WiFi 7 (802.11BE) 2×2 MU-MIMO 2.4+6GHz
Dual Band Dual Concurrent Wireless Module

Model: WLTB7002E26

KEY FEATURES

- Qualcomm QCN6274 'Waikiki' series for Commercial Grade
- Qualcomm QCN9274-I 'Waikiki' series for Industrial Grade
- 2.4GHz, 2×2 MU-MIMO, up to 688 Mbps physical data rate
- 6GHz, 2×2 MU-MIMO, up to 5765 Mbps physical data rate
- Dual-Band Concurrent 2.4+6GHz WiFi 7 (802.11be)
- M.2 B+M Key interface with PCIe 3.0
- Based on WK03.2 reference design
- Supports up to 4096-QAM
- -20°C to 70°C operating temperature*

For industrial-grade environmental temperature requirements, please contact our sales representative for a customized heatsink solution.

Specifications

Chipset	Qualcomm QCN6274 'Waikiki' series for Commercial grade Qualcomm QCN9274-I 'Waikiki' series for Industrial grade
System Memory	2Mbit serial I²C bus EEPROM
Reference Design	WK03.2
Host Interface	M.2 B+M Key Interface with PCIe 3.0
Operating Voltage	3.3V
Power Consumption	8.3W (Max)
Wireless	2.4GHz 802.11b/g/n/ax/be, max 20dBm per chain 6GHz 802.11ax/be, max 17dBm per chain 2x U.FL Connectors
Frequency Range	2.4 GHz: 2.412~2.472GHz 6 GHz: 5.945~7.125GHz
Modulation Techniques	OFDMA: BPSK, QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM,1024-QAM, 4096-QAM
Channel Spectrum Widths for WLAN	Support 20/40MHz at 2.4 GHz Support 20/40/80/160/320MHz at 6GHz
Operating Systems	Linux
Certification	FCC, CE, IC Certified, REACH & RoHS Compliance
Environmental Temperature [1]	Operating temperature: -20°C to 70°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	30 X 52 X 20.1 mm

Configurations are subject to change without notifications.
**Can be requested from respective sales executive.*

[1] For industrial-grade environmental temperature requirements, please contact our sales representative for a customized heatsink solution.

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RF Performance Table at 2.4GHz with Filter

Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
MCS 0	20dBm	23dBm	±2dB
MCS 1	20dBm	23dBm	±2dB
MCS 2	20dBm	23dBm	±2dB
MCS 3	19dBm	22dBm	±2dB
MCS 4	18dBm	21dBm	±2dB
MCS 5	17dBm	20dBm	±2dB
MCS 6	16dBm	19dBm	±2dB
MCS 7	15dBm	18dBm	±2dB
MCS 8	14dBm	17dBm	±2dB
MCS 9	14dBm	17dBm	±2dB
MCS 10	13dBm	16dBm	±2dB
MCS 11	13dBm	16dBm	±2dB
MCS 12	12dBm	15dBm	±2dB
MCS 13	12dBm	15dBm	±2dB

2.4GHz 802.11be EHT20

Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
MCS 0	20dBm	23dBm	±2dB
MCS 1	20dBm	23dBm	±2dB
MCS 2	20dBm	23dBm	±2dB
MCS 3	19dBm	22dBm	±2dB
MCS 4	18dBm	21dBm	±2dB
MCS 5	17dBm	20dBm	±2dB
MCS 6	16dBm	19dBm	±2dB
MCS 7	15dBm	18dBm	±2dB
MCS 8	14dBm	17dBm	±2dB
MCS 9	14dBm	17dBm	±2dB
MCS 10	13dBm	16dBm	±2dB
MCS 11	13dBm	16dBm	±2dB
MCS 12	12dBm	15dBm	±2dB
MCS 13	12dBm	15dBm	±2dB

2.4GHz 802.11be EHT40

Data Rate	RX Specifications Sensitivity	Tolerance
MCS 0	-92dBm	±2dB
MCS 1	-90dBm	±2dB
MCS 2	-88dBm	±2dB
MCS 3	-85dBm	±2dB
MCS 4	-81dBm	±2dB
MCS 5	-77dBm	±2dB
MCS 6	-76dBm	±2dB
MCS 7	-74dBm	±2dB
MCS 8	-70dBm	±2dB
MCS 9	-69dBm	±2dB
MCS 10	-65dBm	±2dB
MCS 11	-63dBm	±2dB
MCS 12	-59dBm	±2dB
MCS 13	-57dBm	±2dB

2.4GHz 802.11be EHT20

Data Rate	RX Specifications Sensitivity	Tolerance
MCS 0	-89dBm	±2dB
MCS 1	-87dBm	±2dB
MCS 2	-85dBm	±2dB
MCS 3	-82dBm	±2dB
MCS 4	-78dBm	±2dB
MCS 5	-73dBm	±2dB
MCS 6	-72dBm	±2dB
MCS 7	-71dBm	±2dB
MCS 8	-67dBm	±2dB
MCS 9	-65dBm	±2dB
MCS 10	-62dBm	±2dB
MCS 11	-60dBm	±2dB
MCS 12	-56dBm	±2dB
MCS 13	-55dBm	±2dB

2.4GHz 802.11be EHT40

RF Performance Table at 6 GHz with Filter

	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
6GHz 802.11be EHT20	MCS 0	17dBm	20dBm	±2dB
	MCS 1	17dBm	20dBm	±2dB
	MCS 2	16dBm	19dBm	±2dB
	MCS 3	15dBm	18dBm	±2dB
	MCS 4	14dBm	17dBm	±2dB
	MCS 5	13dBm	16dBm	±2dB
	MCS 6	12dBm	15dBm	±2dB
	MCS 7	12dBm	15dBm	±2dB
	MCS 8	11dBm	14dBm	±2dB
	MCS 9	10dBm	13dBm	±2dB
	MCS 10	9dBm	12dBm	±2dB
	MCS 11	9dBm	12dBm	±2dB
	MCS 12	8dBm	11dBm	±2dB
	MCS 13	8dBm	11dBm	±2dB
6GHz 802.11be EHT40	MCS 0	17dBm	20dBm	±2dB
	MCS 1	17dBm	20dBm	±2dB
	MCS 2	16dBm	19dBm	±2dB
	MCS 3	15dBm	18dBm	±2dB
	MCS 4	14dBm	17dBm	±2dB
	MCS 5	13dBm	16dBm	±2dB
	MCS 6	12dBm	15dBm	±2dB
	MCS 7	12dBm	15dBm	±2dB
	MCS 8	11dBm	14dBm	±2dB
	MCS 9	10dBm	13dBm	±2dB
	MCS 10	9dBm	12dBm	±2dB
	MCS 11	9dBm	12dBm	±2dB
	MCS 12	8dBm	11dBm	±2dB
	MCS 13	8dBm	11dBm	±2dB
6GHz 802.11be EHT80	MCS 0	17dBm	20dBm	±2dB
	MCS 1	17dBm	20dBm	±2dB
	MCS 2	16dBm	19dBm	±2dB
	MCS 3	15dBm	18dBm	±2dB
	MCS 4	14dBm	17dBm	±2dB
	MCS 5	13dBm	16dBm	±2dB
	MCS 6	12dBm	15dBm	±2dB
	MCS 7	12dBm	15dBm	±2dB
	MCS 8	11dBm	14dBm	±2dB
	MCS 9	10dBm	13dBm	±2dB
	MCS 10	9dBm	12dBm	±2dB
	MCS 11	9dBm	12dBm	±2dB
	MCS 12	8dBm	11dBm	±2dB
	MCS 13	8dBm	11dBm	±2dB

	Data Rate	RX Specifications Sensitivity	Tolerance
6GHz 802.11be EHT20	MCS 0	-90dBm	±2dB
	MCS 1	-88dBm	±2dB
	MCS 2	-85dBm	±2dB
	MCS 3	-83dBm	±2dB
	MCS 4	-79dBm	±2dB
	MCS 5	-75dBm	±2dB
	MCS 6	-74dBm	±2dB
	MCS 7	-72dBm	±2dB
	MCS 8	-68dBm	±2dB
	MCS 9	-67dBm	±2dB
	MCS 10	-63dBm	±2dB
	MCS 11	-62dBm	±2dB
	MCS 12	-58dBm	±2dB
	MCS 13	-55dBm	±2dB
6GHz 802.11be EHT40	MCS 0	-87dBm	±2dB
	MCS 1	-85dBm	±2dB
	MCS 2	-83dBm	±2dB
	MCS 3	-80dBm	±2dB
	MCS 4	-77dBm	±2dB
	MCS 5	-72dBm	±2dB
	MCS 6	-71dBm	±2dB
	MCS 7	-69dBm	±2dB
	MCS 8	-66dBm	±2dB
	MCS 9	-64dBm	±2dB
	MCS 10	-61dBm	±2dB
	MCS 11	-58dBm	±2dB
	MCS 12	-55dBm	±2dB
	MCS 13	-53dBm	±2dB
6GHz 802.11be EHT80	MCS 0	-85dBm	±2dB
	MCS 1	-83dBm	±2dB
	MCS 2	-81dBm	±2dB
	MCS 3	-78dBm	±2dB
	MCS 4	-75dBm	±2dB
	MCS 5	-70dBm	±2dB
	MCS 6	-69dBm	±2dB
	MCS 7	-68dBm	±2dB
	MCS 8	-64dBm	±2dB
	MCS 9	-63dBm	±2dB
	MCS 10	-59dBm	±2dB
	MCS 11	-57dBm	±2dB
	MCS 12	-54dBm	±2dB
	MCS 13	-52dBm	±2dB

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RF Performance Table at 6 GHz with Filter

Data Rate		TX Power (per chain)	TX Power (2 chains)	Tolerance
6GHz 802.11be EHT160	MCS 0	17dBm	20dBm	±2dB
	MCS 1	17dBm	20dBm	±2dB
	MCS 2	16dBm	19dBm	±2dB
	MCS 3	15dBm	18dBm	±2dB
	MCS 4	14dBm	17dBm	±2dB
	MCS 5	13dBm	16dBm	±2dB
	MCS 6	12dBm	15dBm	±2dB
	MCS 7	11dBm	14dBm	±2dB
	MCS 8	10dBm	13dBm	±2dB
	MCS 9	9dBm	12dBm	±2dB
	MCS 10	8dBm	11dBm	±2dB
	MCS 11	8dBm	11dBm	±2dB
	MCS 12	7dBm	10dBm	±2dB
	MCS 13	7dBm	10dBm	±2dB
6GHz 802.11be EHT320	MCS 0	16dBm	19dBm	±2dB
	MCS 1	16dBm	19dBm	±2dB
	MCS 2	15dBm	18dBm	±2dB
	MCS 3	14dBm	17dBm	±2dB
	MCS 4	13dBm	16dBm	±2dB
	MCS 5	12dBm	15dBm	±2dB
	MCS 6	11dBm	14dBm	±2dB
	MCS 7	10dBm	13dBm	±2dB
	MCS 8	9dBm	12dBm	±2dB
	MCS 9	8dBm	11dBm	±2dB
	MCS 10	7dBm	10dBm	±2dB
	MCS 11	7dBm	10dBm	±2dB
	MCS 12	7dBm	10dBm	±2dB
	MCS 13	7dBm	10dBm	±2dB

Data Rate		RX Specifications Sensitivity	Tolerance
6GHz 802.11be EHT160	MCS 0	-83dBm	±2dB
	MCS 1	-80dBm	±2dB
	MCS 2	-78dBm	±2dB
	MCS 3	-74dBm	±2dB
	MCS 4	-72dBm	±2dB
	MCS 5	-67dBm	±2dB
	MCS 6	-67dBm	±2dB
	MCS 7	-65dBm	±2dB
	MCS 8	-62dBm	±2dB
	MCS 9	-60dBm	±2dB
	MCS 10	-55dBm	±2dB
	MCS 11	-53dBm	±2dB
	MCS 12	-52dBm	±2dB
	MCS 13	-50dBm	±2dB
6GHz 802.11be EHT320	MCS 0	-80dBm	±2dB
	MCS 1	-77dBm	±2dB
	MCS 2	-75dBm	±2dB
	MCS 3	-71dBm	±2dB
	MCS 4	-69dBm	±2dB
	MCS 5	-64dBm	±2dB
	MCS 6	-64dBm	±2dB
	MCS 7	-42dBm	±2dB
	MCS 8	-59dBm	±2dB
	MCS 9	-57dBm	±2dB
	MCS 10	-52dBm	±2dB
	MCS 11	-50dBm	±2dB
	MCS 12	-49dBm	±2dB
	MCS 13	-49dBm	±2dB

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Component Map

U.FL Connectors

CH0   CH1
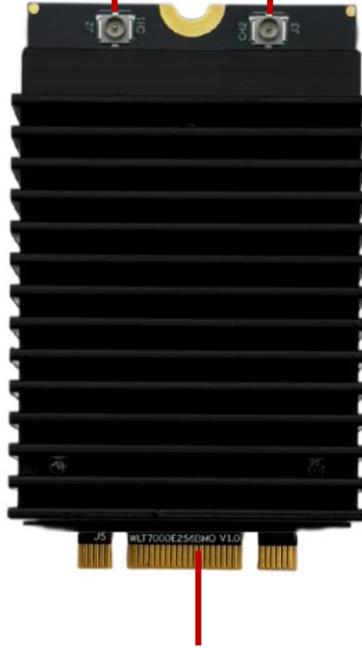
M.2 B +M Key Interface with PCIe 3.0

Mechanical Dimensions
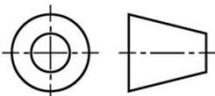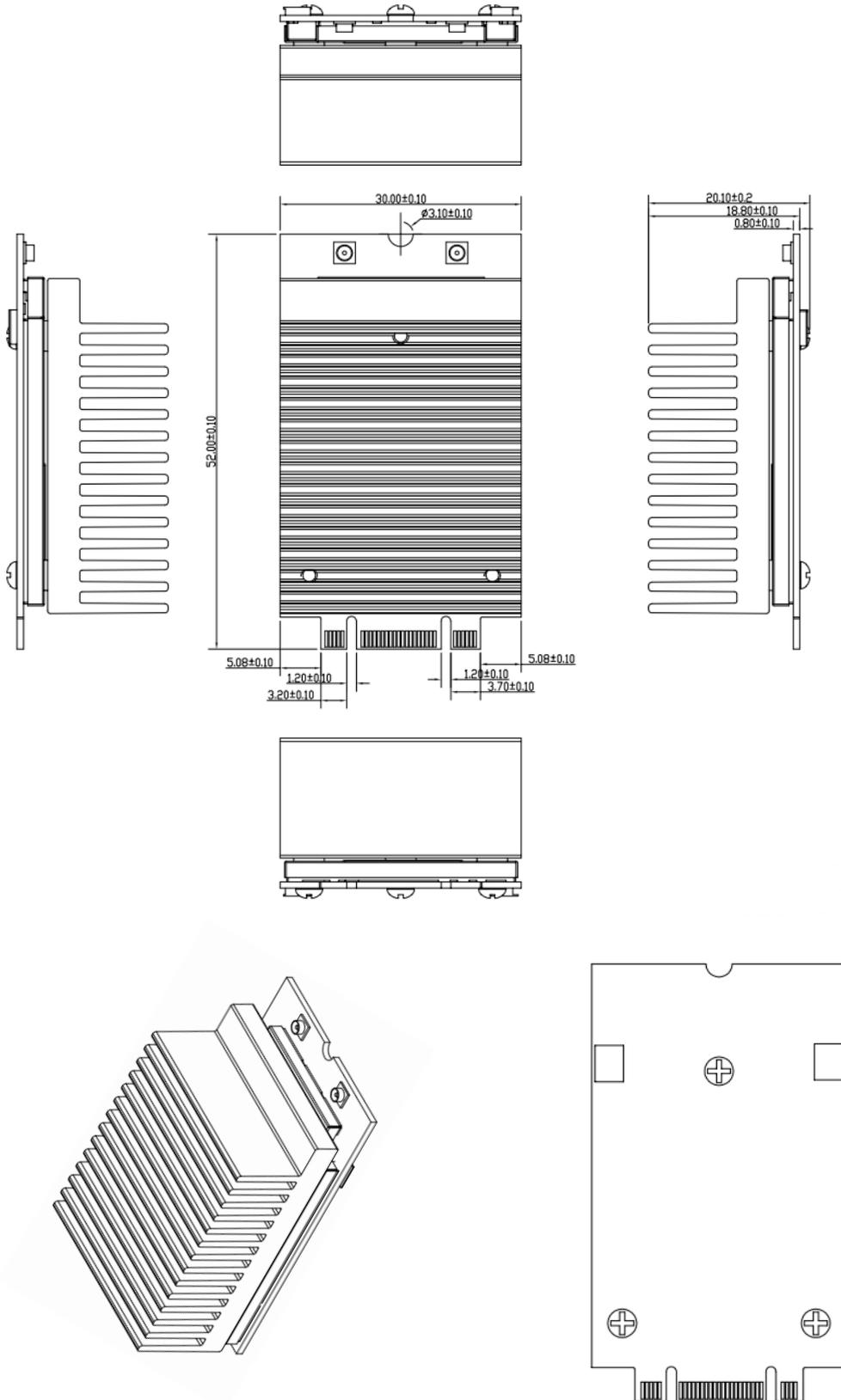
All dimensions are in mm

Ordering Configuration

Item Code	Model	Description
WLTB7002E26 7A000SXLF	WLTB7002E26	QCN6274 2x2 802.11a/b/g/n/ac/ax/be support 2.4+6GHz Dual-Band Concurrent M.2 B+M Key interface with PCIe 3.0 Module
WLTB7002E26 7B000NXLF-I	WLTB7002E26-I	QCN9274-I 2x2 802.11a/b/g/n/ac/ax/be support 2.4+6GHz Dual-Band Concurrent M.2 B+M Key interface with PCIe 3.0 Module

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Chipsets Comparisons

		QCN6224	QCN6274	QCN9274
Band Operation	4 Single Band	✓	✓	✓
	2+2 Dual Band	✓	✓	✓
	2.4GHz	✓	✓	✓
	4.9GHz	-	-	✓
	5GHz	✓	✓	✓
	6GHz	-	✓	✓
	Channel Support	Up to 160MHz at 5GHz	Up to 320MHz at 6GHz	Up to 320MHz at 6GHz
Performance	4K QAM	✓	✓	✓
	#clients	128	256	512
	#OFDMA users	8	16	37
	DL OFDMA + TxBF	-	✓	✓
	DL/UL MU-MIMO	✓	✓	✓
Advanced 11be Features	WFA certified MLO	✓	✓	✓
	Puncture	Static	Static	Static & Dynamic
Others	DPD	✓	✓	✓
	FIPS	-	-	✓
Software Packages	Provisioned Multi Link	✓	✓	✓
	Dense Deployment	✓	✓	✓
	Location & RF Sensing	✓	✓	✓