



# 3x3 5GHz 11ac miniPCIe Radio

Model: YBTE5V9880-27

ac wave series

## Features

- Qualcomm-Atheros QCA9880 Version 2, CUS223 (High Power) Reference Design
- Maximum 27dBm output power (per chain), 32dBm (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 YBT9344

## Applications(combined with YBT9344

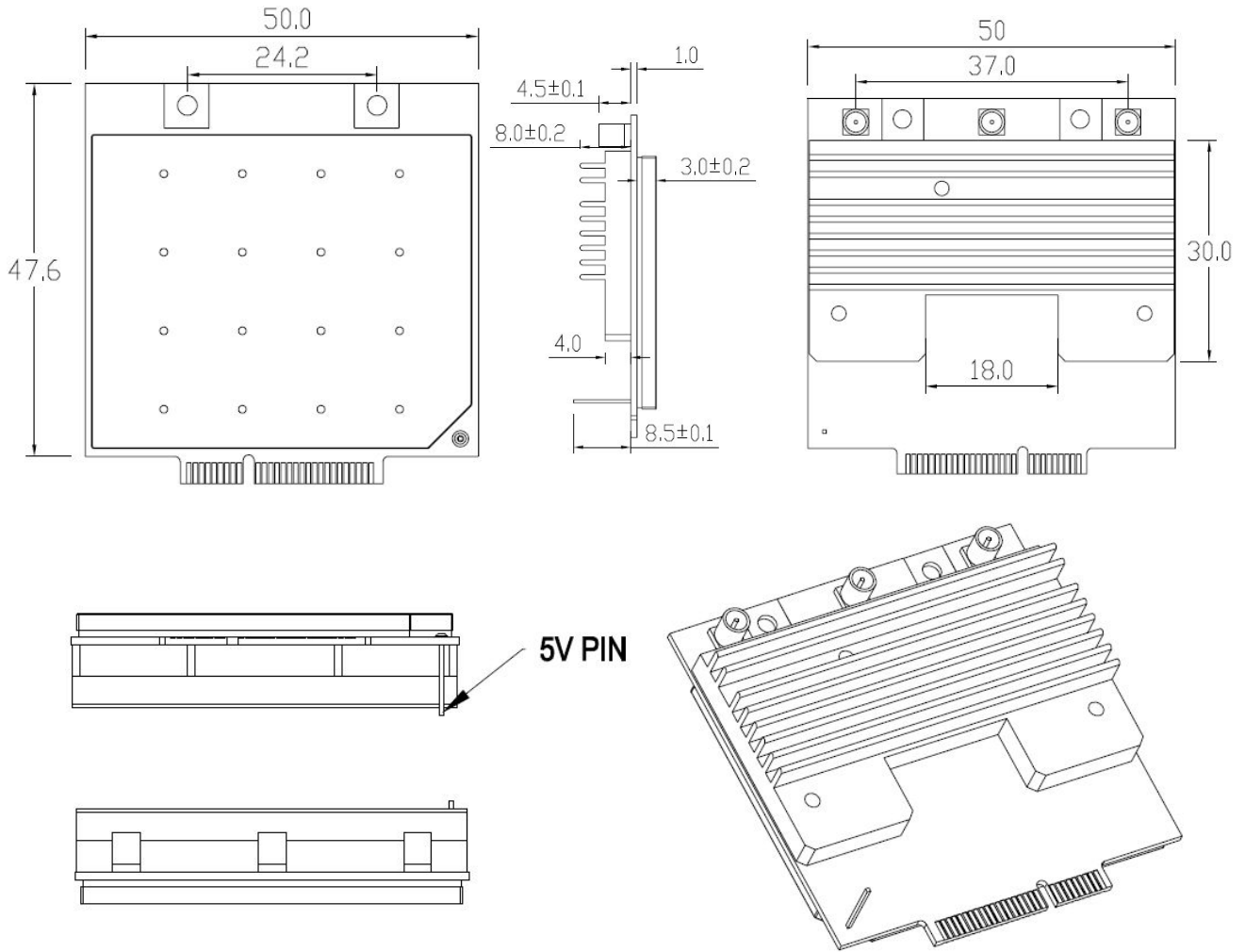
- Indoor AP
- Outdoor AP
- 802.11ac/an CPE
- 802.11ac/an Point to Point
- Base Station

## Technical Specifications

System Information									
<b>Chipset</b>	Qualcomm-Atheros QCA9880								
<b>Host Interface</b>	PCI-Express 1.1 Standard								
<b>Operating Voltage</b>	3.3 VDC, 5V (compulsory and external) <sup>1</sup>								
<b>Power Consumption</b>	10W								
<b>Antenna Connector</b>	3 x MMCX Antenna Connector								
<b>Frequency Range</b>	5.150 ~ 5.875 GHz								
<b>Modulation Techniques</b>	OFDM: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM								
<b>RoHS Compliance</b>	Yes								
<b>Temperature Range</b>	Operating: -20°C to 70°C; Storage: -40°C to 90°C								
<b>Humidity</b>	Operating: 5% to 95% (non-condensing) Storage: Max.90% (non-condensing)								
<b>Dimensions (mm)</b>	50.95 x 50 x 3.2 (H x W x D)								
TX Specifications									
	Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance		Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance
<b>802.11a</b>	6Mbps	27dBm	32dBm	±2dB	<b>5GHz 11n/ac HT20</b>	MCS 0	27dBm	32dBm	±2dB
	9Mbps	27dBm	32dBm	±2dB		MCS 1	26dBm	31dBm	±2dB
	12Mbps	27dBm	32dBm	±2dB		MCS 2	26dBm	31dBm	±2dB
	18Mbps	27dBm	32dBm	±2dB		MCS 3	25dBm	30dBm	±2dB
	24Mbps	27dBm	32dBm	±2dB		MCS 4	25dBm	30dBm	±2dB
	36Mbps	25dBm	30dBm	±2dB		MCS 5	25dBm	30dBm	±2dB
	48Mbps	25dBm	30dBm	±2dB		MCS 6	24dBm	29dBm	±2dB
	54Mbps	24dBm	29dBm	±2dB		MCS 7	23dBm	28dBm	±2dB
						MCS 8	23dBm	28dBm	±2dB
<b>5GHz 11n/ac HT40</b>	MCS 0	27dBm	32dBm	±2dB	<b>5GHz 11ac HT80</b>	MCS 0	27dBm	32dBm	±2dB
	MCS 1	26dBm	31dBm	±2dB		MCS 1	26dBm	31dBm	±2dB
	MCS 2	26dBm	31dBm	±2dB		MCS 2	26dBm	31dBm	±2dB
	MCS 3	25dBm	30dBm	±2dB		MCS 3	26dBm	31dBm	±2dB
	MCS 4	25dBm	30dBm	±2dB		MCS 4	26dBm	31dBm	±2dB
	MCS 5	25dBm	30dBm	±2dB		MCS 5	25dBm	30dBm	±2dB
	MCS 6	24dBm	29dBm	±2dB		MCS 6	25dBm	30dBm	±2dB
	MCS 7	23dBm	28dBm	±2dB		MCS 7	24dBm	29dBm	±2dB
	MCS 8	23dBm	28dBm	±2dB		MCS 8	23dBm	28dBm	±2dB
	MCS 9	22dBm	27dBm	±2dB		MCS 9	22dBm	27dBm	±2dB
RX Specifications									
	DataRate	Sensitivity		DataRate	Sensitivity	Tolerance			
<b>802.11a</b>	6Mbps	-94dBm	<b>5GHz 11n/ac HT20</b>	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			
<b>5GHz 11n/ac HT40</b>	MCS 0	-93dBm	<b>5GHz 11ac HT80</b>	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			

<sup>1</sup> Customers have to connect a 5V power supply to the pin on

### Dimension Drawing



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