

## Wi-Fi Module

### Wi-Fi LAN Radio/Bluetooth Radio Module (MT7662U)

#### WBC-200

The WBC-200 is a Wi-Fi module built in a 2x2 dual-band wireless LAN radio and Bluetooth radio. The advance chipset MT7662U supports IEEE 802.11ac draft standard and provides the highest PHY rate up to 867Mbps, offering feature-rich wireless connectivity and reliable throughput from an extended distance. It includes Bluetooth EDR and LE radio which complies with Bluetooth v2.1+EDR, v3.0, and v4.0+BLE.

The WBC-200 supports the 802.11i security standard and implements hardware acceleration for TKIP, CCMP, GCMP, and WAPI. The device also supports 802.11e QoS for video, voice, and multimedia applications.

The WBC-200 can provide a concurrent operation of Wi-Fi and Bluetooth over USB interface. An intelligent Wi-Fi/Bluetooth coexistence algorithm is implemented to provide the best harmonized Wi-Fi and Bluetooth radio performance. WBC-200 also features the high-speed UART with SIG standard HCI interface to support Bluetooth over UART.

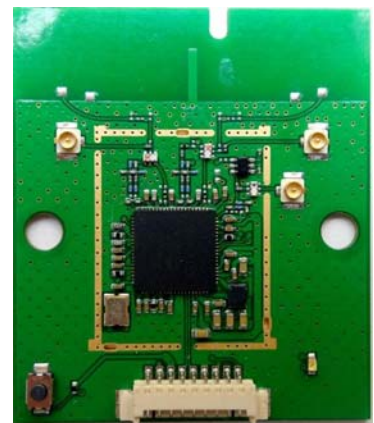
#### Features

- Frequency range: 2.4GHz – 2.485GHz / 5.180GHz – 5.825 GHz
- Operating voltage: DC 3.3V
- Other interface: USB 3.0 / USB 2.0
- RoHS Compliant
- Dimension: 46.45 mm x 40 mm x 1 mm

#### **WLAN**

- Support IEEE 802.11 a/b/g/n and 802.11ac draft compliant
- Support 20MHz, 40MHz, 80MHz in 5GHz band, and 20MHz, 40MHz bandwidth in 2.4GHz band
- Dual-band 2T2R mode with data rate up to 867Mbps
- Support 256QAM in 2.4GHz band
- Support STBC, LDPC, MRC, and transmit Beamforming
- Greenfield, mixed mode, legacy modes support
- Frame aggregation
- Integrated LNA, PA, and T/R switch
- Optional external LNA and PA support
- IEEE 802.11 d/e/h/i/k/r/w support
- Security support for WPA WPA2 personal, WPS2.0, WAPI
- Supports 802.11w protected managed frames
- QoS support of WFAWMM, WMM PS
- 802.11 to 802.3 header translation offload
- Supports Wi-Fi Direct
- Per packet transmit power control
- Wake on WLAN
- Conforms to EN300328 V1.8.1 (2012.08) and EN301893 V1.7.1 (2012.06)

#### Outline



## BLUETOOTH

- Bluetooth specification v2.1 +EDR
- Bluetooth v4.0 Low Energy (LE)
- Standard HCI interface over USB super-speed, high-speed and full-speed mode
- High speed UART up to 4Mbps BAUD rate
- Integrated BALUN and PA with 9dBm transmit power
- Best-in-class BT/Wi-Fi coexistence performance
- Scatternet support: Up to 4 piconets simultaneously with background inquiry/page scan
- Up to 4 simultaneous active ACL links
- Support SCO and eSCO link with re-transmission
- Support wide-band speech and hardware accelerated SBC codec for A2DP streaming
- Packet loss concealment
- Low power scan mode
- Channel quality driven data rate adaptation
- Channel assessment for AFH
- 3DD support
- Wake on Bluetooth

## Applications

- Wireless intelligent radio
- Wireless intelligent audio
- Wireless intelligent portable speaker
- Wireless intelligent router and music player
- Wireless home entertainment center
- Smart home
- Security