



3x3 5GHz 11ac miniPCIe Radio

Model: WLE900V5-23

ac wave series

Features

- Qualcomm-Atheros QCA9880 Version 2, CUS223 (High Power) Reference Design
- Maximum 23dBm output power (per chain), 28dBm (aggregate)
- IEEE 802.11ac complaint & backward compatible with 802.11a/n
- 3X3 MIMO Technology & up to 1.3Gbps
- MiniPCI Express 1.1 interface
- Supports Spatial Multiplexing, Cyclic-Delay Diversity (CDD), low-density parity check (LDPC), Maximal Ratio Combining (MRC), Space Time Block Code (STBC)
- Supports IEEE 802.11d, e, h, I, k, RO, v time stamp, and w standards
- Supports Dynamic Frequency Selection (DFS)
- Cards are individually calibrated for Quality Assurance
- Supported by either CompexWRT with Atheros Reference Wireless Driver OR OpenWRT with ath10k Wireless Driver on WPJ344

Applications(combined with WPJ344)

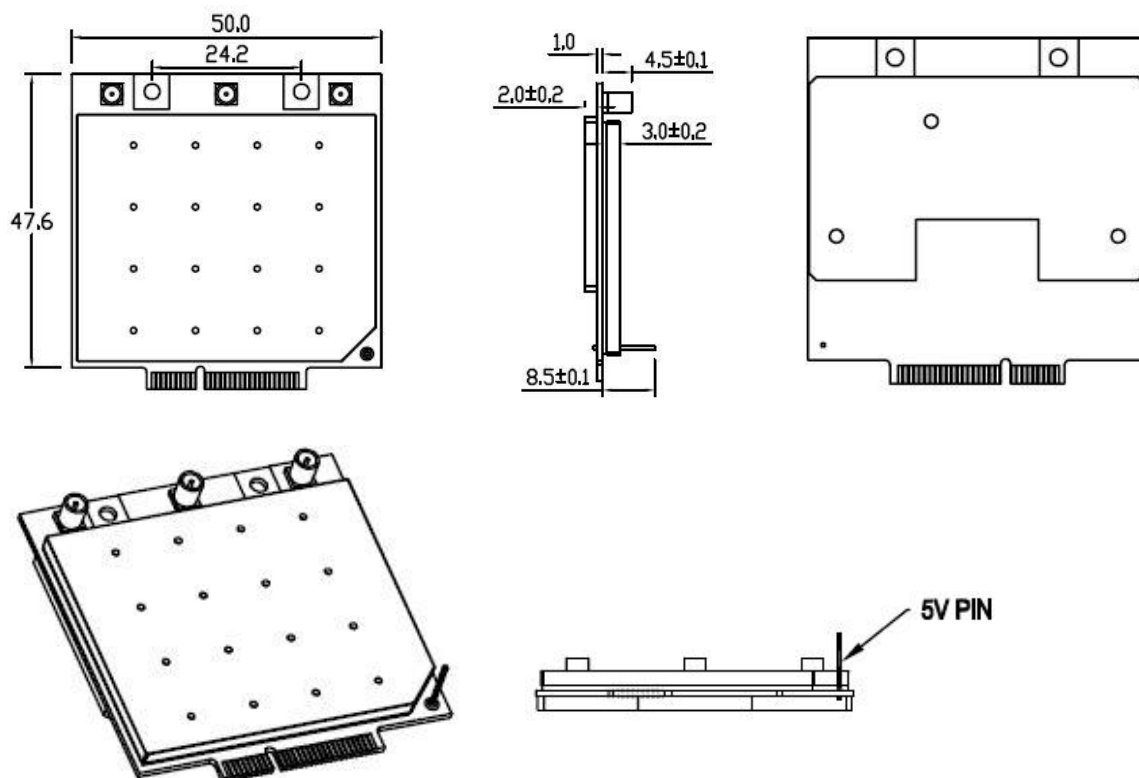
- Indoor AP
- Outdoor AP
- 802.11ac/an CPE
- 802.11ac/an Point to Point
- Base Station

Technical Specifications

System Information								
Chipset	QCA9880 Version 2							
Host Interface	PCI-Express 1.1 Standard							
Operating Voltage	3.3 VDC, 5V (compulsory and external) ¹							
Power Consumption	7.2W							
Antenna Connector	3 x MMCX Antenna Connector							
Frequency Range	5.150 ~ 5.875 GHz							
Modulation Techniques	OFDM: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM							
RoHS Compliance	Yes							
Temperature Range	Operating: -20°C to 70°C; Storage: -40°C to 90°C							
Humidity	Operating:5% to 95% (non-condensing) Storage: Max.90% (non-condensing)							
Dimensions (mm)	50.95 x 50 x 3.2 (H x W x D)							
TX Specifications								
	Data Rate	TX Power (per chain)	TX Power (3 chains)		Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance
802.11a	6Mbps	23dBm	28dBm	5GHz 11n/ac HT20	MCS 0	23dBm	28dBm	±2dB
	9Mbps	23dBm	28dBm		MCS 1	23dBm	28dBm	±2dB
	12Mbps	23dBm	28dBm		MCS 2	23dBm	28dBm	±2dB
	18Mbps	23dBm	28dBm		MCS 3	23dBm	28dBm	±2dB
	24Mbps	23dBm	28dBm		MCS 4	23dBm	28dBm	±2dB
	36Mbps	23dBm	28dBm		MCS 5	23dBm	28dBm	±2dB
	48Mbps	21dBm	26dBm		MCS 6	21dBm	26dBm	±2dB
	54Mbps	19dBm	24dBm		MCS 7	19dBm	24dBm	±2dB
					MCS 8	17dBm	22dBm	±2dB
					MCS 9	16dBm	21dBm	±2dB
5GHz 11n/ac HT40	MCS 0	23dBm	28dBm	5GHz 11ac HT80	MCS 0	23dBm	28dBm	±2dB
	MCS 1	23dBm	28dBm		MCS 1	23dBm	28dBm	±2dB
	MCS 2	23dBm	28dBm		MCS 2	23dBm	28dBm	±2dB
	MCS 3	23dBm	28dBm		MCS 3	23dBm	28dBm	±2dB
	MCS 4	23dBm	28dBm		MCS 4	23dBm	28dBm	±2dB
	MCS 5	22dBm	27dBm		MCS 5	22dBm	27dBm	±2dB
	MCS 6	21dBm	26dBm		MCS 6	21dBm	26dBm	±2dB
	MCS 7	19dBm	24dBm		MCS 7	19dBm	24dBm	±2dB
	MCS 8	17dBm	22dBm		MCS 8	17dBm	22dBm	±2dB
	MCS 9	15dBm	20dBm		MCS 9	15dBm	20dBm	±2dB
RX Specifications								
	DataRate	Sensitivity		DataRate	Sensitivity	Tolerance		
802.11a	6Mbps	-94dBm	5GHz 11n/ac HT20	MCS 0	-94dBm	±2dB		
	9Mbps	-94dBm		MCS 1	-94dBm	±2dB		
	12Mbps	-94dBm		MCS 2	-92dBm	±2dB		
	18Mbps	-92dBm		MCS 3	-88dBm	±2dB		
	24Mbps	-89dBm		MCS 4	-84dBm	±2dB		
	36Mbps	-86dBm		MCS 5	-81dBm	±2dB		
	48Mbps	-82dBm		MCS 6	-78dBm	±2dB		
	54Mbps	-80dBm		MCS 7	-77dBm	±2dB		
				MCS 8	-74dBm	±2dB		
				MCS 9	-71dBm	±2dB		
5GHz 11n/ac HT40	MCS 0	-93dBm	5GHz 11ac HT80	MCS 0	-89dBm	±2dB		
	MCS 1	-91dBm		MCS 1	-88dBm	±2dB		
	MCS 2	-90dBm		MCS 2	-85dBm	±2dB		
	MCS 3	-85dBm		MCS 3	-81dBm	±2dB		
	MCS 4	-82dBm		MCS 4	-79dBm	±2dB		
	MCS 5	-78dBm		MCS 5	-75dBm	±2dB		
	MCS 6	-77dBm		MCS 6	-74dBm	±2dB		
	MCS 7	-75dBm		MCS 7	-72dBm	±2dB		
	MCS 8	-73dBm		MCS 8	-70dBm	±2dB		
	MCS 9	-71dBm		MCS 9	-68dBm	±2dB		

¹ Customers have to connect a 5V power supply to the pin on WLE900V5-23

Dimension Drawing



Ordering Information

Item Code	Chipset	Form factor	Card Informations
WLE900V5-23 8AA000	Atheros 9880	Wide size	3x3 11ac 5GHz High Power miniPCIe Radio
WLE900V5-23 8AB000	Atheros 9880	Wide size	3x3 11ac 5GHz High Power miniPCIe Radio
WLE900V5-23 8BB000	Atheros 9890	Wide size	3x3 11ac 5GHz High Power miniPCIe Radio