Silicon Labs Corporate Overview

JANUARY 2020

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

>1500
EMPLOYEES WORLDWIDE

HEADQUARTERED IN AUSTIN
INTERNATIONAL HQ SINGAPORE

R&D Centers  Sales Offices
Leader in Silicon, Software and Solutions

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

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

MCUs | Wireless | Sensors
Secure wireless stacks
Embedded OS | OTA Updates
Modules | Reference designs
Cloud services | Tools
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**
Highly reliable clocks and crystal oscillators service the backbone of the Internet

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

Unrivaled, scalable approach for developing auto infotainment systems
## A Diversified Product Portfolio

<table>
<thead>
<tr>
<th>Internet of Things</th>
<th>Infrastructure</th>
<th>Broadcast</th>
<th>Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCU</td>
<td>Wireless</td>
<td>Sensors</td>
<td>Timing</td>
</tr>
<tr>
<td>~60% Revenue</td>
<td>~20% Revenue</td>
<td>~15% Revenue</td>
<td>&gt;5% Revenue</td>
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### High Growth

- MCU | Wireless | Sensors
- Timing | Isolation

### Mature

- Automotive Radio | TV Tuners
- Modems | SLICs | PoE
IoT Driving $12.1B Opportunity Pipeline

- Total SLAB
  - Design-win lifetime revenue up >30% y-y
- Wireless solutions driving growth
  - >65% 2019 IoT revenue
  - Grew 14% in FY19 vs WSTS down 16%
- IoT growth drivers
  - Smart home & security
  - High volume lighting
  - Smart metering
  - Broad industrial market
IoT: Market Opportunity

Source: IHSM 2019 Q3
IoT: Leadership in Wireless Silicon, Software and Solutions

- 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
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

<table>
<thead>
<tr>
<th>STARTER KITS</th>
<th>WIRELESS MODULES AND SIPS</th>
<th>APPLICATION EXAMPLES</th>
</tr>
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<tbody>
<tr>
<td>Rapid prototyping</td>
<td>Pre-certified, small footprint</td>
<td>Examples with source code for both SoC and mobile applications</td>
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</table>
## Platform-based Edge Node Architecture

### Developer Tools
- **Host Environment**
  - Energy Profiler
  - Hardware Config
  - App Builder
- **Network Analyzer**
- **Radio Config**
- **Secure Programming**
- **Toolchains**
  - IAR
  - GCC

### Connectivity Software
- **SEMICONDUCTOR PROVIDED**
  - Zigbee
  - Thread
  - Proprietary wireless
- **CUSTOMER IMPLEMENTED**
  - Bluetooth
  - WiFi

### Platform Software
- **RTOS**
  - KAL
  - Micrium Kernel
- **Core Platform**
  - Sleep
  - IPC
  - Memory
  - Timers
  - Events
  - System
- **Drivers**
  - Micrium POSIX
  - EmLib
- **Security**
  - Security Libraries
  - Secure Element

### Hardware
- **Chips**
  - Secure MCU
  - Multi-protocol radio
  - Secure Element
  - eFlash/RAM
  - I/O, Interfaces
  - Power/Energy Management
- **Modules**
  - Antenna Match
  - Certifications
  - PCB, SIP
  - Shield

### Other
- **Sample Applications**
- **Precertification**
  - MISRA, Static Analysis
- **Mobile Apps**
  - Large Network Testing
  - Documentation
  - Application Notes
- **Other**
  - Coexistence
  - BR / Gateway
  - Multiprotocol
  - Test Harness

### Radio Abstraction Layer

### Platform Software
- **Utilities**
  - C-Lib, Diag, Stats, Error Codes, Assert
  - FS, IO
  - Bootloader
  - NCP, CLI
  - NVM
  - Graphics Lib
- **Middleware**
  - Cap Sense

### Development Boards
- **Starters Kits**
- **Reference Designs**
- **Radio/Expansion Cards**
- **Evaluation Boards**
Infrastructure: Leadership in Performance and Integration

- 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

STRATEGIC GROWTH TARGET 10%
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

<table>
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<tr>
<th>TELECOM</th>
<th>DATA CENTERS</th>
<th>WIRELESS</th>
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<tbody>
<tr>
<td>Increasing amount of data being transferred within / between cities, countries</td>
<td>Pictures/video social media, cloud storage driving huge connected data centers</td>
<td>Implementation of small cells, distributed antenna systems to increase coverage</td>
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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
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.

We’re in more than 1M EV/HEV cars.

30 million hours saved yearly with smart metering applications.

We help coordinate 90% of Internet traffic.

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

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

Source: Silicon Labs estimates
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

<table>
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<th>CUSTOM TEST HARDWARE</th>
<th>FLEXIBLE CAPACITY</th>
<th>SMALL FORM FACTOR</th>
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<td>Modular design so we can be responsive to changing requirements</td>
<td>Custom design allows for rapid scaling and deployment</td>
<td>A typical ATE is about the size of a car; ours is smaller than a shoe box</td>
</tr>
</tbody>
</table>
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