

WiFi 6 (802.11ax) 2x2 MU-MIMO OFDMA 5GHz Single Band Wireless Module

Model: WLE3002H5



KEY FEATURES

- Qualcomm QCN6024/9024 'Pine' series for Commercial grade
- Qualcomm QCN9074 'Pine' series for Industrial grade
- 5GHz, 2x2 MU-MIMO OFDMA Technology, up to 2402Mbps physical data rate
- Single Band 5GHz 2x2 WiFi 6 (802.11ax)
- MiniPCIe Interface with PCIe 3.0
- Supports Dynamic Frequency Selection (DFS)
- Heat sink allows free air operation
- Supports IEEE 802.11d, e, h, i, j, k, r, u, v time stamp, w standard.
- Designed for High Bandwidth Enterprise Wireless Access Points

Specifications

Chipset	Qualcomm QCN6024/9024 'Pine' series for Commercial grade Qualcomm QCN9074 'Pine' series for Industrial grade
System Memory	2Mbit serial I ² C bus EEPROM
Reference Design	PN02.1
Host Interface	MiniPCIe interface with PCIe 3.0
Operating Voltage	3.3V
Power Consumption	6.5W(Max)
Wireless	2x2 5GHz 802.11a/n/ac/ax, max 19 dBm per chain 2x U.FL Connectors
Frequency Range	5GHz: 5.150~5.825 GHz
Modulation Techniques	OFDMA: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
Channel Spectrum Widths for WLAN	Supports 20/40/80/160MHz at 5GHz
Operating Systems	OpenWRT
Certification	REACH & RoHS Compliance
Environmental Temperature	Operating (Commercial Grade): -20°C to 70°C, Storage: -40°C to 90°C Operating (Industrial Grade): -40°C to 85°C, Storage: -40°C to 90°C
Environmental Humidity, Non-Condensing	Operating: 5% to 95%, Storage: Max. 90%
Dimensions (W x H x D) in mm	30 x 50.8 x 13.5 mm

*Configurations are subject to change without notifications.

**Can be requested from respective sales executive.

RF Performance Table

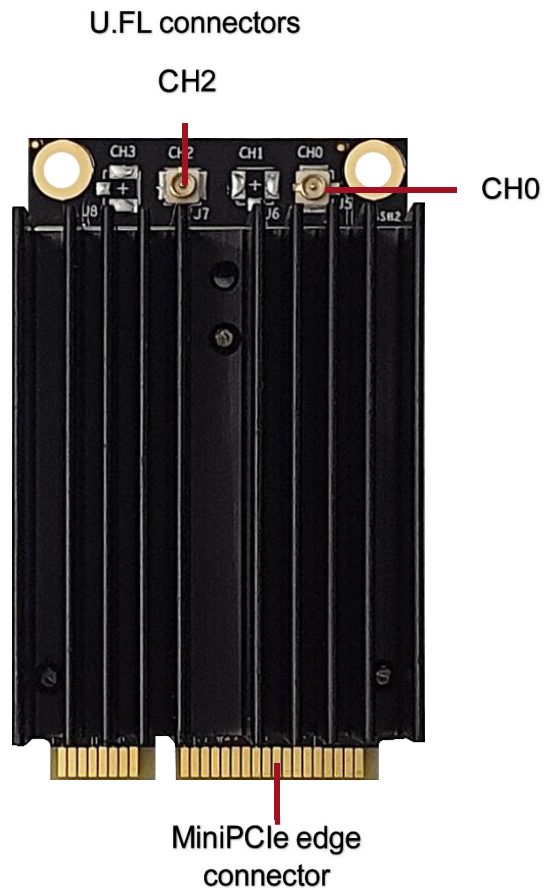
	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance		Data Rate	RX Specifications Sensitivity	Tolerance
802.11ax HE20	MCS 0	19dBm	22dBm	±2dB	802.11ax HE20	MCS 0	-95dBm	±2dB
	MCS 1	19dBm	22dBm	±2dB		MCS 1	-93dBm	±2dB
	MCS 2	18dBm	21dBm	±2dB		MCS 2	-90dBm	±2dB
	MCS 3	17dBm	20dBm	±2dB		MCS 3	-88dBm	±2dB
	MCS 4	17dBm	20dBm	±2dB		MCS 4	-86dBm	±2dB
	MCS 5	17dBm	20dBm	±2dB		MCS 5	-82dBm	±2dB
	MCS 6	16dBm	19dBm	±2dB		MCS 6	-79dBm	±2dB
	MCS 7	16dBm	19dBm	±2dB		MCS 7	-77dBm	±2dB
	MCS 8	15dBm	18dBm	±2dB		MCS 8	-73dBm	±2dB
	MCS 9	15dBm	18dBm	±2dB		MCS 9	-71dBm	±2dB
	MCS 10	14dBm	17dBm	±2dB		MCS 10	-69dBm	±2dB
	MCS 11	14dBm	17dBm	±2dB		MCS 11	-65dBm	±2dB
802.11ax HE40	MCS 0	19dBm	22dBm	±2dB	802.11ax HE40	MCS 0	-92dBm	±2dB
	MCS 1	19dBm	22dBm	±2dB		MCS 1	-90dBm	±2dB
	MCS 2	18dBm	21dBm	±2dB		MCS 2	-88dBm	±2dB
	MCS 3	17dBm	20dBm	±2dB		MCS 3	-85dBm	±2dB
	MCS 4	17dBm	20dBm	±2dB		MCS 4	-82dBm	±2dB
	MCS 5	17dBm	20dBm	±2dB		MCS 5	-78dBm	±2dB
	MCS 6	16dBm	19dBm	±2dB		MCS 6	-76dBm	±2dB
	MCS 7	16dBm	19dBm	±2dB		MCS 7	-75dBm	±2dB
	MCS 8	15dBm	18dBm	±2dB		MCS 8	-71dBm	±2dB
	MCS 9	14dBm	17dBm	±2dB		MCS 9	-69dBm	±2dB
	MCS 10	14dBm	17dBm	±2dB		MCS 10	-65dBm	±2dB
	MCS 11	14dBm	17dBm	±2dB		MCS 11	-62dBm	±2dB
802.11ax HE80	MCS 0	19dBm	22dBm	±2dB	802.11ax HE80	MCS 0	-89dBm	±2dB
	MCS 1	19dBm	22dBm	±2dB		MCS 1	-88dBm	±2dB
	MCS 2	18dBm	21dBm	±2dB		MCS 2	-85dBm	±2dB
	MCS 3	17dBm	20dBm	±2dB		MCS 3	-83dBm	±2dB
	MCS 4	17dBm	20dBm	±2dB		MCS 4	-79dBm	±2dB
	MCS 5	17dBm	20dBm	±2dB		MCS 5	-74dBm	±2dB
	MCS 6	16dBm	19dBm	±2dB		MCS 6	-73dBm	±2dB
	MCS 7	15dBm	18dBm	±2dB		MCS 7	-71dBm	±2dB
	MCS 8	15dBm	18dBm	±2dB		MCS 8	-67dBm	±2dB
	MCS 9	14dBm	17dBm	±2dB		MCS 9	-65dBm	±2dB
	MCS 10	14dBm	17dBm	±2dB		MCS 10	-62dBm	±2dB
	MCS 11	14dBm	17dBm	±2dB		MCS 11	-59dBm	±2dB

RF Performance Table

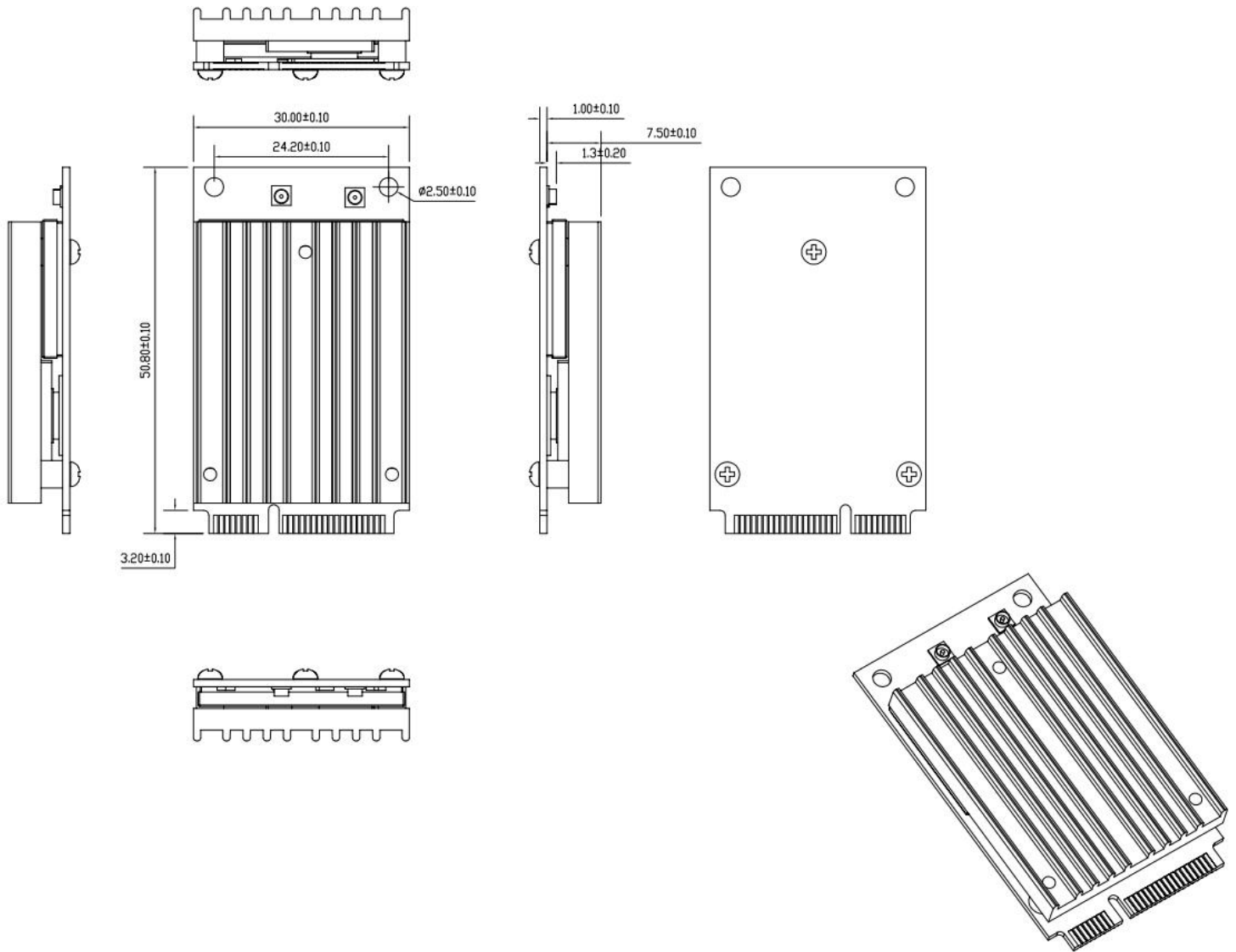
	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
802.11ax HE160	MCS 0	19dBm	22dBm	±2dB
	MCS 1	19dBm	22dBm	±2dB
	MCS 2	18dBm	21dBm	±2dB
	MCS 3	17dBm	20dBm	±2dB
	MCS 4	17dBm	20dBm	±2dB
	MCS 5	17dBm	20dBm	±2dB
	MCS 6	16dBm	19dBm	±2dB
	MCS 7	15dBm	18dBm	±2dB
	MCS 8	15dBm	18dBm	±2dB
	MCS 9	14dBm	17dBm	±2dB
	MCS 10	13dBm	16dBm	±2dB
	MCS 11	13dBm	16dBm	±2dB

	Data Rate	RX Specifications Sensitivity	Tolerance
802.11ax HE160	MCS 0	-85dBm	±2dB
	MCS 1	-84dBm	±2dB
	MCS 2	-82dBm	±2dB
	MCS 3	-79dBm	±2dB
	MCS 4	-75dBm	±2dB
	MCS 5	-71dBm	±2dB
	MCS 6	-70dBm	±2dB
	MCS 7	-68dBm	±2dB
	MCS 8	-64dBm	±2dB
	MCS 9	-62dBm	±2dB
	MCS 10	-58dBm	±2dB
	MCS 11	-56dBm	±2dB

Component Map



Mechanical Dimensions



All dimensions are in mm.

Ordering Configuration

Item Code	Model	Description
WLE3002H5 7A6024K-TE	WLE3002H5	QCN6024 2x2 802.11a/n/ac/ax support 5GHz MiniPCle interface with PCIe 3.0 Module
WLE3002H5 7A0924K-TE	WLE3002H5	QCN9024 2x2 802.11a/n/ac/ax support 5GHz MiniPCle interface with PCIe 3.0 Module
WLE3002H5 7B0974K-I-TE	WLE3002H5-I	QCN9074 2x2 802.11a/n/ac/ax support 5GHz MiniPCle interface with PCIe 3.0 Module