



Pineapple is an 802.11ax Wi-Fi 6 and Wi-Fi 6E radio module for ultra-high speed enterprise connectivity. It is based on Qualcomm QCN9074 chipset for 2.4/5/6 GHz IEEE802.11ax/ac/n/g/b/ax applications. New radio can perform access point and station functionality with 4x4 MIMO (4 spatial streams). Pineapple is a wireless LAN radio with native 160 MHz support.

## Pineapple module comes in 3 different versions:

#### Pineapple 2:

2400-2500MHz operating frequency range, 28dBm RF power per chain.

#### Pineapple 5:

4920-5925MHz operating frequency range, 27dBm RF power per chain.

#### Pineapple 6:

5925-7125MHz operating frequency range, 27dBm RF power per chain.

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## **Features**

- 4x4 160MHz 802.11ax Wi-Fi 6E PCle radio module
- Tri-band: 2.4 GHz, 5 GHz, 6 GHz full band support
- PCI Express 3.0 dual-lane interface
- Additional interfaces: GPIOs, UART, JTAG
- 35x47mm size PCle radio module with castellated soldering pads
- Pineapple module also available soldered on mini-PCIe, M.2 A+E, M.2 B+M cards
- 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
- Supports 20/40/80/160 MHz in 6 GHz
- Supports up to 1024 QAM (4SS) and 4096 QAM(2SS)
- Data rates of up to 4804 Mbps in 802.11ax 160 MHz channels in 5GHz and 6GHz mode
- Data rates of up to 1147 Mbps in 802.11ax 40 MHz 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)
- Spectral Analysis (SA) and Agile Spectral Analysis (aSA) for all bands (dynamic switching
- between 4 and 3+1)
- PTA (3-wire) and WCI/MCI (2-wire) coexistence
- 802.11 ac/ax explicit transmit beamforming (TxBF)
- 802.11 ac/ax beamformee for STA mode
- 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**

Chinset code	QCN-9074
-	Solderable module
Linux Support	QSDK
Mainline Kernel	from 4.4.60 upward
Windows Support	
Standard	802.11 a/n/ac/ax
Band	2.4/5/6GHz
MIMO	MU 4x4
Monitor Mode	yes
Power (Per Chain)	27 dBm
Receiver Sensitivity	TBD
Antenna Connector	Pads
Power Supply	3.3V; 5V
Power Consumption	TBD
Temperature Range	0°C to 65°C or -40°C to 85°C*
Dimension (mm)	35 x 47
Reference Design	PN02.7
Certifications	CE(RED)/ FCC/ IC**
	Windows Support Standard Band MIMO Monitor Mode Power (Per Chain) Receiver Sensitivity Antenna Connector Power Supply Power Consumption Temperature Range Dimension (mm) Reference Design

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<sup>\*</sup> Industrial version will be available later in 2021 \*\* Certification is in progress and will be available later in 2021