



# Silicon Labs Corporate Overview

FEBRUARY 2021

The leader in silicon, software and solutions for a smarter, more connected world.



# Silicon Labs

A leading provider of silicon, software and solutions for a smarter, more connected world

- Core competencies in mixed-signal and RF integration
- A track record of multiple industry firsts, transforming and disrupting large markets
- Focus on high-quality, diversified markets positioning us well for sustainable growth
- Scalable, fabless manufacturing model



FOUNDED IN 1996



LISTED SLAB

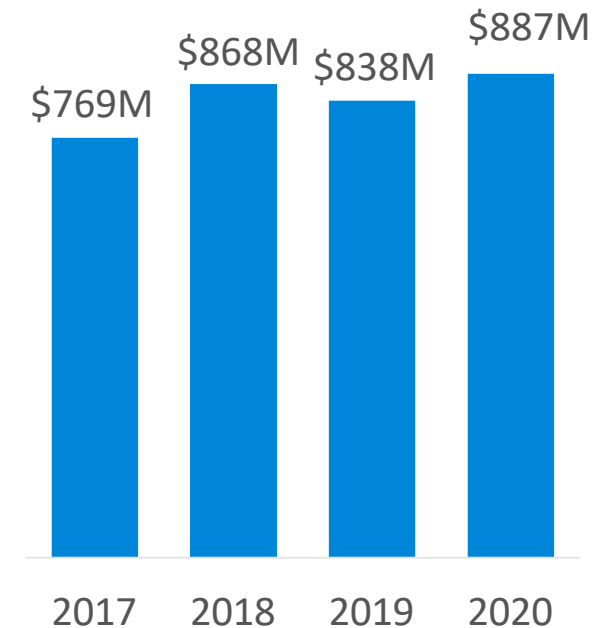


~35,000 CUSTOMERS



>1,700 PATENTS

## REVENUE



2015, 2016, 2017, 2018, 2019 Most Respected Public Semiconductor Company Achieving \$500 Million to \$1 Billion in Annual Sales



# A Global Company

HEADQUARTERED IN  
AUSTIN

~1800  
EMPLOYEES WORLDWIDE

INTERNATIONAL HQ  
SINGAPORE

● R&D Centers ● Sales Offices

# Leader in Silicon, Software and Solutions



MCUs | Wireless | Sensors



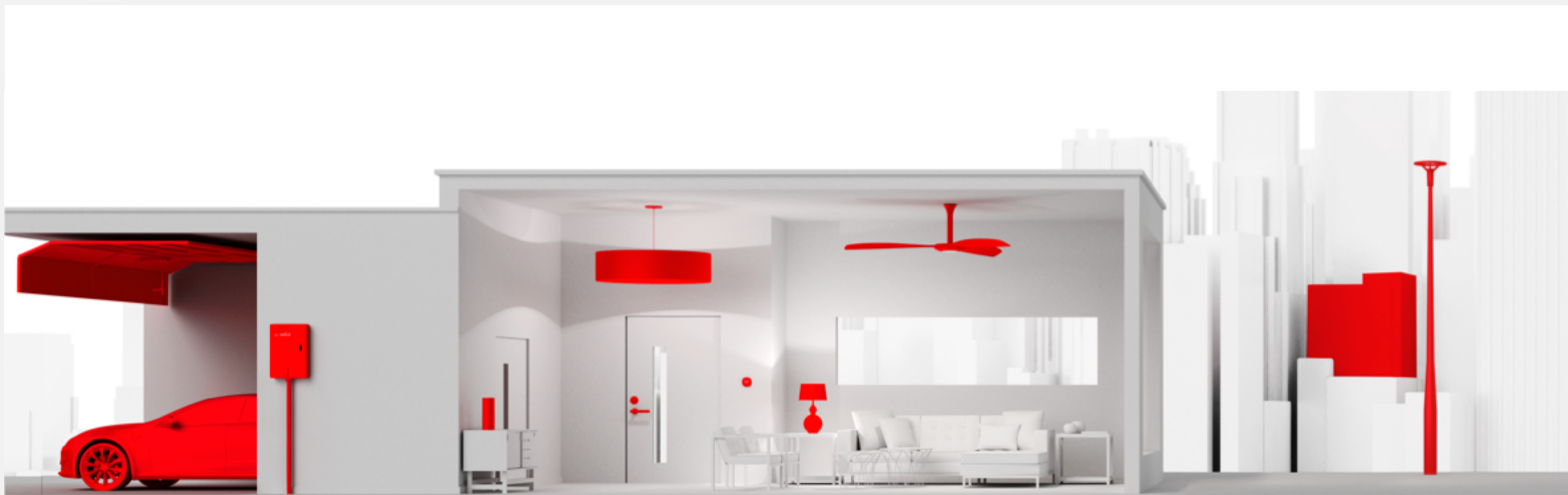
Secure wireless stacks  
Embedded OS | OTA Updates



Modules | Reference designs  
Cloud services | Tools

We provide significant advantages in performance, energy efficiency, connectivity and design simplicity.

- Diverse range of applications and customers
- Flexible hardware and software platform



## **We Believe in a More Connected World**

Our technologies enable customers to transform industries and improve lives. Together, we are creating a smarter, more connected world that benefits us all.

# A More Connected World is...

## SAFER



Allegion's door locks enable delivery service access without homeowners needing to be on-site.

**Zigbee**

## BRIGHTER



Yeelight's LED lightbulbs allow you to control lights with just the touch of your phone.

**Bluetooth Mesh**

## HEALTHIER



Propeller Health makes it possible for asthma and COPD patients to better manage their treatment.

**Bluetooth SiP**



# A More Connected World is...

## DATA-DRIVEN



Highly reliable clocks and crystal oscillators service the backbone of the Internet

**Timing**

## GREENER



Superior products reduce size and cost for electric vehicles and charging stations

**Isolation**









## MORE INFORMED



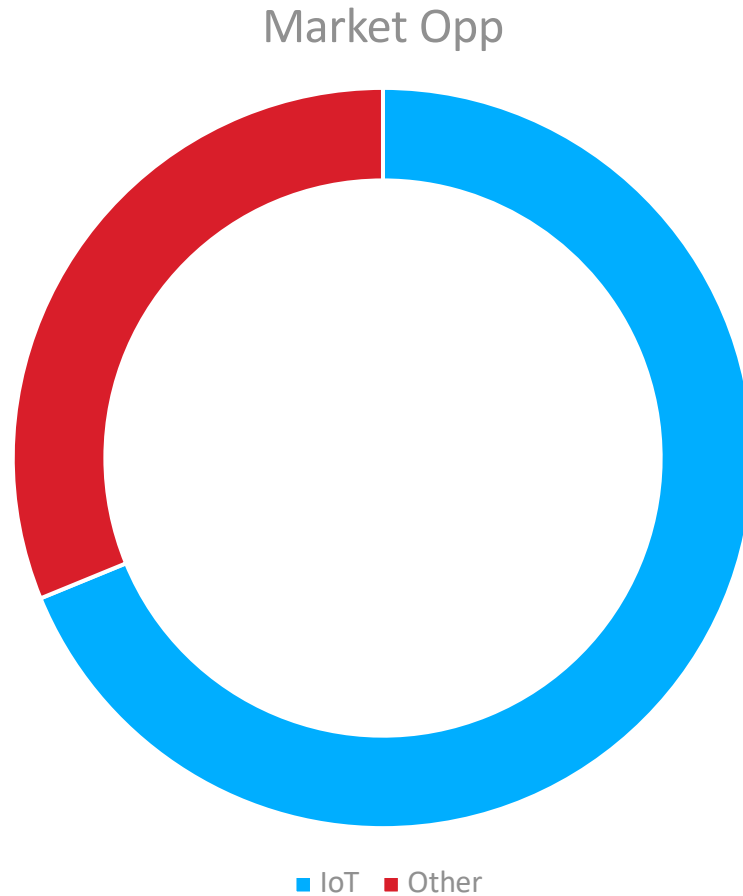
Unrivaled, scalable approach for developing auto infotainment systems

**Automotive Infotainment**

# A Diversified Product Portfolio

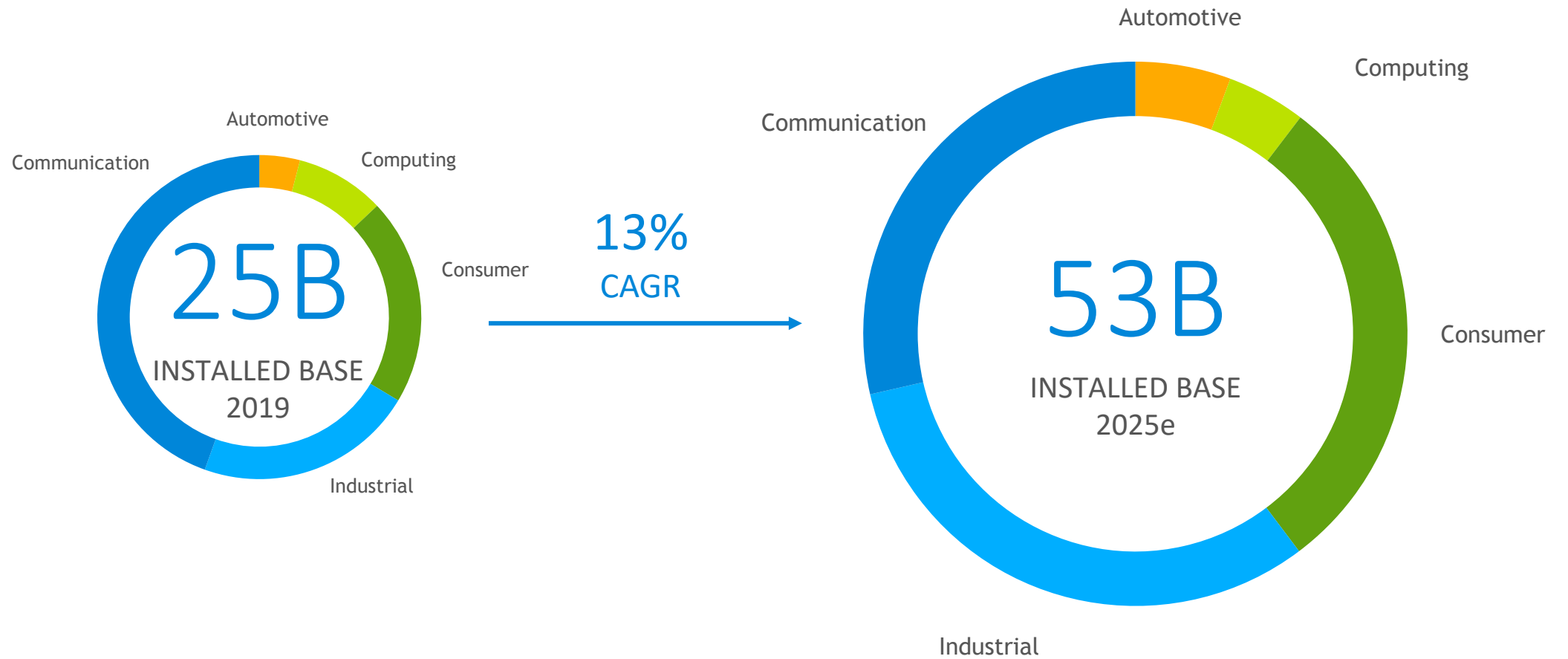
INTERNET OF THINGS	INFRASTRUCTURE	BROADCAST	ACCESS
			
			
MCU   Wireless   Sensors ~60% REVENUE	Timing   Isolation ~20% REVENUE	Automotive Radio   TV Tuners ~15% REVENUE	Modems   SLICs   PoE >5% REVENUE
HIGH GROWTH			MATURE

# IoT Driving \$15B Opportunity Pipeline



- Total SLAB
  - Design-win lifetime revenue up 10% y-y
- Wireless solutions driving growth
  - ~66% 2020 IoT revenue
- IoT growth drivers
  - Smart home & security
  - Portable medical
  - Smart retail
  - Industrial automation
  - High volume lighting
  - Smart metering

# IoT: Market Opportunity



Source: IHSM 2019 Q3



# IoT: Leadership in Wireless Silicon, Software and Solutions



STRATEGIC GROWTH TARGET 20%

- Scalable hardware and software platform
- Provide complete solution from silicon to cloud
- Enable market-leading integrated security
- Broad offering of low-power SoCs
- Extensive wireless protocols including Bluetooth, mesh, proprietary, and Wi-Fi
- Simplicity to drive support leverage
- 1,000's of applications and 10,000's of customers



Wireless  
MCUs  
Sensors



Secure wireless stacks  
Embedded OS  
Device management



Modules  
Simplicity Studio  
Application examples

# IoT: Executing a Platform Strategy

## CUSTOMER REQUIREMENTS

High performance, reliable, maintainable

Easy to develop and deploy

Long life solution



## WHY WE WIN

Best connectivity—RF SoCs and modules

Robust SW framework simplifies development

Upgradeable, cloud connected

# We Address all Facets of the IoT

## DEVICES AND SOFTWARE



### Wireless SoCs and Modules

Superior RF performance  
Multiprotocol | Robust stacks | Security

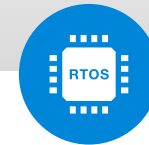
## DEVELOPMENT TOOLS



### Leading Tools

Fast time-to-market | Simplicity Studio IDE  
Connectivity kits | Network optimization

## SOLUTION



### Silicon-to-Cloud

Complete solution | RTOS  
Cloud connectivity

# IoT: Solutions to Shorten the Path to Connectivity

## STARTER KITS



Rapid prototyping

## WIRELESS MODULES AND SIPS



Pre-certified, small footprint

## APPLICATION EXAMPLES



Examples with source code for both SoC and mobile applications

# Platform-based Edge Node Architecture



Home Automation & Control



Lighting



Industrial Automation



Smart Metering



Retail & Commercial

## Developer Tools

Host Environment			Toolchains	Other		
Energy Profiler	Hardware Config	App Builder	IAR	Sample Applications	Precertification	MISRA, Static Analysis
Network Analyzer	Radio Config	Secure Programming	GCC	Mobile Apps	Large Network Testing	Documentation Application Notes

## Connectivity Software

SEMICONDUCTOR PROVIDED		CUSTOMER IMPLEMENTED		Other	
					
					
					
					
					
RADIO ABSTRACTION LAYER					
Coexistence		BR / Gateway			
Multiprotocol		Test Harness			

## Platform Software

RTOS	Core Platform			Drivers	Security	Utilities	Middleware		
KAL	Sleep	IPC	Memory	Micrium POSIX	Security Libraries	C-Lib, Diag, Stats, Error Codes, Assert	FS, IO	NCP, CLI	Cap Sense
Micrium Kernel	Timers	Events	System	EmLib	Secure Element		Bootloader	NVM	Graphics Lib

## Hardware

Chips			Modules		Development Boards	
Secure MCU	Multi-protocol radio	Secure Element	Antenna Match	Certifications	Starter Kits	Reference Designs
eFlash/RAM	I/O, Interfaces	Power/Energy Management	PCB, SiP	Shield	Radio/Expansion Cards	Evaluation Boards



# Infrastructure: Leadership in Performance and Integration



STRATEGIC GROWTH TARGET  
>1.5x industry growth<sup>1</sup>

- Breakthrough architectures leading industry
- Timing: leading in core/metro and expanding into data center, wireless and industrial applications
- Isolation: replacing traditional optocouplers in power supplies, motor controls and green energy applications
- Long life, highly profitable revenue



Timing: Clocks &  
Oscillators



Digital  
Isolation



Low Touch  
Easy to Design-in

# Timing Portfolio



- Leading in core/metro and expanding into data center, wireless, industrial and automotive applications
- Patented technologies yield performance advantage
- Flexibility, programmability simplify design
- Oscillators deliver time to market advantage
- 9 of the top 10 telecom equipment providers rely on our timing solutions



XO/VCXO



Jitter Attenuating Clocks



Clock Buffers



Synchronization



Clock Generators



Wireless Clocks



# Timing Opportunity

## TELECOM



Increasing amount of data being transferred within / between cities, countries

## DATA CENTERS



Pictures/video social media, cloud storage driving huge connected data centers

## WIRELESS



Implementation of small cells, distributed antenna systems to increase coverage



# Timing Performance Wins

## CUSTOMER REQUIREMENTS

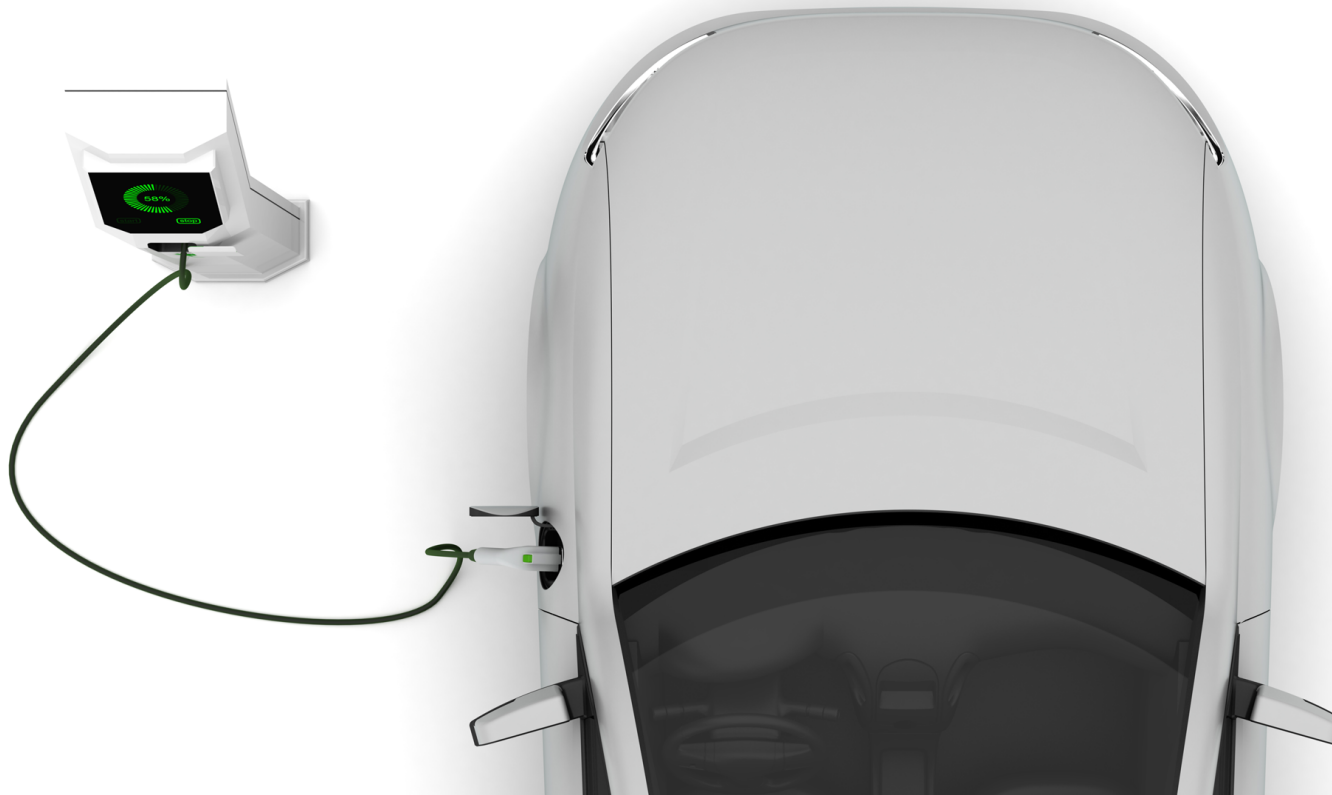
Faster data rates require higher performance  
More features in a smaller form factor



## WHY WE WIN

Industry-leading performance and flexibility  
Provide complete clock solutions with  
highest level of integration

# Isolation Portfolio



- Replacing traditional optocouplers in power supplies, motor controls and green energy applications
- Patented RF, capacitive isolation technology
- Field proven, more than 1B channels shipped
- Best emissions, immunity performance
- Compact size supports shrinking electronics
- High-speed and tight timing improve efficiency
- #1 in digital isolation for electric vehicles, cloud and telecom power supplies



Digital Isolator



Isolated Driver

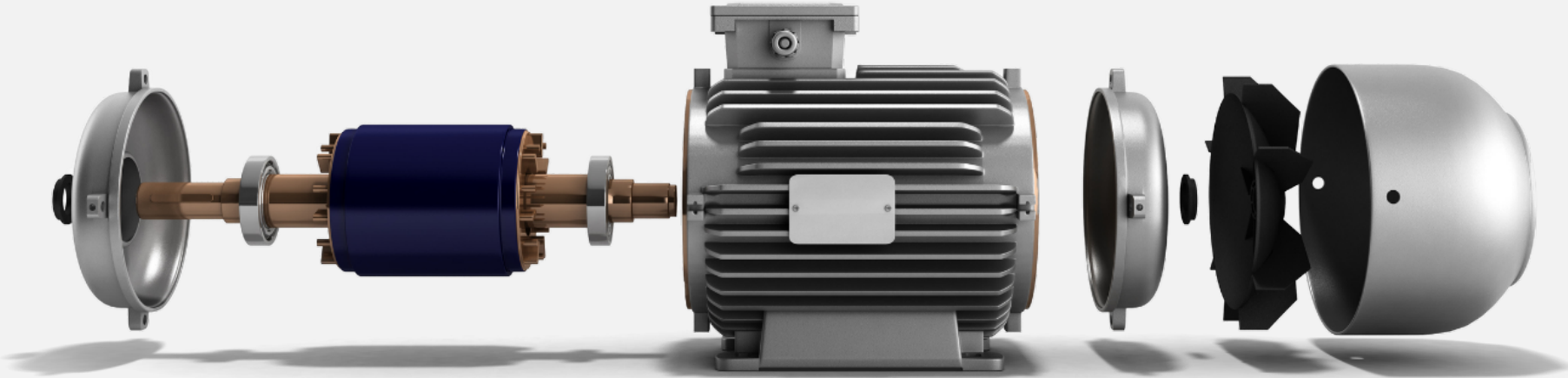


Isolated ADC



Isolated Analog

# Isolation: Global Trends Driving Growth



## GREEN ENERGY



Electric & hybrid-electric vehicles



Solar inverters & wind turbines

## EFFICIENCY



Server, storage, networking power supplies

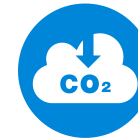


300M industrial electric motors installed

## REGULATION



Governments issuing efficiency standards

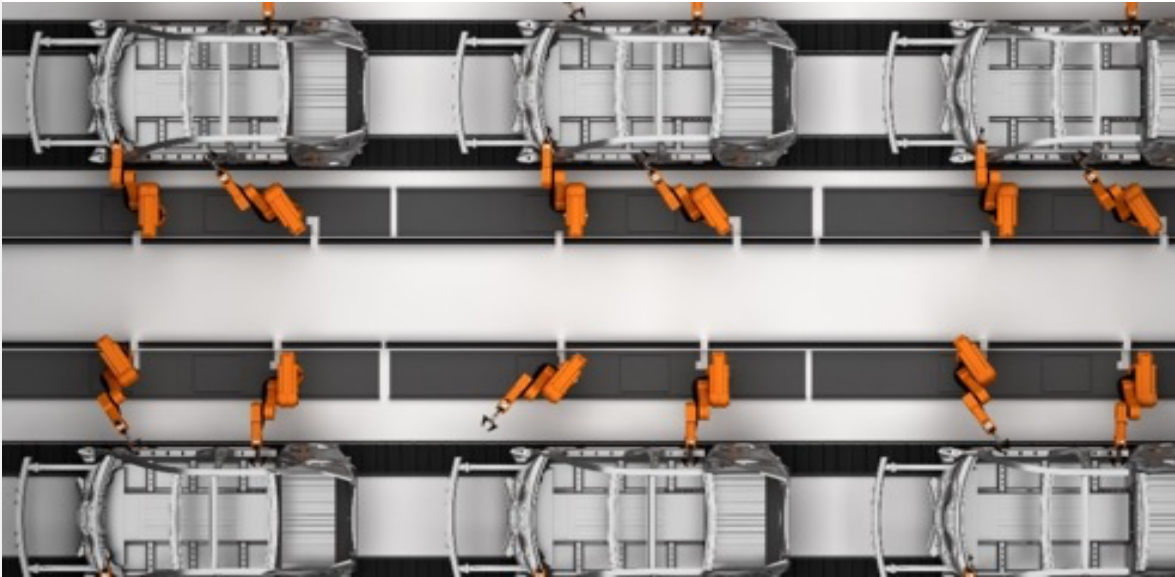


Reduction in greenhouse emissions

# Isolation Performance Wins

## CUSTOMER REQUIREMENTS

Improve efficiency  
Robust operation in noisy environments  
Smaller PCB footprints

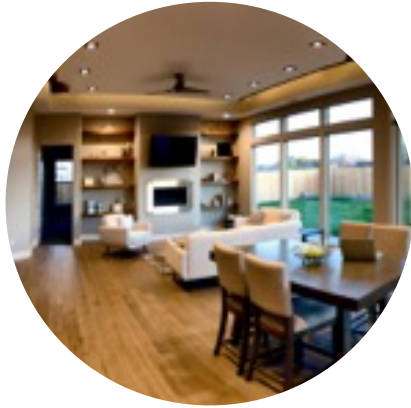


## WHY WE WIN

Delivers faster switching times  
Best-in-class noise immunity  
Higher density and more integrated features



# A Broad Range of Customers and Application Areas



We've shipped **more than 150 million** mesh networking devices



**30 million hours saved** yearly with smart metering applications



Boosted energy capacity by 6.8 MW in **13.8 million solar inverters**



We're in more than **1M EV/HEV cars**



We help coordinate **90% of Internet traffic**



On board 100% of cherry red electric roadsters currently **orbiting the sun**

# High Quality, Agile Supply Chain

Partnering with world-class suppliers to manage products from development to customer delivery

- Reliable, responsive, high volume supply
- Support unexpected surges in demand
- Quality-centered assembly and test, dual sourced
- ISO9001/14001 certified and ISO/TS16949 compliant



## 20+ YEARS

OF PROVIDING SILICON,  
SOFTWARE, AND SOLUTIONS

## 15 YEAR

TIER 1 FOUNDRY/  
ASSEMBLY PARTNERSHIP

# Innovation in Testing and Performance

## CUSTOM TEST HARDWARE



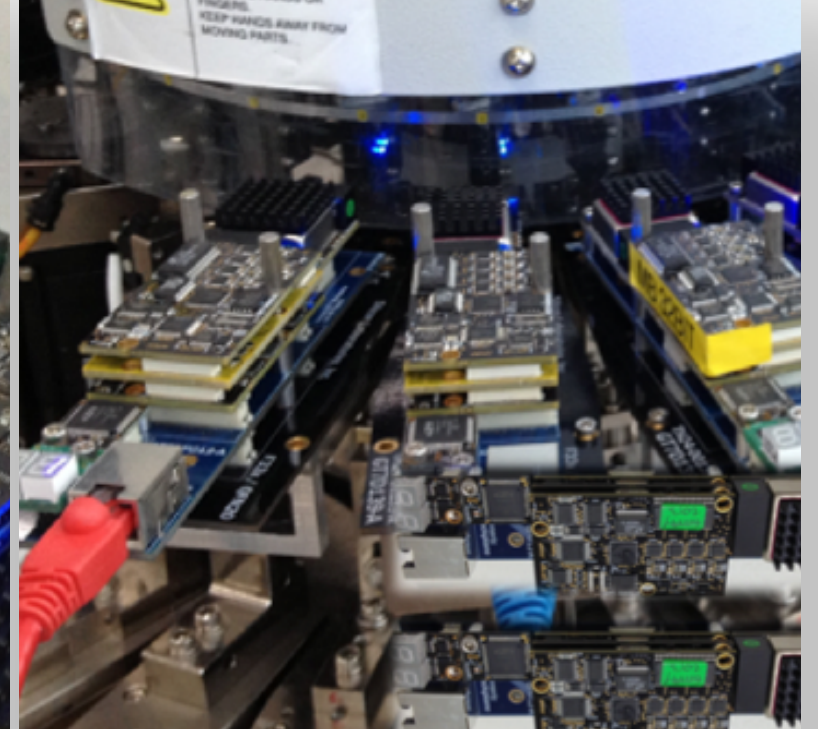
Modular design so we can be responsive to changing requirements

## FLEXIBLE CAPACITY



Custom design allows for rapid scaling and deployment

## SMALL FORM FACTOR



A typical ATE is about the size of a car; ours is smaller than a shoe box



# Key Take Aways



- Well positioned for leadership in IoT
  - Large, growing and diverse market
  - Leading hardware and software platform
  - Advanced capabilities in connectivity and security
- High quality Infrastructure opportunity
  - Addressing trends in data and green energy
  - Focus on communications, industrial & auto markets
  - Expanding SAM and portfolio
- Addressing a \$12.1B opportunity pipeline
  - >\$8B IoT opportunity
  - Double digit growth opportunity for IoT & Infrastructure
  - Total DW LTR up >30% y/y



Thank you

