

Category Award

Multi-Function High-Speed Wireless IC



Realtek Semiconductor Corp.
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[Company Website](#)



Winning Reason

The single-chip integration of WiFi 7, BT 6.0, 802.15.4 (Zigbee 3.0), and Open Thread offers multiple wireless functionalities, including dual Bluetooth and dual audio channels, and has passed AEC-Q100 certification, reducing the resources required for manufacturers to develop wireless products. With a single chip, it's now possible to develop products for PCs, TVs, gaming devices, automotive applications, and smart homes. The built-in Realtek WiCense feature uses an antenna for direct WiFi detection without pairing with a wireless AP. It also includes a Security Boot feature to protect the firmware. This is the industry's first chip to support WiFi 7, Dual Bluetooth, and Zigbee/Thread simultaneous usage.

Product Feature

The RTL8922D provides high-speed wireless connections with 802.11 a/b/g/n/ac/ax/be 2T2R technology and 20/40/80/160MHz bandwidth. By using Multi-Link Operation and dual-band connection, the 2.4GHz, 5GHz and 6GHz frequency bands can be flexibly configured for best performance. It supports Wi-Fi sensing and 802.11az to ensure stable wireless connections. Secure Boot technology ensures the device safe bootup. It supports Wi-Fi+BT+802.15.4 coexistence and is compatible with Zigbee 3.0 and Open Thread. Zigbee and Thread could work simultaneously. It supports up to 200 nodes suitable for smart home / IoT applications. Dual BT allows dual-channel SCO and A2DP audio streaming and supports BT6.0. It has high-power transmission and supports LE Audio for low-power and high-quality audio experience.

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