TPE-M2NCRD2 Specifications

1x1 802.11b/g/n + BT4.0 PCIe/USB M.2 Combo Module

16x30mm

Overview:

TPE-M2NCRD2 is an 802.11n b/g wifi M.2 PCIe/USB card designed specifically to provide enhanced WiFi performance and value for GNU/Linux, from set-top boxes, gaming consoles, printers, IP cameras, and variety of other products. The TPE-M2NCRD2 QCA9565 chip features a new architecture that integrates both a CPU and memory to run more of the WiFi function on-chip. The integrated CPU offloads the wireless processing overhead from the host appliance and enables consumer electronic devices to support WiFi functions seamlessly.

Key Features:

» Integrated CPU and memory to run more of WiFi function on-chip to offload wireless processing overhead from the host appliance.

» 30(L) x 16(W) mm small dimension with standard M.2 key e connector is ideal for new ergonomic home gateways, set-top boxes, gaming consoles, printers, IP cameras, and variety of other WiFi products.

» Windows XP/Vista/7/8/8.1, FreeBSD 12.1+, and Linux drivers enable manufacturers to quickly and easily bring new bandwidth intensive applications to market with trouble-free WiFi integration.

» Supported by ath9k providing Linux kernel AP/Station/IBSS/Monitor-mode drivers for industrial, academic, or personal projects at highest flexibility and lowest cost.

» 802.11n compliance effectively interoperates with other chipsets.

» Enables bandwidth of up to 150Mbps link rate, three times the throughput of 802.11g.

» Supports IEEE 802.11b/802.11g backward compatibility allowing inter-operability among multiple wifi networks.

Specifications:

Main Chipset	Atheros® QCA9565
Standard Conformance	802.11b, 802.11g, and 802.11n
Interface	M.2 Key E
Antenna Connector	**MHF4**

Frequency Range

» USA: 2.400 – 2.483Ghz

» Europe: 2.400 – 2.483Ghz

» Japan: 2.400 – 2.497Ghz

» China: 2.400 – 2.483Ghz

Data Rate

» 802.11b: 1, 2, 5.5 and 11Mbps
» 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps
» 802.11n:
  » 20MHz channel: 1Nss: 65Mbps @ 800GI, 72.2Mbps @ 400GI (Max.)
  » 40MHz channel: 1Nss: 135Mbps @ 800GI, 150Mbps @ 400GI (Max.)

Operating Channels

» USA/Canada: 11 (1-11)
» Major Europe Countries: 13 (1-13)
» France: 4 (10-13)
» Japan: 14 for 802.11b (1-13 or 14th), 13 for 802.11g (1-13)
» China: 13 (1-13)

Operation Distance

» 802.11b:

Outdoor	Indoor
» 150m @ 11Mbps	» 30m @ 11Mbps
» 300m @ 1Mbps	» 100m @ 1Mbps

» 802.11g:

Outdoor	Indoor
» 50m @ 54Mbps	» 30m @ 54Mbps
» 300m @ 6Mbps	» 100m @ 6Mbps

» 802.11n:

Outdoor	Indoor
» 30m @ 150Mbps	» 20m @ 150Mbps
» 30m @ 65Mbps	» 20m @ 65Mbps
» 250m @ 6.5Mbps	» 100m @ 6.5Mbps

Operating System Compatibility

» Windows XP/Vista/7 and Linux.

Dimensions

30(L)x 16(W) mm

Security

» 64/128/152-bit WEP encryption

» 802.1x authentication

» AES-CCM & TKIP encryption

» WPA & WPA2

Operation Temperature Range

0°C ~ +40°C

Ordering Information:

TPE-M2NCRD2   802.11b/g/n + BT4.0 PCIe/USB M.2 Combo Module

Wireless radio modules are ESD sensitive, especially the components such as RF switch and the power amplifier. To avoid damage by electrostatic discharge, the following installation procedure is recommended:

» Touch your hands and the bag or tray containing the radio module to a ground point on the host board (for example one of the mounting holes).