DR882

Wireless Module

Wireless AC/AN MiniPCIE Standard Card

Features

- Featuring with industrial-grade Atheros's QCA9882-BR4A chipset
- Integrated with 2x 2 5G high power Radio Card
- Frequency Range: Band 1:5150~5250MHz, Band 4: 5725~5850MHz
- 2 x 5G MMCX Connectors
- 20MHz/40MHz/80MHz Bandwidth
- Support 11AC/A/N
- RoHS compliance ensure a high level protection of human health and the environment from risks that can be posed by chemicals

Applications

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

Product Description

DR882-NAS based on QCA9882-BR4A chipset is an enterprise wireless module integrated with 2x2 5G high power Radio card designed specifically to provide users with mobile access to high-bandwidth video streaming, voice, and data transmission for office and challenging RF environment in factories, warehouses establishment.

Absolute Maximum Rating

Parameter	Rating	Unit
Supply Voltage	3.3V(MINIPCIE)	V
Operating Temperature Range	-40 to +70	ºC
Storage Temperature Range	-65 to +105	ºC
Operating Humidity Range	5 to +95 (non-condensing)	%
Storage Humidity Range	0 to +90 (non-condensing)	%

Symbol	Parameter
CPU	QCA9882-BR4A
Antenna Connector	2 x 5G MMCX connectors
ROHS Compliance	YES
Dimension	50mm x 30mm x 16mm

Radio TX Specifications(5180MHz-5825MHz)

Operating Mode	frequency range	Tune-up Output Power
802.11a	5150~5250	17dBm
	5725~5850	17dBm
802.11ac20	5150~5250	17dBm
	5725~5850	17dBm
802.11n-HT20	5150~5250	17dBm
	5725~5850	17dBm
802.11ac40	5150~5250	16.50dBm
	5725~5850	17dBm
802.11n-HT40	5150~5250	17dBm
	5725~5850	17dBm
802.11ac80	5210	16.50dBm
	5775	16.50dBm

Radio RX Specifications(5180MHz-5825MHz)

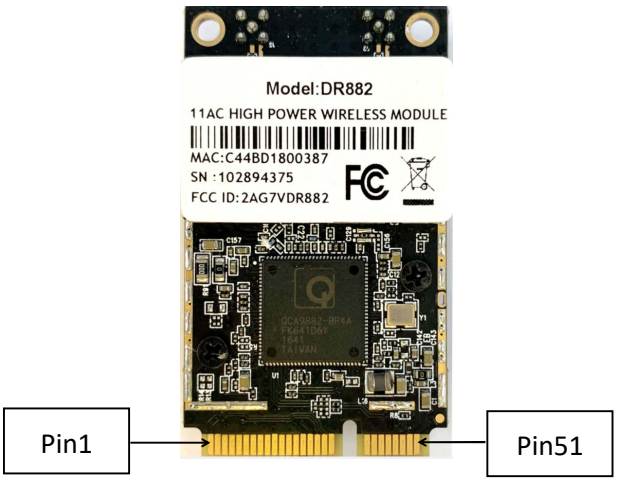
Operating Mode	Data Rate	Sensitivity
802.11a	6 Mbps	-96dBm
	54 Mbps	-78dBm
802.11n HT20	MCS0, MCS8	-92dBm
	MCS7, MCS15	-73dBm
802.11n HT40	MCS0, MCS8	-90dBm
	MCS7, MCS15	-70dBm
802.11AC HT40	MCS0, MCS10,MCS20	-90dBm
	MCS9,MCS19,MCS29	-67dBm
802.11AC HT80	MCS0, MCS10,MCS20	-88dBm
	MCS9,MCS19,MCS29	-62dBm

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		

MiniPCIe 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
31	PCIE_RX_P	32	NC
33	PCIE_RX_N	34	GND
35	GND	36	NC
37	GND	38	NC
39	VCC_3V3 (RESERVED)	40	GND
41	VCC_3V3 (RESERVED)	42	NC
43	GND	44	GPIO1_WLAN_LED
45	NC	46	GPIO17_BT_LED
47	NC	48	NC
49	NC	50	GND
51	NC	52	VCC_3V3



1）the picture show us the Pin 1 and the pin51，the pin numbers are increasing by odd numbers on the top side；

2）and increasing by even numbers from Pin2 to Pin52 on the bottom side；the pin2 is on the bottom of the pin1

OEM/Integrators Installation:

1.0 This module has been tested and found to comply with 15.407 requirements for Limited module procedures． This module can work with 5G(Band 1,Band 4)， but the two band can't work together.

1.1. Summarize the specific operational use conditions

This module can be used in Commercial radio coverage and other equipment. The input voltage to the module should be nominally DC 3.3V ,the ambient temperature of the module is -40°~70°.And if the antenna needs to be changed, the certification should be re-applied.

1.2. Limited module procedures

This module can be used in Commercial radio coverage and other equipment. Normally host device should provide a power supply in range 3.3VDC for this module. The limited module manufacturer will reviews detailed test data or host designs prior to giving the host manufacturer approval.

1.3. Trace antenna designs

N/A

1.4. RF exposure considerations

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .This equipment should be installed and operated with minimum distance 20cm between the radiator& your body. If the device built into a host as a portable usage, the additional RF exposure evaluation may be required as specified by 2.1093.

1.5. Antennas

Antenna 1:
Omni Antenna:4.0 dBi
Antenna 2&3 :
Directional Antenna: 19.0 dBi

1.6. Label and compliance information

When the module is installed in the host device, the FCC ID label must be visible through a window on the final device or it must be visible when an access panel, door or cover is easily re-moved. If not, a second label must be placed on the outside of the final device that contains the following text: “Contains FCC ID: 2AG7VDR882”. The FCC ID can be used only when all FCC ID compliance requirements are met.

1.7. Information on test modes and additional testing requirements

a) The modular transmitter has been fully tested by the module grantee on the required number of channels,modulation types, and modes, it should not be necessary for the host installer to re-test all the available transmitter modes or settings. It is recommended that the host product manufacturer, installing the modular transmitter,perform some investigative measurements to confirm that the resulting composite system does not exceed the spurious emissions limits or band edge limits (e.g., where a different antenna may be causing additional emissions).

b) The testing should check for emissions that may occur due to the intermixing of emissions with the other transmitters, digital circuitry, or due to physical properties of the host product (enclosure). This investigation is especially important when integrating multiple modular transmitters where the certification is based on testing each of them in a stand-alone configuration. It is important to note that host product manufacturers should not assume that because the modular transmitter is certified that they do not have any responsibility for final product compliance.

c) If the investigation indicates a compliance concern the host product manufacturer is

1.8. Additional testing, Part 15 Sub part B disclaimer The final host / module combination need to be evaluated against the FCC Part 15B criteria for unintentional radiators in order to be properly authorized for operation as a Part 15 digital device.

The host integrator installing this module into their product must ensure that the final composite product complies with the FCC requirements by a technical assessment or evaluation to the FCC rules, including the transmitter operation and should refer to guidance in KDB 996369. For host products with certified modular transmitter, the frequency range of investigation of the composite system is specified by rule in Sections 15.33(a)(1) through (a)(3), or the range applicable to the digital device, as shown in Section 15.33(b)(1), whichever is the higher frequency range of investigation When testing the host product, all the transmitters must be operating.The transmitters can be enabled by using publicly-available drivers and turned on, so the transmitters are active. In certain conditions it might be appropriate to use a technology-specific call box (test set) where accessory 50 devices or drivers are not available. When testing for emissions from the unintentional radiator, the transmitter shall be placed in the receive mode or idle mode, if possible. If receive mode only is not possible then, the radio shall be passive (preferred) and/or active scanning. In these cases, this would need to enable activity on the communication BUS (i.e., PCIe, SDIO, USB) to ensure the unintentional radiator circuitry is enabled. Testing laboratories may need to add attenuation or filters depending on the signal strength of any active beacons (if applicable) from the enabled radio(s). See ANSI C63.4, ANSI C63.10 and ANSI C63.26 for further general testing details.

The product under test is set into a link/association with a partnering WLAN device, as per the normal intended use of the product. To ease testing, the product under test is set to transmit at a high duty cycle, such as by sending a file or streaming some media content.

FCC Statment:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules . Operation is subject tn the fol lowing two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.