

Silicon Labs xG26 Sets New Standard in Multiprotocol Wireless Device Performance

Provides industry's highest combination of Flash, RAM, and GPIO for Matter over Thread

AUSTIN, Texas, April 9, 2024 /PRNewswire/ -- [Silicon Labs](#) (NASDAQ: SLAB), a leader in secure, intelligent wireless technology for a more connected world, today announced their new [xG26 family of Wireless SoCs and MCUs](#), the IoT industry leader's highest performance device family to date. The new family consists of the [multiprotocol](#) MG26 SoC, the [Bluetooth LE](#) BG26 SoC, and the PG26 [MCU](#). All three are designed to future-proof the IoT against some of the most demanding emerging applications, like [Matter](#), with double the Flash and RAM of other Silicon Labs multiprotocol devices.

"As users from consumer to industrial sectors extract more benefits from their IoT deployments, their requirements are steadily increasing," said Matt Johnson, CEO of Silicon Labs, Inc. "The new xG26 family is built for the future, empowering device manufacturers with the confidence that their current designs will meet tomorrow's demands."

To help designers build devices capable of running advanced IoT applications, the xG26 family can be equipped with:

- **Doubled Flash, RAM, and GPIO capacity** compared to the [xG24](#) device family, allowing IoT device builders to develop advanced edge applications. It also has double the number of general-purpose input/output (GPIO) pins as the xG24, meaning that device builders can connect it to twice as many peripherals for better system integration.
- **Higher performance compute** in a multicore format with an [ARM® Cortex®-M33 CPU](#) and dedicated cores for the radio and security subsystems, helping to free up the main core for customer applications.
- **Embedded AI/ML hardware acceleration**, enabling up to 8x faster processing of machine learning algorithms using as little as 1/6th the power, achieving greater energy efficiency.
- **Best-in-Class Security** with [Silicon Labs Secure Vault™](#) and ARM TrustZone. Using the Silicon Labs Custom Part Manufacturing Service, xG26 devices can also be hard-coded with customer-designed security keys and other features in the fabrication process, further hardening them against vulnerabilities.
- **2.4 GHz wireless connectivity leveraging Silicon Labs' proven, tested, and certified software stacks for 2.4 GHz wireless protocols**, including Matter, [Zigbee](#), [OpenThread](#), Bluetooth Low Energy, [Bluetooth Mesh](#), [Proprietary](#), and Multiprotocol, with a best in class RF link budget that improves range and reduces transmission retries, providing a better user experience while improving battery life.

MG26 Multiprotocol SoC Designed to be Most Advanced SoC for Matter over Thread

Silicon Labs is all-in on Matter, the rapidly deploying application layer that allows devices to be interoperable between the leading IoT networks and ecosystems. Silicon Labs is Matter's leading semiconductor code contributor and third-largest contributor. The experience gained from working on Matter gave Silicon Labs deep insight into what it takes to build a device capable of growing with the needs of the Matter standard as it adds support for new device types, security enhancements, and more. Most device types have already seen Matter's code requirements grow by 6% in the first 18 months since Matter 1.0 was released in October 2022.

Consumers who invest in building Matter-enabled Smart Homes don't want their new devices to become obsolete in a few years. Instead, they want confidence that the Matter device they purchased last year will work with the same devices and be as secure as the next Matter device they buy next year. That's Matter's interoperability and security promise, which is why Silicon Labs designed the MG26 to be the most advanced SoC for the Matter standard.

Building off the same platform as the award-winning MG24 Multiprotocol Wireless SoC, the MG26 doubles its predecessor's Flash and RAM capacity and can be configured with up to 3200 kB of Flash and 512 kB of RAM. It also has double the number of general-purpose input/output (GPIO) pins as the MG24, meaning that device builders can connect it to twice as many peripherals for better system integration.

To enable greater intelligence for not only Matter-enabled applications, but all applications, the MG26, BG26, and PG26 also use Silicon Labs' proprietary Matrix Vector AI/ML hardware accelerator. This dedicated core is optimized for machine learning and can process ML operations up to 8x faster using as little as 1/6th the energy as a traditional embedded CPU. This significantly improves the family's energy efficiency because the device can offload ML-based activation or wake cues to the accelerator, allowing more power-hungry functions to sleep and minimize battery drain. This is ideal for smart home battery-operated devices like sensors or switches, where consumers look for them to fade into the background of their home and not draw their attention with the need for constant battery changes.

Silicon Labs Extends IoT Leadership with New SoC and MCU Family

Silicon Labs is one of the world's leading pure-play [IoT](#) companies, and no other can match its breadth, depth, and expertise in the Internet of Things. That's why the xG26 launches as a family. While the MG26 is ideal for Matter, the BG26 Bluetooth SoC brings all the same features and is optimized for Bluetooth LE and Bluetooth Mesh, and the PG26 brings low-power intelligence to unconnected applications like CCTV cameras, remotes, and children's toys. Pin compatibility between select xG26 and xG24 devices and shared hardware and software development tools like Silicon Labs Simplicity Studios allows for easy development and seamless migration from other Silicon Labs Series 2 devices.

Learn more about how to begin developing cutting-edge IoT devices using Silicon Labs, be sure to :

- The Silicon Labs [Matter Developer Journey](#)
- The Silicon Labs [Bluetooth Developer Journey](#)
- The Silicon Labs [32-Bit Microcontrollers](#) product page
- Register for the [PG26 Unboxing Tech Talk](#)

About Silicon Labs

Silicon Labs is a trailblazer in wireless connectivity for the Internet of Things. Its integrated hardware and software platform, intuitive development tools, and unmatched ecosystem support make Silicon Labs the ideal long-term partner in building advanced industrial, commercial, and home and life applications. Silicon Labs leads the industry in high performance, low power, and security with support for the broadest set of multi-protocol solutions.

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