

# Qualcomm Dragonwing™ NPro 6 Platform



Wi-Fi 6 (802.11ax) network solution, designed for the growing demands of increasingly crowded and dense Wi-Fi environments.

The Dragonwing NPro 6 Platform offers premium-tier networking by harnessing up to 12 streams of Wi-Fi 6 connectivity, powerful computing, and an architecture built for the most challenging infrastructure environments.

The Dragonwing NPro 6 Platform includes Wi-Fi 6 features like optimized multi-user scheduling of both uplink and downlink MU-MIMO and OFDMA across all spatial streams of Wi-Fi 6 connectivity. Additional Wi-Fi 6 features include 1024 QAM, BSS coloring, and WPA3 security, all delivered on an architecture that can successfully associate and maintain connectivity for up to 1500 client devices simultaneously.

The Dragonwing NPro 6 Platform is the ideal architecture for premium-tier access points, retail routers, and gateways for next-gen enterprise and carrier-class deployments.

## Ordering Information

### Product / Part Number

Dragonwing NPro 6 Platform /  
IPQ8078, IPQ8074, IPQ6010, IPQ6028

## Highlights

### SUPERIOR CONNECTIVITY

Up to 12 spatial streams of Wi-Fi 6 connectivity across both 5 and 2.4GHz bands, dual or tri-radio configurability, and multi-user scheduling across downlink and uplink MU-MIMO and OFDMA to simultaneously manage up to 1500 users.



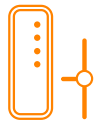
### POWERFUL COMPUTING

A 64-bit quad-core CPU gives this platform computing power, and, when combined with our superior design architecture, offers additional capabilities for dynamic data processing and management.



### POWERFUL NETWORKING ACCELERATION

Programmable network acceleration and 5 Gbps in line crypto for complex and secure data transfer with Wi-Fi driver offload while offloading CPU compute. Advanced networking interfaces for 10 GbE WAN and LAN, as well as 5G CPE deliver fixed wireless access.





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## Features

- Up to 12 spatial streams for delivery of maximum Wi-Fi 6 capacity
- Multi-user scheduling architecture uses advanced algorithms and deep packet buffer for a deterministic approach to resource allocation.
- Downlink/Uplink MU-MIMO supports 12 streams of Wi-Fi to simultaneously connect to MU-MIMO capable clients
- Downlink/Uplink OFDMA across all 12 spatial streams to provide efficient use of spectrum for small data packets, supporting up to 37 users
- 1024 QAM support
- Up to 512 users per radio, flexible based on memory configuration
- Multi-Band Simultaneous Wi-Fi configurations for improved throughput across all bands of Wi-Fi
- Advanced network interfaces for 10 GbE WAN and LAN standard networking protocols and PCIe interface for platform extensions

## Specifications

<b>CPU</b>	<p>Cores: Quad-core</p> <p>Clock Speed: Up to 2.2 GHz*</p> <p>Process Node: 14 nm</p>
<b>Wi-Fi</b>	<p>Peak PHY Rate: Up to 6 Gbps</p> <p>Generation: Wi-Fi 6, Wi-Fi 5, Wi-Fi 4</p> <p>Standards: 802.11ax/ac/n/g/b/a</p> <p>Spectral Bands: 5GHz, 2.4GHz</p> <p>Channels: 160MHz, 80MHz, 40MHz, 20MHz</p> <p>Maximum Band Configuration: Tri-band</p> <p>Spatial Streams: Up to 12</p> <p>Peak QAM: 1024 QAM</p> <p>Encryption: AES-CCMP, AES-GCMP</p> <p>Security: WPA3 Personal, WPA3 Enterprise, WPA3 Enhanced Open, WPA3 Easy Connect, WPA2, WPS, 802.11i security, PRNG, TKIP, WAPI, WEP</p> <p>Wi-Fi Features: Uplink scheduling, Advanced QoS, TxBF, MU-MIMO, OFDMA, Qualcomm® Wi-Fi SON</p>
<b>Memory</b>	Type: DDR3L, DDR4
<b>Flash</b>	Type: NOR, NAND, eMMC Interface: Serial
<b>Interfaces</b>	<p>Supported Interfaces: SD/eMMC, UART, PCIe 2.0, PCIe 3.0, SPI, Ethernet, I2S, PTA Coex, I2C, USB 3.0, SDIO</p> <p>Platform Extensions: Bluetooth®, 802.15.4</p>

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

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