Single Band 5GHz 2x2 MIMO 802.11ac Mini PCIe WiFi Module

Designed for High Power Enterprise Wireless Access Points

Model: WLE600V5-27

KEY FEATURES

- Qualcomm Atheros QCA9882
- 5GHz max 27dBm output power (per chain) , 30dBm (aggregate)
- IEEE 802.11ac compliant & backward compatible with 802.11a/n
- 2x2 MIMO Technology, up to 867Mbps
- Built-in ESD Protection with ESD/EMP Immunity Threshold: 15KeV[1]
- Mini PCI Express edge connector
- 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, k, r, 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

Specifications

Chipset	QCA9882
Host Interface	PCI Express 1.2 Standard
Operating Voltage	DC 3.3V, 5V[2]
Antenna Connector	2x MMCX
Frequency Range	5.180 ~ 5.825 GHz
Certification	CE, FCC, IC, RoHS
Power Consumption	7.5W (Max)
Modulation Techniques	BPSK, QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM
Temperature Range	Operating: -40°C to 70°C with normal heatsink, -40°C to 85°C with large heatsink Storage: -40°C to 90°C
Humidity	Operating: 5% to 95% (non-condensing) Storage: Max. 90% (non-condensing)
Dimensions (W x H x D)	50 x 51 x 12.5 mm with normal heatsink, 95 x 51 x 13 mm with large heatsink

1. Module grounding cable included.

2. 5V supply is compulsory. Enable this by placing jumper on pin pair J5 on the WPJ344/WPJ558 board. Otherwise supply to the 5V external power pin.

RF Performance Table

	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
5GHz 802.11a	6Mbps	27dBm	30dBm	±2dB
	9Mbps	27dBm	30dBm	±2dB
	12Mbps	27dBm	30dBm	±2dB
	18Mbps	27dBm	30dBm	±2dB
	24Mbps	27dBm	30dBm	±2dB
	36Mbps	25dBm	28dBm	±2dB
	48Mbps	24dBm	27dBm	±2dB
	54Mbps	23dBm	26dBm	±2dB
5GHz 802.11n/ac VHT20	MCS 0	26dBm	29dBm	±2dB
	MCS 1	25dBm	28dBm	±2dB
	MCS 2	25dBm	28dBm	±2dB
	MCS 3	24dBm	27dBm	±2dB
	MCS 4	24dBm	27dBm	±2dB
	MCS 5	23dBm	26dBm	±2dB
	MCS 6	22dBm	25dBm	±2dB
	MCS 7	21dBm	24dBm	±2dB
	MCS 8	20dBm	23dBm	±2dB
5GHz 802.11n/ac VHT40	MCS 0	26dBm	29dBm	±2dB
	MCS 1	25dBm	28dBm	±2dB
	MCS 2	25dBm	28dBm	±2dB
	MCS 3	24dBm	27dBm	±2dB
	MCS 4	24dBm	27dBm	±2dB
	MCS 5	23dBm	26dBm	±2dB
	MCS 6	22dBm	25dBm	±2dB
	MCS 7	21dBm	24dBm	±2dB
	MCS 8	20dBm	23dBm	±2dB
	MCS 9	19dBm	22dBm	±2dB
5GHz 802.11ac VHT80	MCS 0	26dBm	29dBm	±2dB
	MCS 1	25dBm	28dBm	±2dB
	MCS 2	25dBm	28dBm	±2dB
	MCS 3	24dBm	27dBm	±2dB
	MCS 4	24dBm	27dBm	±2dB
	MCS 5	23dBm	26dBm	±2dB
	MCS 6	22dBm	25dBm	±2dB
	MCS 7	21dBm	24dBm	±2dB
	MCS 8	20dBm	23dBm	±2dB
	MCS 9	19dBm	22dBm	±2dB

	Data Rate	RX Specifications Sensitivity	Tolerance
5GHz 802.11a	6Mbps	-94dBm	±2dB
	9Mbps	-94dBm	±2dB
	12Mbps	-94dBm	±2dB
	18Mbps	-92dBm	±2dB
	24Mbps	-89dBm	±2dB
	36Mbps	-86dBm	±2dB
	48Mbps	-82dBm	±2dB
	54Mbps	-80dBm	±2dB
5GHz 802.11n/ac VHT20	MCS 0	-94dBm	±2dB
	MCS 1	-94dBm	±2dB
	MCS 2	-92dBm	±2dB
	MCS 3	-88dBm	±2dB
	MCS 4	-84dBm	±2dB
	MCS 5	-81dBm	±2dB
	MCS 6	-78dBm	±2dB
	MCS 7	-77dBm	±2dB
	MCS 8	-74dBm	±2dB
5GHz 802.11n/ac VHT40	MCS 0	-94dBm	±2dB
	MCS 1	-94dBm	±2dB
	MCS 2	-92dBm	±2dB
	MCS 3	-88dBm	±2dB
	MCS 4	-84dBm	±2dB
	MCS 5	-81dBm	±2dB
	MCS 6	-78dBm	±2dB
	MCS 7	-77dBm	±2dB
	MCS 8	-73dBm	±2dB
	MCS 9	-71dBm	±2dB
5GHz 802.11ac VHT80	MCS 0	-89dBm	±2dB
	MCS 1	-88dBm	±2dB
	MCS 2	-85dBm	±2dB
	MCS 3	-81dBm	±2dB
	MCS 4	-79dBm	±2dB
	MCS 5	-75dBm	±2dB
	MCS 6	-74dBm	±2dB
	MCS 7	-72dBm	±2dB
	MCS 8	-70dBm	±2dB
	MCS 9	-68dBm	±2dB

Connector Map with Normal Heatsink

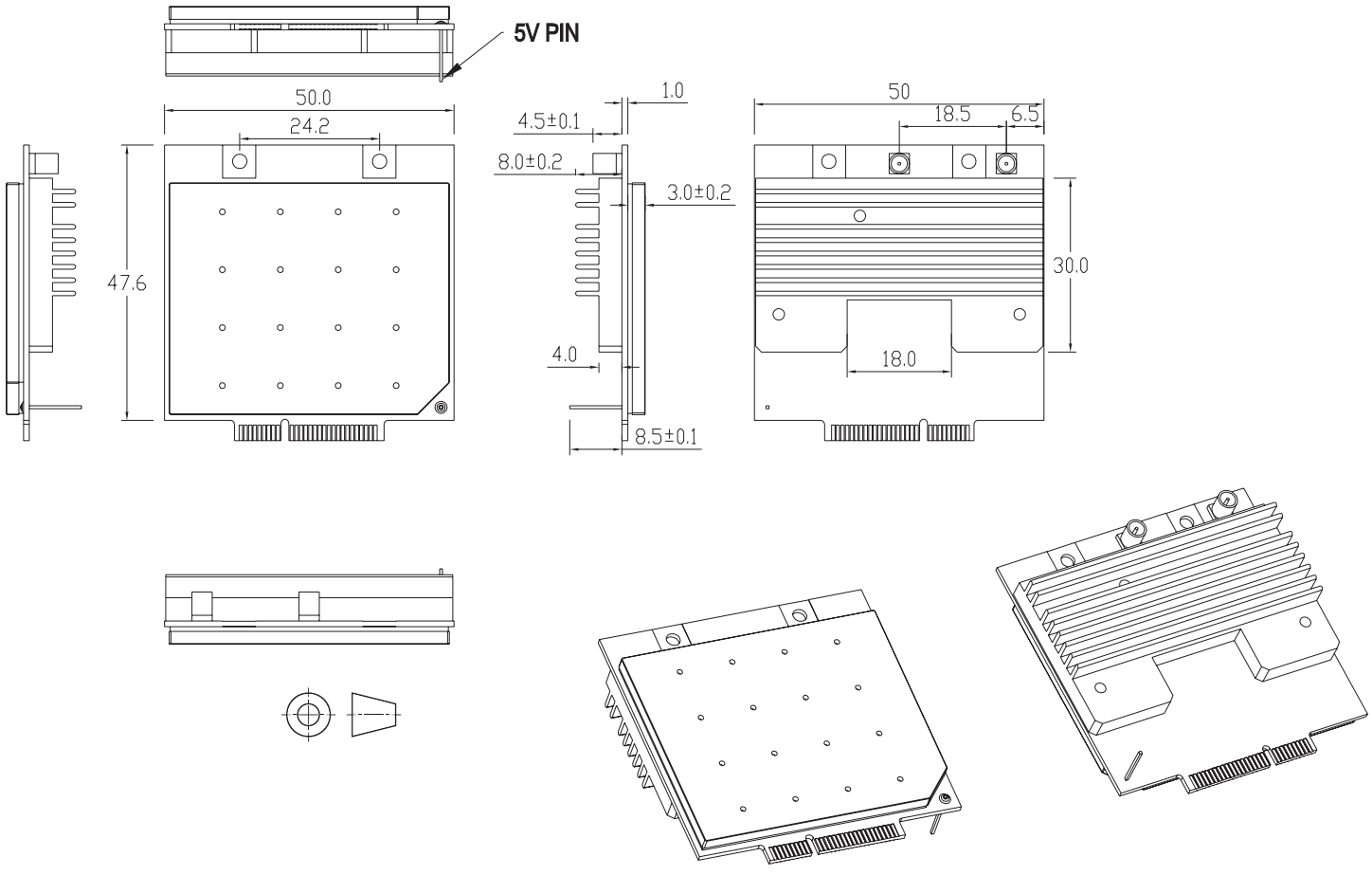
Antenna Ports MMCX connectors Chain0, Chain1

Normal Heatsink

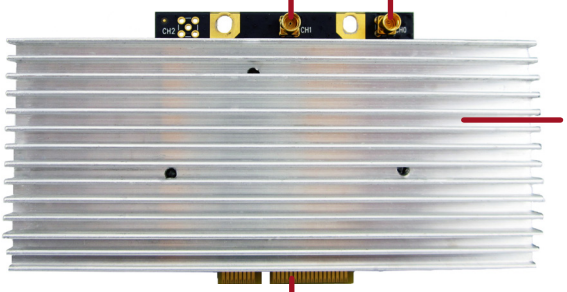
MiniPCIe Edge Connector

5V External Power Pin

Mechanical Dimensions with Normal Heatsink



Connector Map with Large Heatsink Option

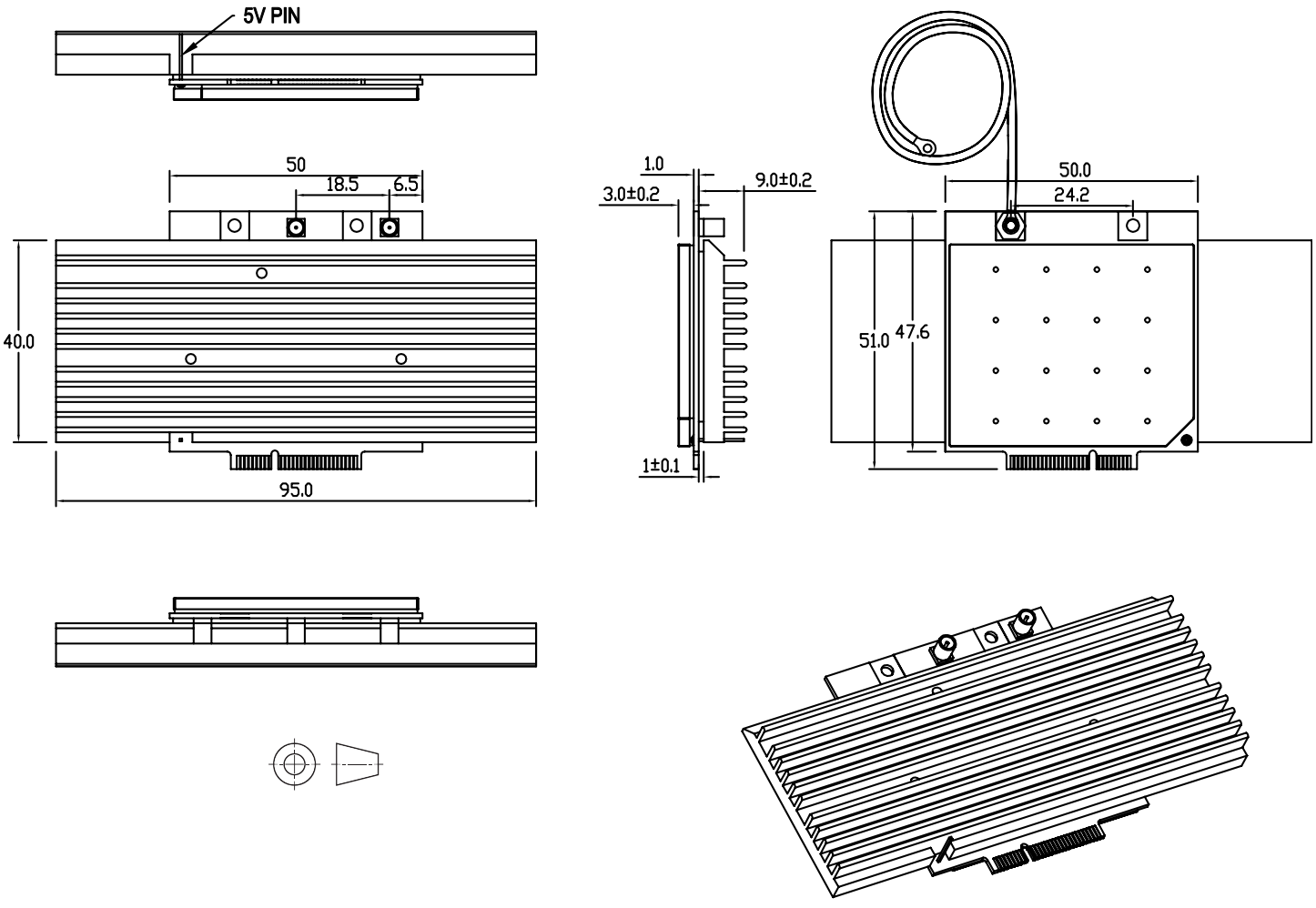


Antenna Ports
MMCX connectors
Chain1,
Chain0

Large Heatsink

MiniPCIe Edge
Connector

Mechanical Dimensions with Large Heatsink Option



Ordering Configuration

Item Code	Chipset	Form factor	Card Information
WLE600V5-27 8AB000ESD	Atheros 9882	Wide size card	2x2 802.11ac 5GHz High Power with Normal Heatsink
WLE600V5-27 8AB000ESD-LH	Atheros 9882	Wide size card	2x2 802.11ac 5GHz High Power with Large Heatsink

Packaging Information

Packaging Type	Dimensions	Gross Weight	Dimensional Weight
For WLE600V5-27 8AB000ESD with normal heatsink: Carton Box (250 units)	422 x 410 x 240 mm	11.28 kg	8.5 kg
For WLE600V5-27 8AB000ESD-LH with large heatsink: Carton Box (150 units)	422 x 410 x 240 mm	13.89 kg	8.5 kg

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