DR4019S

Access Point Wireless Module
Dual band 11AC Wave2 Module

Features

- Featuring withindustrial-grade IPQ4019 chipset
- Integrated with 2x 2 5G high power Radio module and 2x2 2.4G high power Radio module
- Support 5.180GHz to5.825GHz Frequency Range;
- Support 2.412GHz to 2.482GHz
- Support 2 x 5G MMCX Connectors and 2x2.4G MMCX
- 20MHz/40MHz/80MHz Bandwidth
- Support 11ABGN/AC
- 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

DR4019s based on IPQ4019 chipset is an enterprise wireless module integrated with 2x2 5G high power Radio module and 2x2 2.4G high power Radio module 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	24V~48	V
Operating Temperature Range	-20 to +70	ºC
Storage Temperature Range	-20 to +105	ºC
Operating Humidity Range	5 to +95 (non-condensing)	%
Storage Humidity Range	0 to +90 (non-condensing)	%

Hardware Specifications

Symbol	Parameter
CPU	IPQ4019（Quad core ARM Cortex A7 at 716.8 MHz）
Antenna Connector	2 x 5G MMCX connectors;2x2.4G MMCX
10/100/1000Mbps Gigabit Ethernet	2xRJ45
DC Jack	12 power supply
ROHS Compliance	YES
Dimension	65mmx35mm x 16mm
Max Power	12V x 0.8A= 9.6W
Nor Flash	32MB
DDR	256MB

Radio TX Specifications(5180MHz-5825MHz)

Operating Mode	Data Rate	Power		Tolerance
		1 Chain	2 Chains	
802.11a	6 Mbps	26dBm	29dbm	±2dB
	54 Mbps	22dBm	25dbm	±2dB
802.11n HT20	MCS0, MCS8	26dBm	29dbm	±2dB
	MCS7, MCS15	22dBm	25dbm	±2dB
802.11n HT40	MCS0, MCS8	25dBm	28dbm	±2dB
	MCS7, MCS15	21dBm	24dbm	±2dB
802.11ac	MCS0, MCS10,MCS20	25dBm	28dbm	±2dB
	MCS9,MCS19,MCS29	19dBm	22dbm	±2dB

Radio RX Specifications(5180MHz-5825MHz)

Operating Mode	Data Rate	Sensitivity
802.11a	6 Mbps	-92dBm
	54 Mbps	-74dBm
802.11n HT20	MCS0, MCS8	-91dBm
	MCS7, MCS15	-72dBm
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

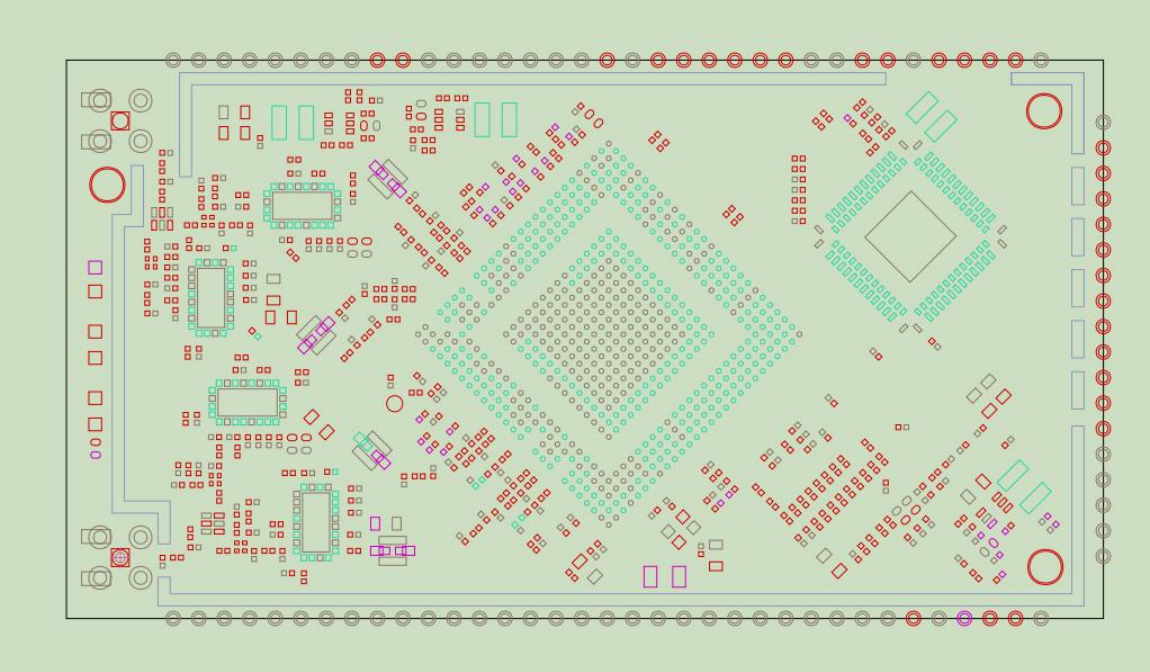
Radio TX Specifications(2412MHz-2482MHz)

Operating Mode	Data Rate	Power		Tolerance
		1 Chain	2 Chains	
802.11g	6 Mbps	25dbm	28dbm	±2dB
	54 Mbps	22dbm	25dbm	±2dB
802.11n HT20	MCS0, MCS8	25dbm	28dbm	±2dB
	MCS7, MCS15	21dbm	24dbm	±2dB
802.11n HT40	MCS0, MCS8	25dbm	28dbm	±2dB
	MCS7, MCS15	21dbm	24dbm	±2dB

Radio RX Specifications(2412MHz-2482MHz)

Operating Mode	Data Rate	Sensitivity
802.11g	6 Mbps	-91dBm
	54 Mbps	-73dBm
802.11n HT20	MCS0, MCS8	-90dBm
	MCS7, MCS15	-72dBm
802.11n HT40	MCS0, MCS8	-90dBm
	MCS7, MCS15	-70dBm

Pin Define



Pin number	signal	Pin number	signal	Pin number	signal
1	GND	36	GND	54	GND
2	GND	37	GND	55	P4_TRX2+
3	GND	38	GND	56	P4_TRX2-
4	GND	39	GND	57	P4_TRX3+
5	GND	40	GND	58	P4_TRX3-
6	GND	41	P3_TRX0+	59	GND
7	GND	42	P3_TRX0-	60	P4_1000_LED
8	GND	43	P3_TRX1+	61	2G_LINK_LED_1P8
9	GND	44	P3_TRX1-	62	GND
10	GND	45	P3_TRX2+	63	GND
11	GND	46	P3_TRX2-	64	USB3_SS_TX_P
12	GND	47	P3_TRX3+	65	USB3_SS_TX_N
13	GND	48	P3_TRX3-	66	USB3_SS_RX_P
14	GND	49	P4_TRX0+	67	USB3_SS_RX_N
15	GND	50	P4_TRX0-	68	USB3_HS_DP
16	GND	51	P4_TRX1+	69	USB3_HS_DM
17	GND	52	P4_TRX1-	70	GND
18	GND	53	GND	71	2G_STRENGTH_LED
19	GND			72	GND
20	GND			73	GND

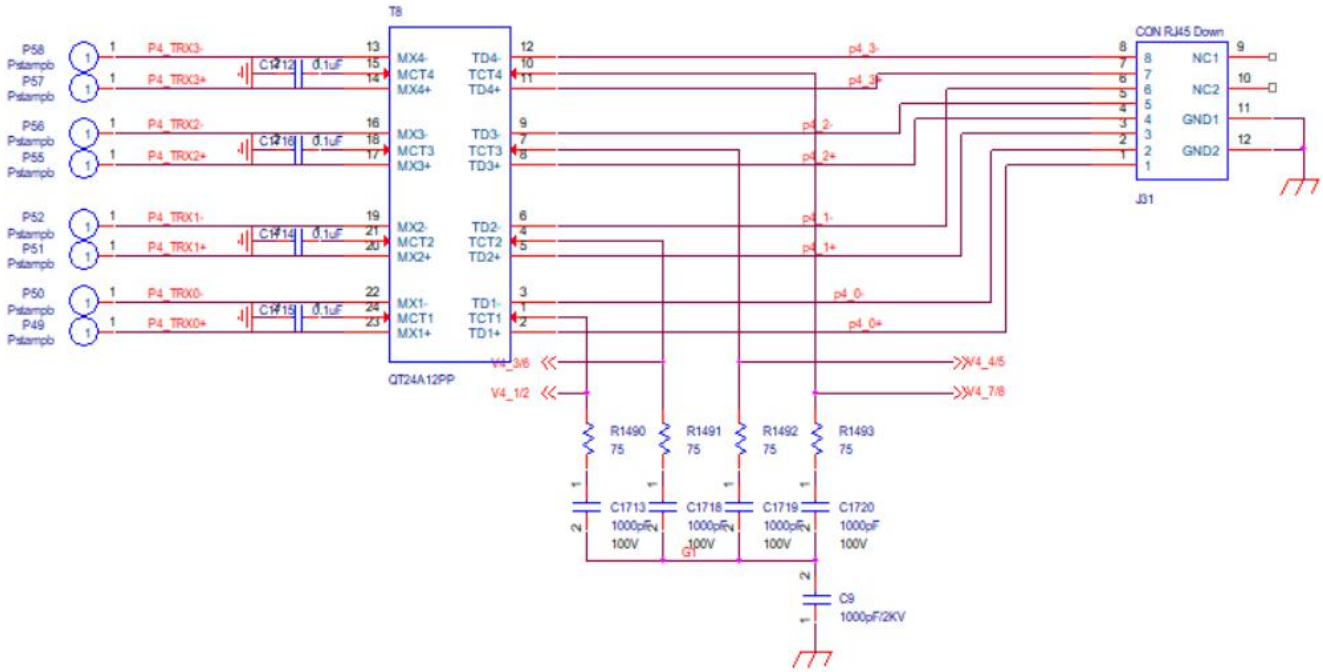
21	GND			74	GND
22	GND			75	GND
23	GND			76	GND
24	GND			77	GND
25	GND			78	GND
26	GND			79	12V
27	GND			80	12V
28	GND			81	GND
29	GND			82	GND
30	software reset			83	GND
31	GND			84	GND
32	3.3V			85	GND
33	Uart TX			86	GND
34	Uart RX			87	GND
35	GND			88	GND

Note:

1) Pin41-Pin48 indicates the differential signals of network port 1, which are 0,1,2, and 3 in sequence

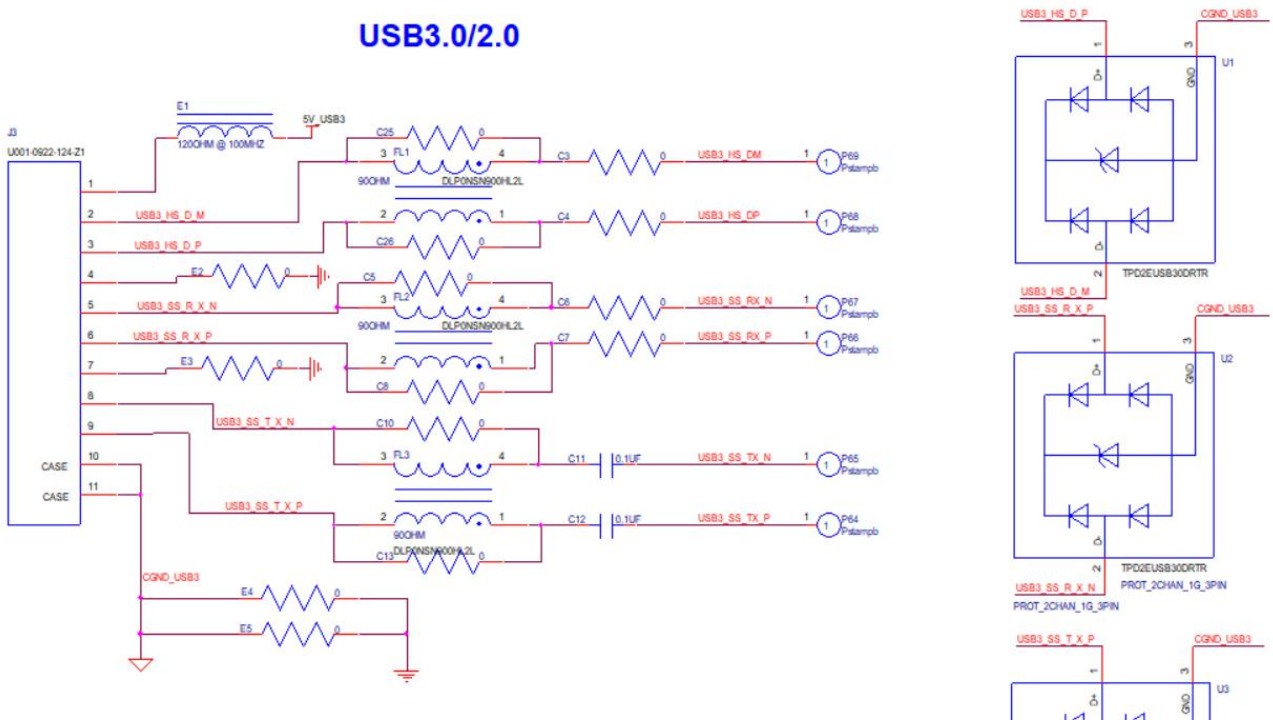
2) Pin48 to Pin52, P55 to Pin58 indicates the differential signals of network port 2. The sequence is differential signals 0,1,2, and 3

The schematic diagram of the extended circuit is as follows:



3) Pin64-Pin69 indicates the differential signals of USB3.0 are TX, RX, and HS in sequence

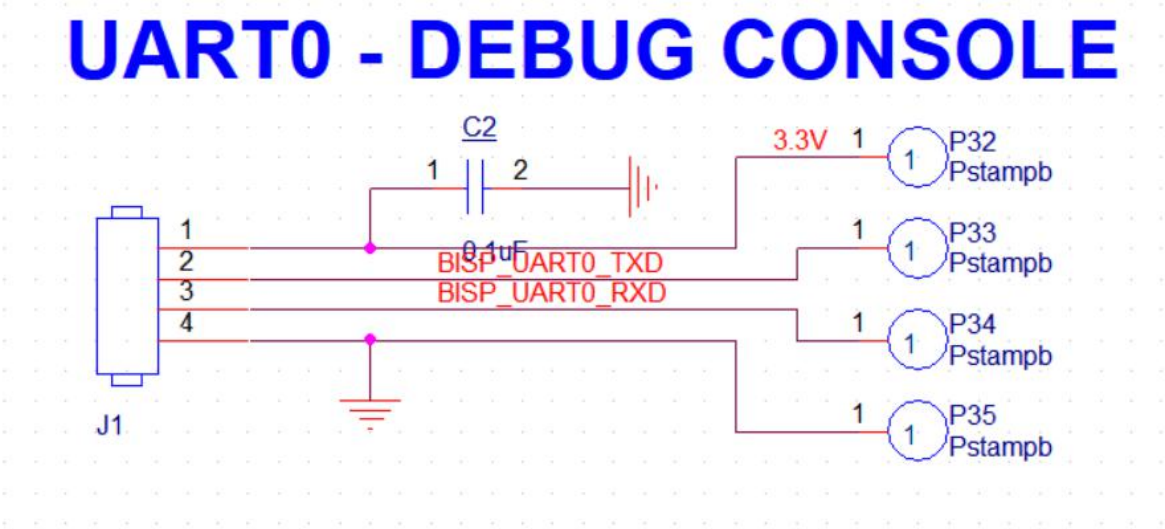
The schematic diagram of the extended circuit is as follows:



4) Pin 79,80 is a 12V input power signal and the input voltage is in the range of 11v-13v

5) Pin32 -Pin35 indicates the serial port signal, Pin32 indicates the output 3.3V, Pin33, and Pin34 indicates the output input signal

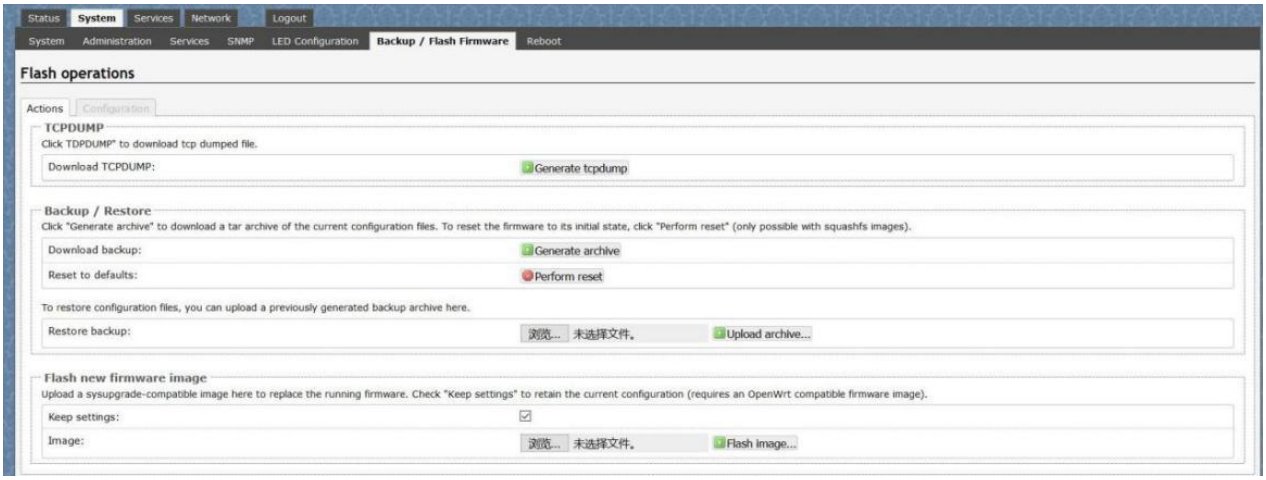
The schematic diagram of the extended circuit is as follows,



Firmware upgrade

1) Login page

2) Enter the following screen



Click the "Browse" button, select your firmware,

And then click on the button "Flash Image" Finally, click the button "Proceed", be careful not to

power off, wait 3-5 minutes, then the system will restart automatically, and then it is done.