



802.11ac 2.4/5GHz miniPCIe Radio

Model: WLE900VX

FEATURES

- Qualcomm-Atheros QCA9880 Version 2, XB140 Reference Design
- 2.4GHz max 19dBm output power & 5GHz max 18dBm output power (per chain)
- IEEE 802.11ac complaint & backward compatible with 802.11a/b/g/n
- Dual-band 3X3 MIMO Technology & up to 1.3Gbps
- MiniPCI Express 1.1 interface
- Supports Spatial Multiplexing, Cyclic-Delay Diversity (CDD), low-density parity check (LDPC), Maximal Ratio Combining (MRC), Space Time Block Code (STBC)
- Supports IEEE 802.11d, e, h, I, k, RO, v time stamp, and w standards
- Supports Dynamic Frequency Selection (DFS)
- Cards are individually calibrated for Quality Assurance

APPLICATIONS (combined with WPJ344)

- Indoor AP
- Outdoor AP
- 802.11ac CPE
- 802.11ac Point to Point

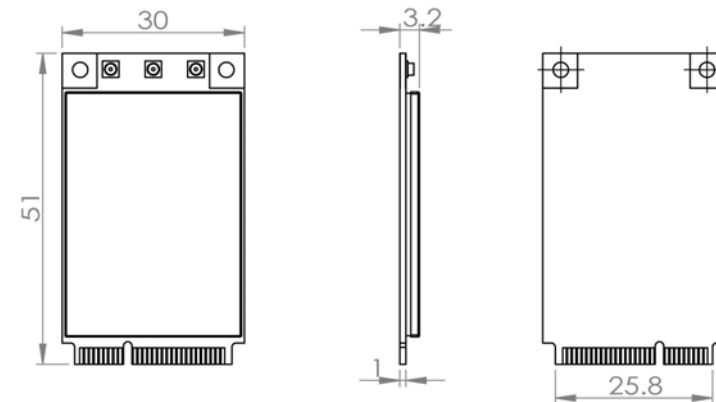


*Supported by either CompexWRT with Atheros Reference Wireless Driver OR OpenWRT with ath10k Wireless Driver on WPJ344.

TECHNICAL SPECIFICATIONS

| SYSTEM INFORMATION | |
|------------------------------|--|
| Chipset | QCA9880 Version 2 |
| Host Interface | PCI-Express 1.1 Standard |
| Operating Voltage | 3.3 VDC |
| Power Consumption | 5W |
| Antenna Connector | 3 x U.FL |
| Frequency Range | 2.412 ~ 2.484GHz & 5.150 ~ 5.875 GHz |
| Modulation Techniques | OFDM: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM |
| RoHS Compliance | Yes |
| Temperature Range | Operating: -20°C to 70°C; Storage: -40°C to 90°C |
| Humidity | Operating: 5% to 95% (non-condensing) Storage: Max.90% (non-condensing) |
| Dimensions (mm) | 50.95 x 30 x 3.2 (H x W x D) |

DIMENSION DRAWING



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| TX SPECIFICATIONS | | | | | RX SPECIFICATIONS | | | | TX SPECIFICATIONS | | | | | RX SPECIFICATIONS | | | | | |
|-------------------------|-----------|----------------------|---------------------|-----------|-------------------------|-----------|-------------|-----------|--------------------------|------------------------|----------------------|---------------------|-----------|--------------------------|-----------|------------------------|-----------|--------|------|
| | Data Rate | TX Power (per chain) | TX Power (3 chains) | Tolerance | | Data Rate | Sensitivity | Tolerance | | Data Rate | TX Power (per chain) | TX Power (3 chains) | Tolerance | | Data Rate | Sensitivity | Tolerance | | |
| 802.11 b/g | 6-24Mbps | 19dBm | 23dBm | ±2dB | 802.11 b/g | 6Mbps | -94dBm | ±2dB | 5 GHz 11n/ac HT20 | MCS0 | 18dBm | 23dBm | ±2dB | 5 GHz 11n/ac HT20 | MCS0 | -93dBm | ±2dB | | |
| | 36Mbps | 17dBm | 22dBm | ±2dB | | 36Mbps | -86dBm | ±2dB | | MCS1 | 18dBm | 23dBm | ±2dB | | MCS1 | -91dBm | ±2dB | | |
| | 48Mbps | 17dBm | 22dBm | ±2dB | | 48Mbps | -82dBm | ±2dB | | MCS2 | 18dBm | 23dBm | ±2dB | | MCS2 | -90dBm | ±2dB | | |
| | 54Mbps | 15dBm | 20dBm | ±2dB | | 54Mbps | -80dBm | ±2dB | | MCS3 | 17dBm | 22dBm | ±2dB | | MCS3 | -85dBm | ±2dB | | |
| 2.4 GHz 11n HT20 | MCS 0 | 19dBm | 24dBm | ±2dB | 2.4 GHz 11n HT20 | MCS 0 | -94dBm | ±2dB | | MCS4 | 17dBm | 22dBm | ±2dB | | MCS4 | -82dBm | ±2dB | | |
| | MCS 1 | 19dBm | 24dBm | ±2dB | | MCS 1 | -94dBm | ±2dB | | MCS5 | 14dBm | 19dBm | ±2dB | | MCS5 | -78dBm | ±2dB | | |
| | MCS 2 | 19dBm | 24dBm | ±2dB | | MCS 2 | -92dBm | ±2dB | | MCS6 | 13dBm | 18dBm | ±2dB | | MCS6 | -77dBm | ±2dB | | |
| | MCS 3 | 18dBm | 23dBm | ±2dB | | MCS 3 | -88dBm | ±2dB | | MCS7 | 13dBm | 18dBm | ±2dB | | MCS7 | -75dBm | ±2dB | | |
| | MCS 4 | 18dBm | 23dBm | ±2dB | | MCS 4 | -84dBm | ±2dB | | MCS8 | 12dBm | 17dBm | ±2dB | | MCS8 | -73dBm | ±2dB | | |
| | MCS 5 | 18dBm | 23dBm | ±2dB | | MCS 5 | -81dBm | ±2dB | | MCS9 | 12dBm | 17dBm | ±2dB | | MCS9 | -71dBm | ±2dB | | |
| | MCS 6 | 15dBm | 20dBm | ±2dB | | MCS 6 | -78dBm | ±2dB | | MCS0 | 18dBm | 23dBm | ±2dB | | MCS0 | -93dBm | ±2dB | | |
| | MCS 7 | 13dBm | 18dBm | ±2dB | | MCS 7 | -77dBm | ±2dB | | MCS1 | 18dBm | 23dBm | ±2dB | | MCS1 | -91dBm | ±2dB | | |
| 2.4 GHz 11n HT40 | MCS 0 | 18dBm | 23dBm | ±2dB | 2.4 GHz 11n HT40 | MCS 0 | -93dBm | ±2dB | 5 GHz 11n/ac HT40 | MCS2 | 18dBm | 23dBm | ±2dB | 5 GHz 11n/ac HT40 | MCS2 | -90dBm | ±2dB | | |
| | MCS 1 | 18dBm | 23dBm | ±2dB | | MCS1 | -91dBm | ±2dB | | MCS3 | 16dBm | 21dBm | ±2dB | | MCS3 | -85dBm | ±2dB | | |
| | MCS 2 | 18dBm | 23dBm | ±2dB | | MCS2 | -90dBm | ±2dB | | MCS4 | 16dBm | 21dBm | ±2dB | | MCS4 | -82dBm | ±2dB | | |
| | MCS 3 | 17dBm | 22dBm | ±2dB | | MCS3 | -85dBm | ±2dB | | MCS5 | 13dBm | 18dBm | ±2dB | | MCS5 | -78dBm | ±2dB | | |
| | MCS 4 | 17dBm | 22dBm | ±2dB | | MCS4 | -82dBm | ±2dB | | MCS6 | 12dBm | 17dBm | ±2dB | | MCS6 | -77dBm | ±2dB | | |
| | MCS 5 | 17dBm | 22dBm | ±2dB | | MCS5 | -78dBm | ±2dB | | MCS7 | 12dBm | 17dBm | ±2dB | | MCS7 | -75dBm | ±2dB | | |
| | MCS 6 | 15dBm | 20dBm | ±2dB | | MCS6 | -77dBm | ±2dB | | MCS8 | 11dBm | 16dBm | ±2dB | | MCS8 | -73dBm | ±2dB | | |
| | MCS 7 | 13dBm | 18dBm | ±2dB | | MCS7 | -75dBm | ±2dB | | MCS9 | 11dBm | 16dBm | ±2dB | | MCS9 | -71dBm | ±2dB | | |
| 802.11 a | 6-24Mbps | 18dBm | 23dBm | ±2dB | 802.11 a | 6Mbps | -94dBm | ±2dB | | 5 GHz 11ac HT80 | MCS0 | 18dBm | 23dBm | | ±2dB | 5 GHz 11ac HT80 | MCS0 | -89dBm | ±2dB |
| | 36Mbps | 17dBm | 22dBm | ±2dB | | 36Mbps | -86dBm | ±2dB | | | MCS1 | 18dBm | 23dBm | | ±2dB | | MCS1 | -88dBm | ±2dB |
| | 48Mbps | 16dBm | 21dBm | ±2dB | | 48Mbps | -82dBm | ±2dB | | | MCS2 | 18dBm | 23dBm | | ±2dB | | MCS2 | -85dBm | ±2dB |
| | 54Mbps | 15dBm | 20dBm | ±2dB | | 54Mbps | -80dBm | ±2dB | | | MCS3 | 15dBm | 20dBm | | ±2dB | | MCS3 | -81dBm | ±2dB |
| | | | | | | | | MCS4 | 15dBm | | 20dBm | ±2dB | MCS4 | -79dBm | ±2dB | | | | |
| | | | | | | | | MCS5 | 12dBm | | 17dBm | ±2dB | MCS5 | -75dBm | ±2dB | | | | |
| | | | | | | | | MCS6 | 11dBm | | 16dBm | ±2dB | MCS6 | -74dBm | ±2dB | | | | |
| | | | | | | | | MCS7 | 11dBm | | 16dBm | ±2dB | MCS7 | -72dBm | ±2dB | | | | |
| | | | | | | | | MCS8 | 10dBm | | 15dBm | ±2dB | MCS8 | -70dBm | ±2dB | | | | |
| | | | | | | | | MCS9 | 10dBm | | 15dBm | ±2dB | MCS9 | -68dBm | ±2dB | | | | |