

Dual Band MIMO 2.4/5GHz WiFi + Bluetooth Combo M.2 Module Designed for WLAN/BT and Low-Energy Communications

Model: WLT674



KEY FEATURES

- Qualcomm Atheros QCA6174A-5.
- Supports 2x2 multiple-user, multiple-input, multiple-output (MU-MIMO) with two spatial streams.
- Supports IEEE 802.11a/b/g/n/ac WLAN standards.
- Enables seamless integration of WLAN/Bluetooth and low energy technology.
- Provides a highly integrated WLAN System-on-Chip (SoC) for 5GHz 802.11ac, or 2.4GHz / 5GHz 802.11n WLAN applications.
- Supports Bluetooth 5.0 + HS, BLE, and ANT+ and backward compatibility with BT 1.2 and BT 2.X + enhanced data rate.
- Supports BT-WLAN coexistence and ISM-LTE coexistence.
- Supports Simple Pairing (SP) and Enhanced Inquiry Response (EIR) function.
- HCI USB interface to work with Windows upper layer stack.

APPLICATIONS

- Medical devices, security systems, robots, video streaming, PoS, digital signs, gaming machine, medical equipment, tablet PCs, handheld devices, thin client devices.

Specifications

Chipset	Qualcomm Atheros QCA6174A-5 'Rome' Series
Reference Design	Qualcomm Atheros NFA364
WLAN Host Interface	M.2 A+E Key interface with PCIe 2.1
Host Interface	M.2 2230, Key A+E
Bluetooth Host Interface	USB 1.1 interface
Operating Voltage	3.3V DC power supply and I/O supply of 1.8V or 3.3V
Power Consumption	TX: 610 mA, RX: 280 mA
Antenna	2x U.FL connectors, 2T2R Support WiFi/Bluetooth co-existence
WLAN Frequency Range	2.412~2.483GHz, 5.150~5.850GHz, *Subject to local regulations
Modulation Techniques	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11ac: OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM)
Channel Spectrum Widths for WLAN	Supports 20/40MHz at 2.4GHz, Supports 20/40/80MHz at 5GHz
Standards for Bluetooth	Bluetooth v5.0, v4.1, v4.0 LE, v3.0+HS, v2.1+EDR

*Configurations are subject to change without notifications.

Specifications

Max Data Rates for WLAN	300Mbps on 802.11n networks 867Mbps on 802.11ac networks
Data Rates for Bluetooth	1Mbps, 2Mbps, and up to 3Mbps
Driver Support	Linux with ath10k, Windows 7/8.1/10
Security	64/128-bits WEP, WPA, WPA2, 802.1X
Certification	CE, FCC, IC, REACH and RoHS Compliance
Environmental Temperature	Operating: -20°C to 70°C, Storage: -40°C to 85°C
Environmental Humidity, Non-Condensing	Operating: 5% to 95%, Storage: 5% to 90%
Dimensions (W x H x D) in mm	22 x 30 x 2.1

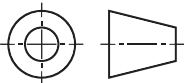
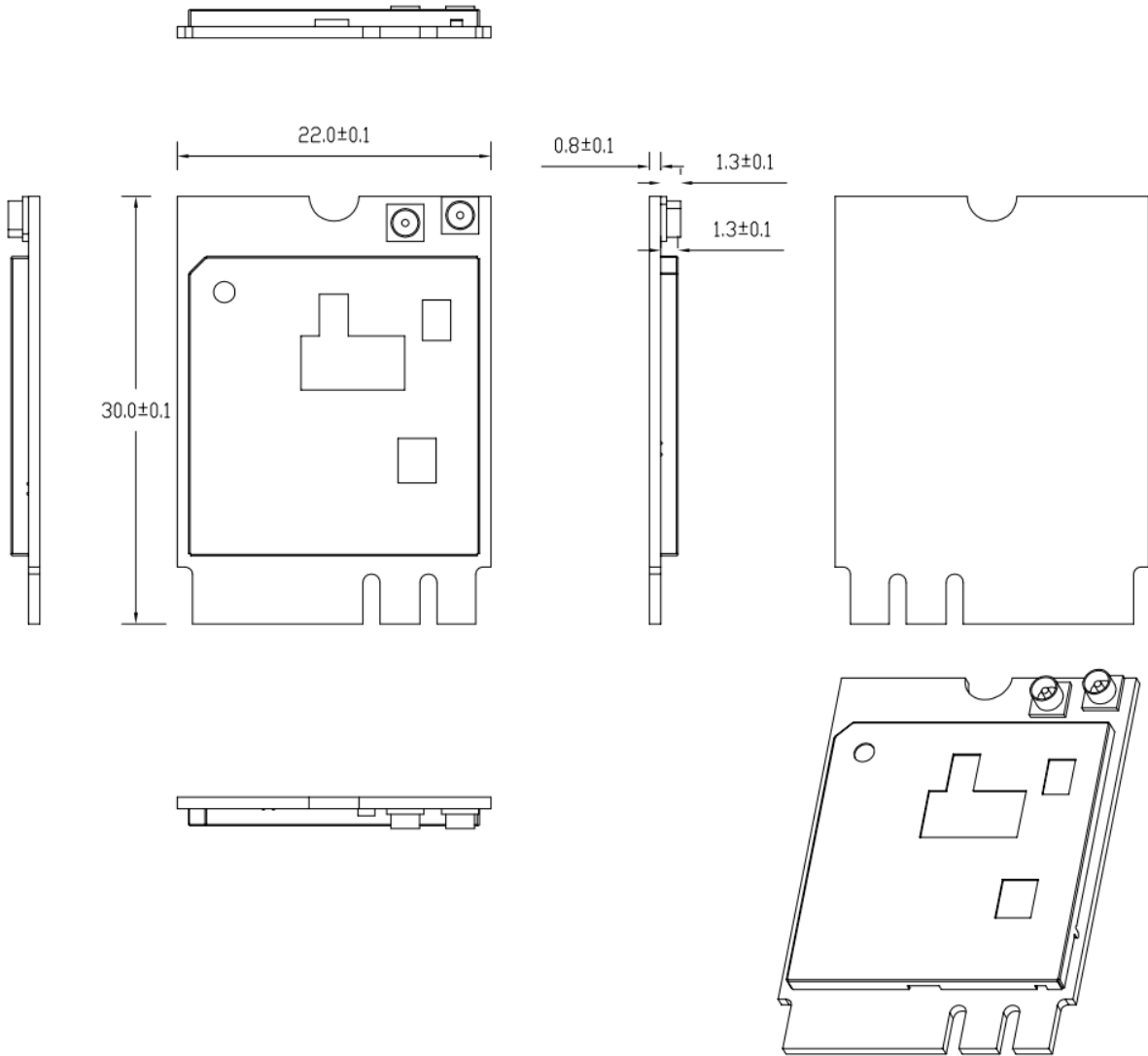
*Configurations are subject to change without notifications.

RF Performance Table

	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
2.4GHz 802.11b	11Mbps	18dBm	21dBm	±2dB
2.4GHz 802.11g	54Mbps	15dBm	18dBm	±2dB
2.4GHz 802.11n HT20	MCS 7	15dBm	18dBm	±2dB
2.4GHz 802.11n HT40	MCS 7	15dBm	18dBm	±2dB
5GHz 802.11a	54Mbps	10.5dBm	13.5dBm	±2dB
5GHz 802.11n VHT20	MCS 7	10dBm	13dBm	±2dB
5GHz 802.11n VHT40	MCS 7	10dBm	13dBm	±2dB
5GHz 802.11ac VHT80	MCS 9	6dBm	9dBm	±2dB
Bluetooth	3Mbps	4~10dBm	-	±2dB

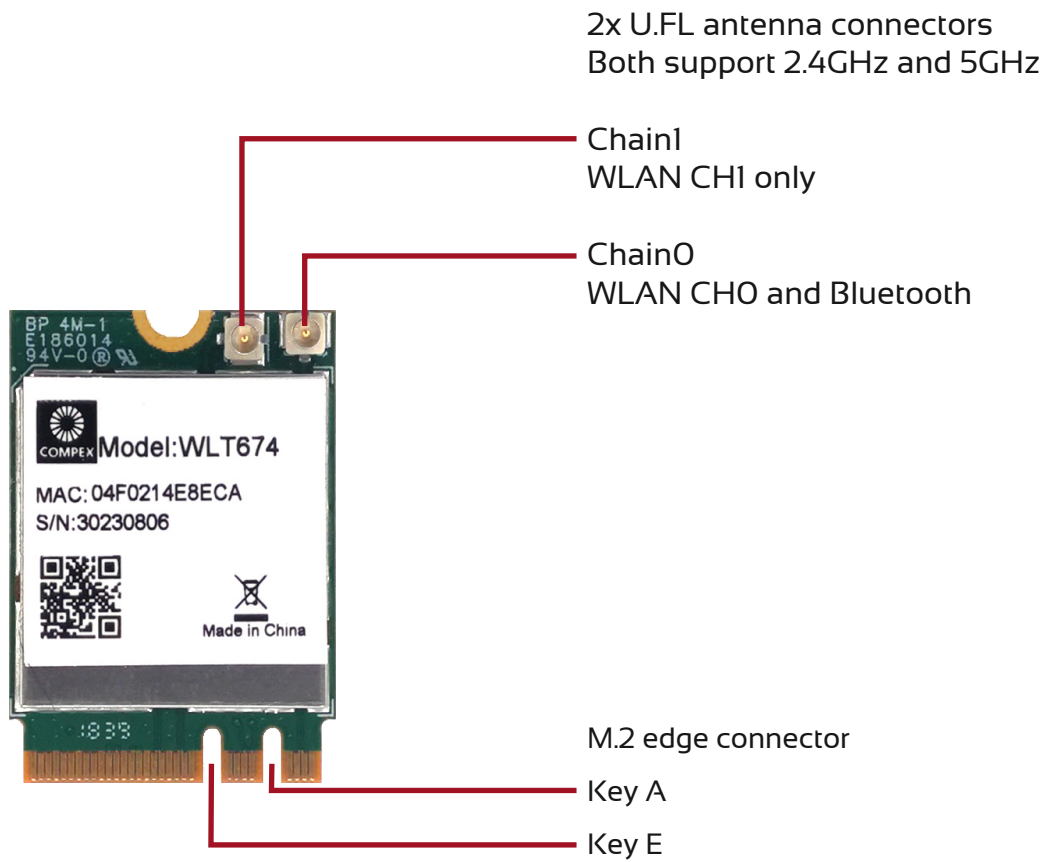
	Data Rate	RX Specifications Sensitivity	Tolerance
2.4GHz 802.11b	11Mbps	-76dBm	±2dB
2.4GHz 802.11g	54Mbps	-65dBm	±2dB
2.4GHz 802.11n HT20	MCS 7	-64dBm	±2dB
2.4GHz 802.11n HT40	MCS 7	-61dBm	±2dB
5GHz 802.11a	54Mbps	-65dBm	±2dB
5GHz 802.11n VHT20	MCS 7	-64dBm	±2dB
5GHz 802.11n VHT40	MCS 7	-61dBm	±2dB
5GHz 802.11ac VHT80	MCS 9	-51dBm	±2dB
Bluetooth	3Mbps	-70dBm (0.1% BER)	±2dB

Mechanical Dimensions



All dimensions are in mm.

Component Map



Ordering Configuration

Item Code	Model	Description
WLT674 7A0000 1.00	WLT674	M.2 Module