

Features

- Qualcomm-Atheros QCA9880 chipset
- 2.4GHz max 24dBm & 5GHz max 23dBm output power
- IEEE 802.11ac compliant & backwardcompatible with 802.11a/b/g/n
- 2x2 MIMO Technology, up to 867Mbps
- Mini PCI Express edge connector
- Support the Frequency 4920MHz~4980MHz
- RoHS compliance ensure a high level protection of human health and the environment from risks that can be posed by chemicals
- Supports Spatial Multiplexing, Cyclic-Delay Diversity (CDD), Low-Density Parity Check (LDPC) Codes, Maximal Ratio Combining (MRC), Space Time Block Code (STBC)
- Supports IEEE 802. 11d, e, h, i, k, r, v time stamp, and w standards
- Supports Dynamic Frequency Selection (DFS)
- Cards are individually calibrated for Quality Assurance



Applications

- Security Surveillance
- Commercial radio coverage
- Hotel Wireless application
- Country coverage
- Forest fire protection engineering
- Some special scene application

Product Description

DR600VX based on QCA9880 chipset is an enterprise wireless module integrated with 2x2 5Ghigh power Radio module and 2 x2 2 . 4 G high power Radio module designed specifically toprovide users with mobile access to high-bandwidth video streaming, voice, and datatransmission for office and challenging RF environment in factories, warehouses establishment.

**Specifications**

Symbol	Parameter
Chipset	QCA9880
Host Interface	Mini PCI Express 1.1 Standard
Antenna Connector	2 x UF.L
Frequency Range	2.4GHz: 2.412GHz to 2.472GHz 5GHz: 4.920GHz to 5.825GHz
Operating Voltage	3.3V DC
Power Consumption	5W(MAX)
Modulation Techniques	OFDM: BPSK, QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM
Environmental Temperature	Operating: -40° C to 70° C, Storage: -40° C to 90° C
Environmental Humidity, non-condensing	Operating: 5% to 95%, Storage: Max. 90%
ROHS Compliance	YES
Dimensions (W×H×D)	30.0mm × 50.9mm × 3.2mm

RF Performance Table

Operating Mode	Data Rate	Power		Tolerance
		1 Chain	2 Chains	
2.4GHz 802.11b	1Mbps	20dBm	23dbm	±2dB
	2Mbps	20dBm	23dbm	±2dB
	5.5Mbps	20dBm	23dbm	±2dB
	11Mbps	20dBm	23dbm	±2dB
2.4GHz 802.11g	6Mbps	21dBm	24dbm	±2dB
	9Mbps	21dBm	24dBm	±2dB
	12Mbps	21dBm	24dbm	±2dB
	18Mbps	21dBm	24dBm	±2dB
	24Mbps	21dBm	24dbm	±2dB
	36Mbps	20dBm	23dBm	±2dB
	48Mbps	19dBm	22dbm	±2dB
2.4GHz 802.11n HT20	54Mbps	19dBm	22dbm	±2dB
	MCS0	21dBm	24dbm	±2dB
	MCS1	21dBm	24dBm	±2dB
	MCS2	21dBm	24dbm	±2dB
	MCS3	20dBm	23dBm	±2dB
	MCS4	20dBm	23dBm	±2dB
	MCS5	20dBm	23dBm	±2dB
	MCS6	19dBm	22dbm	±2dB
2.4GHz 802.11n HT40	MCS7	19dBm	22dbm	±2dB
	MCS0	21dBm	24dbm	±2dB
	MCS1	21dBm	24dBm	±2dB
	MCS2	21dBm	24dbm	±2dB
	MCS3	20dBm	23dBm	±2dB
	MCS4	20dBm	23dBm	±2dB
	MCS5	20dBm	23dBm	±2dB
	MCS6	19dBm	22dbm	±2dB
MCS7	18dBm	21dbm	±2dB	

Operating Mode	Data Rate	RX Sensitivity	Tolerance
2.4GHz 802.11b	1Mbps	-95dBm	±2dB
	2Mbps	-94dBm	±2dB
	5.5Mbps	-92dBm	±2dB
	11Mbps	-90dBm	±2dB
2.4GHz 802.11g	6Mbps	-94dBm	±2dB
	9Mbps	-93dBm	±2dB
	12Mbps	-92dBm	±2dB
	18Mbps	-90dBm	±2dB
	24Mbps	-88dBm	±2dB
	36Mbps	-85dBm	±2dB
	48Mbps	-81dBm	±2dB
	54Mbps	-80dBm	±2dB
2.4GHz 802.11n HT20	MCS0	-93dBm	±2dB
	MCS1	-91dBm	±2dB
	MCS2	-89dBm	±2dB
	MCS3	-84dBm	±2dB
	MCS4	-83dBm	±2dB
	MCS5	-78dBm	±2dB
	MCS6	-78dBm	±2dB
	MCS7	-76dBm	±2dB
2.4GHz 802.11n HT40	MCS0	-92dBm	±2dB
	MCS1	-88dBm	±2dB
	MCS2	-85dBm	±2dB
	MCS3	-82dBm	±2dB
	MCS4	-79dBm	±2dB
	MCS5	-75dBm	±2dB
	MCS6	-75dBm	±2dB
	MCS7	-73dBm	±2dB



DR600VX

2X2 MIMO 802.11ac Mini PCIe WiFi Module Dual Band Wireless Access Point

Operating Mode	Data Rate	Power		Tolerance
		1 Chain	2 Chains	
5 GHz 802. 11a	6Mbps	20dBm	23dBm	±2dB
	9Mbps	20dBm	23dBm	±2dB
	12Mbps	20dBm	23dBm	±2dB
	18Mbps	20dBm	23dBm	±2dB
	24Mbps	20dBm	23dBm	±2dB
	36Mbps	18dBm	21dBm	±2dB
	48Mbps	16dBm	19dBm	±2dB
	54Mbps	16dBm	18dBm	±2dB
5 GHz 802. 11n/ac HT20	MCS0	19dBm	22dBm	±2dB
	MCS1	19dBm	22dBm	±2dB
	MCS2	19dBm	22dBm	±2dB
	MCS3	18dBm	21dBm	±2dB
	MCS4	18dBm	21dBm	±2dB
	MCS5	17dBm	20dBm	±2dB
	MCS6	16dBm	19dBm	±2dB
	MCS7	15dBm	18dBm	±2dB
	MCS8	14dBm	17dBm	±2dB
5 GHz 802. 11n/ac HT40	MCS0	18dBm	21dBm	±2dB
	MCS1	18dBm	21dBm	±2dB
	MCS2	18dBm	21dBm	±2dB
	MCS3	17dBm	20dBm	±2dB
	MCS4	17dBm	20dBm	±2dB
	MCS5	16dBm	19dBm	±2dB
	MCS6	15dBm	18dBm	±2dB
	MCS7	15dBm	18dBm	±2dB
	MCS8	14dBm	17dBm	±2dB
	MCS9	14dBm	17dBm	±2dB
5 GHz 802. 11n/ac HT80	MCS0	18dBm	21dBm	±2dB
	MCS1	18dBm	21dBm	±2dB
	MCS2	18dBm	21dBm	±2dB
	MCS3	17dBm	20dBm	±2dB
	MCS4	17dBm	20dBm	±2dB
	MCS5	16dBm	19dBm	±2dB
	MCS6	15dBm	18dBm	±2dB
	MCS7	15dBm	18dBm	±2dB



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	MCS8	14dBm	17dBm	±2dB
	MCS9	14dBm	17dBm	±2dB

Operating Mode	Data Rate	RX Sensitivity	Tolerance
5 GHz 802. 11a	6Mbps	-94dBm	±2dB
	9Mbps	-94dBm	±2dB
	12Mbps	-92dBm	±2dB
	18Mbps	-90dBm	±2dB
	24Mbps	-86dBm	±2dB
	36Mbps	-84dBm	±2dB
	48Mbps	-81dBm	±2dB
	54Mbps	-80dBm	±2dB
5 GHz 802. 11n/ac HT20	MCS0	-93dBm	±2dB
	MCS1	-90dBm	±2dB
	MCS2	-87dBm	±2dB
	MCS3	-83dBm	±2dB
	MCS4	-80dBm	±2dB
	MCS5	-77dBm	±2dB
	MCS6	-74dBm	±2dB
	MCS7	-73dBm	±2dB
	MCS8	-71dBm	±2dB
5 GHz 802. 11n/ac HT40	MCS0	-90dBm	±2dB
	MCS1	-88dBm	±2dB
	MCS2	-85dBm	±2dB
	MCS3	-82dBm	±2dB
	MCS4	-79dBm	±2dB
	MCS5	-75dBm	±2dB
	MCS6	-73dBm	±2dB
	MCS7	-73dBm	±2dB
	MCS8	-69dBm	±2dB
	MCS9	-66dBm	±2dB
5 GHz 802. 11n/ac HT80	MCS0	-88dBm	±2dB
	MCS1	-86dBm	±2dB
	MCS2	-84dBm	±2dB
	MCS3	-81dBm	±2dB
	MCS4	-77dBm	±2dB
	MCS5	-74dBm	±2dB



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	MCS6	-73dBm	± 2 dB
	MCS7	-70dBm	± 2 dB
	MCS8	-67dBm	± 2 dB
	MCS9	-65dBm	± 2 dB

GPIO Pin Mapping

GPIO Pin	Function		
GPIO0	WLAN_DIS		
GPIO1	WLAN_LED		
GPIO2	MCI_CLK_IN		
GPIO3	MCI_CLK_OUT		
GPIO4	MCI_DATA_OUT		
GPIO5	MCI_DATA_IN		
GPIO12	TMS		
13	TCK		
14	TDI		
15	TDO		
16	CPU_WARM_RESET / JTEG RESET		
17	GPIO17_BT_LED		
19	ANT_A		
20	ANT_B		
21	FEM_BS		
22	FEM_MODE		

MiniPCle Slot Pin Assignment

Top Side		Bottom Side	
1	PCIE_WAKE_L	2	VCC_3V3
3	NC	4	GND
5	NC	6	NC
7	PCIE_CLKREQ_L	8	NC
9	GND	10	NC
11	PCIE_REFCLK_N	12	NC
13	PCIE_REFCLK_P	14	NC
15	GND	16	NC
Mechanical key			
17	NC	18	GND
19	NC	20	GPIO0_WLAN_DIS
21	GND	22	PCIE_RST_L
23	PCIE_TX_N	24	VCC_3V3
25	PCIE_TX_P	26	GND
27	GND	28	NC
29	GND	30	NC

Version

Version	CPU	Feature
DR600VX	QCA9880	
DR600VX-i	QCA9890	Operation Temp. Up to 85°
DR600VX-4.9	QCA9880	Support 4 . 9G

