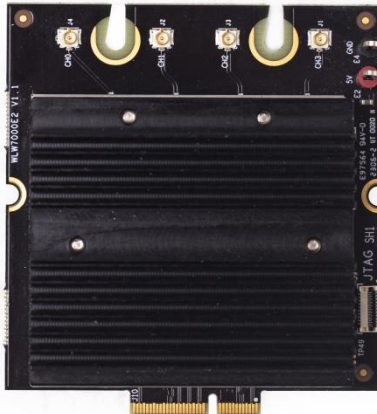


WiFi 7 (802.11be) 4x4 MU-MIMO 6GHz Single Band Wireless Module

Model: WLW7000E6



KEY FEATURES

- Qualcomm QCN6274 'Waikiki' series for Commercial Grade
- Qualcomm QCN9274 'Waikiki' series for Industrial Grade
- 6GHz, 4x4 MU-MIMO, up to 11530Mbps 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 I ² C 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.

RF Performance Table at 6GHz

	Data Rate	TX Power (per chain)	TX Power (4 chains)	Tolerance
6GHz 802.11a	6Mbps	22dBm	28dBm	±2dB
	9Mbps	22dBm	28dBm	±2dB
	12Mbps	22dBm	28dBm	±2dB
	18Mbps	21dBm	27dBm	±2dB
	24Mbps	20dBm	26dBm	±2dB
	36Mbps	20dBm	26dBm	±2dB
	48Mbps	19dBm	25dBm	±2dB
	54Mbps	19dBm	25dBm	±2dB
6GHz 802.11n HT20	MCS0	22dBm	28dBm	±2dB
	MCS1	22dBm	28dBm	±2dB
	MCS2	22dBm	28dBm	±2dB
	MCS3	21dBm	27dBm	±2dB
	MCS4	20dBm	26dBm	±2dB
	MCS5	20dBm	26dBm	±2dB
	MCS6	19dBm	25dBm	±2dB
	MCS7	19dBm	25dBm	±2dB
6GHz 802.11n HT40	MCS0	22dBm	28dBm	±2dB
	MCS1	22dBm	28dBm	±2dB
	MCS2	22dBm	28dBm	±2dB
	MCS3	21dBm	27dBm	±2dB
	MCS4	20dBm	26dBm	±2dB
	MCS5	20dBm	26dBm	±2dB
	MCS6	19dBm	25dBm	±2dB
	MCS7	19dBm	25dBm	±2dB
6GHz 802.11ac VHT20	MCS 0	22dBm	28dBm	±2dB
	MCS 1	22dBm	28dBm	±2dB
	MCS 2	22dBm	28dBm	±2dB
	MCS 3	22dBm	28dBm	±2dB
	MCS 4	22dBm	28dBm	±2dB
	MCS 5	21dBm	27dBm	±2dB
	MCS 6	19dBm	25dBm	±2dB
	MCS 7	19dBm	25dBm	±2dB
	MCS 8	18dBm	24dBm	±2dB
	MCS 9	18dBm	24dBm	±2dB
6GHz 802.11ac VHT40	MCS 0	22dBm	28dBm	±2dB
	MCS 1	22dBm	28dBm	±2dB
	MCS 2	22dBm	28dBm	±2dB
	MCS 3	21dBm	27dBm	±2dB
	MCS 4	21dBm	27dBm	±2dB
	MCS 5	21dBm	27dBm	±2dB
	MCS 6	19dBm	25dBm	±2dB
	MCS 7	19dBm	25dBm	±2dB
	MCS 8	18dBm	24dBm	±2dB
	MCS 9	18dBm	24dBm	±2dB

	Data Rate	RX Specifications Sensitivity	Tolerance
6GHz 802.11a	6Mbps	TBD	±2dB
	9Mbps	TBD	±2dB
	12Mbps	TBD	±2dB
	18Mbps	TBD	±2dB
	24Mbps	TBD	±2dB
	36Mbps	TBD	±2dB
	48Mbps	TBD	±2dB
	54Mbps	TBD	±2dB
6GHz 802.11n HT20	MCS 0	TBD	±2dB
	MCS 1	TBD	±2dB
	MCS 2	TBD	±2dB
	MCS 3	TBD	±2dB
	MCS 4	TBD	±2dB
	MCS 5	TBD	±2dB
	MCS 6	TBD	±2dB
	MCS 7	TBD	±2dB
6GHz 802.11n HT40	MCS 0	TBD	±2dB
	MCS 1	TBD	±2dB
	MCS 2	TBD	±2dB
	MCS 3	TBD	±2dB
	MCS 4	TBD	±2dB
	MCS 5	TBD	±2dB
	MCS 6	TBD	±2dB
	MCS 7	TBD	±2dB
6GHz 802.11ac VHT20	MCS 0	TBD	±2dB
	MCS 1	TBD	±2dB
	MCS 2	TBD	±2dB
	MCS 3	TBD	±2dB
	MCS 4	TBD	±2dB
	MCS 5	TBD	±2dB
	MCS 6	TBD	±2dB
	MCS 7	TBD	±2dB
	MCS 8	TBD	±2dB
	MCS 9	TBD	±2dB
6GHz 802.11ac VHT40	MCS 0	TBD	±2dB
	MCS 1	TBD	±2dB
	MCS 2	TBD	±2dB
	MCS 3	TBD	±2dB
	MCS 4	TBD	±2dB
	MCS 5	TBD	±2dB
	MCS 6	TBD	±2dB
	MCS 7	TBD	±2dB
	MCS 8	TBD	±2dB
	MCS 9	TBD	±2dB

RF Performance Table at 6GHz

	Data Rate	TX Power (per chain)	TX Power (4 chains)	Tolerance		Data Rate	RX Specifications Sensitivity	Tolerance
6GHz 802.11ac VHT80	MCS 0	22dBm	28dBm	±2dB	6GHz 802.11ac VHT80	MCS 0	TBD	±2dB
	MCS 1	22dBm	28dBm	±2dB		MCS 1	TBD	±2dB
	MCS 2	22dBm	28dBm	±2dB		MCS 2	TBD	±2dB
	MCS 3	21dBm	27dBm	±2dB		MCS 3	TBD	±2dB
	MCS 4	21dBm	27dBm	±2dB		MCS 4	TBD	±2dB
	MCS 5	21dBm	27dBm	±2dB		MCS 5	TBD	±2dB
	MCS 6	19dBm	25dBm	±2dB		MCS 6	TBD	±2dB
	MCS 7	18dBm	24dBm	±2dB		MCS 7	TBD	±2dB
	MCS 8	18dBm	24dBm	±2dB		MCS 8	TBD	±2dB
	MCS 9	17dBm	23dBm	±2dB		MCS 9	TBD	±2dB
6GHz 802.11ax HE20	MCS 0	22dBm	28dBm	±2dB	6GHz 802.11ax HE20	MCS 0	TBD	±2dB
	MCS 1	22dBm	28dBm	±2dB		MCS 1	TBD	±2dB
	MCS 2	22dBm	28dBm	±2dB		MCS 2	TBD	±2dB
	MCS 3	22dBm	28dBm	±2dB		MCS 3	TBD	±2dB
	MCS 4	22dBm	28dBm	±2dB		MCS 4	TBD	±2dB
	MCS 5	21dBm	27dBm	±2dB		MCS 5	TBD	±2dB
	MCS 6	19dBm	25dBm	±2dB		MCS 6	TBD	±2dB
	MCS 7	19dBm	25dBm	±2dB		MCS 7	TBD	±2dB
	MCS 8	18dBm	24dBm	±2dB		MCS 8	TBD	±2dB
	MCS 9	18dBm	24dBm	±2dB		MCS 9	TBD	±2dB
	MCS 10	17dBm	23dBm	±2dB		MCS 10	TBD	±2dB
	MCS 11	17dBm	23dBm	±2dB		MCS 11	TBD	±2dB
6GHz 802.11ax HE40	MCS 0	22dBm	28dBm	±2dB	6GHz 802.11ax HE40	MCS 0	TBD	±2dB
	MCS 1	22dBm	28dBm	±2dB		MCS 1	TBD	±2dB
	MCS 2	22dBm	28dBm	±2dB		MCS 2	TBD	±2dB
	MCS 3	21dBm	27dBm	±2dB		MCS 3	TBD	±2dB
	MCS 4	21dBm	27dBm	±2dB		MCS 4	TBD	±2dB
	MCS 5	21dBm	27dBm	±2dB		MCS 5	TBD	±2dB
	MCS 6	19dBm	25dBm	±2dB		MCS 6	TBD	±2dB
	MCS 7	19dBm	25dBm	±2dB		MCS 7	TBD	±2dB
	MCS 8	18dBm	24dBm	±2dB		MCS 8	TBD	±2dB
	MCS 9	18dBm	24dBm	±2dB		MCS 9	TBD	±2dB
	MCS 10	17dBm	23dBm	±2dB		MCS 10	TBD	±2dB
	MCS 11	17dBm	23dBm	±2dB		MCS 11	TBD	±2dB
6GHz 802.11ax HE80	MCS 0	22dBm	28dBm	±2dB	6GHz 802.11ax HE80	MCS 0	TBD	±2dB
	MCS 1	22dBm	28dBm	±2dB		MCS 1	TBD	±2dB
	MCS 2	22dBm	28dBm	±2dB		MCS 2	TBD	±2dB
	MCS 3	21dBm	27dBm	±2dB		MCS 3	TBD	±2dB
	MCS 4	21dBm	27dBm	±2dB		MCS 4	TBD	±2dB
	MCS 5	21dBm	27dBm	±2dB		MCS 5	TBD	±2dB
	MCS 6	19dBm	25dBm	±2dB		MCS 6	TBD	±2dB
	MCS 7	18dBm	24dBm	±2dB		MCS 7	TBD	±2dB
	MCS 8	18dBm	24dBm	±2dB		MCS 8	TBD	±2dB
	MCS 9	17dBm	23dBm	±2dB		MCS 9	TBD	±2dB
	MCS 10	16dBm	22dBm	±2dB		MCS 10	TBD	±2dB
	MCS 11	16dBm	22dBm	±2dB		MCS 11	TBD	±2dB

RF Performance Table at 6GHz

	Data Rate	TX Power (per chain)	TX Power (4 chains)	Tolerance
6GHz 802.11ax HE160	MCS 0	21dBm	27dBm	±2dB
	MCS 1	21dBm	27dBm	±2dB
	MCS 2	21dBm	27dBm	±2dB
	MCS 3	21dBm	27dBm	±2dB
	MCS 4	21dBm	27dBm	±2dB
	MCS 5	20dBm	26dBm	±2dB
	MCS 6	19dBm	25dBm	±2dB
	MCS 7	18dBm	24dBm	±2dB
	MCS 8	17dBm	23dBm	±2dB
	MCS 9	17dBm	23dBm	±2dB
	MCS 10	16dBm	22dBm	±2dB
	MCS 11	15dBm	21dBm	±2dB
6GHz 802.11be EHT20	MCS0	22dBm	28dBm	±2dB
	MCS1	22dBm	28dBm	±2dB
	MCS2	22dBm	28dBm	±2dB
	MCS3	22dBm	28dBm	±2dB
	MCS4	22dBm	28dBm	±2dB
	MCS5	21dBm	27dBm	±2dB
	MCS6	19dBm	25dBm	±2dB
	MCS7	19dBm	25dBm	±2dB
	MCS8	18dBm	24dBm	±2dB
	MCS9	18dBm	24dBm	±2dB
	MCS10	17dBm	23dBm	±2dB
	MCS11	17dBm	23dBm	±2dB
	MCS12	16dBm	22dBm	±2dB
	MCS13	16dBm	22dBm	±2dB
6GHz 802.11be EHT40	MCS0	22dBm	28dBm	±2dB
	MCS1	22dBm	28dBm	±2dB
	MCS2	22dBm	28dBm	±2dB
	MCS3	21dBm	27dBm	±2dB
	MCS4	21dBm	27dBm	±2dB
	MCS5	21dBm	27dBm	±2dB
	MCS6	19dBm	25dBm	±2dB
	MCS7	19dBm	25dBm	±2dB
	MCS8	18dBm	24dBm	±2dB
	MCS9	18dBm	24dBm	±2dB
	MCS10	17dBm	23dBm	±2dB
	MCS11	17dBm	23dBm	±2dB
	MCS12	15dBm	21dBm	±2dB
	MCS13	15dBm	21dBm	±2dB

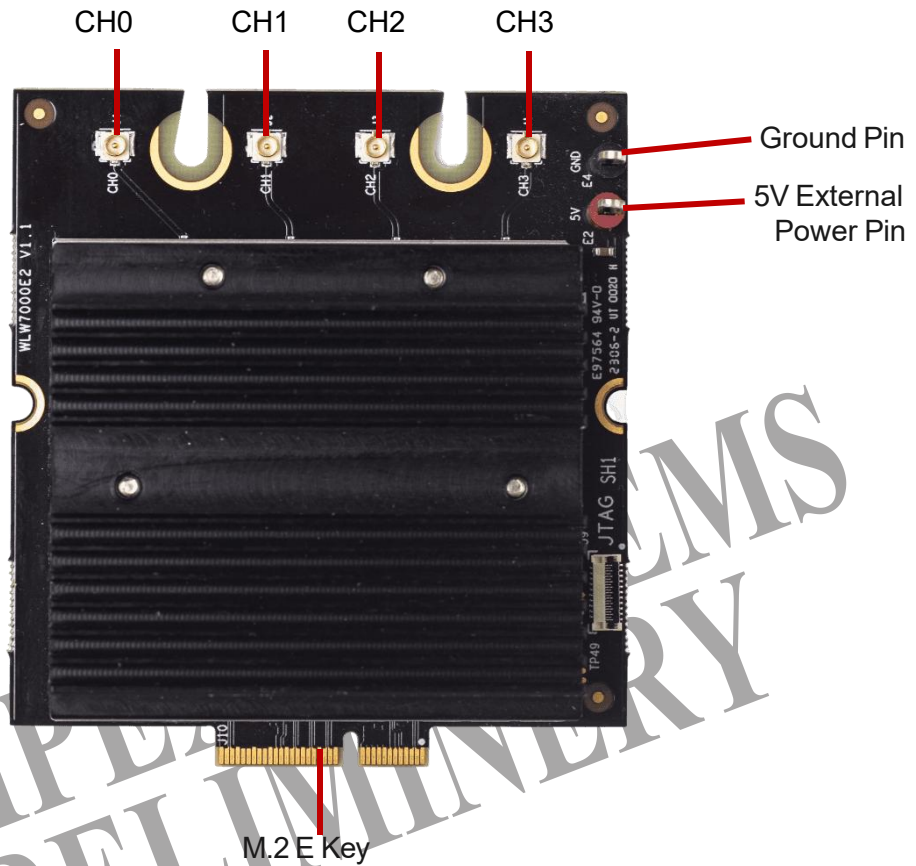
	Data Rate	RX Specifications Sensitivity	Tolerance
6GHz 802.11ax HE160	MCS 0	TBD	±2dB
	MCS 1	TBD	±2dB
	MCS 2	TBD	±2dB
	MCS 3	TBD	±2dB
	MCS 4	TBD	±2dB
	MCS 5	TBD	±2dB
	MCS 6	TBD	±2dB
	MCS 7	TBD	±2dB
	MCS 8	TBD	±2dB
	MCS 9	TBD	±2dB
	MCS 10	TBD	±2dB
	MCS 11	TBD	±2dB
6GHz 802.11be EHT20	MCS0	TBD	±2dB
	MCS1	TBD	±2dB
	MCS2	TBD	±2dB
	MCS3	TBD	±2dB
	MCS4	TBD	±2dB
	MCS5	TBD	±2dB
	MCS6	TBD	±2dB
	MCS7	TBD	±2dB
	MCS8	TBD	±2dB
	MCS9	TBD	±2dB
	MCS10	TBD	±2dB
	MCS11	TBD	±2dB
	MCS12	TBD	±2dB
	MCS13	TBD	±2dB
6GHz 802.11be EHT40	MCS0	TBD	±2dB
	MCS1	TBD	±2dB
	MCS2	TBD	±2dB
	MCS3	TBD	±2dB
	MCS4	TBD	±2dB
	MCS5	TBD	±2dB
	MCS6	TBD	±2dB
	MCS7	TBD	±2dB
	MCS8	TBD	±2dB
	MCS9	TBD	±2dB
	MCS10	TBD	±2dB
	MCS11	TBD	±2dB
	MCS12	TBD	±2dB
	MCS13	TBD	±2dB

RF Performance Table at 6GHz

	Data Rate	TX Power (per chain)	TX Power (4 chains)	Tolerance		Data Rate	RX Specifications Sensitivity	Tolerance
6GHz 802.11be EHT80	MCS 0	22dBm	28dBm	±2dB	6GHz 802.11be EHT80	MCS 0	TBD	±2dB
	MCS 1	22dBm	28dBm	±2dB		MCS 1	TBD	±2dB
	MCS 2	22dBm	28dBm	±2dB		MCS 2	TBD	±2dB
	MCS 3	21dBm	27dBm	±2dB		MCS 3	TBD	±2dB
	MCS 4	21dBm	27dBm	±2dB		MCS 4	TBD	±2dB
	MCS 5	21dBm	27dBm	±2dB		MCS 5	TBD	±2dB
	MCS 6	19dBm	25dBm	±2dB		MCS 6	TBD	±2dB
	MCS 7	18dBm	24dBm	±2dB		MCS 7	TBD	±2dB
	MCS 8	18dBm	24dBm	±2dB		MCS 8	TBD	±2dB
	MCS 9	17dBm	23dBm	±2dB		MCS 9	TBD	±2dB
	MCS 10	16dBm	22dBm	±2dB		MCS 10	TBD	±2dB
	MCS 11	16dBm	22dBm	±2dB		MCS 11	TBD	±2dB
	MCS 12	15dBm	21dBm	±2dB		MCS 12	TBD	±2dB
	MCS 13	15dBm	21dBm	±2dB		MCS 13	TBD	±2dB
6GHz 802.11be EHT160	MCS 0	21dBm	27dBm	±2dB	6GHz 802.11be EHT160	MCS 0	TBD	±2dB
	MCS 1	21dBm	27dBm	±2dB		MCS 1	TBD	±2dB
	MCS 2	21dBm	27dBm	±2dB		MCS 2	TBD	±2dB
	MCS 3	21dBm	27dBm	±2dB		MCS 3	TBD	±2dB
	MCS 4	21dBm	27dBm	±2dB		MCS 4	TBD	±2dB
	MCS 5	20dBm	26dBm	±2dB		MCS 5	TBD	±2dB
	MCS 6	19dBm	25dBm	±2dB		MCS 6	TBD	±2dB
	MCS 7	18dBm	24dBm	±2dB		MCS 7	TBD	±2dB
	MCS 8	17dBm	23dBm	±2dB		MCS 8	TBD	±2dB
	MCS 9	17dBm	23dBm	±2dB		MCS 9	TBD	±2dB
	MCS 10	16dBm	22dBm	±2dB		MCS 10	TBD	±2dB
	MCS 11	15dBm	21dBm	±2dB		MCS 11	TBD	±2dB
	MCS 12	14dBm	20dBm	±2dB		MCS 12	TBD	±2dB
	MCS 13	14dBm	20dBm	±2dB		MCS 13	TBD	±2dB
6GHz 802.11be EHT320	MCS 0	20dBm	26dBm	±2dB	6GHz 802.11be EHT320	MCS 0	TBD	±2dB
	MCS 1	20dBm	26dBm	±2dB		MCS 1	TBD	±2dB
	MCS 2	20dBm	26dBm	±2dB		MCS 2	TBD	±2dB
	MCS 3	20dBm	26dBm	±2dB		MCS 3	TBD	±2dB
	MCS 4	20dBm	26dBm	±2dB		MCS 4	TBD	±2dB
	MCS 5	20dBm	26dBm	±2dB		MCS 5	TBD	±2dB
	MCS 6	19dBm	25dBm	±2dB		MCS 6	TBD	±2dB
	MCS 7	18dBm	24dBm	±2dB		MCS 7	TBD	±2dB
	MCS 8	17dBm	23dBm	±2dB		MCS 8	TBD	±2dB
	MCS 9	17dBm	23dBm	±2dB		MCS 9	TBD	±2dB
	MCS 10	12dBm	18dBm	±2dB		MCS 10	TBD	±2dB
	MCS 11	11dBm	17dBm	±2dB		MCS 11	TBD	±2dB
	MCS 12	7dBm	13dBm	±2dB		MCS 12	TBD	±2dB
	MCS 13	7dBm	13dBm	±2dB		MCS 13	TBD	±2dB

Component Map

U.FL Connectors



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

COMPEX SYSTEMS
PRELIMINARY