

## Features:

- **Qualcomm Atheros QCA9377-7**
- **Antenna: 2xU.FL connectors, 1T1R**
- **Data Rates: Allows link speeds up to 433Mbps**
- **Support Win7/8.1/10**

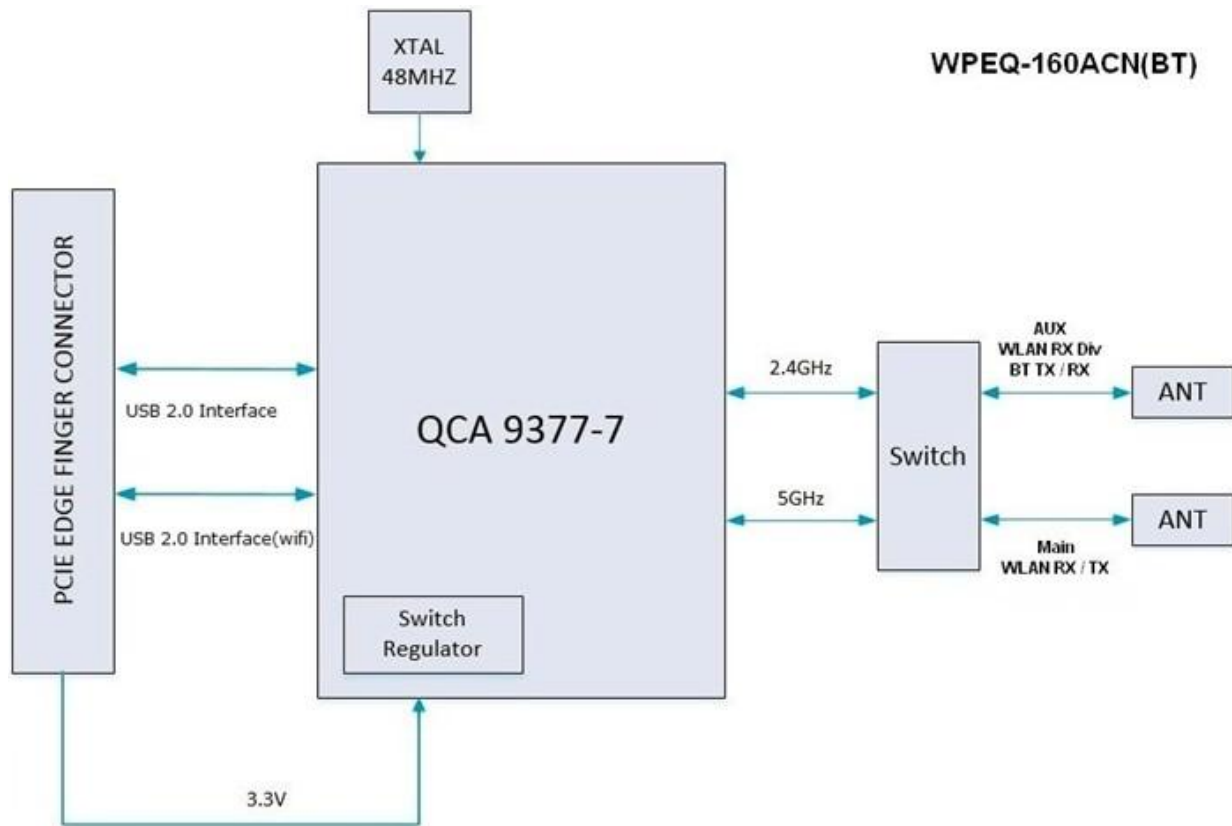
# WPEQ-160ACN(BT)

802.11ac/abgn Dual-Band 1T1R Wi-Fi Half Mini PCIe Module



| System                      |                                                                                                                                                                                         |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                   | IEEE 802.11ac/a/b/g/n (1T1R)                                                                                                                                                            |
| Chipset                     | Qualcomm Atheros QCA9377-7                                                                                                                                                              |
| Data Rate                   | 802.11b: 11Mbps / 802.11a/g: 54Mbps / 802.11n: MCS0~7/ 802.11ac: MCS0~9                                                                                                                 |
| Operating Frequency         | IEEE 802.11 ac/a/b/g/n ISM Band, 2.412GHz~2.472GHz, 5.180MHz~5.825MHz<br>*Subject to local regulations                                                                                  |
| Interface                   | Wifi: USB                                                                                                                                                                               |
| Form Factor                 | Half Mini PCIe                                                                                                                                                                          |
| Antenna                     | 2xU.FL connectors (main antenna 0 on, diversity antenna 1 off) for 1T1R                                                                                                                 |
| Modulation                  | 802.11b: DSSS (DBPSK, DQPSK, CCK)<br>802.11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)<br>802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)<br>802.11ac: OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM) |
| Power Consumption           | TX: TBD / RX: TBD                                                                                                                                                                       |
| Operating Voltage           | DC 3.3V                                                                                                                                                                                 |
| Operating Temperature Range | -20°C~70°C                                                                                                                                                                              |
| Storage Temperature Range   | -30°C~85°C                                                                                                                                                                              |
| Humidity (Non-Condensing)   | 5%~90% (Operating)<br>5%~95% (Storing)                                                                                                                                                  |
| Dimension (in mm)           | 29.85mm x 26.65mm                                                                                                                                                                       |
| Weight (g)                  | ≤ 4.7g                                                                                                                                                                                  |
| Driver Support              | Windows7/8.1/10                                                                                                                                                                         |
| Security                    | 64/128-bits WEP, WPA, WPA2, 802.1x                                                                                                                                                      |

## Block Diagram



## Pin Assignment

| Pin# | Pin Name      | Description     | Pin# | Pin Name      | Description     |
|------|---------------|-----------------|------|---------------|-----------------|
| 1    | No Connection | -               | 2    | +3.3V         | +3.3V           |
| 3    | No Connection | -               | 4    | GND           | GND             |
| 5    | No Connection | -               | 6    | No Connection | -               |
| 7    | No Connection | -               | 8    | No Connection | -               |
| 9    | GND           | GND             | 10   | No Connection | -               |
| 11   | No Connection | -               | 12   | No Connection | -               |
| 13   | No Connection | -               | 14   | No Connection | -               |
| 15   | GND           | GND             | 16   | No Connection | -               |
| 17   | USB(BT) D+    | USB serial data | 18   | GND           | GND             |
| 19   | USB(BT) D-    | USB serial data | 20   | No Connection | -               |
| 21   | GND           | GND             | 22   | No Connection | -               |
| 23   | No Connection | -               | 24   | +3.3V         | +3.3V           |
| 25   | No Connection | -               | 26   | GND           | GND             |
| 27   | GND           | GND             | 28   | No Connection | -               |
| 29   | GND           | GND             | 30   | No Connection | -               |
| 31   | No Connection | -               | 32   | No Connection | -               |
| 33   | No Connection | -               | 34   | GND           | GND             |
| 35   | GND           | GND             | 36   | USB(Wi-Fi) D- | USB serial data |
| 37   | GND           | GND             | 38   | USB(Wi-Fi) D+ | USB serial data |
| 39   | 3.3V          | +3.3V           | 40   | GND           | GND             |
| 41   | 3.3V          | +3.3V           | 42   | No Connection | -               |
| 43   | GND           | GND             | 44   | No Connection | -               |
| 45   | No Connection | -               | 46   | No Connection | -               |
| 47   | No Connection | -               | 48   | No Connection | -               |
| 49   | No Connection | -               | 50   | GND           | GND             |
| 51   | No Connection | -               | 52   | 3.3V          | +3.3V           |

## Certification

☒ **FCC**
☐ **IC**
☐ **SRRC**
☒ **CE** (RED EN 300 328 V2.1.1 / EN 301 893 V2.1.1)

☒ **TELEC**

## Ordering Information

| Product Name    | Part Number | Description                                              |
|-----------------|-------------|----------------------------------------------------------|
| WPEQ-160ACN(BT) | R9701890012 | 802.11ac/abgn Dual-Band 1T1R Wi-Fi Half Mini PCIe Module |

## Optional Accessory

| Product Name  | Part Number | Description                                              |
|---------------|-------------|----------------------------------------------------------|
| Ant. AD-103AG | R3410110203 | 2dBi 5G/2.4GHz Dipole RP-SMA                             |
| Ant. AD-301N  | R3410110220 | 4.4dBi/5dBi 2.4G/5GHz Dipole RP-SMA                      |
| CBIRF-M150    | R3470300004 | I-PEX/MHF1 to RP-SMA Female; L:150mm; Coaxial 1.37 Black |