# Qualcomm® Networking Pro 1620 Platform

**Quad-Band Wi-Fi 7 networking platform with a 16-stream configuration. Ideal architecture for highly-congested venues, enterprise, small-to-medium business and pro-sumer home environments.**

The Qualcomm Networking Pro 1620 Platform sets new Wi-Fi 7 and networking platform performance benchmarks for premium tier networking. It is designed to enable 33 Gbps peak speeds for massive capacity even in congested environments such as large public venues and enterprises.

The Networking Pro 1620 Platform delivers next-gen Wi-Fi 7 features today, including support for wide 320MHz channels to surge peak speeds, Multi-Link operation to maximize spectrum efficiency and low-latency performance, and 4K QAM to provide a throughput boost via advanced modulation.

The Qualcomm Networking Pro 1620 Platform includes Qualcomm® Multi-User Traffic Management with advanced algorithmic scheduling of bi-directional data using MU-MIMO and OFDMA on all 16 streams and up to 2000 client devices. This platform features powerful computing and an architectural design built for the most challenging infrastructure environments, and supports Qualcomm AFC Service—enabling higher power operation in the 6GHz band for greater performance and longer range, in regions where available.

## Highlights

### Superior Wi-Fi 7 Connectivity

Experience advanced Wi-Fi 7 features like 320MHz channel support, Multi-Link operation, 4K QAM, and more.

### Massive Capacity

The Qualcomm Networking Pro 1620 Platform is designed to deliver industry-leading peak speed of 33 Gbps* based on PHY.

### Peak Performance

Designed to deliver maximum aggregated capacity and sustained maximum connections per port, to reliably handle the toughest Wi-Fi applications.

### Qualcomm Multi-User Traffic Management

Qualcomm Multi-User Traffic Management brings algorithmic optimization across all spectrum bands, universal uplink and downlink support for MU-MIMO, OFDMA, spatial multiplexing for 8 overlapping device transactions, and more.

### Qualcomm® Max User Architecture

Architecture to leverage Wi-Fi 7 features, with a unique and differentiated design developed for extreme high-density deployments, able to associate and maintain stable connectivity and ideal throughput to up to 2000 clients simultaneously.

* Speed claims refer to maximum physical layer (PHY) rate.

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The Qualcomm Networking Pro 1620 Platform is designed to deliver advanced Wi-Fi connectivity features supporting premier enterprise and large venue demands.

## Features

- 320MHz channel support in the 6GHz band, where available, for max throughput and congestion avoidance for low latency applications.

- 240MHz channel support, key for regions without 6GHz spectrum availability, across 5GHz channels.

- Massively expanded range of Wi-Fi channels in the 6GHz spectrum, with simultaneous operation in 2.4, 5, and 6GHz spectrum bands.

- Support for 4K QAM

- Qualcomm Multi-User Traffic Management provides advanced scheduling algorithms and buffering with bi-directional data support, up to 37-user OFDMA support per channel and spatial multiplexing 8-user UL/DL MU-MIMO support per channel.

- Qualcomm Max User Architecture offers network stability and sustained throughput for up to 2000 users, and flexibility based on memory configuration.

- Qualcomm® Wi-Fi Security Suite offers the most comprehensive WPA3 implementation coupled with state-of-the-art embedded crypto accelerators designed to provide secure transactions across a full range of Wi-Fi data touchpoints.

- Advanced network interfaces for 10GbE WAN and LAN standard networking protocols and PCIe interfaces for platform extensions.

- Ordering part number: IPQ9574

## Specifications

| | |
|---|---|
| **CPU Clock Speed** | 2.2GHz |
| **CPU Cores** | Quad-core Cortex-A73 Arm |
| **Process Technology** | 14nm |
| **Wi-Fi Standards** | Wi-Fi 7 (802.11be), Wi-Fi 6E, Wi-Fi 6 (802.11ax), Wi-Fi 5 (802.11ac), Wi-Fi 4 (802.11n), 802.11a/b/g |
| **Wi-Fi Spectral Bands** | 6GHz, 5GHz, 2.4GHz |
| **Spatial Streams** | 16 streams |
| **Channel Support** | 320MHz, 249MHz, 160MHz, 80MHz, 40MHz, 20MHz |
| **Peak Speed** | 33 Gbps (PHY Rate) |
| **Max Band Config** | Quad-Band |
| **Wi-Fi Features** | 320MHz channel support<br>Simultaneous & Alternating Multi Link Puncturing for wideband operation in presence of 5G/DFS & 6G/AFC interferers<br>4K QAM<br>UL/DL OFDMA, 37 users<br>UL/DL MU-MIMO, 8 users<br>2000 users<br>TxBF<br>802.11be QoS |
| **Wi-Fi Security** | WPA3 Personal, WPA3 Enterprise, WPA3 Enhanced Open, WPA3 Easy Connect, WPA2, WPS, 802.11i security, AES-CCMP, AES-GCMP, PRNG, TKIP, WAPI2, WAPI1, WEP |
| **Flash** | eMMC, NAND, Serial NOR |
| **Memory Type** | DDR3L, DDR4<br>Bit width 16/32 |
| **Platform Extensions** | Bluetooth, 15.4 (Zigbee/Thread), 4G/5G FWA |
| **Packet Processing** | WAN tunnel offload engine, integrated Ethernet switch, enhanced security processor, high performance QoS/TM |
| **6 Port Integrated Ethernet Switch** | 4 x 2.5 GE + 5 GE + 10 GE |
| **Supported OS** | Openwrt, Linux Kernel 5.4 |
| **Supported Interfaces** | 4x PCIe 3.0 controllers, PTA Coex, $I^2S$, $I^2C$, 2x USXGMII, 1x USXGMII-M, SD/eMMC, SDIO, SPI, UART, USB 3.0 |

Qualcomm Wi-Fi Security Suite is a product of Qualcomm Technologies, Inc. and/or its subsidiaries.

**To learn more visit: qualcomm.com**