



Mini Pini is an 802.11ax Wi-Fi 6 radio module for ultra-high speed enterprise connectivity. Device comes out in three different versions:

Mini Pini 4x4 is based on Qualcomm QCN9074 chipset for 2.4/5GHz IEEE802.11ax/ac/n/g/b/a applications. New radio can perform access point and station functionality with 4x4 MIMO (4 spatial streams). It is a wireless LAN radio with native 160 MHz support. 4x4 version comes out in industrial (-40-85°C) temperature range, and also in commercial (0-60°C) temperature range.

Mini Pini 2x2 is based on Qualcomm QCN9072 chipset for 2.4/5GHz IEEE802.11ax/ac/n/g/b/a applications. This radio can perform access point and station functionality with 2x2 MIMO (2 spatial streams). It is a wireless LAN radio with native 160 MHz support. 2x2 version comes out in industrial (-40-85°C) temperature range.

Features

- 2x2/4x4 160MHz 802.11ax Wi-Fi 6 PCIe radio module;
- Dual band: 2.4 GHz, 5 GHz full band support;
- PCI Express 3.0 dual-lane interface;
- 30x50.95x15.05mm size PCIe radio card;
- Dual-synthesizer WLAN radio up to 160MHz bandwidth support;
- Supports 5/10 MHz in 4.9 GHz (Public Safety band);
- Supports 20/40 MHz in 2.4 GHz;
- Supports 20/40/80/160 MHz in 5 GHz;
- Data rates of up to 4804 Mbps in 802.11ax 160 MHz 4x4 channels in 5GHz;
- Data rates of up to 1147 Mbps in 802.11ax 40 MHz 4x4 channels in 2.4GHz mode;
- Data rates of up to 2402 Mbps in 802.11ax 160 MHz 2x2 channels in 5GHz;
- Data rates of up to 573.5 Mbps in 802.11ax 40 MHz 2x2 channels in 2.4GHz mode;
- DL/UL MU-MIMO, up to 4 users per PPDU;
- DL/UL MU-OFDMA, up to 37 users per PPDU;
- TxBF, MU-MIMO, MU-OFDMA/TxBF, ML, STBC;
- Dynamic frequency selection (DFS) and Agile DFS (dynamic switching between 4 and 3+1);
- PTA (3-wire) and WCI/MCI (2-wire) coexistence;
- 802.11 ac/ax explicit transmit beamforming (TxBF);
- 802.11e-compatible bursting;
- Supports monitor mode;
- Supports IEEE 802.11d, h, i, j, k, r, u, v, w;
- AES-CCMP/GCMP at 128/256 bits;
- WEP, TKIP, WAPI-2 hardware encryption;
- WPA/WPA2-Personal/WPA2-Enterprise and WPA3 Personal;
- FIPS ECB.

Specification

Platform	
Chipset code	QCN-9074/QCN-9072
Interface	Mini-PCIe card
Linux Support	QSDK
Mainline Kernel	from 4.4.60 upward
Wi-Fi	
Standard	802.11 a/b/g/n/ac/ax
Band	2.4/5
MIMO	MU 4x4/ MU 2x2
Monitor Mode	yes
Power (Per Chain)	20 dBm
Antenna Connector	U.FI
Module Spec	
Power Supply	3.3V
Power Consumption	Theoretically 10W
Temperature Range	0°C to 65°C or -40°C to 85°C
Dimension (mm)	30x50.95x15.05xmm
Reference Design	PN02.7
Certifications	CE(REDF)/ FCC/ IC*

*TBD