jjPlus

WIRELESS 11AC WAVE 2

The first and revolutionary
Wave 2 dual band module in standard mPCI-e format in the world

MU-MIMO
where several new clients are gathered simultaneously

4x4 Spatial Streams
Performs the best with mesh
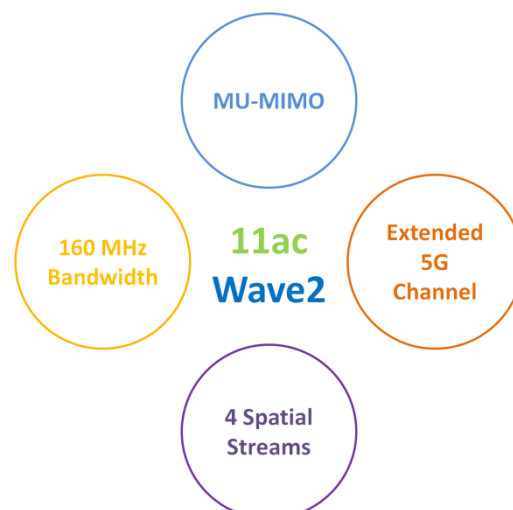
Double channel 160 MHz bandwidth
Upgrade the performance by combining two directly adjacent 80 MHz channels
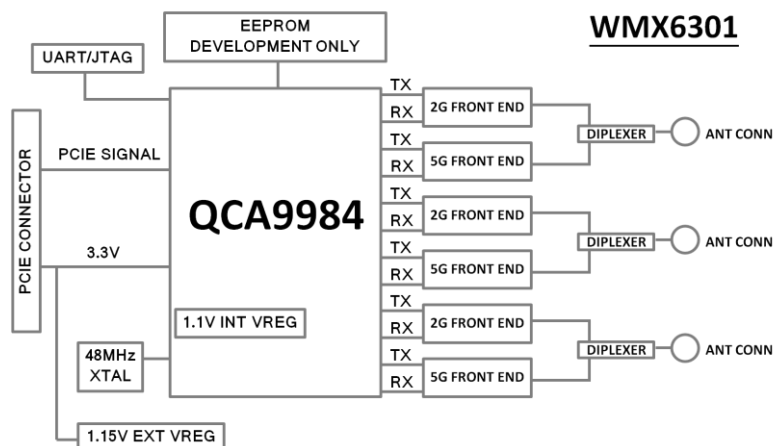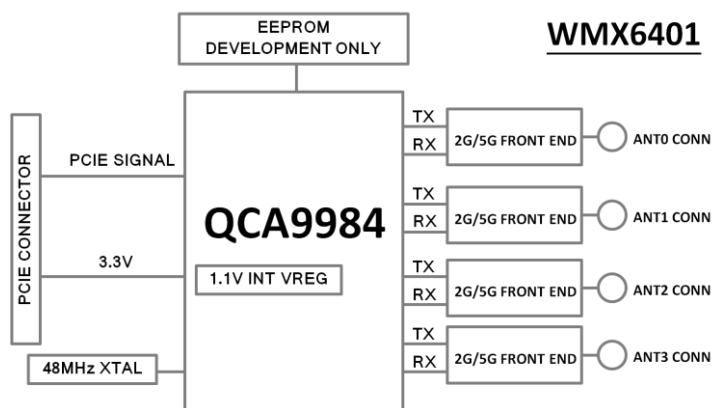
jjPlus WMX6XXX series perform the 802.11ac Wave 2 dual band switchable in typical mPCI-e form factor to be easily utilized. Integrated with QCA9984/9994 highly reliable chipset supports 4x4 spatial streams wave II and MU-MIMO clients coverage. Two RF options (11ac only and 11ac/bgN dual band) either 3x3 or 4x4 antenna are all available for customers to enjoy the longevity of the modules while fit the specific band.

Key Features

➤ Design with Qualcomm Atheros QCA99xx Series

➤ Supports IEEE 802.11ac Wave 2 & backward compatible

➤ 5Ghz single band or 2.4Ghz/5Ghz dual band switchable

➤ Mutli-user MIMO(MU-MIMO) beam former for clients' connection simultaneously

➤ Mini PCIE Express 2.0 interface

➤ Highlight recommend for High Bandwidth Enterprise Wireless Access Point
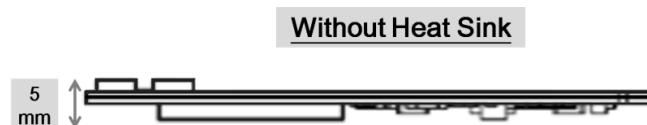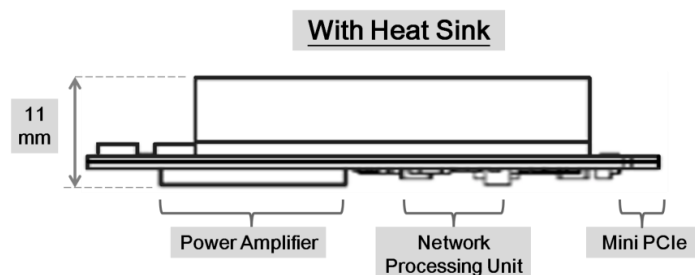
➤ Certification: FCC/CE/IC

MU-MIMO

160 MHz Bandwidth

11ac Wave2

Extended 5G Channel

4 Spatial Streams

v0.1

WMX6401

PCIE CONNECTOR

EEPROM DEVELOPMENT ONLY

PCIE SIGNAL
3.3V
1.1V INT VREG
48MHz XTAL

QCA9984

TX RX — 2G/5G FRONT END — ANT0 CONN
TX RX — 2G/5G FRONT END — ANT1 CONN
TX RX — 2G/5G FRONT END — ANT2 CONN
TX RX — 2G/5G FRONT END — ANT3 CONN

WMX6301

PCIE CONNECTOR

UART/JTAG

EEPROM DEVELOPMENT ONLY

PCIE SIGNAL
3.3V
1.1V INT VREG
48MHz XTAL
1.15V EXT VREG

QCA9984

TX RX — 2G FRONT END
TX RX — 5G FRONT END
— DIPLEXER — ANT CONN

TX RX — 2G FRONT END
TX RX — 5G FRONT END
— DIPLEXER — ANT CONN

TX RX — 2G FRONT END
TX RX — 5G FRONT END
— DIPLEXER — ANT CONN

WMX5401/5402 WMX6401/6402

4 x U.FL Antenna Connectors

50.8 mm

30 mm

2.2mm in diameter

WMX6301/6302

3 x U.FL Antenna Connectors

Mini PCIe Interface
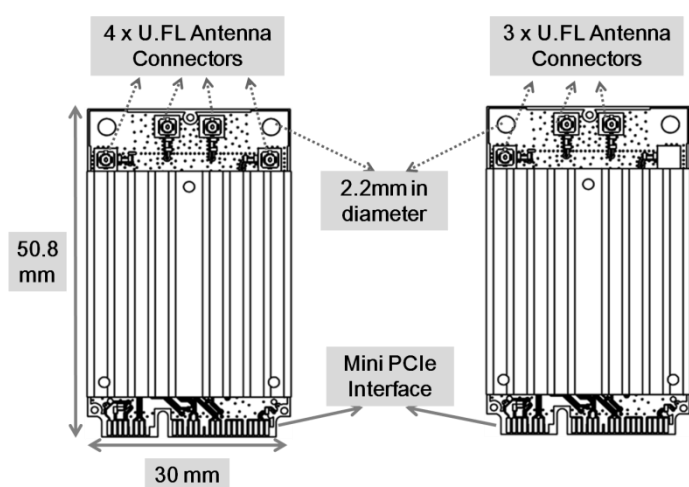
Top view
(This side up while installed)

With Heat Sink

11 mm

Power Amplifier | Network Processing Unit | Mini PCIe

Without Heat Sink

5 mm

Side view

Model name	Chipset	Standard	Ant.	OS support	Operating Voltage	Operating Temp.	Dimension
WMX5401	QCA9984	5GHz Wave 2 802.11ac 4x4	4 x IPEX MHF1	Linux	DC 3.3V	-20°C to 70°C	50.8 x 30mm
WMX5402	QCA9994	5GHz Wave 2 802.11ac 4x4	4 x IPEX MHF1	Linux	DC 3.3V	-40°C to 85°C	50.8 x 30mm
WMX6401	QCA9984	Dual Band Wave 2 802.11ac 4x4	4 x IPEX MHF1	Linux	DC 3.3V	-20°C to 70°C	50.8 x 30mm
WMX6402	QCA9994	Dual Band Wave 2 802.11ac 4x4	4 x IPEX MHF1	Linux	DC 3.3V	-40°C to 85°C	50.8 x 30mm
WMX6301	QCA9984	Dual Band Wave 2 802.11ac 3x3	3 x IPEX MHF1	Linux	DC 3.3V	-20°C to 70°C	50.8 x 30mm
WMX6302	QCA9994	Dual Band Wave 2 802.11ac 3x3	3 x IPEX MHF1	Linux	DC 3.3V	-40°C to 85°C	50.8 x 30mm