

## DATASHEET

# Wi-Fi 6 11ax Mini PCIe Module AW7915-NPD



- Certified to meet international wireless communication and safety regulations.

## Description

The AW7915-NPD is a Wi-Fi 6 mini PCIe Module based on the Mediatek MT7915D Wi-Fi A/D chip which supports Wi-Fi PHY rate of 573+1201 Mbps and complies with IEEE 802.11ax standards. It offers feature-rich wireless connectivity in Dual Bands Dual Concurrent (DBDC) mode, supporting simultaneous operation in the 2.4GHz and 5GHz bands.

The module features optimized RF architecture and baseband algorithms, providing super performance and low power consumption. Its intelligent MAC design offloads Wi-Fi tasks from the host processor.

Deep sleep mode is supported with multiple power domains implemented on the module, enabling low power consumption. The module includes two CPU systems with 32-bit RISC MCU subsystems for clock control, power management, and host interface configuration. PDMA engine support on-the-fly data buffer management.

The MT7915D chipset combines the Wi-Fi MAC and BBP subsystems, working together with the MT7975D, to deliver best-in-class radio performance and low power consumption. It also supports MU-MIMO with different configurations for enhanced multi-user connectivity.

The module utilizes PCIe 2.1 for stable bandwidth between the host platform and the module. It provides high data throughput over Wi-Fi and is designed for optimal performance and power efficiency.

## 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 bandwidth in 5G band
- 2T2R in 2.4G+2T2R in 5G with support of up to 573+1201Mbps 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 WPA WPA2/WPA3 personal, WPS2.0, WAPI

- QoS support of WFA WMM, WMM PS
- Integrated LNA, PA, and T/R switch

### 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**

