#17017

XBP9X Radio

Holybro XBP9X Radio can be configured easily using Digi's free XCTU software or via Digi's simplified AT or API command sets. The Radios provide secure, reliable delivery of critical data between devices with 256-bit AES encryption.

With RF line-of-sight ranging up to 65 miles* and strong interference blocking capabilty, the Radios are ideal for those applications requiring the combination of range, data redundancy and data reliability.

Features:

- USB Type-C port, integrated USB to UART converter
- 6-position JST-GH connector, can be directly connected to pixhawk4 flight controller
- High voltage BEC on board, Support DC7~35V voltage supply
- Can be powered by USB or flight controller in 100mW transmit power mode
- UART transmission LED indicator
- Three-stage RSSI LED indicator
- 256-bit AES encryption for secure data communications
- DigiMesh networking topology for redundancy and reliability
- Fully certified for use in unlicensed 900 MHz band

SPECIFICATIONS

FREQUENCY RANGE	ISM 902 to 928 MHz
TRANSMIT POWER (Software Selectable)	Up to 30 dBm*
CHANNELS	10 hopping sequences share 50 frequencies
RF DATA RATE	Low data rate: 10 kb/s; Middle data rate: 110 kb/s; High data rate: 250 kb/s
MAXIMUM DATA THROUGHPUT	High data rate: 120 kb/s
AVAILABLE CHANNEL FREQUENCIES	Low and middle data rate: 101; High data rate: 50
RECEIVER SENSITIVITY	Low data rate: -113 dBm; Middle data rate: -106 dBm; High data rate: -103 dBm
RECEIVER IF SELECTIVITY	Low data rate, +/- 250 kHz: 40 dB; Low data rate, +/- 500 kHz: 50 dB Middle data rate, +/- 250 kHz: 30 dB; Middle data rate, +/- 500 kHz: 40 dB High data rate, +/- 500 kHz: 30 dB; High data rate, +/- 1000 kHz: 45 dB RECEIVER RF SELECTIVITY Below 900 MHz and above 930 MHz; > 50 dB
RURAL RANGE LINE OF SIGHT	Low data rate: Up to 105 km (65 mi)
URBAN RANGE LINE OF SIGHT	Low data rate: Up to 18 km (11 mi)
INDOOR RANGE	Low data rate: Up to 300 m (1,000 feet)
MODULATION	Gaussian Frequency Shift Keying Gaussian Frequency Shift Keying
SPREADING TECHNOLOGY	Frequency Hopping Spread Spectrum (FHSS)
SUPPORTED NETWORK TOPOLOGIES (Software Selectable)	Peer-to-peer (master/slave relationship not required), point-to-point/point-to-multipoint, mesh
ENCRYPTION	Optional 256-bit AES CBC encryption. Encryption is enabled with the ATKY command.

Power

Supply voltage: 5V DC from USB or 6-position JST-GH (100mW)

7~35V DC form 4-position JST-GH (500mW or 1000mW)

Transmit current: 300 mA/5V at 20dBm

500mA/7V at 27dBm

800 mA/7V at 30dBm

Receive current: 40 mA

Serial interface: 3.3 V UART

51.9x35.4 x 11.5mm (without antenna)

Please note: when 500MW or 1000MW output is taken, battery must be used for power supply, otherwise the transmission will be unstable.

Status LEDs

The radios have 6 status LEDs, there blue, two orange and one green. The meaning of the different LED states is:

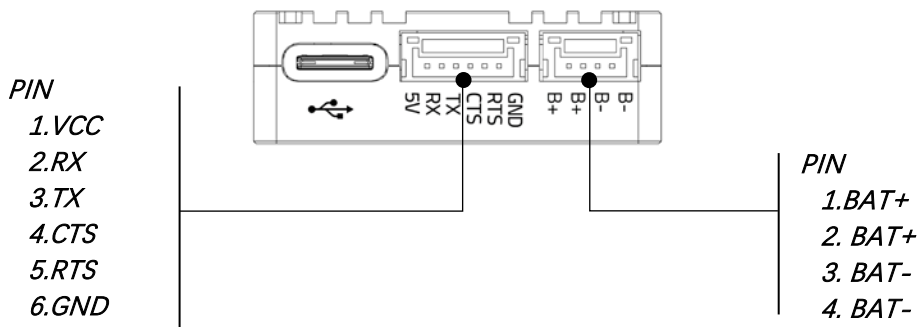**STATUS LED (green) - indicate the heartbeat of the module.**

| Green blinking	module is alive
Green off or solid	module is crash

RSSI LEDs(blue) - indicate the receive signal strength.

RSSI	25 (LED)	50 (LED)	100 (LED)
<25%	off	off	off
25%~50%	on	off	off
50%~85%	on	on	off
85%~100%	on	on	on

UART LEDs(orange) - indicate there are datas transmitting or receiving over UART.

PIN OUTS

PIN
1.VCC
2.RX
3.TX
4.CTS
5.RTS
6.GND

PIN
1.BAT+
2. BAT+
3. BAT-
4. BAT-

Dimensions

51.9

35.4

(58.6)

11.5
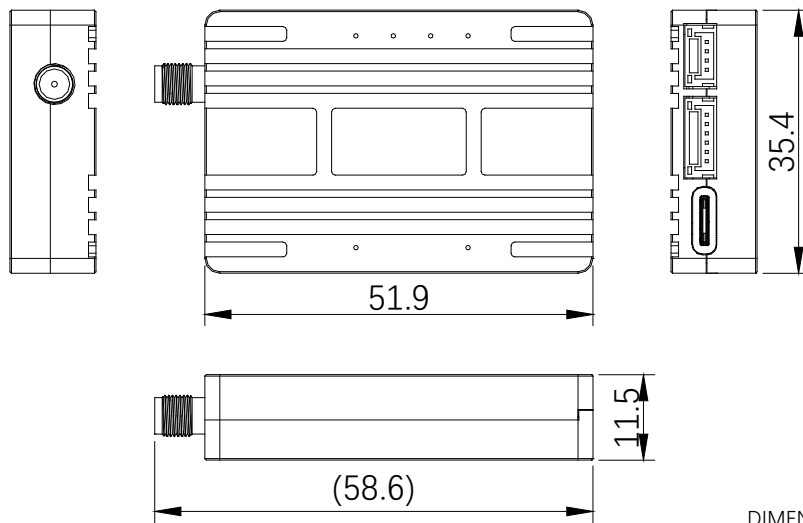
DIMENSIONS IN MILLIMETERS

Antenna

Specifications	QT900L
Frequency range	902 ~ 928 MHz
Band Width	26 MHz
Polarization	vertical
Gain	3 dBi
Input impedance	50Ω
SWR	≤1.5
Maximum power	20W
Connector	RPSMA (female)
Total length	19.6 cm (foldable antenna)
Weight	40g

Download：
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https://www.digi.com/support/productdetail?pid=5614&type=documentation