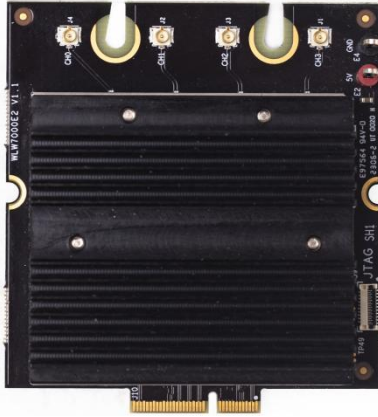## WiFi 7 (802.11be) 4×4 MU-MIMO 6GHz
Single Band Wireless Module

Model: WLW7000E6

KEY FEATURES

- Qualcomm QCN6274 'Waikiki' series for Commercial Grade
- Qualcomm QCN9274 'Waikiki' series for Industrial Grade
- 6GHz, 4×4 MU-MIMO, up to 11530 Mbps physical data rate
- M.2 E Key interface with PCIe 3.0
- Based on WK01.6 reference design
- Supports up to 4096-QAM
- -20°C to 70°C operating temperature for commercial grade
- -40°C to 85°C operating temperature for industrial grade

Specifications

Chipset	Qualcomm QCN6274 'Waikiki' series for Commercial Grade Qualcomm QCN9274 'Waikiki' series for Industrial Grade
System Memory	2Mbit serial I²C bus EEPROM
Reference Design	WK01.6
Host Interface	M.2 E Key interface with PCIe 3.0
Operating Voltage	5V
Power Consumption	14W (Max)
Wireless	6GHz 802.11ax/be, max 22dBm per chain 4x U.FL Connectors
Frequency Range	5.925~7.125GHz
Modulation Techniques	OFDMA: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024QAM, 4096QAM
Channel Spectrum Widths for WLAN	Supports 20/40/80/160/320MHz at 6GHz
Operating Systems	Linux
Certification	REACH & RoHS Compliance
Environmental Temperature	Operating (Commercial Grade): -20°C to 70°C, Storage: -40°C to 90°C Operating (Industrial Grade): -40°C to 85°C, Storage: -40°C to 90°C
Environmental Humidity, Non-Condensing	Operating: 5% to 95%, Storage: Max. 90%
Dimensions (W x H x D) in mm	62.7 X 57 X 15mm

*Configurations are subject to change without notifications.

**Can be requested from respective sales executive.

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RF Performance Table at 6GHz

Data Rate	TX Power (per chain)	TX Power (4 chains)	Tolerance
MCS0	22dBm	28dBm	±2dB
MCS1	22dBm	28dBm	±2dB
MCS2	21dBm	27dBm	±2dB
MCS3	21dBm	27dBm	±2dB
MCS4	20dBm	26dBm	±2dB
MCS5	20dBm	26dBm	±2dB
6GHz 802.11be EHT20 — MCS6	19dBm	25dBm	±2dB
MCS7	18dBm	24dBm	±2dB
MCS8	18dBm	24dBm	±2dB
MCS9	17dBm	23dBm	±2dB
MCS10	17dBm	23dBm	±2dB
MCS11	17dBm	23dBm	±2dB
MCS12	16dBm	22dBm	±2dB
MCS13	16dBm	22dBm	±2dB
MCS0	22dBm	28dBm	±2dB
MCS1	22dBm	28dBm	±2dB
MCS2	21dBm	27dBm	±2dB
MCS3	21dBm	27dBm	±2dB
MCS4	20dBm	26dBm	±2dB
MCS5	20dBm	26dBm	±2dB
6GHz 802.11be EHT40 — MCS6	19dBm	25dBm	±2dB
MCS7	18dBm	24dBm	±2dB
MCS8	18dBm	24dBm	±2dB
MCS9	17dBm	23dBm	±2dB
MCS10	17dBm	23dBm	±2dB
MCS11	17dBm	23dBm	±2dB
MCS12	16dBm	22dBm	±2dB
MCS13	16dBm	22dBm	±2dB
MCS 0	22dBm	28dBm	±2dB
MCS 1	22dBm	28dBm	±2dB
MCS 2	21dBm	27dBm	±2dB
MCS 3	21dBm	27dBm	±2dB
MCS 4	20dBm	26dBm	±2dB
MCS 5	20dBm	26dBm	±2dB
6GHz 802.11be EHT80 — MCS 6	19dBm	25dBm	±2dB
MCS 7	18dBm	24dBm	±2dB
MCS 8	18dBm	24dBm	±2dB
MCS 9	17dBm	23dBm	±2dB
MCS 10	17dBm	23dBm	±2dB
MCS 11	17dBm	23dBm	±2dB
MCS 12	16dBm	22dBm	±2dB
MCS 13	16dBm	22dBm	±2dB

Data Rate	RX Specifications Sensitivity	Tolerance
MCS0	-92dBm	±2dB
MCS1	90dBm	±2dB
MCS2	-88dBm	±2dB
MCS3	84dBm	±2dB
MCS4	-81dBm	±2dB
MCS5	-78dBm	±2dB
6GHz 802.11be EHT20 — MCS6	-76dBm	±2dB
MCS7	-74dBm	±2dB
MCS8	-71dBm	±2dB
MCS9	-68dBm	±2dB
MCS10	-65dBm	±2dB
MCS11	-62dBm	±2dB
MCS12	-59dBm	±2dB
MCS13	-57dBm	±2dB
MCS0	-90dBm	±2dB
MCS1	-87dBm	±2dB
MCS2	-85dBm	±2dB
MCS3	-82dBm	±2dB
MCS4	-79dMW	±2dB
MCS5	-75dBm	±2dB
6GHz 802.11be EHT40 — MCS6	-73dBm	±2dB
MCS7	-71dBm	±2dB
MCS8	-68dBm	±2dB
MCS9	-66dBm	±2dB
MCS10	-62dBm	±2dB
MCS11	-60dBm	±2dB
MCS12	-57dBm	±2dB
MCS13	-55dBm	±2dB
MCS 0	-88dBm	±2dB
MCS 1	-85dBm	±2dB
MCS 2	-82dBm	±2dB
MCS 3	-79dBm	±2dB
MCS 4	-76dBm	±2dB
MCS 5	-71dBm	±2dB
6GHz 802.11be EHT80 — MCS 6	-70dBm	±2dB
MCS 7	-67dBm	±2dB
MCS 8	-65dBm	±2dB
MCS 9	-62dBm	±2dB
MCS 10	-59dBm	±2dB
MCS 11	-56dBm	±2dB
MCS 12	-54dBm	±2dB
MCS 13	-52dBm	±2dB

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RF Performance Table at 6GHz

Data Rate	TX Power (per chain)	TX Power (4 chains)	Tolerance
MCS 0	22dBm	28dBm	±2dB
MCS 1	22dBm	28dBm	±2dB
MCS 2	21dBm	27dBm	±2dB
MCS 3	21dBm	27dBm	±2dB
MCS 4	20dBm	26dBm	±2dB
MCS 5	19dBm	25dBm	±2dB
MCS 6	19dBm	25dBm	±2dB
MCS 7	18dBm	24dBm	±2dB
MCS 8	18dBm	24dBm	±2dB
MCS 9	17dBm	23dBm	±2dB
MCS 10	17dBm	23dBm	±2dB
MCS 11	16dBm	22dBm	±2dB
MCS 12	16dBm	22dBm	±2dB
MCS 13	16dBm	22dBm	±2dB

6GHz 802.11be EHT160 (top block), 6GHz 802.11be EHT320 (bottom block, same TX values):

Data Rate	TX Power (per chain)	TX Power (4 chains)	Tolerance
MCS 0	22dBm	28dBm	±2dB
MCS 1	22dBm	28dBm	±2dB
MCS 2	21dBm	27dBm	±2dB
MCS 3	21dBm	27dBm	±2dB
MCS 4	20dBm	26dBm	±2dB
MCS 5	19dBm	25dBm	±2dB
MCS 6	19dBm	25dBm	±2dB
MCS 7	18dBm	24dBm	±2dB
MCS 8	18dBm	24dBm	±2dB
MCS 9	17dBm	23dBm	±2dB
MCS 10	17dBm	23dBm	±2dB
MCS 11	16dBm	22dBm	±2dB
MCS 12	16dBm	22dBm	±2dB
MCS 13	16dBm	22dBm	±2dB

RX EHT160:

Data Rate	RX Sensitivity	Tolerance
MCS 0	-84dBm	±2dB
MCS 1	-82dBm	±2dB
MCS 2	-79dBm	±2dB
MCS 3	-77dBm	±2dB
MCS 4	-73dBm	±2dB
MCS 5	-68dBm	±2dB
MCS 6	-66dBm	±2dB
MCS 7	-65dBm	±2dB
MCS 8	-61dBm	±2dB
MCS 9	-59dBm	±2dB
MCS 10	-56dBm	±2dB
MCS 11	-53dBm	±2dB
MCS 12	-51dBm	±2dB
MCS 13	-48dBm	±2dB

RX EHT320:

Data Rate	RX Sensitivity	Tolerance
MCS 0	-82dBm	±2dB
MCS 1	-79dBm	±2dB
MCS 2	-76dBm	±2dB
MCS 3	-73dBm	±2dB
MCS 4	-70dBm	±2dB
MCS 5	-65dBm	±2dB
MCS 6	-63dBm	±2dB
MCS 7	-61dBm	±2dB
MCS 8	-58dBm	±2dB
MCS 9	-55dBm	±2dB
MCS 10	-52dBm	±2dB
MCS 11	-50dBm	±2dB
MCS 12	-47dBm	±2dB
MCS 13	-45dBm	±2dB

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Component Map

U.FL Connector

CH0   CH1   CH2   CH3

Ground Pin

5V External
Power Pin

M.2 E Key

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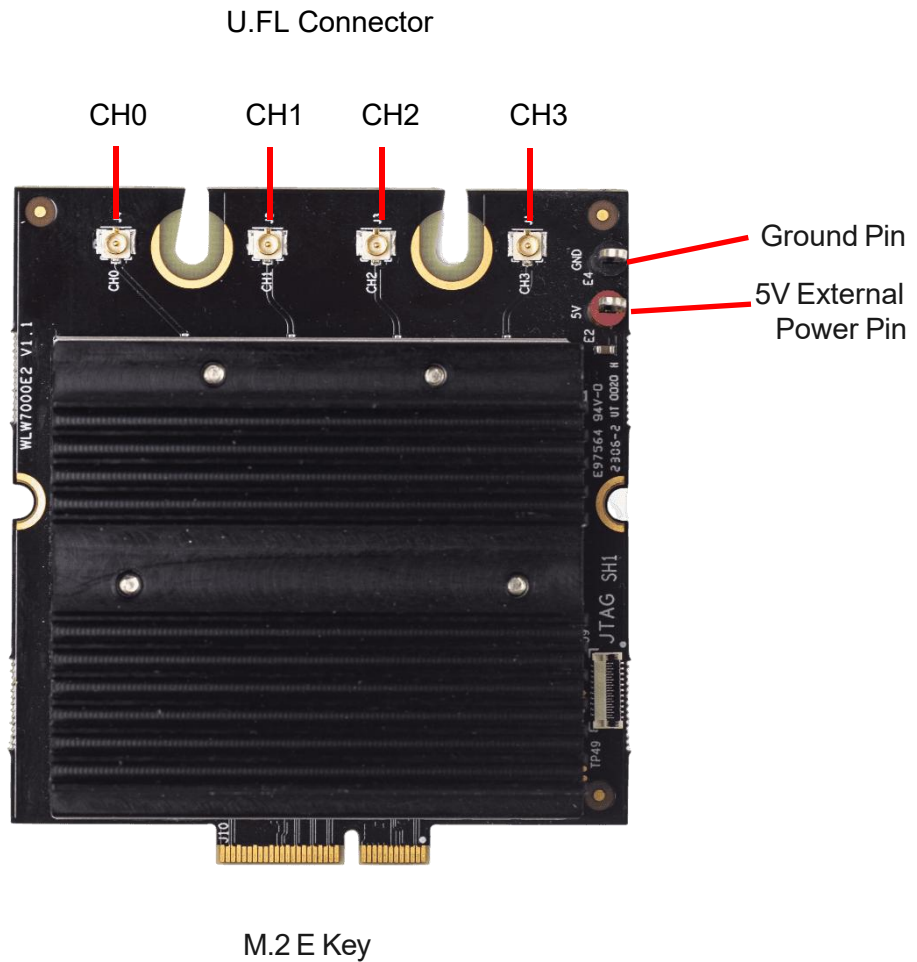
Mechanical Dimensions
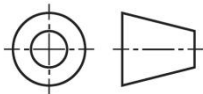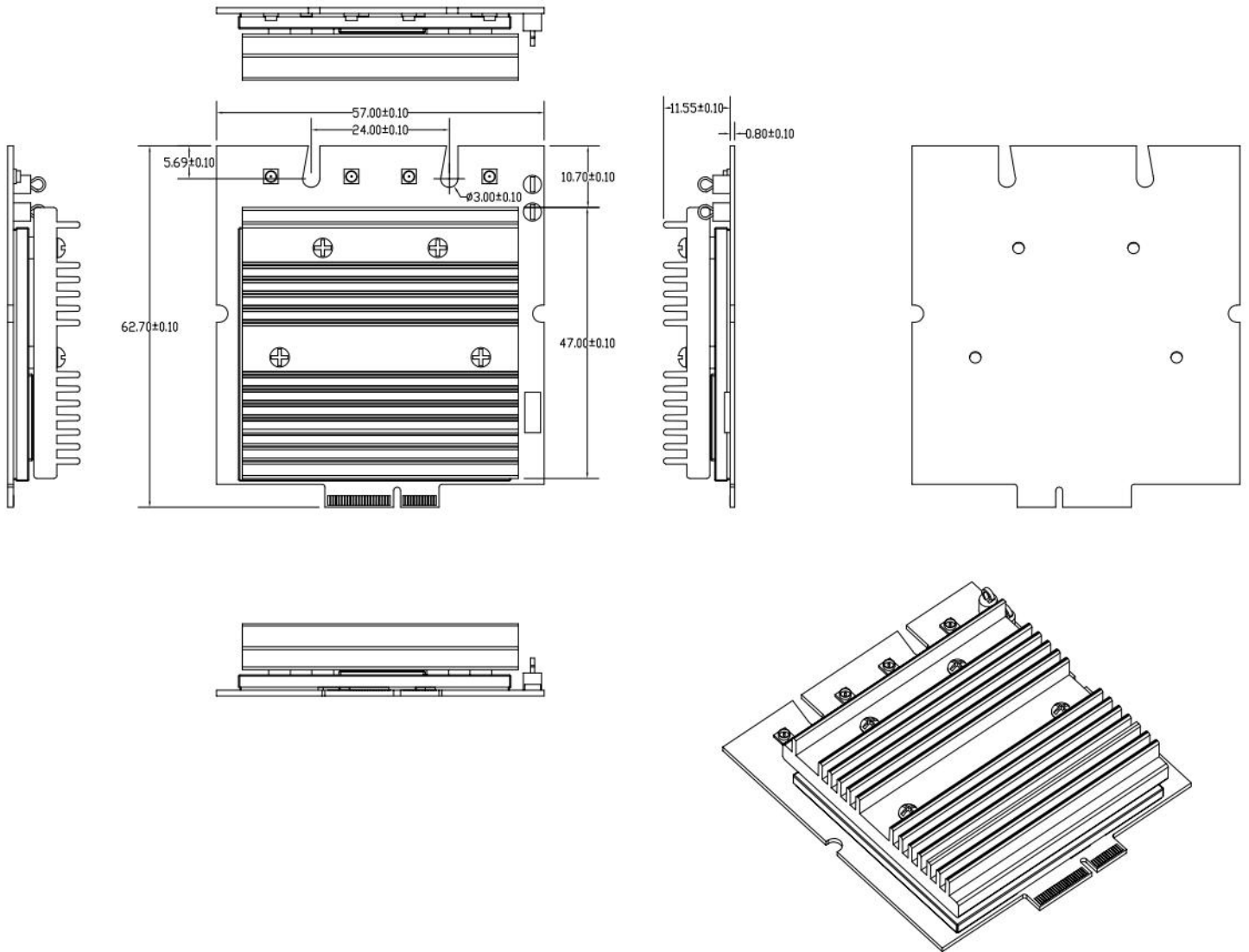
All dimensions are in mm.

Ordering Configuration

Item Code	Model	Description
WLW7000E6 8A0674S-TE	WLW7000E6	QCN6274 4x4 802.11a/n/ac/ax/be support 6GHz M.2 E Key interface with PCIe 3.0
WLW7000E6 8A0974S-TE	WLW7000E6-I	QCN9274 4x4 802.11a/n/ac/ax/be support 6GHz M.2 E Key interface with PCIe 3.0

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