World-class Manufacturing & Packaging

- NASDAQ: DIOD; Founded in 1959
- Headquartered in Plano, TX; 31 locations globally
- Manufacturing in UK, Germany, China, and Taiwan
- ISO 9001:2015 Certified / IATF 16949:2016 Certified
- ISO 14001:2015 Certified
- Key acquisitions:
  - Anachip Corporation Taiwan - Jan. 2006
  - Advanced Power Devices - Nov. 2006
  - Zetex - June 2008
  - Power Analog Microelectronics (PAM) - Oct. 2012
  - BCD Semiconductor - March 2013
  - Pericom Semiconductor - Nov. 2015
  - TI Greenock fab - April 2019
  - Lite-On Semiconductor - Nov 2020
- Over 9,300 employees worldwide
- 29 consecutive years of profitability





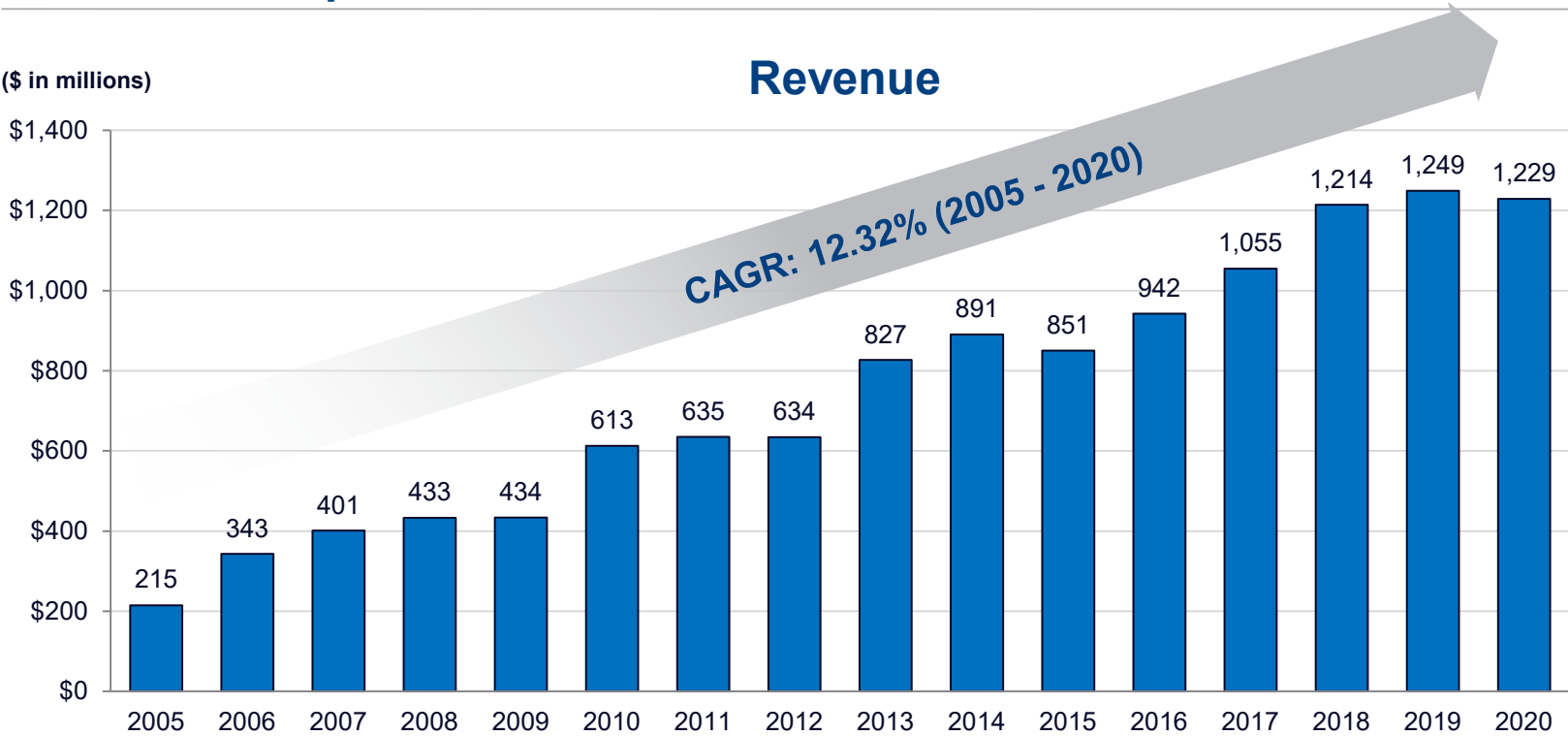
# Our Sustainability Commitment

**We view sustainability as a competitive advantage and have adopted a sustainability-oriented approach to assess and address related risks that may influence our operational activities, business results, and financial performance.**





## Continued Outperformance of Served Markets



# Vision: Create Shareholder Value

- **Goal 1: \$1B Market Cap**
- **Goal 2: \$1B Annual Revenue**
- **Goal 3: \$1B Gross Profit**
- **Goal 4: \$1B Profit Before Tax**



2010



2017



**\$1B PBT**



**\$1B Gross Profit**



**\$1B Revenue**



**\$1B Market Cap**

## Mission:

Profitable growth to  
expand shareholder value

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## Strategy:

Grow Revenue to \$2.5B  
at 40% Gross Margin

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## Goal:

\$1B Gross Profit by 2025



**~40% of  
revenue**  
(34% for 2020)

## **Automotive**

- Connected driving, comfort/style/safety, electrification/powertrain

## **Industrial**

- Embedded systems and precision controls

## **Consumer**

- IoT: wearables, home automation, smart infrastructure

## **Communications**

- Smartphones: advanced protocols and charging

## **Computing**

- Cloud computing: server, storage, data centers



## Focus Applications:

### Connected Driving

- **ADAS** (Advanced Driver Assistance Systems)
- **Telematics**
- **Infotainment Systems**

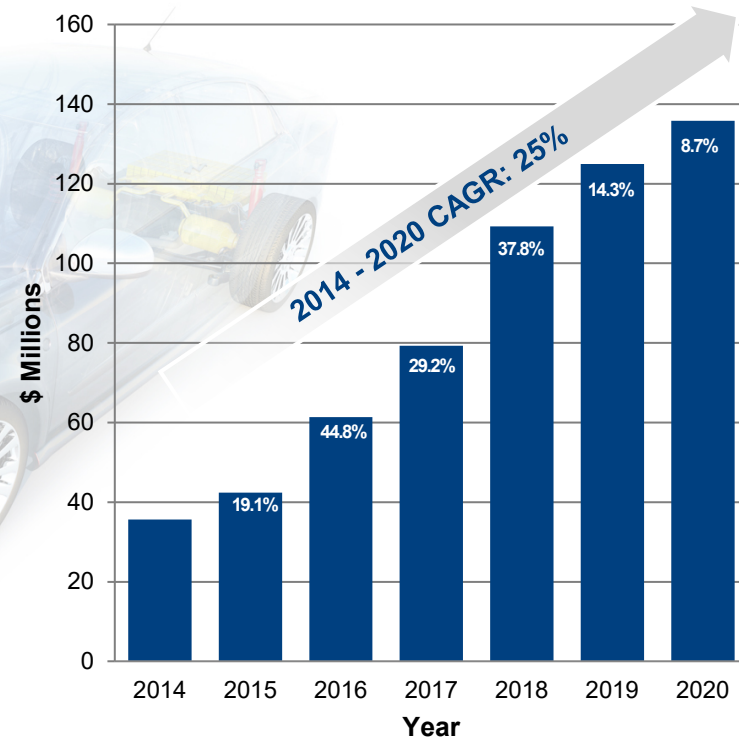
### Comfort, Style and Safety

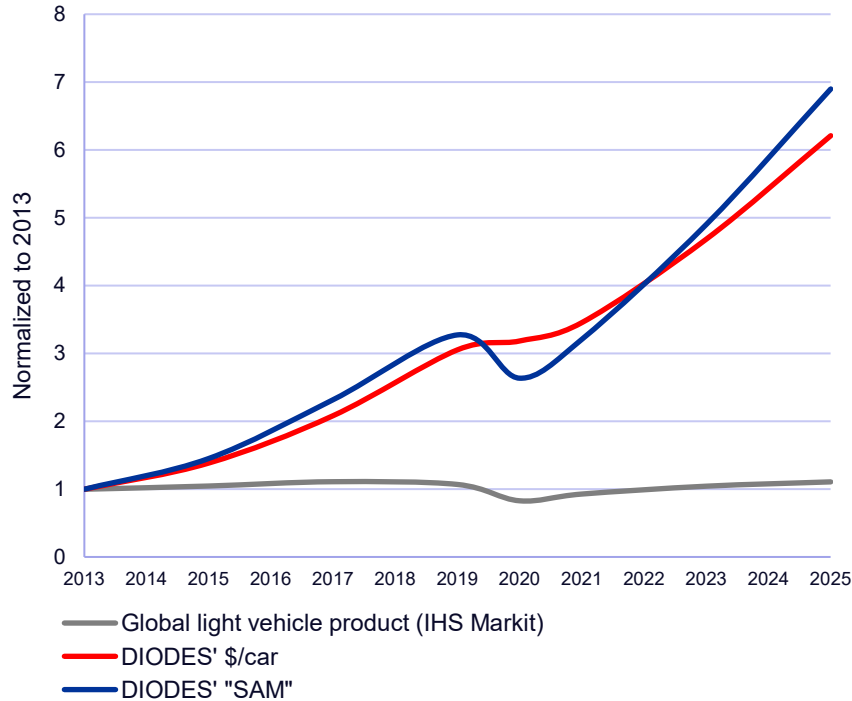
- **Lighting**
  - Migration to LED and intelligent illumination
- **BLDC motor control**
  - Migration from Brushed to Brushless DC Motors

### Electrification/Powertrain

- **Conventional Powertrain → Hybrid → Electrification**
- **Battery management**
  - Move to 48V battery

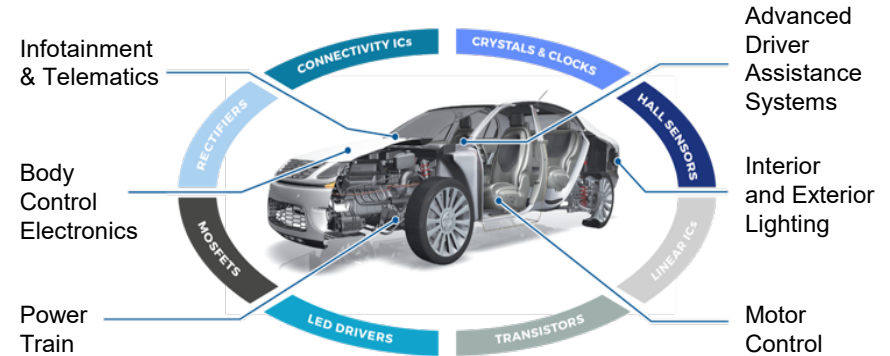
## Diodes Automotive Revenue Year over Year Increase





Car & LV Volumes – IHS Markit 2020

DIODES' SAM = volume \* \$/car

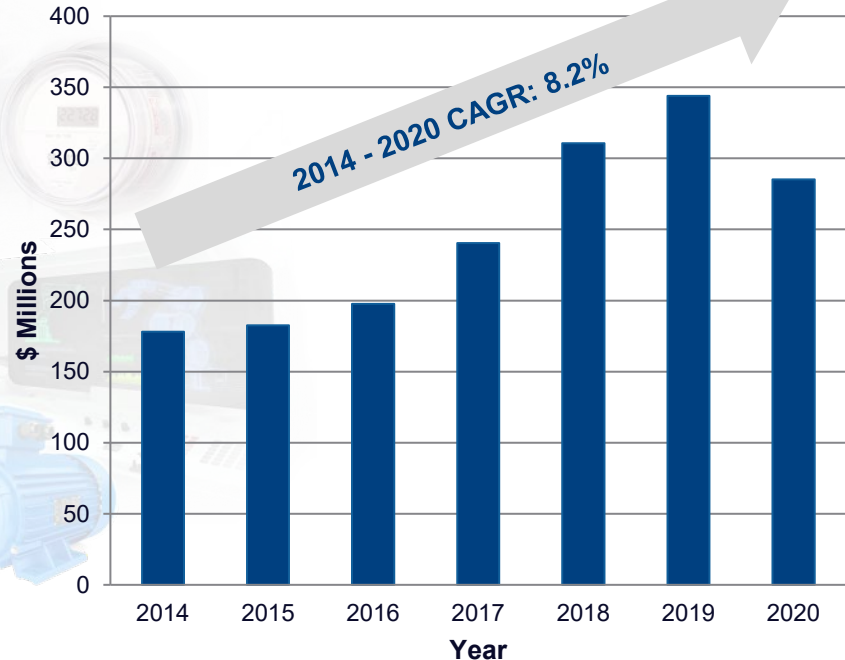


2021 Automotive Potential Revenue	\$ / Car
Automotive Motor Control	\$39.57
Connected Driving (Infotainment, Telematics & ADAS)	\$30.97
Powertrain, Electrification & Body Control Electronics	\$14.77
Lighting – Moving to LED	\$11.23
<b>Total</b>	<b>\$96.54</b>

- Increasing IC content in embedded systems
- Switching and signal path for networked systems and automation
- Signal conditioning and timing for precision controls
- Motor controls, sensors and power management for smart meters

**For 2020, 23% of total revenue is from Industrial market**

## Industrial Revenue



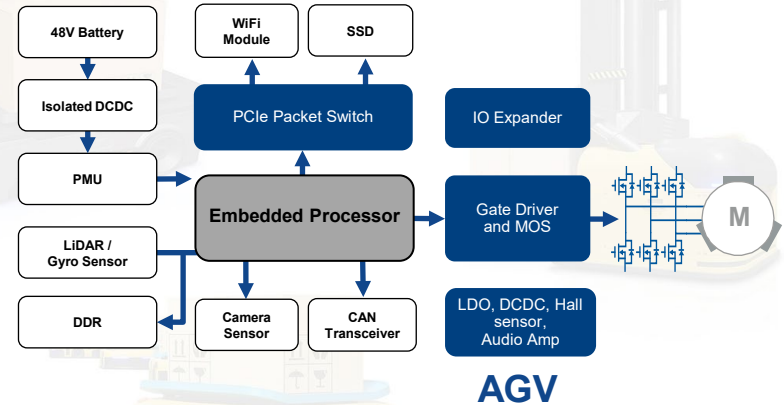
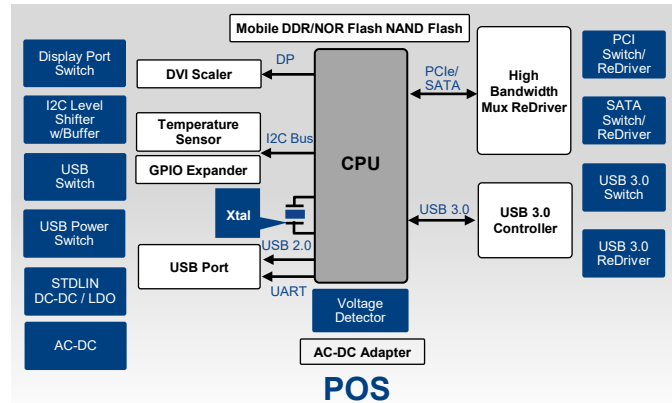
- **M2M – Dominated by short range technology**
  - 73% are short range, mostly Wi-Fi
- **2017: connections @ 750 million**
- **2023: connections @ 2600 million**

## M2M – By Product

- IoT and M2M Modems
- Routers
- POS
- AGV (Automated Guided Vehicle)
- UAV (Unmanned Aerial Vehicle)

## M2M – By Application

- Smart Infrastructure
- POS
- Manufacturing / Industrial



## Growth Opportunities:

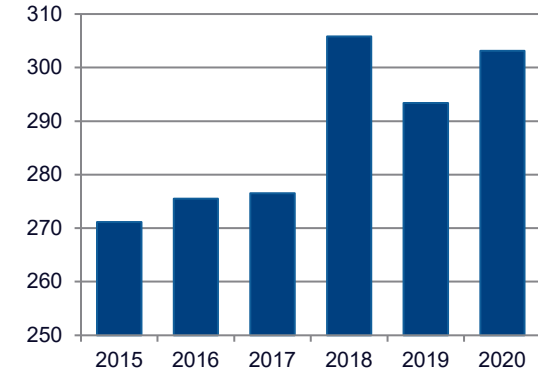
- Power, Sensor, DC-DC
- Gate Driver, BJT, MOSFET
- XTAL and clock
- Packet switch, IO Expander

Diodes Key Products	\$ / AGV
Discrete	\$3.5
Analog	\$0.4
Timing and Connectivity	\$10.4
<b>Total</b>	<b>\$14.3</b>





**Consumer Revenue (\$M)**



Diodes Key Products	\$ / Box
Analog	>\$0.20
Power Management	>\$1.30
MOS/BJT	>\$10.00
Diodes and Rectifiers	>\$5.00
Timing and Connectivity	\$3.50
<b>Total</b>	<b>\$20.00</b>

## Smart Home – expected to grow to 1.4Bu by 2023

- Safety and Security
- Climate Control
- Consumer Electronics
- Lighting control

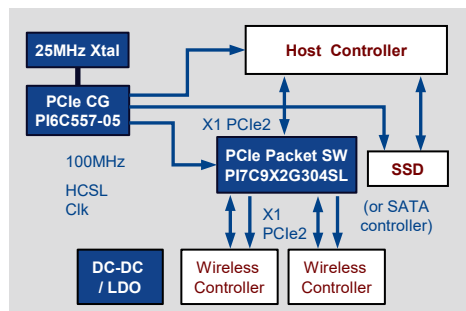
## Growth Opportunities

- Power
- LED driver
- Xtal and clock
- Packet switch

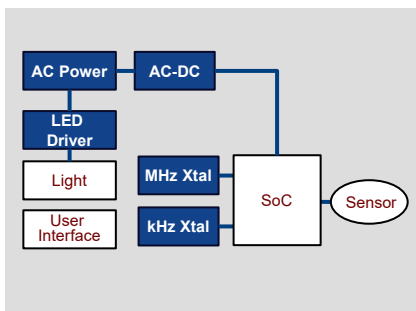


Diodes Key Products	\$ / Box
Analog	\$0.40 ~ \$0.65
Power Management	\$1.80
MOS/BJT	\$1.10
Diodes and Rectifiers	\$0.50
Timing and Connectivity	\$3.50
<b>Total</b>	<b>\$7.55</b>

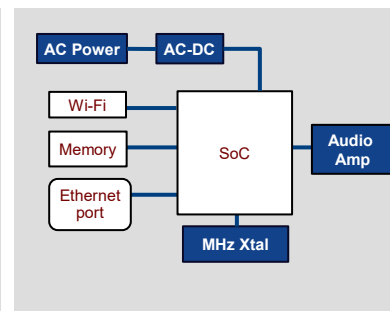
### Smart Home Gateway



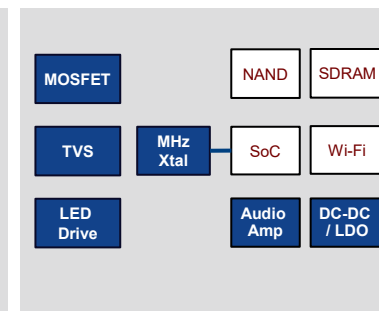
### Smart Lighting



### Smart Speaker



### Digital Assistant



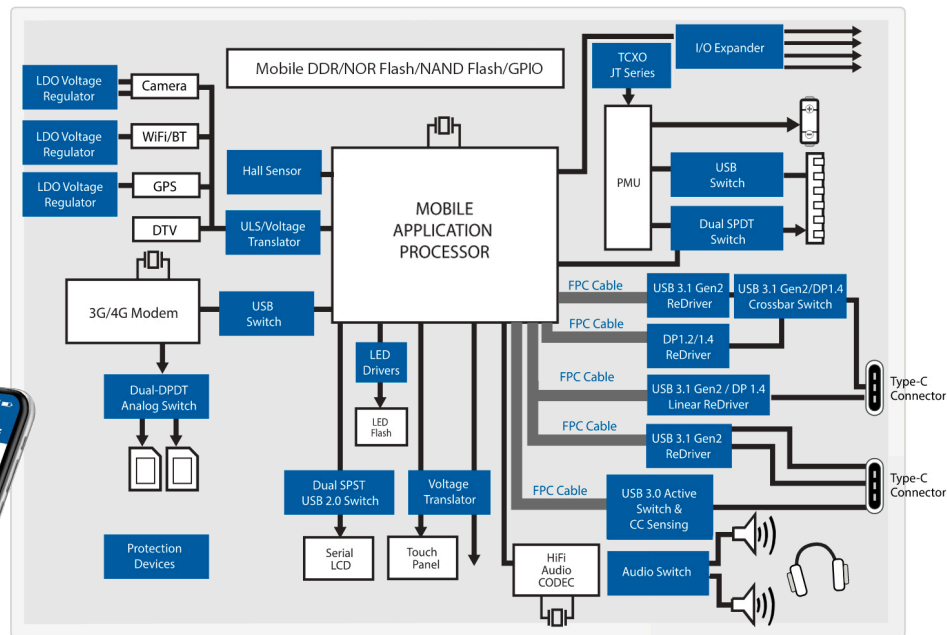
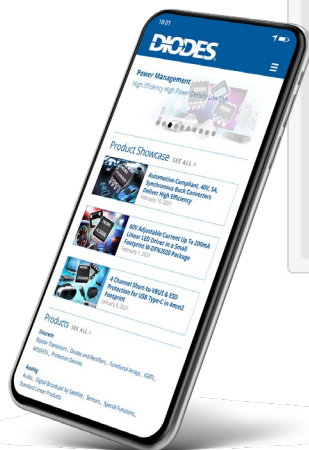
## Driving Smartphone Growth

- Smart speaker/IoT rising
- AR / VR
- Foldable screens
- 5G
- Smartwatches

## Growth Opportunities

- Type-C
- MUX
- MOSFET
- LDO, OVP LDSW, Audio, DCDC, LED/OLED Driver, ACDC

Diodes Key Products	\$ / Phone
Analog	\$0.55
Power Management	\$1.50
MOS/BJT	\$0.33
Diodes and Rectifiers	\$0.42
Timing and Connectivity	\$3.00
<b>Total</b>	<b>\$5.80</b>



- ReDriver support for USB connectivity
- Wide range of signal protocols: PCIe, SAS, SATA, GbE, USB
- MUX products for high capacity solid state storage
- Crystal oscillators for increasing clocking speeds
- LDOs, SBR, and TVS for power management and protection

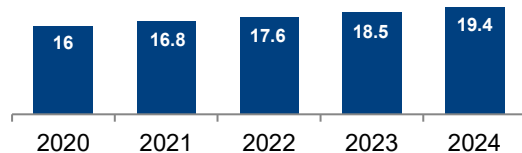




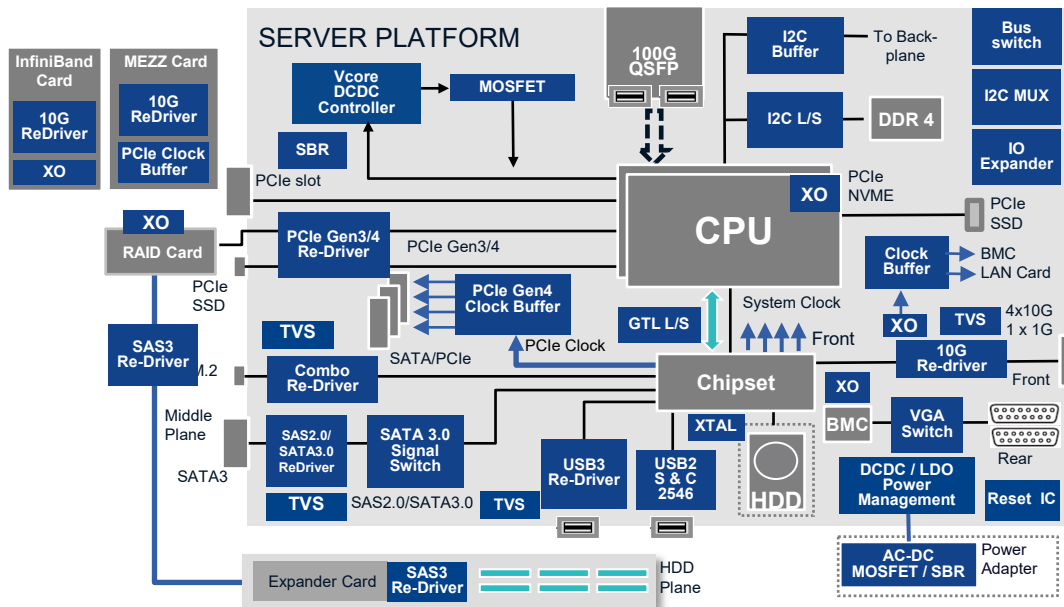
## Server Platform Solution

- CAGR is 5% (2020-2024)
- Almost all of Server vendors are Diodes existing customers
- Diodes products are well positioned in this segment
  - Connectivity, Signal Integrity, Timing, Standard Linear, Power Management, Power Switches, Protection or HV MOSFET / SBR devices

WW Server total shipments (Mu)



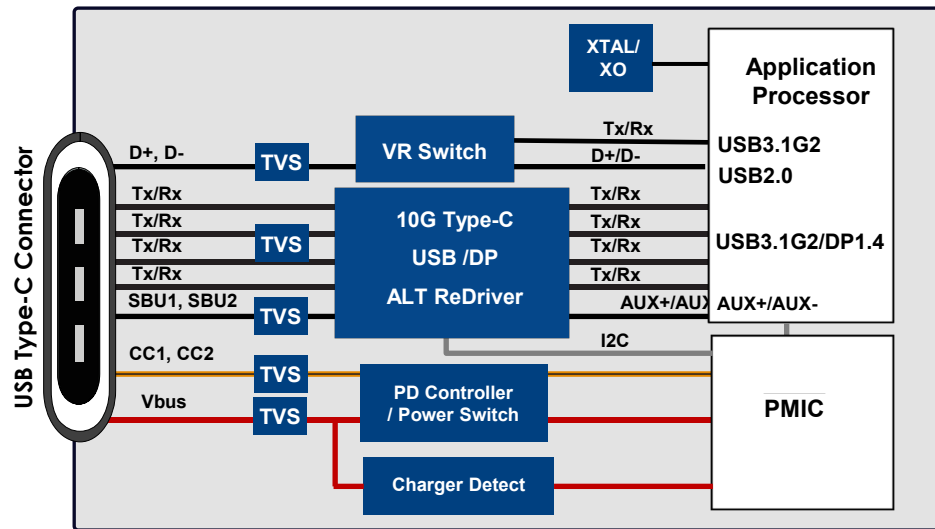
Diodes Key Products	\$ / Server
Analog	2.31
Discrete	3.41
Timing and Connectivity	23.34
<b>Total</b>	<b>\$29.06</b>



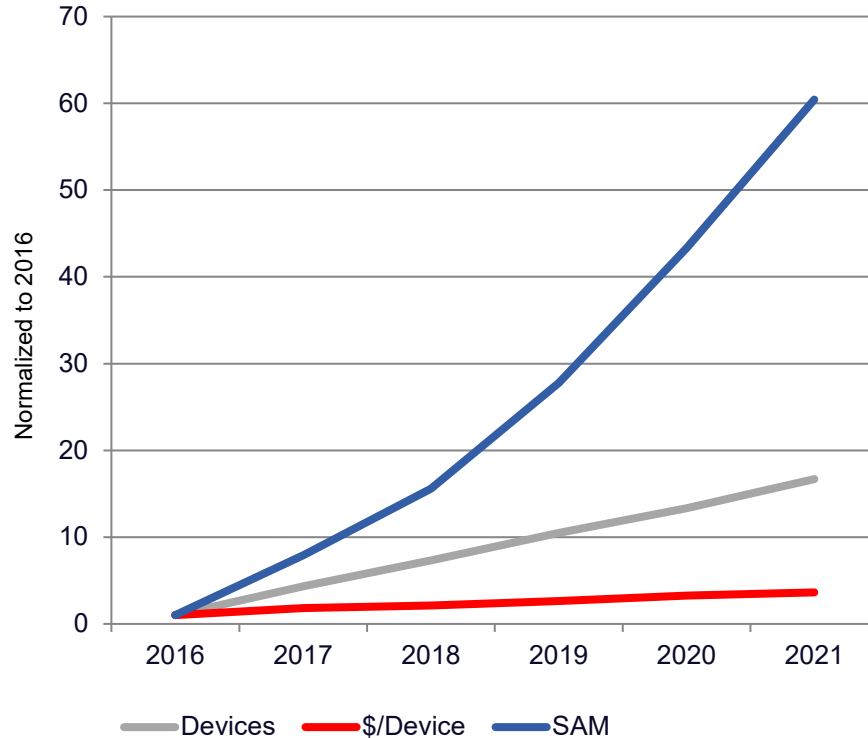
Data speed, flexibility, and simplicity of use are key drivers

## Focus Applications:

- Smartphone, Tablet
- NB/DT/WS/AIO, PC, Server
- CE Appliance
- PC Peripheral/Monitor
- Inflight Entertainment
- Automotive - Infotainment
- Robotics
- Chargers



Supports data, video, and power



2021 Automotive Potential Revenue	\$ / Car
Connectivity, Signal Integrity and Timing	\$3.25
Analog (DCDC, LDO, Sleep Mode Charger etc)	\$0.89
Power Management Switch	\$0.40
MOSFET/BJT	\$0.25
Diodes, Rectifiers and TVS	\$0.50

■ **USB-C adoption to grow from 300M (2016) to 5B units (2021)**

- IHS Dec 2017



## Focus Applications:

### Cloud Computing

- Data Center Server

### Gateway

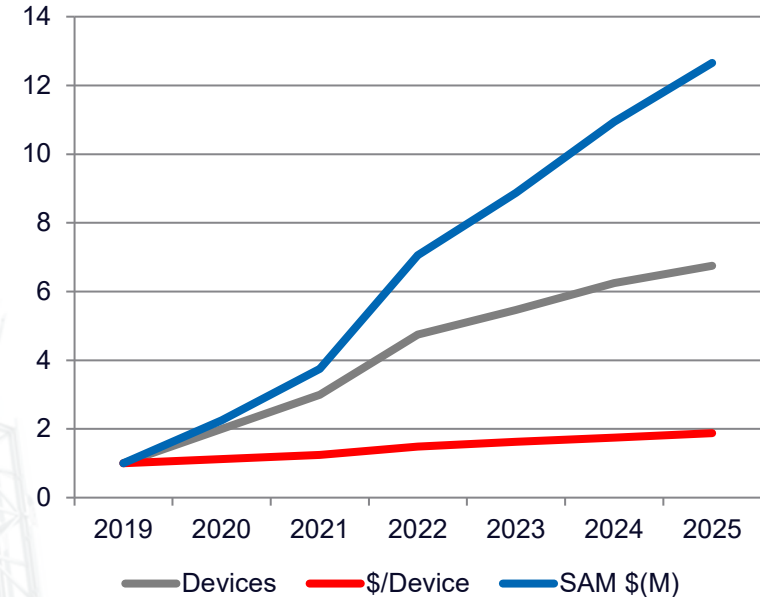
- Internet Gateway
- Fiber network

### Core Network, Cell Stations

- Small Cells
- Base Station
- Edge Computing Server
- Smart antenna
- Fiber network

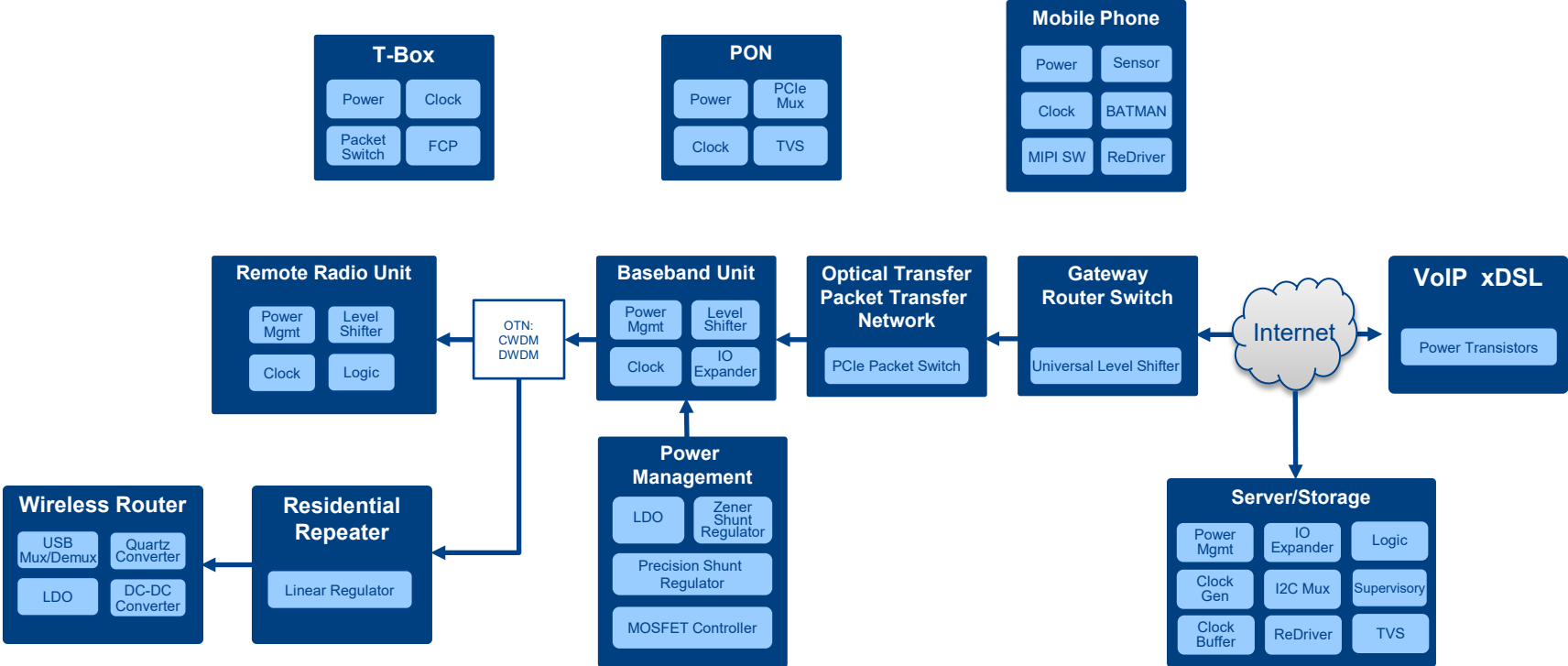
### End Products

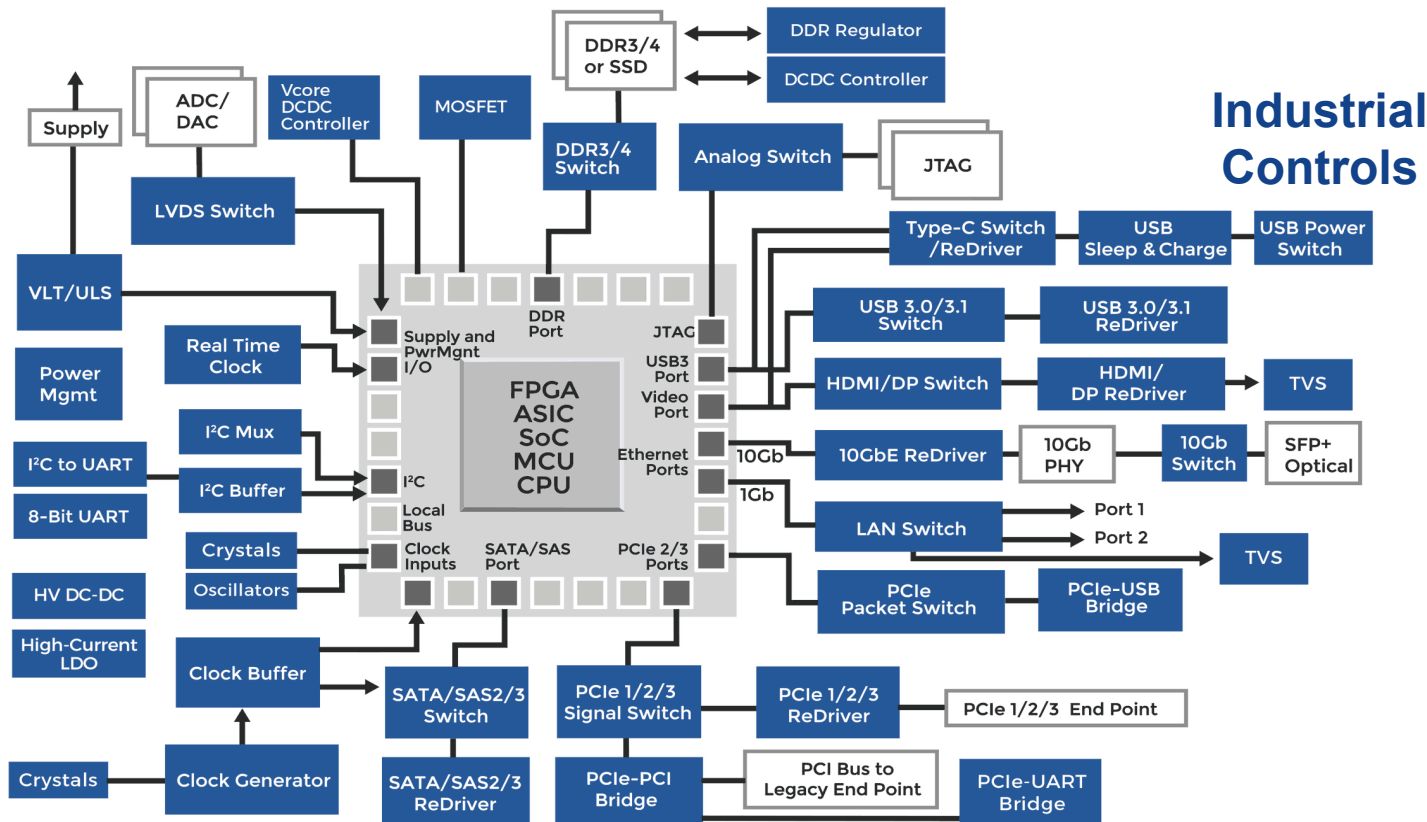
- Portables: Smartphone, Tablet
- Smart Car
- Consumer: VR/AR, Drone, IoTs
- Telecom: 5G CPEs
- Embedded/Industrial



Diodes Key Products	\$ / System
Precision Timing & Connectivity	\$5.00 ~ \$10.00
Discrete	\$2.03 ~ \$2.50
Analog	\$9.00 ~ \$11.28
<b>Total</b>	<b>\$16.03 ~ \$23.78</b>









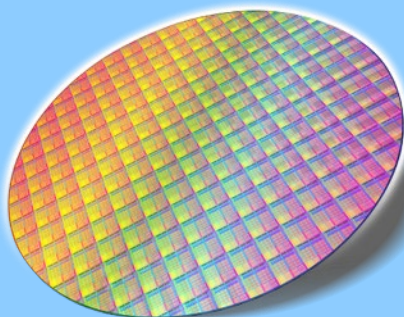
## Products



- 20Gbps ReDrivers and Switches
- Automotive Packet Switch for Telematics / ADAS
- Complete USB Type-C Signal Switching
- High speed clocking for cloud computing
- Ultra low power and low noise LDOs for IoT
- Low  $C_j$  TVS for signal integrity
- Lowest  $R_{DS(ON)}$  LDMOS for battery efficiency

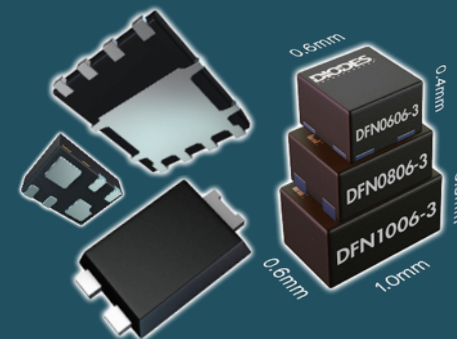
## Wafer Fab

- High performance 8" MOSFET trench technology
- Advanced Epi bipolar transistor processes
- Proprietary rectifier technology
- Rugged automotive grade NMOS and PMOS



## Assembly/Test

- Compact QFN and DFN
- Power density PowerDI
- Chip scale packaging and plating capability
- Extensive multi-chip package technology



## Focus: Miniaturization and Power Efficiency



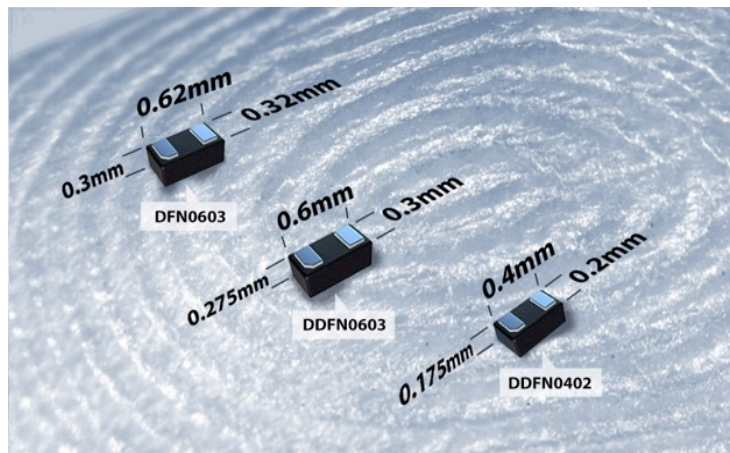


## *Miniaturization and Multi-Chip Packaging*

### Miniaturization

DDFN0402

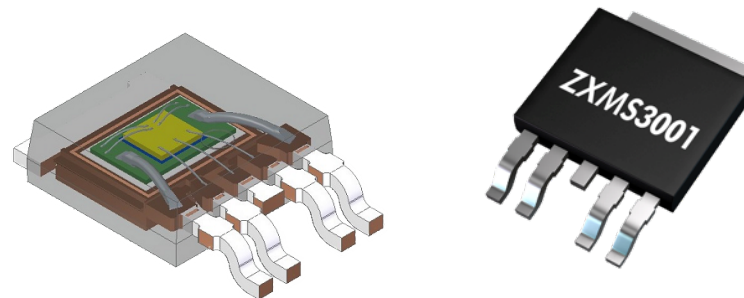
the smallest discrete semiconductor package



### Multi-Chip Packaging

Dual-Flat No-Lead (DFN) DDFN  
(Encapsulated CSP) Chip-Scale  
Package (CSP)

HS IntelliFET: ZXMS3001



## Packaging

- Shanghai-based packaging with capacity over 34 billion units
- Chengdu facility has potential capacity 3X of Shanghai
- Additional facilities in Neuhaus, Germany and Wuxi, China



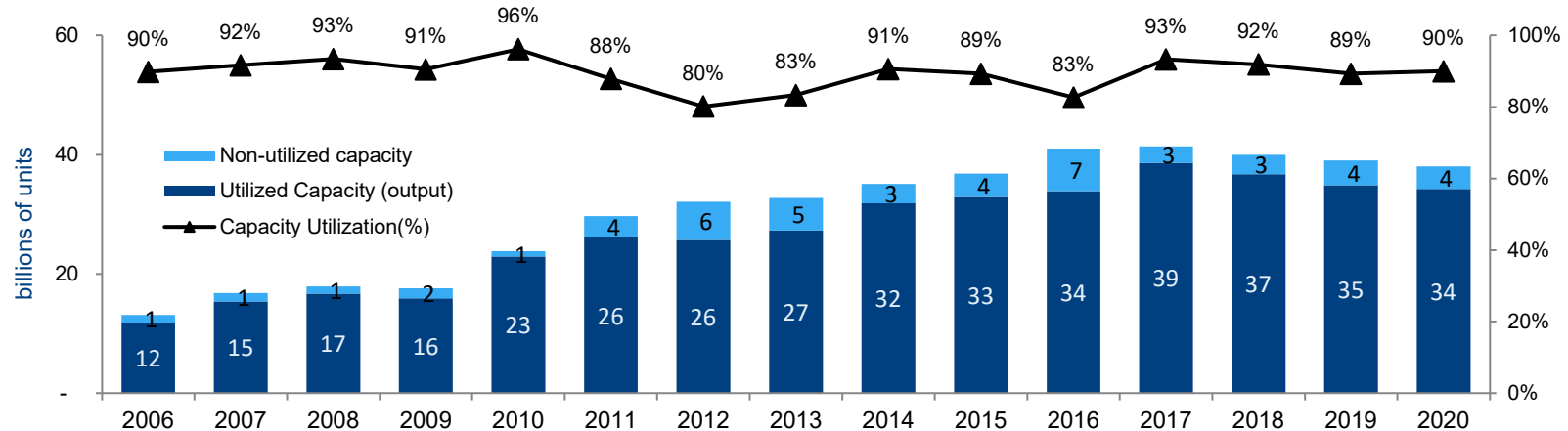
## Wafer Fabs

- China fabs in Shanghai and Wuxi, Taiwan fabs in Hsinchu and Keelung, and UK fabs in Greenock and Oldham
- Bipolar, BiCMOS, CMOS and BCD process
- Strong engineering capabilities



## Economies of Scale: Package Capacity & Loading Percentage in SAT & CAT

\*CapEx Model = 5% - 9% of Revenue



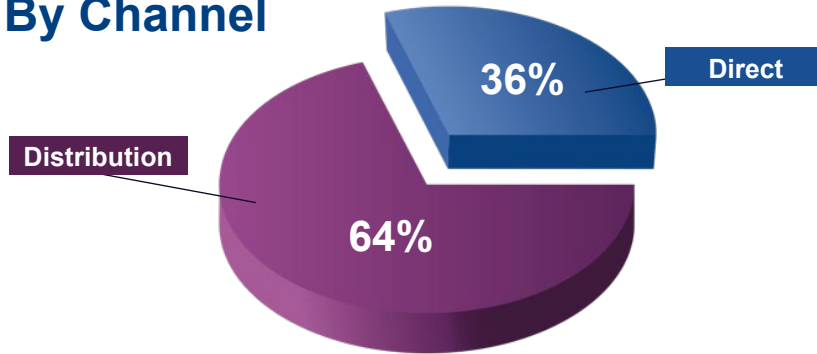
# First Quarter 2021 Financial Performance

(\$ in millions, except per share amounts)	1Q20	4Q20	1Q21
Net sales	280.7	350.4	413.1
Gross profit (GAAP)	95.8	122.7	138.6
Gross profit margin % (GAAP)	34.1%	35.0%	33.6%
Net income (GAAP)	20.2	29.7	39.5
Net income (non-GAAP)	23.9	37.3	42.0
EPS (non-GAAP)	0.46	0.74	0.93
Cash flow from operations	53.7	60.8	68.2
EBITDA (non-GAAP)	52.9	67.1	81.7

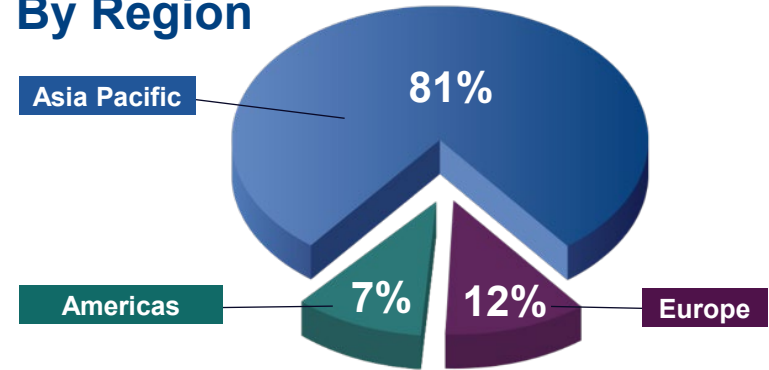
(\$ in millions)	Dec 31, 2019	Dec 31, 2020	March 31, 2021
Cash/Cash equivalents/restricted cash plus short-term investments	264	327	339
Inventory	236	307	290
Current Assets	810	1,024	1,050
Total Assets	1,639	1,980	1,990
Total Debt (L/T, S/T, Line of Credit)	111	451	413
Total Liabilities	487	963	933
Total Equity	1,153	1,016	1,057

# Revenue Profile for First Quarter 2021

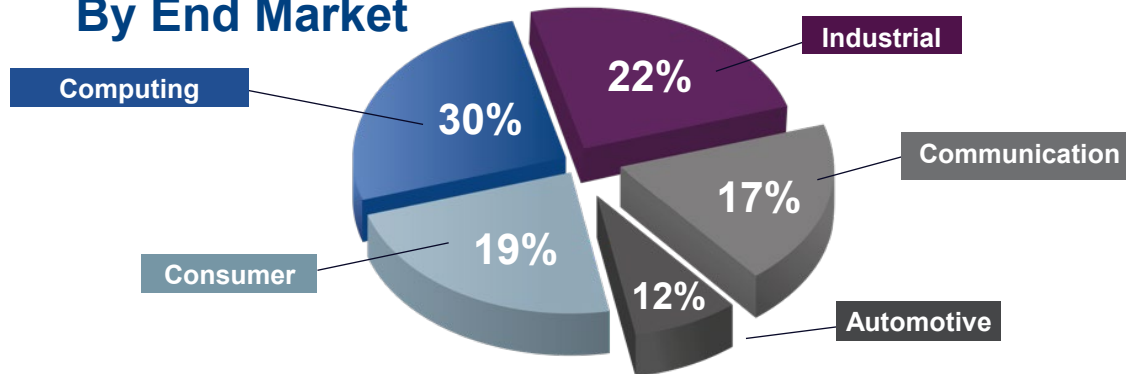
## By Channel



## By Region



## By End Market





- **Revenue to increase to ~\$434 million, +/- 3.0%**
  - a record on both an organic and consolidated basis for a combined increase of about 5% sequentially at the mid-point
- **GAAP gross margin of 35.6%, +/- 1%** on a consolidated basis
- **Non-GAAP operating expenses 20.5% of revenue, +/- 1%**, which are GAAP operating expenses adjusted for amortization of acquisition-related intangible assets
- **Net Interest expense of ~\$1.6 million**
- **Income tax rate to be 19%, +/- 3%**
- Shares used to calculate diluted EPS approximately **45.7 million**
- Purchase accounting adjustments related to amortization of acquisitions-related intangible assets of \$3.3 million, after tax, for Pericom and previous acquisitions is not included in these non-GAAP estimates

*\*Guidance as provided on May 6, 2021*

- **Vision: Expand shareholder value**
- **Mission: Profitability growth to drive 20% operating profit**
- **Next Strategic Goal: \$1B gross profit**
- **Tactics:**
  - Increased focus on high-margin Automotive, Industrial and Pericom products
  - Investment for technology leadership in target products, fab processes, and advanced packaging
  - System solutions to drive business expansion



**Thank you**