3x3 802.11ac Wave 2 Mini PCIe WiFi Module

Standard size form factor with MU-MIMO support

Model: WLE1000V5-20

KEY FEATURES

- Qualcomm Atheros 'Beeliner' QCA9982
- 5GHz max 20dBm output power (per chain)
- Heat sink allows free air operation
- IEEE 802.11ac compliant & backward compatible with 802.11a/n, up to 1.3Gbps
- Multi-user MIMO (MU-MIMO) beamformer
- 802.11ac explicit transmit beamforming (TxBF) and legacy implicit TxBF for both beamformer and beamformee
- 3 spatial streams (3SS) at 80MHz
- Mini PCI Express 2.0 interface
- Supports Spatial Multiplexing, Cyclic-Delay Diversity (CDD), Low-Density Parity Check (LDPC) Codes, Maximal Ratio Combining (MRC), Space Time Block Code (STBC)
- Supports IEEE 802.11d, e, h, i, j, k, r, u, v time stamp, w , and z standards
- Supports Dynamic Frequency Selection (DFS)
- Designed for High Bandwidth Enterprise Wireless Access Points

Specifications

Chipset	QCA9982
System Memory	256Kbit serial I²C bus EEPROM
Host Interface	Mini PCI Express 2.0 Standard
Operating Voltage	3.3V
Antenna Connector	3x U.FL
Frequency Range	5.180GHz to 5.825GHz
Certification	No
Power Consumption	8.5W (Max)
Supported Operating System	CompexWRT or OpenWRT/LEDE
Modulation Techniques	OFDM: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
Environmental Temperature	Operating: -20°C to 70°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	29.9 x 50.8 x 12.7

RF Performance Table

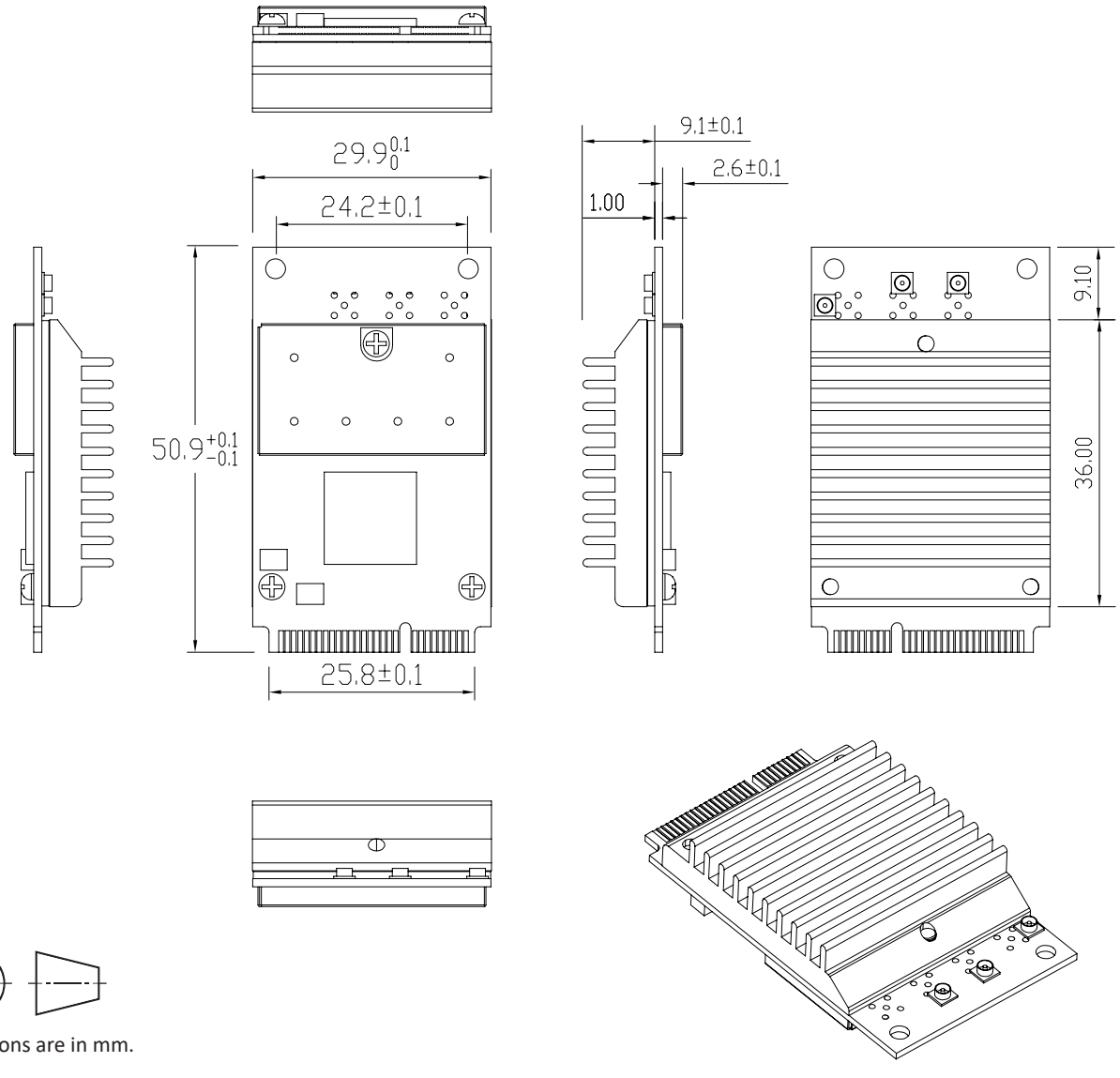
	Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance
5GHz 802.11a	6Mbps	21dBm	26dBm	±2dB
	9Mbps	21dBm	26dBm	±2dB
	12Mbps	21dBm	26dBm	±2dB
	18Mbps	21dBm	26dBm	±2dB
	24Mbps	20dBm	25dBm	±2dB
	36Mbps	19dBm	24dBm	±2dB
	48Mbps	18dBm	23dBm	±2dB
	54Mbps	17dBm	22dBm	±2dB
5GHz 802.11n/ac HT20	MCS 0	21dBm	26dBm	±2dB
	MCS 1	21dBm	26dBm	±2dB
	MCS 2	21dBm	26dBm	±2dB
	MCS 3	20dBm	25dBm	±2dB
	MCS 4	19dBm	24dBm	±2dB
	MCS 5	18dBm	23dBm	±2dB
	MCS 6	17dBm	22dBm	±2dB
	MCS 7	16dBm	21dBm	±2dB
	MCS 8	15dBm	20dBm	±2dB
5GHz 802.11n/ac HT40	MCS 0	21dBm	26dBm	±2dB
	MCS 1	21dBm	26dBm	±2dB
	MCS 2	21dBm	26dBm	±2dB
	MCS 3	20dBm	25dBm	±2dB
	MCS 4	19dBm	24dBm	±2dB
	MCS 5	18dBm	23dBm	±2dB
	MCS 6	18dBm	23dBm	±2dB
	MCS 7	17dBm	22dBm	±2dB
	MCS 8	16dBm	21dBm	±2dB
	MCS 9	15dBm	20dBm	±2dB
5GHz 802.11ac HT80	MCS 0	20dBm	25dBm	±2dB
	MCS 1	20dBm	25dBm	±2dB
	MCS 2	20dBm	25dBm	±2dB
	MCS 3	20dBm	25dBm	±2dB
	MCS 4	19dBm	24dBm	±2dB
	MCS 5	18dBm	23dBm	±2dB
	MCS 6	18dBm	23dBm	±2dB
	MCS 7	17dBm	22dBm	±2dB
	MCS 8	16dBm	21dBm	±2dB
	MCS 9	15dBm	20dBm	±2dB

	Data Rate	RX Specifications Sensitivity	Tolerance
5GHz 802.11a	6Mbps	-94dBm	±2dB
	9Mbps	-93dBm	±2dB
	12Mbps	-92dBm	±2dB
	18Mbps	-89dBm	±2dB
	24Mbps	-86dBm	±2dB
	36Mbps	-84dBm	±2dB
	48Mbps	-79dBm	±2dB
	54Mbps	-78dBm	±2dB
5GHz 802.11n/ac HT20	MCS 0	-94dBm	±2dB
	MCS 1	-91dBm	±2dB
	MCS 2	-90dBm	±2dB
	MCS 3	-86dBm	±2dB
	MCS 4	-83dBm	±2dB
	MCS 5	-80dBm	±2dB
	MCS 6	-77dBm	±2dB
	MCS 7	-76dBm	±2dB
	MCS 8	-71dBm	±2dB
5GHz 802.11n/ac HT40	MCS 0	-91dBm	±2dB
	MCS 1	-88dBm	±2dB
	MCS 2	-85dBm	±2dB
	MCS 3	-82dBm	±2dB
	MCS 4	-79dBm	±2dB
	MCS 5	-75dBm	±2dB
	MCS 6	-73dBm	±2dB
	MCS 7	-72dBm	±2dB
	MCS 8	-68dBm	±2dB
	MCS 9	-66dBm	±2dB
5GHz 802.11ac HT80	MCS 0	-87dBm	±2dB
	MCS 1	-85dBm	±2dB
	MCS 2	-83dBm	±2dB
	MCS 3	-79dBm	±2dB
	MCS 4	-76dBm	±2dB
	MCS 5	-71dBm	±2dB
	MCS 6	-69dBm	±2dB
	MCS 7	-69dBm	±2dB
	MCS 8	-65dBm	±2dB
	MCS 9	-63dBm	±2dB

Compex Systems Pte Ltd | www.compex.com.sg | (+65) 6286 2086 | sales@compex.com.sg | Last Updated: 12/11/18 WH SB SY HB

Feature Guide

Mechanical Dimensions



All dimensions are in mm.

Compex Systems Pte Ltd | www.compex.com.sg | (+65) 6286 2086 | sales@compex.com.sg | Last Updated: 12/11/18 WH SB SY HB

Ordering Configuration

Item Code	Model	Description
WLE1000V5-20 8AA0000	WLE1000V5-20	3x3 802.11a/n/ac 5GHz Wave 2 miniPCIe card

Compex Systems Pte Ltd | www.compex.com.sg | (+65) 6286 2086 | sales@compex.com.sg | Last Updated: 12/11/18 WH SB SY HB