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.

Features

- 4x4 160MHz 802.11ax Wi-Fi 6E PCIe 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 PCIe 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

Platform		
	Chipset code	QCN-9074
	Interface	Solderable module
	Linux Support	QSDK
	Mainline Kernel	from 4.4.60 upward
	Windows Support	
Wi-Fi	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
Module Spec	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**

* Industrial version will be available later in 2021   ** Certification is in progress and will be available later in 2021