

DATASHEET

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



Description

AW7915-NP1 is a WiFi 6 11ax 4T4R 2401Mbps mini PCIe Module by MT7915. It fully complies with IEEE 802.11ax/ac and IEEE 802.11 ac/a/b/g/n 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 and 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 WiFi 6 solution with optimized power consumption and advanced features for reliable wireless connectivity.

Features

- Supports 4x4 4SS 11ax wave2 MU-MIMO
- MU-MIMO configurations of
 - > 4 users: 4*1ss
 - > 3 users: 2*1ss + 1*2ss or 3*1ss
 - > 2 users: 2*2ss or 1*1ss + 1*2ss or 2*1ss
- Supports 5, 10, 20, 40, 80, 80+80 channels
- Support MU-OFDMA TX/RX
- Embedded ARM Cortex R4 processor for full host CPU offload
- Embedded 32-bit RISC microprocessor
- Support STBC, LDPC, TX Beamformer and RX Beamformee
- Greenfield, mixed mode, legacy modes support
- Highly integrated RF with 40nm low power process
- 4T4R with support of up to 2401Mbps PHY rate
- Configurable 4x4/3x3 or 2x2n+2x2ax DBDC
- Noise mitigation:
 - > Supports background scan function for fast channel switching
 - > Supports spectrum analysis for non-Wi-Fi signals
- Intelligent power saving
- WFA WMM, WMM PS (QoS)
- Integrate high efficiency internal 2.4G/5G PAs
- Intelligent Calibration (iCal) reduces the production time
- WoWLAN via GPIO (client mode), supports Host Sleep (AP mode)

For more detailed information, please contact our sales team: sales@asiarf.com / +886 2 2940 7880

