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

Model: WLE600V5-27ESD-I

KEY FEATURES

- Qualcomm Atheros QCA9892
- Industrial Grade Chipset
- 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	QCA9892
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 (TBC) with normal heatsink, -40°C to 85°C (TBC) 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 mm with large heatsink

1. Module grounding cable included.
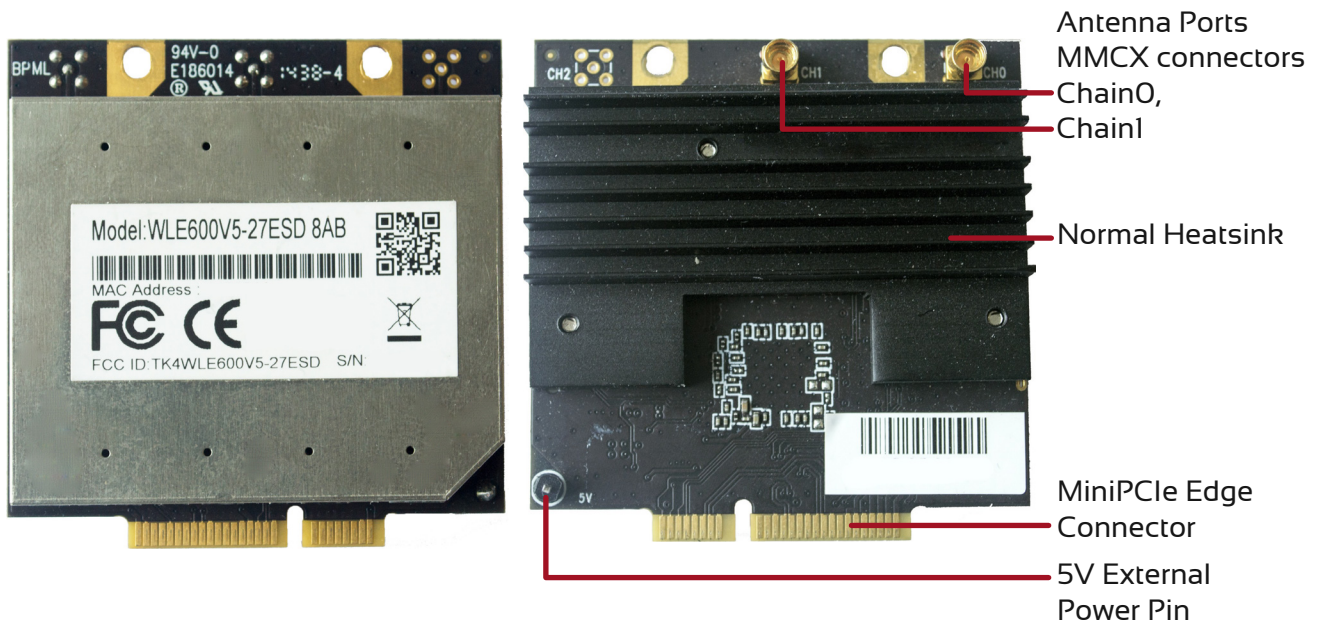2. 5V supply is compulsory. Enable this by placing jumper on pin pair J5 on the WPJ344/WPJ558 board. Otherwise supply to the 5V external power pin.
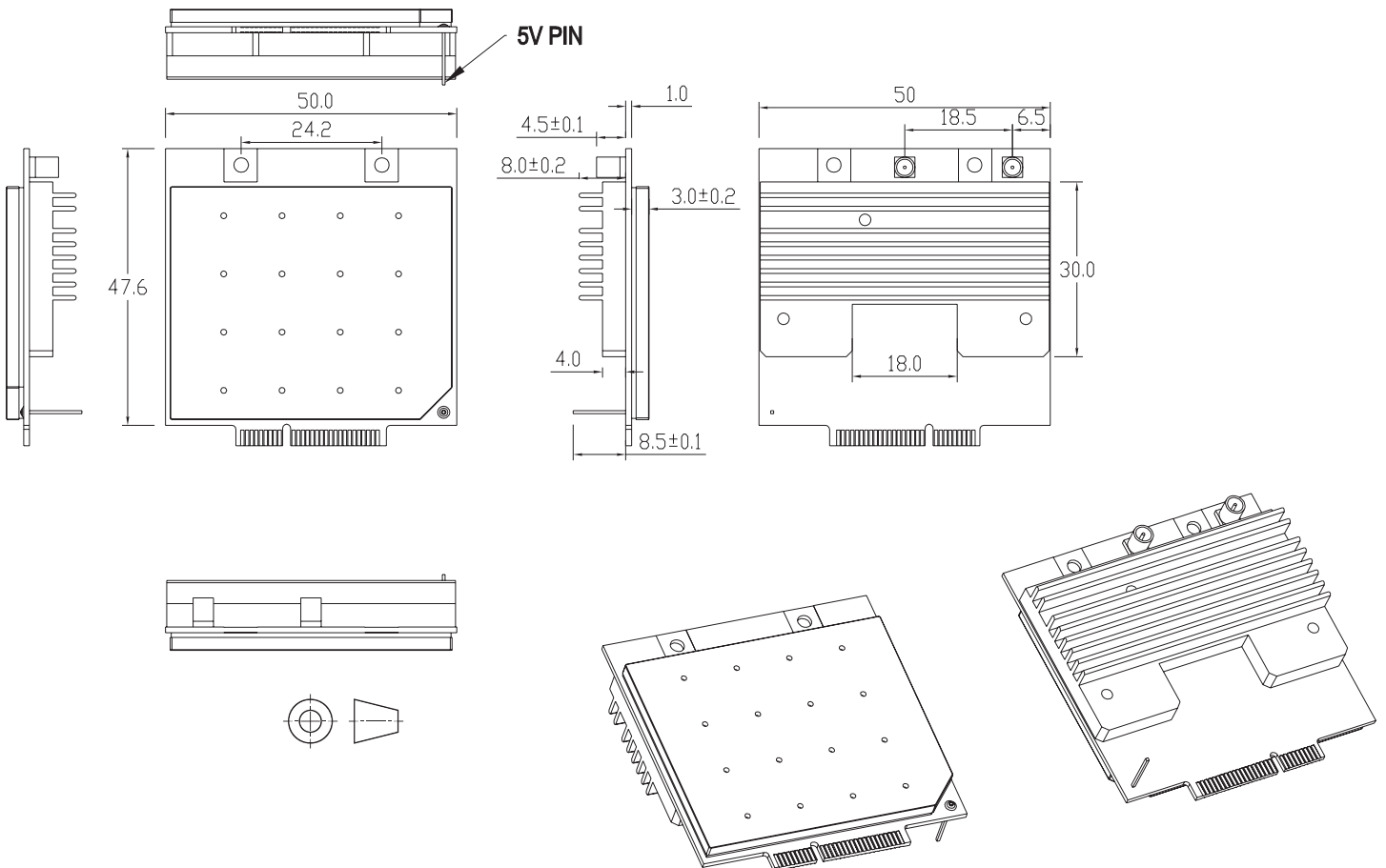
RF Performance Table

Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance		Data Rate	RX Specifications Sensitivity	Tolerance
5GHz 802.11a					**5GHz 802.11a**		
6Mbps	27dBm	30dBm	±2dB		6Mbps	-94dBm	±2dB
9Mbps	27dBm	30dBm	±2dB		9Mbps	-94dBm	±2dB
12Mbps	27dBm	30dBm	±2dB		12Mbps	-94dBm	±2dB
18Mbps	27dBm	30dBm	±2dB		18Mbps	-92dBm	±2dB
24Mbps	27dBm	30dBm	±2dB		24Mbps	-89dBm	±2dB
36Mbps	25dBm	28dBm	±2dB		36Mbps	-86dBm	±2dB
48Mbps	24dBm	27dBm	±2dB		48Mbps	-82dBm	±2dB
54Mbps	23dBm	26dBm	±2dB		54Mbps	-80dBm	±2dB
5GHz 802.11n/ac HT20					**5GHz 802.11n/ac HT20**		
MCS 0	26dBm	29dBm	±2dB		MCS 0	-94dBm	±2dB
MCS 1	25dBm	28dBm	±2dB		MCS 1	-94dBm	±2dB
MCS 2	25dBm	28dBm	±2dB		MCS 2	-92dBm	±2dB
MCS 3	24dBm	27dBm	±2dB		MCS 3	-88dBm	±2dB
MCS 4	24dBm	27dBm	±2dB		MCS 4	-84dBm	±2dB
MCS 5	23dBm	26dBm	±2dB		MCS 5	-81dBm	±2dB
MCS 6	22dBm	25dBm	±2dB		MCS 6	-78dBm	±2dB
MCS 7	21dBm	24dBm	±2dB		MCS 7	-77dBm	±2dB
MCS 8	20dBm	23dBm	±2dB		MCS 8	-74dBm	±2dB
5GHz 802.11n/ac HT40					**5GHz 802.11n/ac HT40**		
MCS 0	26dBm	29dBm	±2dB		MCS 0	-94dBm	±2dB
MCS 1	25dBm	28dBm	±2dB		MCS 1	-94dBm	±2dB
MCS 2	25dBm	28dBm	±2dB		MCS 2	-92dBm	±2dB
MCS 3	24dBm	27dBm	±2dB		MCS 3	-88dBm	±2dB
MCS 4	24dBm	27dBm	±2dB		MCS 4	-84dBm	±2dB
MCS 5	23dBm	26dBm	±2dB		MCS 5	-81dBm	±2dB
MCS 6	22dBm	25dBm	±2dB		MCS 6	-78dBm	±2dB
MCS 7	21dBm	24dBm	±2dB		MCS 7	-77dBm	±2dB
MCS 8	20dBm	23dBm	±2dB		MCS 8	-73dBm	±2dB
MCS 9	19dBm	22dBm	±2dB		MCS 9	-71dBm	±2dB
5GHz 802.11ac HT80					**5GHz 802.11ac HT80**		
MCS 0	26dBm	29dBm	±2dB		MCS 0	-89dBm	±2dB
MCS 1	25dBm	28dBm	±2dB		MCS 1	-88dBm	±2dB
MCS 2	25dBm	28dBm	±2dB		MCS 2	-85dBm	±2dB
MCS 3	24dBm	27dBm	±2dB		MCS 3	-81dBm	±2dB
MCS 4	24dBm	27dBm	±2dB		MCS 4	-79dBm	±2dB
MCS 5	23dBm	26dBm	±2dB		MCS 5	-75dBm	±2dB
MCS 6	22dBm	25dBm	±2dB		MCS 6	-74dBm	±2dB
MCS 7	21dBm	24dBm	±2dB		MCS 7	-72dBm	±2dB
MCS 8	20dBm	23dBm	±2dB		MCS 8	-70dBm	±2dB
MCS 9	19dBm	22dBm	±2dB		MCS 9	-68dBm	±2dB

Connector Map with Normal Heatsink

Model: WLE600V5-27ESD 8AB
MAC Address :
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
1.0
8.0±0.2
3.0±0.2
4.0
8.5±0.1

50
18.5   6.5
30.0
18.0

Connector Map with Large Heatsink Option

Antenna Ports
MMCX connectors
Chain1,
Chain0

Large Heatsink

MiniPCIe Edge
Connector
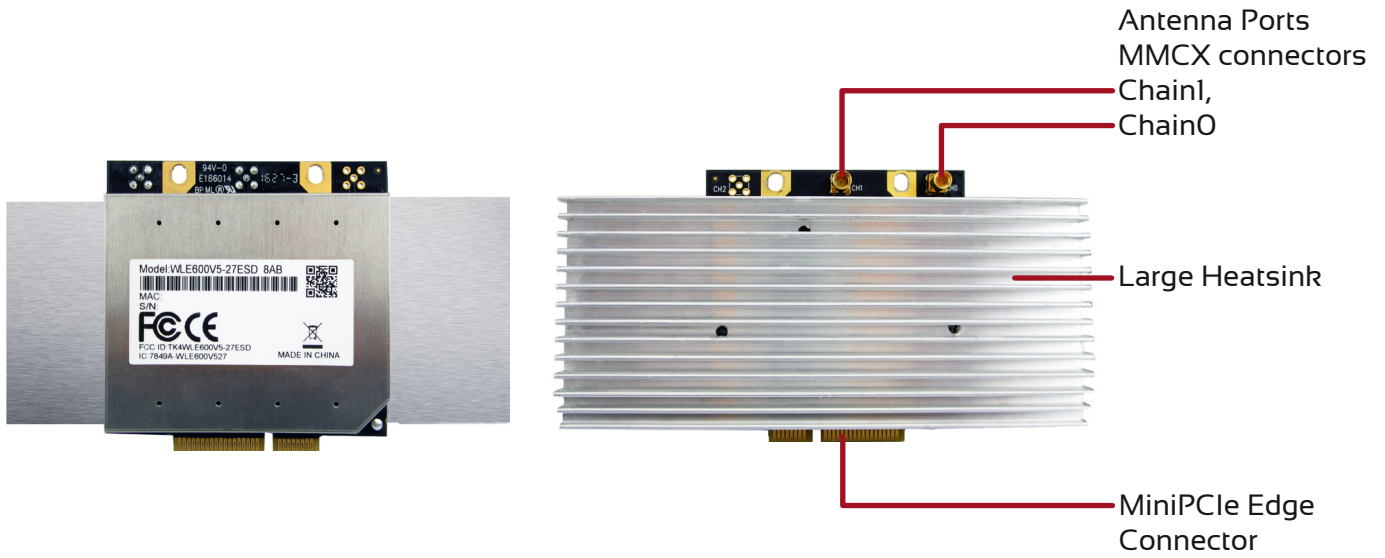
Mechanical Dimensions with Large Heatsink Option

5V PIN

50
18.5   6.5

40.0

95.0

1.0
3.0±0.2   9.0±0.2

1±0.1

50.0
24.2

51.0   47.6

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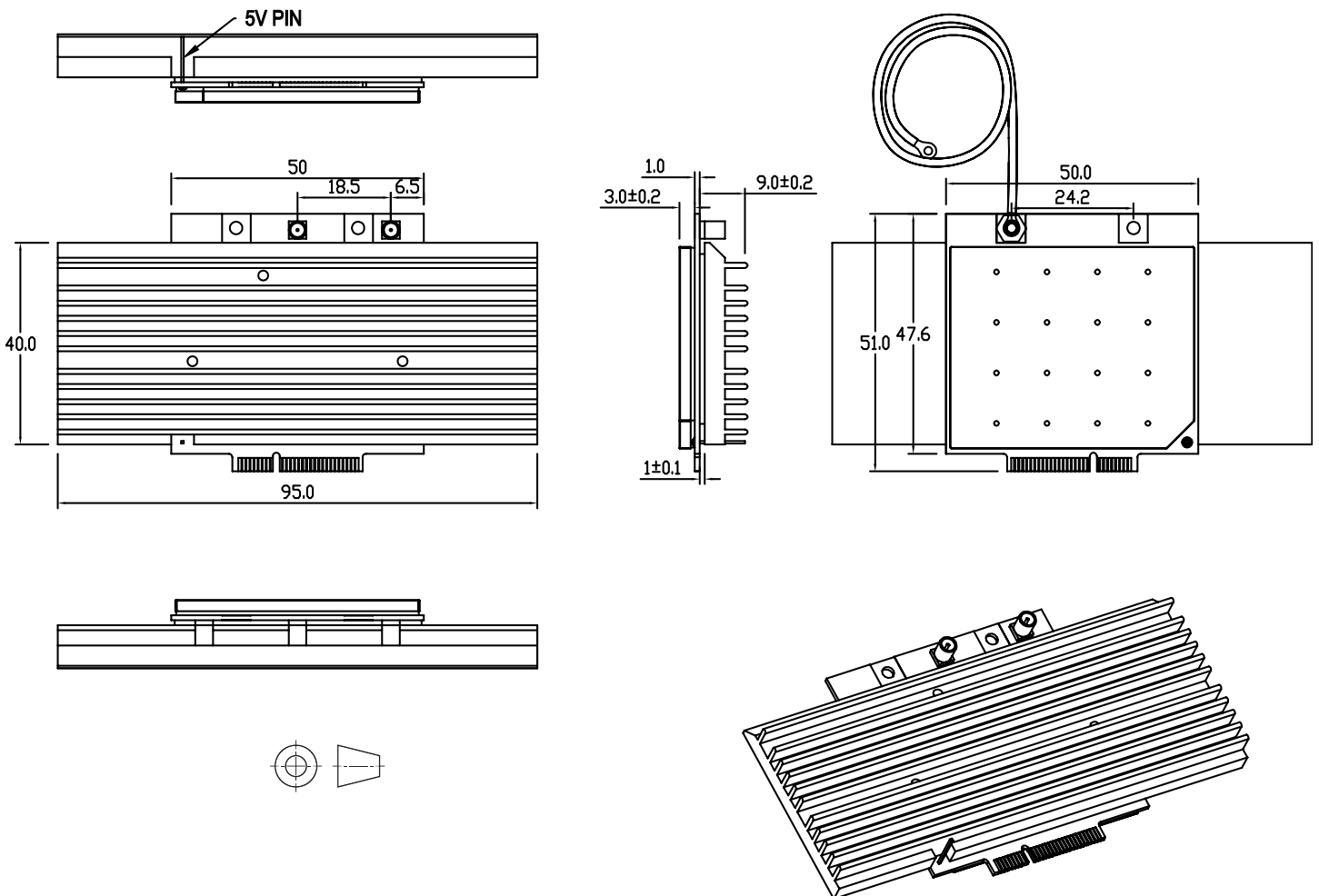
Ordering Configuration

Item Code	Model	Description
WLE600V5-27 8BB000ESD-I	WLE600V5-27ESD-I	Industrial Grade 2x2 802.11ac 5GHz High Power with Normal Heatsink
Please contact Sales for this option	WLE600V5-27ESD-I	Industrial Grade 2x2 802.11ac 5GHz High Power with Large Heatsink