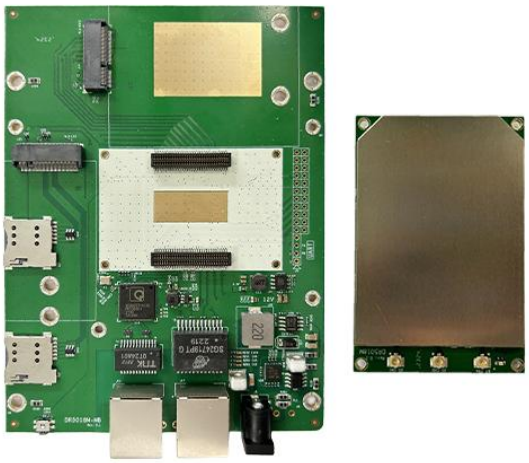
Features



- Dual-core ARM 64 bit A53@1.0GHzProcessor
- 1GB DDRL3L System Memory
- 8MB NOR Flash, 256MB NAND Flash
- Support BT5.1
- 2x2 On-board 2.4GHzradio, up to 573Mbps physical Data Rate
- M.2 Card Slot for 5G (QUECTEL RM 500Q-GL)
- M.2 Card Slot for QCN9074 WIFI 6E Card
- M.2 Card Slot for QCN6122-6E Card
- M.2 Card Slot for QCN6102-5GCard
- Support Openwifi

Applications

- 802 . 11ax MU- MIMO OFDMA Access Point
- Mesh router supporting Easy Mesh Hotel Wireless
- Smart AP TWT

Product Description

DR5018 based on IPQ5018 chipset is an enterprise wireless module integrated with BT5 .1 Radio module and 2x2 2.4 G 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 ~ 48V (DC Jack)	V
Operating Temperature Range	-40 ~ 70	°C
Storage Temperature Range	-45 ~ 105	°C
Operating Humidity Range	5 ~ 95 (non-condensing)	%
Storage Humidity Range	0 ~ 90 (non-condensing)	%

Hardware Specifications

Symbol	Parameter
CPU	Qualcomm-Atheros IPQ5018
CPU Frequency	Quad-core ARM 64 bit A53 @ 1.0 GHz processor
System Memory	512MB DDR3L 16-bit interface with 32-bit memory bus design
Ethernet Port	1 x 1Gbps Ethernet Port
PCIE3.0	1x PCIEx2 Interface
USB3.0	1x USB3.0 Interface
SGMII	1x SGMII Interface
UART	1x UART Interface
GPIO	13x GPIOs
Wireless	On-board 2x2 2.4GHz MU- MIMO OFDMA 802.11b/g/n/ax, max 21 dBm per chain,2 x IPEX Connector
BLE	On board BLE
VDD Out	5VDD
Nor Flash	8 MB
Nand Flash	128 MB
DDR	512MB
Dimension	60mm x 40mm

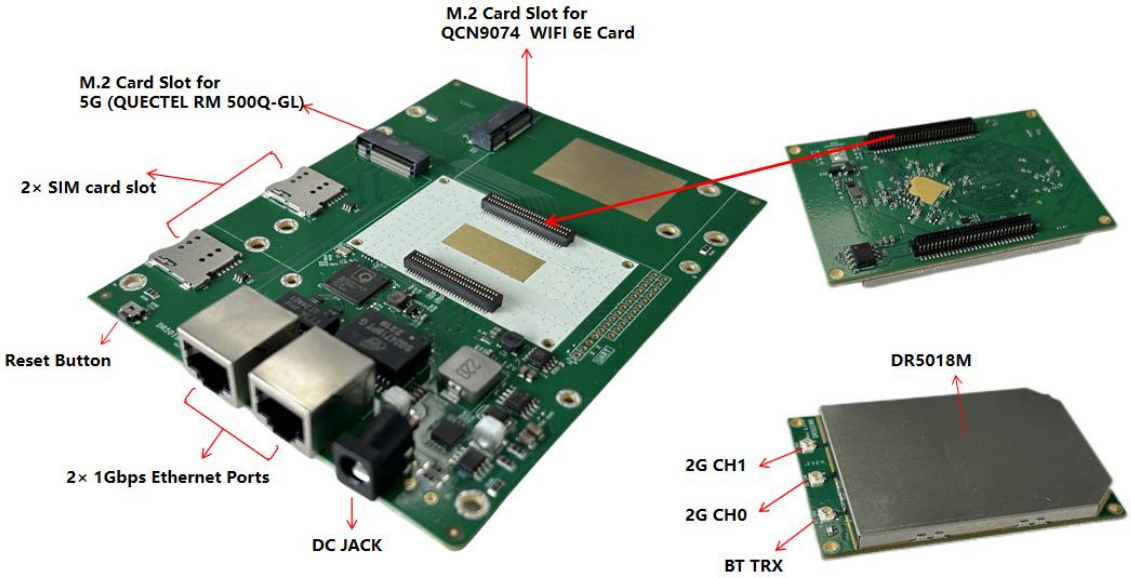
Radio TX Specifications (2412MHz-2482MHz)

Operating Mode	Data Rate	Power		Tolerance
		1 Chain	2 Chains	
2.4Ghz 802.11ax HE20	MCS0	21dbm	24dbm	±2dB
	MCS1	21dBm	24dBm	±2dB
	MCS2	21dBm	24dBm	±2dB
	MCS3	21dBm	24dBm	±2dB
	MCS4	21dBm	24dBm	±2dB
	MCS5	20dBm	23dBm	±2dB
	MCS6	20dBm	23dBm	±2dB
	MCS7	19dBm	22dBm	±2dB
	MCS8	19dBm	22dBm	±2dB
	MCS9	18dBm	21dBm	±2dB
	MCS10	17dBm	20dBm	±2dB
	MCS11	16dbm	19dbm	±2dB
2.4Ghz 802.11ax HE40	MCS0	21dbm	24dbm	±2dB
	MCS1	21dBm	24dBm	±2dB
	MCS2	21dBm	24dBm	±2dB
	MCS3	21dBm	24dBm	±2dB
	MCS4	21dBm	24dBm	±2dB
	MCS5	20dBm	23dBm	±2dB
	MCS6	20dBm	23dBm	±2dB
	MCS7	19dBm	22dBm	±2dB
	MCS8	19dBm	22dBm	±2dB
	MCS9	18dBm	21dBm	±2dB
	MCS10	17dBm	20dBm	±2dB
	MCS11	16dbm	19dbm	±2dB

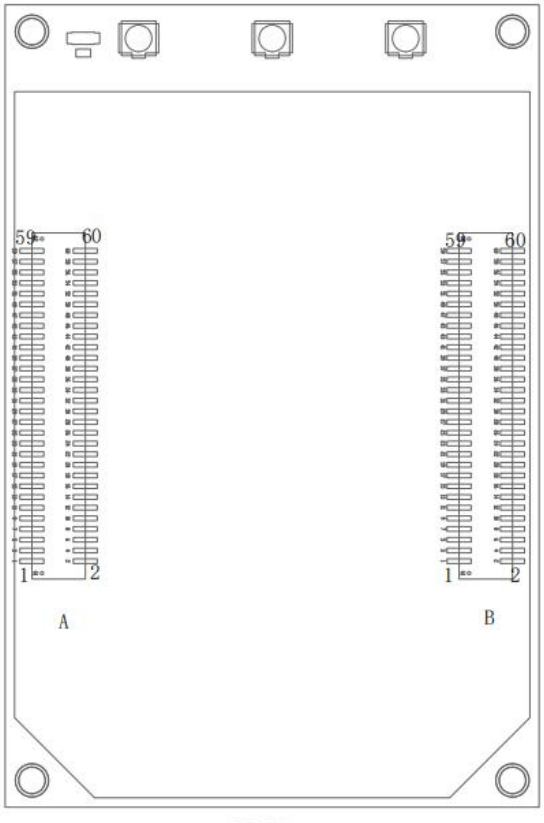
Radio RX Specifications (2412MHz-2482MHz)

Operating Mode	Data Rate	RX Sensitivity	Tolerance
2.4Ghz 802.11b	1Mbps	-98	±2dB
	2Mbps	-95	±2dB
	5.5Mbps	-92	±2dB
	11Mbps	-92	±2dB
2.4Ghz 802.11g	6Mbps	-94	±2dB
	54Mbps	-80	±2dB
2.4Ghz 802.11n/ac VHT20	MCS0	-92	±2dB
	MCS7	-75	±2dB
2.4Ghz 802.11n/ac VHT40	MCS0	-90	±2dB
	MCS7	-70	±2dB
2.4Ghz 802.11ax HE20	MCS0	-92	±2dB
	MCS8	-74	±2dB
	MCS9	-72	±2dB
	MCS10	-69	±2dB
	MCS11	-64	±2dB
2.4Ghz 802.11ax HE40	MCS0	-89	±2dB
	MCS8	-72	±2dB
	MCS9	-69	±2dB
	MCS10	-66	±2dB
	MCS11	-61	±2dB

Interface MAP



PIN ASSIGNMENTS



TOP View

PIN DEFINE

J1(A)				J2(B)			
PN	Pin Define	PN	Pin Define	PN	Pin Define	PN	Pin Define
1	12V_IN	2	VDD_5V0_PCIE0	1	IPQ_GPIO34	2	NC
3	12V_IN	4	VDD_5V0_PCIE0	3	IPQ_GPIO23	4	NC
5	GND	6	GND	5	IPQ_GPIO26	6	NC
7	USB0_HS_DM	8	NC	7	IPQ_GPIO30	8	GND
9	USB0_HS_DP	10	NC	9	DVDD_1V8	10	DVDD_3V3
11	GND	12	NC	11	GND	12	DVDD_3V3
13	CONN_UPHY_TXP	14	NC	13	IPQ_GPIO28	14	GND
15	CONN_UPHY_TXN	16	NC	15	IPQ_GPIO32	16	GND
17	GND	18	NC	17	IPQ_GPIO29	18	IPQ_MRST_N
19	CONN_UPHY_RXP	20	NC	19	IPQ_GPIO25	20	GND
21	CONN_UPHY_RXN	22	NC	21	IPQ_GPIO35	22	IPQ_SGMII_CLK25M
23	GND	24	WPS_L	23	IPQ_GPIO24	24	GND
25	CONN_PCIEX2_TXP2	26	GND	25	IPQ_GPIO33	26	PHY1_SGMII_TX_N
27	CONN_PCIEX2_TXN2	28	NC	27	IPQ_GPIO31	28	PHY1_SGMII_TX_P
29	GND	30	IPQ_GPIO22	29	ETH_MDIO	30	GND
31	PCIEX2_RXN2	32	GND	31	ETH_MDC	32	PHY1_SGMII_RX_P
33	PCIEX2_RXP2	34	IPQ_RSTIN_N	33	GND	34	PHY1_SGMII_RX_N
35	GND	36	NC	35	P3VD3	36	GND
37	CONN_PCIEX2_TXP1	38	NC	37	P3VD3	38	MAPLE_TRXN3
39	CONN_PCIEX2_TXN1	40	NC	39	GND	40	MAPLE_TRXP3
41	GND	42	NC	41	GND	42	GND
43	PCIEX2_RXP1	44	PCIE1_WAKE_N	43	NC	44	MAPLE_TRXP2
45	PCIEX2_RXN1	46	PCIE1_RST_N	45	GND	46	MAPLE_TRXN2
47	GND	48	PCIE1_CLKREQ_N	47	UART_RXD1_CONN	48	GND
49	PCIEX2_REFCLK_ON	50	PCIE0_WAKE_N	49	UART_TXD1_CONN	50	MAPLE_TRXN1
51	PCIEX2_REFCLK_OP	52	PCIE0_RST_N	51	VDD1V95_PMU	52	MAPLE_TRXP1
53	GND	54	PCIE0_CLKREQ_N	53	GND	54	GND
55	UPHY_REFCLK_ON	56	IPQ_RST_OUT_N	55	12V_IN	56	MAPLE_TRXN0
57	UPHY_REFCLK_OP	58	IPQ_PHY_RST_N	57	12V_IN	58	MAPLE_TRXP0
59	GND	60	1GE_LINK_LED	59	12V_IN	60	GND

Mechanical characteristics