Silicon Labs Corporate Overview

MAY 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

~1700
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**
<table>
<thead>
<tr>
<th>DATA-DRIVEN</th>
<th>GREENER</th>
<th>MORE INFORMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly reliable clocks and crystal oscillators service the backbone of the Internet</td>
<td>Superior products reduce size and cost for electric vehicles and charging stations</td>
<td>Unrivaled, scalable approach for developing auto infotainment systems</td>
</tr>
</tbody>
</table>

**Timing**

**Isolation**

**Automotive Infotainment**
## A Diversified Product Portfolio

<table>
<thead>
<tr>
<th>Segment</th>
<th>Products</th>
<th>Growth Stage</th>
<th>Revenue Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet of Things</td>
<td>MCU</td>
<td>Wireless</td>
<td>Sensors</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Timing</td>
<td>Isolation</td>
<td>PoE</td>
</tr>
<tr>
<td>Broadcast</td>
<td>Automotive Radio</td>
<td>TV Tuners</td>
<td>~15% REVENUE</td>
</tr>
<tr>
<td>Access</td>
<td>Modems</td>
<td>SLICs</td>
<td></td>
</tr>
</tbody>
</table>

*MCU = Microcontroller Unit*
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: IHS Markit 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

STRATEGIC GROWTH TARGET 20%
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>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image of a starter kit" /></td>
<td><img src="image2.png" alt="Image of a wireless module and SIP" /></td>
<td><img src="image3.png" alt="Image of application examples" /></td>
</tr>
<tr>
<td>Rapid prototyping</td>
<td>Pre-certified, small footprint</td>
<td>Examples with source code for both SoC and mobile applications</td>
</tr>
</tbody>
</table>
## Platform-based Edge Node Architecture

### Developer Tools

<table>
<thead>
<tr>
<th>Host Environment</th>
<th>Toolchains</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Profiler</td>
<td>IAR</td>
<td>Sample Applications</td>
</tr>
<tr>
<td>Hardware Config</td>
<td>GCC</td>
<td>Precertification</td>
</tr>
<tr>
<td>App Builder</td>
<td></td>
<td>MISRA, Static Analysis</td>
</tr>
<tr>
<td>Network Analyzer</td>
<td></td>
<td>Mobile Apps</td>
</tr>
<tr>
<td>Radio Config</td>
<td></td>
<td>Large Network Testing</td>
</tr>
<tr>
<td>Secure Programming</td>
<td></td>
<td>Documentation Application Notes</td>
</tr>
</tbody>
</table>

### Connectivity Software

**SEMICONDUCTOR PROVIDED**
- Zigbee
- Thread
- Wi-Fi
- Proprietary wireless

**CUSTOMER IMPLEMENTED**
- Bluetooth
- M-Bus
- iO
- Wirepas

### Platform Software

<table>
<thead>
<tr>
<th>RTOS</th>
<th>Core Platform</th>
<th>Drivers</th>
<th>Security</th>
<th>Utilities</th>
<th>Middleware</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAL</td>
<td>Sleep, IPC, Memory</td>
<td>Micrium POSIX, EmLib</td>
<td>Security Libraries, Secure Element</td>
<td>C-Lib, Diag, Statis, Error Codes, Assert</td>
<td>FS, IO, NCP, CLI, Cap Sense</td>
</tr>
<tr>
<td>Micrium Kernel</td>
<td>Sleep, Timer, Events, System</td>
<td>Micrium POSIX, EmLib</td>
<td>Security Libraries, Secure Element</td>
<td>C-Lib, Diag, Statis, Error Codes, Assert</td>
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</table>

### Hardware

<table>
<thead>
<tr>
<th>Chips</th>
<th>Modules</th>
<th>Development Boards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure MCU</td>
<td>Antenna Match, Certifications</td>
<td>Starter Kits, Reference Designs</td>
</tr>
<tr>
<td>Multi-protocol radio</td>
<td>PCB, SIP</td>
<td>Radio/Expansion Cards, Evaluation Boards</td>
</tr>
<tr>
<td>Secure Element</td>
<td>Shield</td>
<td></td>
</tr>
<tr>
<td>I/O, Interfaces, I/O, Interfaces</td>
<td>Power/Energy Management</td>
<td></td>
</tr>
</tbody>
</table>

### Other

- Connectivity Software
  - Coexistence, BR / Gateway
  - Multiprotocol, Test Harness

- Other
  - SEMICONDUCTOR PROVIDED
  - CUSTOMER IMPLEMENTED
  - Other

- Development Boards
  - Starter Kits, Reference Designs
  - Radio/Expansion Cards, Evaluation Boards

- Documentation
  - Application Notes

- Sample Applications
  - Precertification
  - MISRA, Static Analysis

- Mobile Apps
  - Large Network Testing
  - Documentation Application Notes

- Other
  - SEMICONDUCTOR PROVIDED
  - CUSTOMER IMPLEMENTED
  - Other

- Developer Tools
  - Energy Profiler, Hardware Config, App Builder
  - Network Analyzer, Radio Config, Secure Programming
  - IAR, GCC, Mobile Apps
  - Sample Applications, Precertification, MISRA, Static Analysis
  - Documentation Application Notes

- Connectivity Software
  - Zigbee, Thread, Wi-Fi, Proprietary wireless
  - Bluetooth, M-Bus, iO, Wirepas

- Platform Software
  - KAL, Micrium Kernel
  - Sleep, IPC, Memory, Micrium POSIX, EmLib
  - Security Libraries, Secure Element, C-Lib, Diag, Statis, Error Codes, Assert
  - FS, IO, NCP, CLI, Cap Sense

- Hardware
  - Secure MCU, Multi-protocol radio, Secure Element
  - Antenna Match, PCB, SIP, Shield
  - Power/Energy Management, Cap Sense

- Development Boards
  - Starter Kits, Reference Designs
  - Radio/Expansion Cards, Evaluation Boards

- Documentation
  - Application Notes

- Sample Applications
  - Precertification
  - MISRA, Static Analysis

- Mobile Apps
  - Large Network Testing
  - Documentation Application Notes
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: 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

<table>
<thead>
<tr>
<th><strong>TELECOM</strong></th>
<th><strong>DATA CENTERS</strong></th>
<th><strong>WIRELESS</strong></th>
</tr>
</thead>
<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>
</tr>
</tbody>
</table>
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
- **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**

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

**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