

## DATASHEET

# Wi-Fi 6E Mini PCIe Module

# AW7916-NPD

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# AX3000



- Certified to meet international wireless communication and safety regulations.

## Description

The AW7916-NPD is a cutting-edge mini PCIe Module that supports Wi-Fi 6E 3000, dual concurrent bands (DBDC) and is based on Mediatek MT7916AN. It provides up to 3Gbps performance and supports maximum bandwidths of 160MHz for 5 or 6GHz and 40MHz for 2.4GHz. An additional antenna boosts downlink performance via zero-wait DFS or MRC. The FEM radio integration into the Mediatek Filogic 630 platform offers size and cost benefits.

It accommodates up to 24 users (OFDMA), supports MU-MIMO clients, houses 512 MAC entries, and 16 MBSSID while also supporting all Wi-Fi 6 Release 2 features.

The chipset also boasts a hardware-based Wi-Fi offload engine, enhancing energy efficiency and performance by reducing Wi-Fi related processing for the router AP. The Filogic 630 can pair with the Filogic 830 SoC platform for comprehensive Tri-band Wi-Fi 6/6E solutions for routers and repeaters.

## Features

### Platform :

- 32-bit RISC MCU for Wi-Fi protocols and Wi-Fi offload
- PCIe device fully compliant to PCIe v2.1 specification

### WLAN :

- IEEE 802.11 a/b/g/n/ac/ax compliant
- Support 20/40MHz bandwidth in G-band, and 20/40/80/160MHz bandwidth in A-band
- G-band 2T2R + A-band 3T3R 2ss, dual-band dual concurrent (DBDC) with PHY rate up to 3000Mbps
- Support MU-MIMO TX/RX
- Support MU-OFDMA TX/RX
- Support STBC, LDPC, TX Beamformer and RX Beamformee
- Support greenfield, mixed mode, legacy modes
- Security support for WFA WPA/WPA2/WPA3 personal, WPS2.0
- QoS support of WFA WMM, WMM PS

### Wi-Fi subsystem :

- Support all data rates of 802.11a/g including 6, 9, 12, 18, 24, 36, 48, and 54Mbps
- Support short GI and all data rates of 802.11n including MCS0 to MCS7
- Support 802.11ac MCS0 to MCS9
- Support 802.11ax MCS0 to MCS11
- AMPDU/AMSDU RX (de-aggregation) and TX (aggregation) support
- TX beamformer and RX beamformee

### Wi-Fi Baseband : DFS radar detection

**Wi-Fi RF chip :** Configurable Wi-Fi 2.4/5GHz PA for higher efficiency in low-power applications.

**For more detailed information, please contact our sales team: [sales@asiarf.com](mailto:sales@asiarf.com) / +886 2 2940 7880**

