

## DATASHEET

# WiFi 6 11ax 4T4R Mini PCIe Module AW7915-NP1



- Certified to meet international wireless communication and safety regulations.

## Description

AW7915-NP1 is a Wi-Fi 6 11ax 4T4R 2401Mbps mini PCIe Module by MT7915. It fully complies with IEEE 802.11ax and IEEE 802.11 a/b/g/n/ac standards, delivering reliable wireless connectivity with optimized performance and low power consumption.

The module features optimized RF architecture, intelligent MAC design, and integrated PCIe interfaces for stable bandwidth. It supports high data throughput over WiFi and incorporates deep sleep mode for power saving.

With two 32-bit RISC MCU subsystems and PDMA engines, it enables efficient clock control, power management, and on-the-fly data buffer management. The module combines WiFi MAC and BBP subsystems, providing best-in-class radio performance.

It supports multi-user MIMO (MU-MIMO) and dual-band operation (2.4GHz or 5GHz). The module also includes noise mitigation features, intelligent power saving, and WFA WMM/WMM PS (QoS) support.

In summary, AW7915-NP1 offers a high-performance WiFi6 solution with optimized power consumption and advanced features for reliable wireless connectivity.

## Features

### Platform :

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

### WLAN :

- IEEE 802.11 a/b/g/n/ac/ax compliant
- Support 20/40M bandwidth in 2.4G band and 20/40/80M/80+80M bandwidth in 5G band
- Dual-band 4T4R mode with support of up to 2401Mbps PHY rate
- Support MU-MIMO TX/RX
- Support MU-OFDMA TX/RX
- Support STBC, LDPC, TX Beamformer and RX Beamformee
- Greenfield, mixed mode, legacy modes support
- Security support for WFA WPA/WPA2/WPA3 personal, WPS2.0, WAPI
- QoS support of WFA WMM, WMM PS
- Integrated LNA, PA, and T/R switch

### Wi-Fi MAC :

- 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

### WLAN Baseband :

- DFS radar detection

### WLAN Baseband :

- 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**

