Qualcomm Dragonwing™ N6E Platform

Dragonwing N6E Platform is a Tri-band, Wi-Fi 6E networking platform supporting simultaneous high-end performance across three spectrum bands.

The successor to our groundbreaking mesh networking platforms, Dragonwing N Series Platforms are designed with novel modular architecture, advanced network packet processing, and Wi-Fi 6E designed to deliver Gigabit-speed wireless performance to virtually every room in the home with devices that fit in the palm of the hand.

With up to 4x4 Wi-Fi 6E configuration delivering enhanced performance, range, and/or client count, the Dragonwing N6E Platform offers extreme flexibility in the application of Tri-Band Wi-Fi 6E by supporting migration of performance-limiting backhaul traffic to the 6GHz band while future-proofing the network for devices supporting 6GHz operation.

Plus, advanced Qualcomm® Multi-User Traffic Management technologies balance and support the Wi-Fi connected devices in a modern smart home while high-performance Bluetooth® integration supports seamless onboarding and integration of advanced applications leveraging either connectivity technology.

Ordering Information

Product / Part Number
Dragonwing N6E Platform / IPQ5018

Highlights

HIGH-PERFORMANCE WI-FI 6E

Experience Tri-Band Wi-Fi 6E with up to 8 spatial streams simultaneously supporting our differentiated Wi-Fi feature portfolio across the 2.4 and 5GHz bands with up to 4 of those streams dedicated to support the 6GHz band, accessing the 160MHz channels that are available to deliver corner-to-corner gigabit-class connectivity.

ADVANCED INTELLIGENCE

The Dragonwing N6E Platform delivers our signature network intelligence for powerful local computing and connectivity coexistence centralizing smart home interfaces like voice assistance and emergent technologies like RF sensing to deliver a truly immersive smart home experience.

APPLICATION OPTIMIZATION

Utilizing innovative modular platform architecture, this platform is built to be small enough to go unnoticed, scalable in design to deploy densely for virtually every size home, and powerful enough to support the demands of today's smart home network.

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Features

- Tri-Band Wi-Fi 6E is designed to deliver simultaneous operation in the 2.4, 5, and 6GHz spectrum bands, including 160MHz channels.
- Tri-Band Wi-Fi 6E for Mesh Networks is designed to migrate traffic between mesh Wi-Fi nodes to the 6GHz band, where Gigabit backhaul and rock-solid stability await, clearing the way for all the connected devices in the smart home to realize maximum performance.
- Qualcomm Multi-User Traffic Management provides advanced scheduling algorithms and buffering with universal uplink data support.
- Qualcomm® Wi-Fi Security Suite offers the most comprehensive WPA3 implementation coupled with state-of-the-art embedded accelerators designed to provide secure transactions across a full range of Wi-Fi data touchpoints.
- Open API porting for multi-source development.
- Mesh Wi-Fi options include Qualcomm® Wi-Fi SON, the Wi-Fi Alliance's Wi-Fi CERTIFIED EasyMesh™ standard, and the OpenSync™ open-source software.
- Advanced powerful local computing using dual-core processors paired with powerful network accelerators.

Specifications

CPU	**Cores:** Dual-core **Clock Speed:** Up to 1 GHz*
Wi-Fi	**Peak PHY Rate:** Up to 7.8 Gbps **Generation:** Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4 **Standards:** 802.11ax/ac/n/g/b/a **Spectral Bands:** 6GHz, 5GHz, 2.4GHz **Channels:** 160MHz, 80MHz, 40MHz, 20MHz **Maximum Band Configuration:** Tri-band **Spatial Streams:** Up to 8 **Encryption:** AES-CCMP, AES-GCMP **Security:** WPA3 Personal, WPA3 Enterprise, WPA3 Enhanced Open, WPA3 Easy Connect, PRNG, TKIP, WPS, WPA2, WEP, WAPI2 **Wi-Fi Features:** Uplink scheduling, Advanced QoS, TxBF, MU-MIMO, OFDMA, Target Wake Time, Wi-Fi Alliance's Wi-Fi CERTIFIED EasyMesh, Qualcomm Wi-Fi SON
Memory	**Type:** DDR3L
Flash	**Type:** NOR, NAND, eMMC **Interface:** SPI
Interfaces	**Platform Extensions:** Bluetooth, 4G/5G FWA

* Maximum CPU speed will vary based on platform version. Consult OEM specifications for device CPU speed.

To learn more visit: qualcomm.com

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Qualcomm Wi-Fi Security Suite and Qualcomm Wi-Fi SON are products of Qualcomm Technologies, Inc. and/or its subsidiaries.

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