



Synaptics Launches Industry's First Matter-Compliant Triple Combo™ SoC with Integrated Wi-Fi 6/6E, Bluetooth 5.2, and 802.15.4/Thread for Seamless IoT Connectivity

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Simplifies product development while supporting 600 Mbps video and data, low-power Thread communication, and users' need for frictionless, platform-agnostic device setup and interoperability

SAN JOSE, Calif., Feb. 02, 2022 (GLOBE NEWSWIRE) -- Synaptics® Incorporated (Nasdaq: [SYNA](#)) today announced the SYN4381 Triple Combo system on chip (SoC), the first to combine Wi-Fi 6/6E (802.11ax with extended 6 GHz operation), Bluetooth® 5.2 (BT 5.2) with BLE Audio and High Accuracy Distance Measurement (HADMM), and IEEE 802.15.4 with built-in support for the Thread protocol and Matter application layer. The SoC and its supporting SynFi™ software simplifies product development and reduces time to market, while accelerating the transition to seamless, secure, and scalable connectivity between devices across heterogeneous Internet of Things (IoT) networks, regardless of platform, OEM, or brand.

The typical smart home comprises devices from multiple vendors with a variety of wireless interfaces and communication protocols. Device developers choose these for their suitability to specific functions, such as high-speed video or data (Wi-Fi), low-power sensor and control networks (802.15.4 with Zigbee or Thread), or point-to-point communication for audio or file transfers (Bluetooth). That these devices cannot interoperate is a constant source of frustration for end users as it prevents them from fully enjoying the promise of a seamlessly interactive smart home.

Instead of forcing developers and end users to choose between the various RF interfaces or "walled garden" brand ecosystems, the SYN4381 Triple Combo combines all three primary interfaces and adds support for Matter. Matter is a unified, standards-based communication protocol that once deployed across all devices enables secure interoperability—regardless of which network the devices use. For example, the user can control window blinds connected to a Zigbee network using commands given to a smart speaker running over the home's Wi-Fi network.

Now developers can now focus on their application instead of the intricacies of inter-platform communication, thereby simplifying development and accelerating device time to market. End users, for their part, get simplified setup and seamless control of all their smart home devices.

The SYN4381 has industry-leading Wi-Fi performance, with Wi-Fi 6E data rates up to 600 Mbps, as well as transmit power and receive sensitivity that together enable sustained high throughput over an extended range for full-home coverage. Along with proximity detection using HADMM, its fully featured dual-mode BT 5.2 radio supports best-in-class Wi-Fi/Bluetooth/802.15.4 coexistence performance. Built-in support for the Thread networking protocol allows devices using the SYN4381 to connect to a smart home's secure, low-power mesh network, while acting as a Thread Router node. The SynFi wireless stack allows developers to use the same software across Triple Combos and future Synaptics Wi-Fi/BLE/802.15.4 chipsets, further reducing overall time to market.

Triple Combo Meets Rising Market Demand

According to market research firm IoT Analytics, the number of connected IoT devices is expected to grow to 12.3 billion by the end of 2021, and 27 billion by 2025.¹ Fueling the need for multi-standard connectivity is the growing work-from-anywhere (WFA) trend as well as the need for devices from multiple OEMs and brands to be interoperable to reduce user frustration.

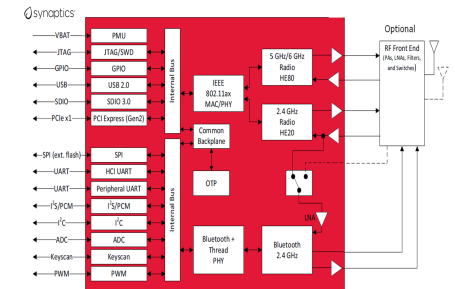
"Synaptics is an established leader in Wireless Combo solutions today with excellent traction at our customers for a wide range of applications such as multimedia streaming, gaming, surveillance cameras, and drones, just to mention a few," said Alex Chou, Senior Vice President and General Manager, Wireless Connectivity Division at Synaptics. "The Triple Combo is the next logical step toward a seamless user experience, while providing industry-leading performance across three of the most popular and widely used networking technologies in the smart home. We expect the market to quickly begin the transition to Triple Combos with launches expected by the end of 2022."

Triple Combo Technical Specifications

The Synaptics Triple Combo is a 16 nm ultra-low-power SoC comprising:

- SYN4381 (1x1 Wi-Fi 6/6E, 600 Mbps PHY layer) IEEE 802.11ax-compliant WLAN radio; supports 2.4/5/6 GHz operation and legacy 802.11a/b/g/n/ac; on-chip power amplifiers (PAs) and low-noise amplifiers (LNAs), with support for external PAs and LNAs; multipoint external coexistence interface for LTE, GPS

Synaptics Triple Combo



The SYN4381 Triple Combo™ combines Wi-Fi 6/6E, Bluetooth 5.2, and IEEE 802.15.4 for Zigbee/Thread in a single IC with on-chip PAs and LNAs, while also supporting Matter for full smart-home device interoperability.

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Synaptics Triple Combo Makes Smart Home Seamless

By combining Wi-Fi, Bluetooth, IEEE 802.15.4 (Thread/Zigbee) radios on a single IC support for Matter, the Triple Combo makes the smart home a truly seamless experience.

- Bluetooth 5.2 with Bluetooth low energy (LE) isochronous channels, LE audio, A2DP support, host encryption key size control, and HADM for accurate distance measurement
- Thread/Zigbee support using IEEE 802.15.4-based standard enabling cross-platform interoperability and ultra-low-power mesh networking and security features
- Matter interoperability and security support

Availability

The SYN4381 Triple Combo is sampling now. To learn more, visit [Synaptics Connectivity Solutions](#)

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About Synaptics Incorporated:

Synaptics (Nasdaq: [SYNA](#)) is changing the way humans engage with connected devices and data, engineering exceptional experiences throughout the home, at work, in the car, and on the go. Synaptics is the partner of choice for the world's most innovative intelligent system providers who are integrating multiple experiential technologies into platforms that make our digital lives more productive, insightful, secure, and enjoyable. These customers combine Synaptics' differentiated technologies in touch, display, and biometrics with a new generation of advanced connectivity and AI-enhanced video, vision, audio, speech, and security processing. Follow Synaptics on [LinkedIn](#), [Twitter](#), and [Facebook](#), or visit www.synaptics.com.

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¹ <https://iot-analytics.com/number-connected-iot-devices/>

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