Single Band 5GHz 2x2 MIMO 802.11ac Mini PCIe WiFi Module
Designed for High Power Enterprise Wireless Access Points

Model: WLE600V5-27ESD

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

Specifications

Chipset	QCA9882
Host Interface	Mini 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)
Supported Operating System	Supported by either CompexWRT with Atheros Reference Wireless Driver OR OpenWRT/LEDE with ath10k Wireless Driver on WPJ344
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) in mm	50.0 x 51.0 x 12.5 with normal heatsink, 95.0 x 51.0 x 13.0 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.
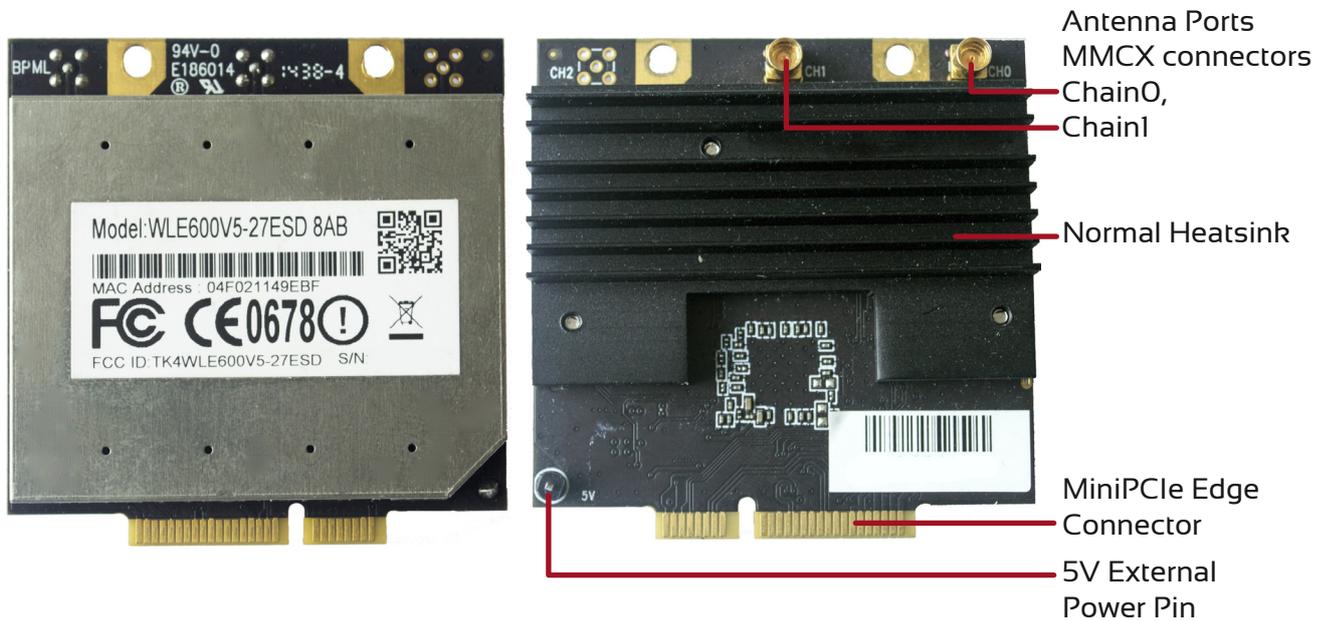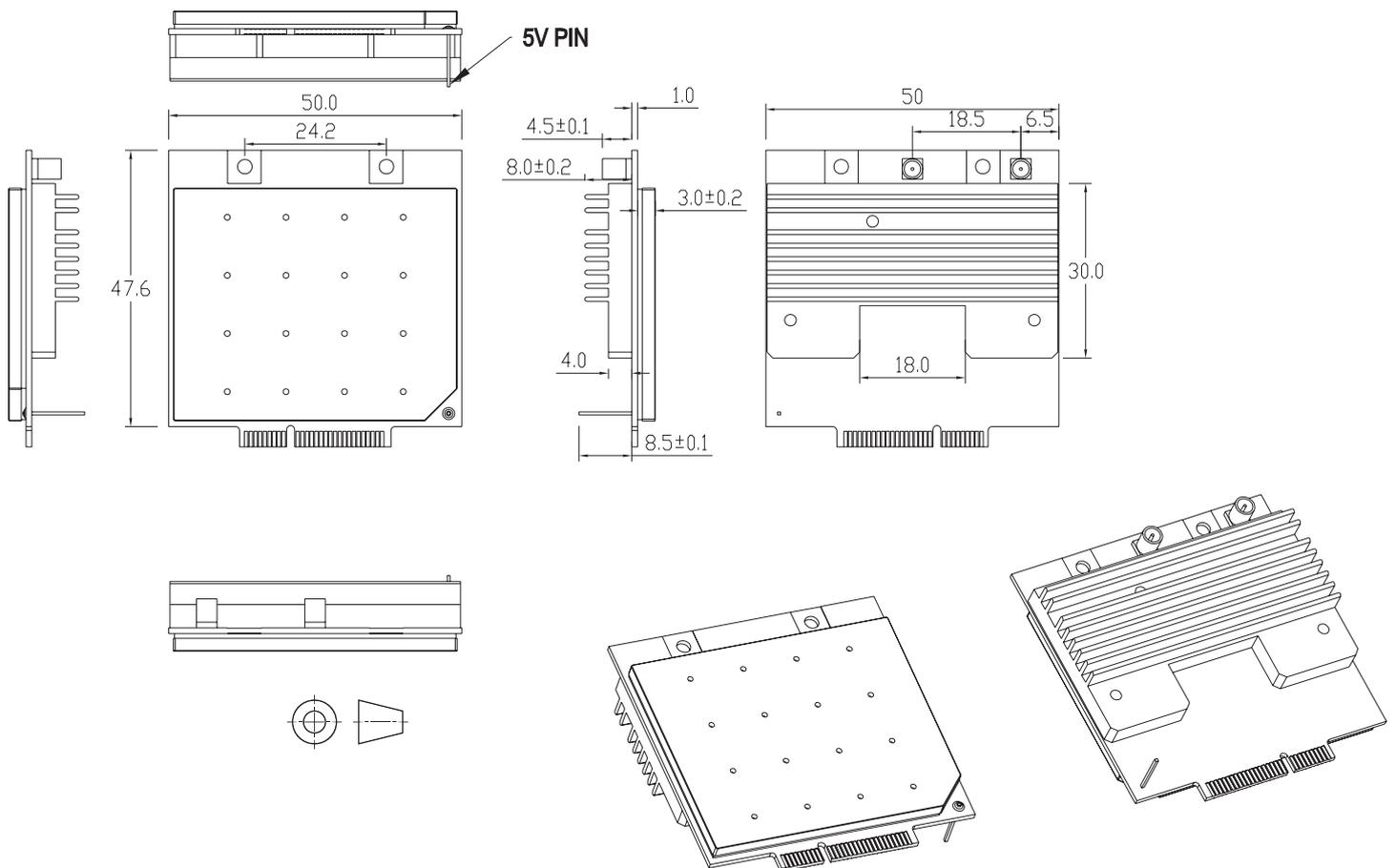*Otherwise supply to the 5V external power pin.*

RF Performance Table

Data Rate	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 HT20	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 HT40	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 HT80	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	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 HT20	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 HT40	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 HT80	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

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Connector Map with Normal Heatsink

Model: WLE600V5-27ESD 8AB
MAC Address : 04F021149EBF
FCC ID: TK4WLE600V5-27ESD   S/N:

Antenna Ports MMCX connectors Chain0, Chain1

Normal Heatsink

MiniPCIe Edge Connector

5V External Power Pin

Mechanical Dimensions with Normal Heatsink

5V PIN

50.0
24.2
47.6

4.5±0.1
8.0±0.2
1.0
3.0±0.2
4.0
8.5±0.1

50
18.5   6.5
30.0
18.0

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Connector Map with Large Heatsink Option

**Antenna Ports
MMCX connectors
Chain1,
Chain0**

Large Heatsink

**MiniPCIe Edge
Connector**
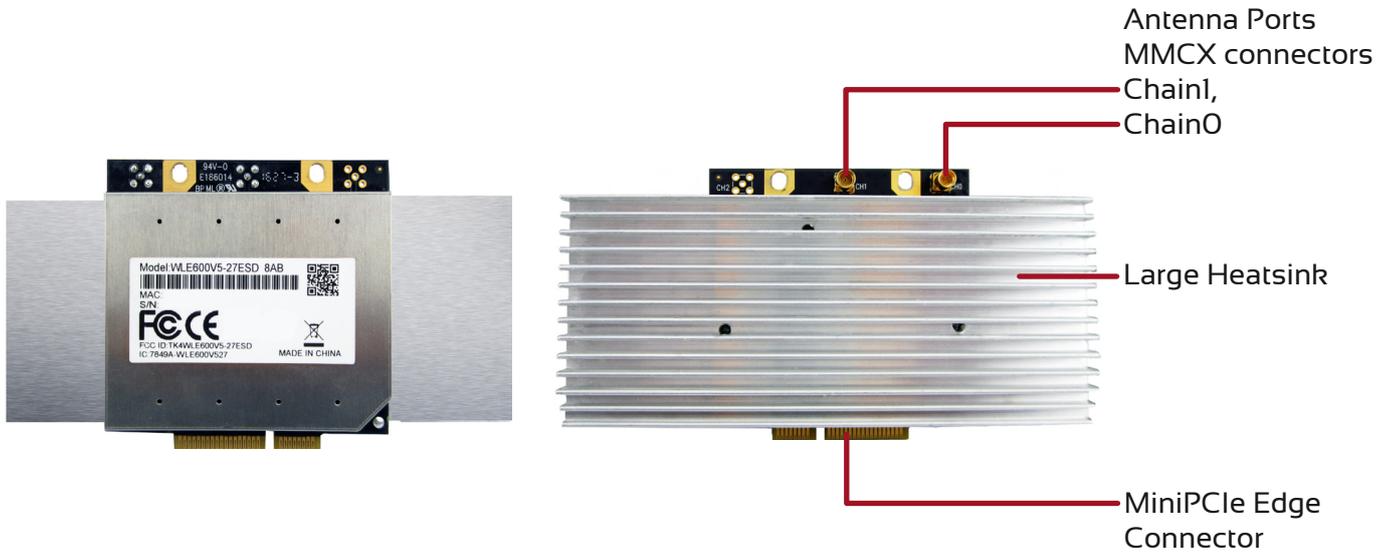
Mechanical Dimensions with Large Heatsink Option

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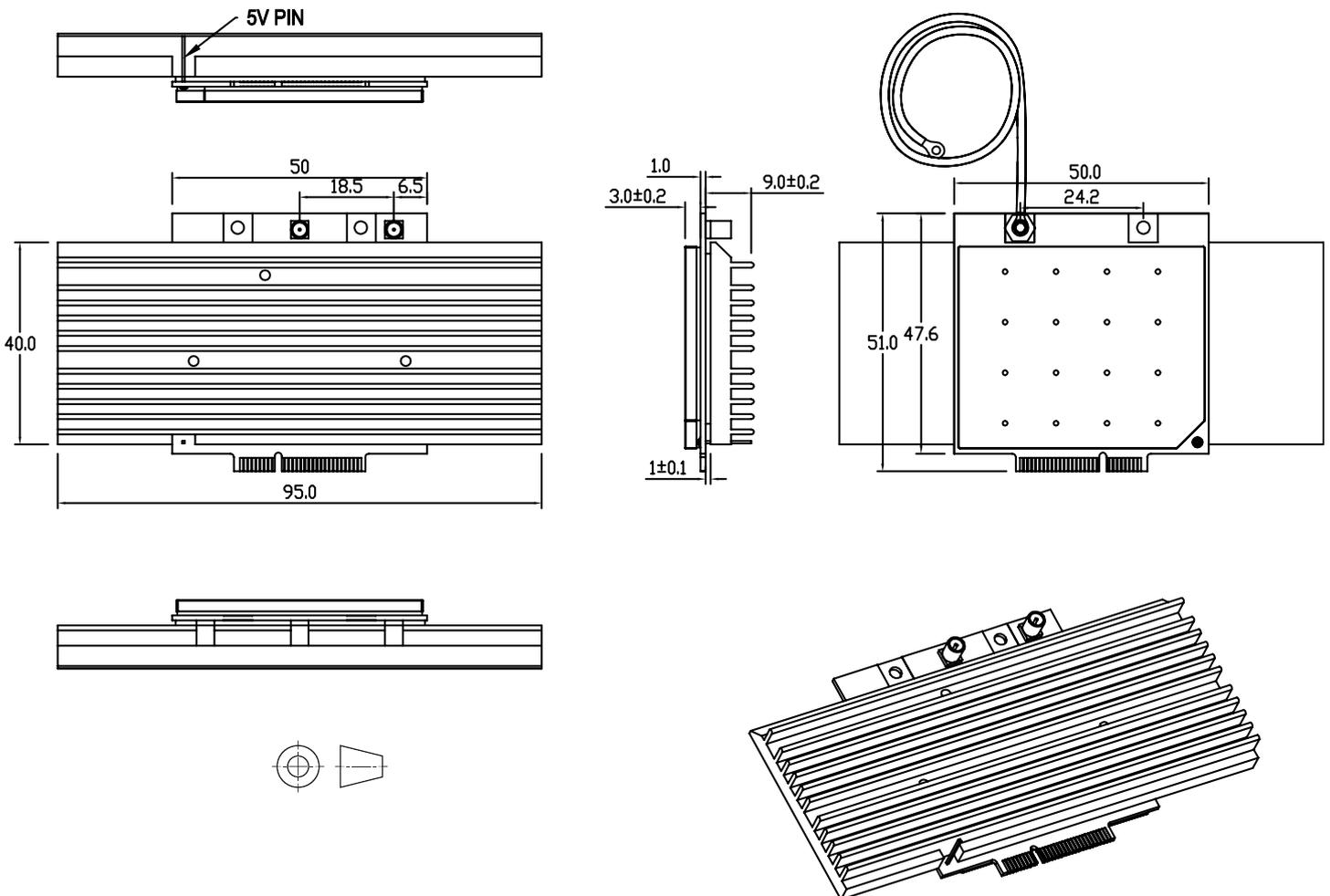
Ordering Configuration

Item Code	Model	Description
WLE600V5-27 8AB000ESD	WLE600V5-27ESD	2x2 802.11ac 5GHz High Power with Normal Heatsink
WLE600V5-27 8AB000ESD-LH	WLE600V5-27ESD	2x2 802.11ac 5GHz High Power with Large Heatsink

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