Silicon Labs Advances Large-Scale Matter Deployments with 200-Node Matter-over-Thread Validation Network

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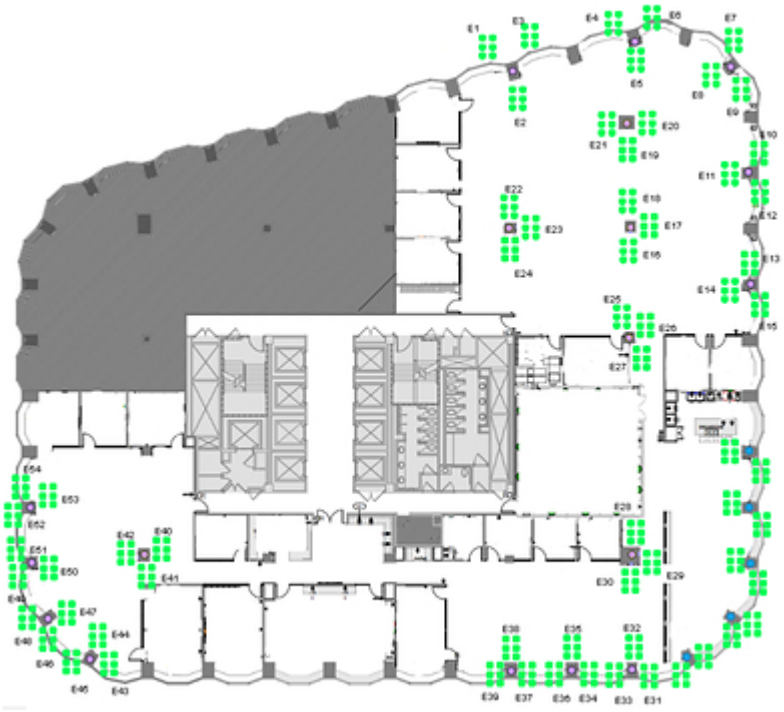
Demonstration validates Matter readiness for commercial buildings, smart homes and next-generation IoT deployments using concurrent multiprotocol technology

AUSTIN, Texas, June 16, 2026 /PRNewswire/ -- Silicon Labs (NASDAQ: SLAB), the leading innovator in low-power wireless connectivity, today announced the successful deployment and operation of a 200-node Matter-over-Thread validation network, demonstrating the scalability, reliability and performance of Matter for large-scale smart building, commercial IoT and next-generation smart home applications.



Announced at the Connectivity Standards Alliance's (CSA) inaugural Unify event, this highlights a key evolution in the Matter ecosystem: the industry is moving beyond proving interoperability and toward demonstrating scalability for real-world deployments. Silicon Labs' 200-node Matter-over-Thread validation network provides evidence that Matter can support the larger, more complex environments expected in commercial buildings, multi-dwelling units and next-generation smart home installations.

"Matter is rapidly evolving from a smart home technology into a platform capable of supporting much larger deployments," said Daniel Cooley, Chief Technology Officer at Silicon Labs. "This work demonstrates not only that Matter-over-Thread can theoretically scale to thousands of devices, but also how Silicon Labs is helping customers deploy, manage and future-proof those networks through innovations spanning Matter, Thread, and Concurrent Multiprotocol technologies."

Largest Public Validation Network Demonstrates Matter Scalability for Industrial and Commercial Applications

Believed to be among the largest publicly documented Matter-over-Thread performance test networks to date, the deployment was designed to evaluate how Matter performs as networks expand beyond traditional residential use cases. Unlike a controlled laboratory simulation, the network operated across Silicon Labs' Boston Connectivity Lab and office environment, with devices distributed throughout the facility and exposed to real-world wireless conditions including active Wi-Fi, Bluetooth and Thread traffic. The network tested multicast messaging, unicast communications, commissioning workflows and long-term network stability under deployment-like conditions.

The validation effort reflects Silicon Labs' ongoing commitment to advancing the Matter ecosystem and helping device manufacturers confidently deploy Matter-enabled products at scale. As one of the industry's leading contributors to Matter, Silicon Labs provides wireless SoCs, software, development tools Thread Border Routers based on the OpenThread implementation, certification resources and ecosystem support that help developers accelerate Matter adoption from concept through production.

The results come as the Matter ecosystem continues to mature and expand. Silicon Labs supports the latest Matter specifications, including Matter 1.6 capabilities that broaden device interoperability, expand supported device categories and enable new smart home and smart building experiences. Through its comprehensive Matter portfolio, Silicon Labs helps developers build products that work seamlessly across major ecosystems while simplifying development, certification and deployment.

Key findings from the 200-node Matter-over-Thread validation network include:

- Successful deployment and sustained operation of a 200-node Matter-over-Thread network in a real-world office environment.
- 100% commissioning success using on-network commissioning.
- Reliable multicast and multi-hop unicast communications with mean multicast latencies as low as 87 ms and less than 1% packet loss across most payload sizes.
- Consistent operation despite active Wi-Fi, Bluetooth and Thread traffic, with no specialized topology engineering required.
- Validation that Matter-over-Thread can support commercial-scale lighting, building automation and large IoT deployments.

Silicon Labs OpenThread Border Router and Concurrent Multiprotocol Technology Provide Stable Matter Foundation

The 200-node Matter-over-Thread validation network was built using the OpenThread Border Router (OTBR) implementation, which provided the Thread network infrastructure used to commission and manage devices participating in the test. As Matter-over-Thread deployments scale, Border Routers play a critical role in securely connecting Thread devices to controllers, cloud services and broader IP networks. Silicon Labs provides developers with OTBR solutions and development resources that help simplify deployment of large Matter networks.

The results also reinforce the value of Silicon Labs' leadership in Concurrent Multiprotocol (CMP), a technology pioneered by Silicon Labs that enables devices to simultaneously support multiple wireless protocols on a single radio. CMP enables support for both Zigbee and Matter-over-Thread networks within the same device, helping manufacturers simplify migrations while preserving compatibility with existing deployments and future-proofing product portfolios.

This capability allows manufacturers to support current customer installations while preparing for future Matter adoption, reducing development complexity, streamlining inventory management and enabling a smoother transition between ecosystems. Silicon Labs supports CMP across its latest wireless platforms, including MG26 and Series 3 devices, helping developers build interoperable products that span multiple wireless ecosystems.

The complete Matter Large Network Performance report is available at: https://www.silabs.com/wireless/matter/matter-over-thread-large-network-performance-testing.

About Silicon Labs

Silicon Labs (NASDAQ: SLAB) is the leading innovator in low-power connectivity, building embedded technology that connects devices and improves lives. Merging cutting-edge technology into the world's most highly integrated SoCs, Silicon Labs provides device makers with the solutions, support, and ecosystems needed to create advanced edge connectivity applications. Headquartered in Austin, Texas, Silicon Labs has operations in over 16 countries and is the trusted partner for innovative solutions in smart home, industrial IoT, and smart cities markets. Learn more at https://www.silabs.com.

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