DR9074-6E(PN02.7)

WiFi 6E(802.11ax) 4x4 MU-MIMO 6GHz
QCN9074 Single Band Wireless Module

Features

- Qualcomm Atheros QCN9074
- 6GHz, max 23dBm per chain, up to 4804Mbps
- Single Band 6GHz 4x4 WiFi 6E (802.11ax)
- 4 spatial streams (4SS)
- M.2 E Key Interface
- PCI Express 3 .0 Interface

Applications

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

Product Description

DR9074 - 6E(PN02.7) based on QCN9074 Chipset is an enterprise wireless module integrated with 4 x4 MU- MIMO 6 GHz Single Band Wireless 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
Operating Temperature Range	-20 to 70	° C
Storage Temperature Range	-40 to 90	° C
Operating Humidity Range	5 to +95 (non-condensing)	%
Storage Humidity Range	0 to +90 (non-condensing)	%

Hardware Specifications

Symbol	Parameter
Chipset	Qualcomm Atheros QCN9 0 7 4
WLAN Host Interface	PCI Express 3 . 0 Interface
System Memory	2 Mbit serial I2C bus EEPROM
StandardOperating Voltage	5V
Operating Systems	QSDK
Host Interface	M.2 E Key
Antenna Cable / Port	4 x MMCX Connectors, 4 T4 R
Frequency Range	5.925GHz-7. 125GHz
Data Rates	6GHz, max 23dBm per chain, up to 4804Mbps
Channel Spectrum Widths	Support 20/40/ 80/ 160MHz at 6GHz
Modulation Techniques	OFDMA: BPSK, QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM;
Temperature Range	Operating: -20 。C to 70 。C, Storage: -40 。C to 90 。C
Humidity	Operating: 5% to 95% (non-condensing) , Storage: Max. 90% (n on- condensing)
Certification	TBD
Power Consumption	TBD
Reference Design	PN02 .7
Dimensions (WxHxD)	57mm x 63mm x 6mm

RF Performance Table for 6GHz

Operating Mode	Data Rate	TX Power		RX Specificatios Sensitivity	Tolerance
		Per Chain	4 Chains		
6GHz 802.11n/ax HE20	MCS0	24dBm	30dBm	-96dBm	±2dB
	MCS1	24dBm	30dBm	-93dBm	±2dB
	MCS2	24dBm	30dBm	-91dBm	±2dB
	MCS3	24dBm	30dBm	-89dBm	±2dB
	MCS4	24dBm	30dBm	-86dBm	±2dB
	MCS5	23dBm	29dBm	-85dBm	±2dB
	MCS6	21dBm	27dBm	-82dBm	±2dB
	MCS7	21dBm	27dBm	-80dBm	±2dB
	MCS8	19.5dBm	25.5dBm	-76dBm	±2dB
	MCS9	19.5dBm	25.5dBm	-77dBm	±2dB
	MCS10	18.5dBm	24.5dBm	-74dBm	±2dB
	MCS11	18.5dBm	24.5dBm	-71dBm	±2dB
6GHz 802.11n/ax HE40	MCS0	23dBm	29dBm	-94dBm	±2dB
	MCS1	23dBm	29dBm	-88dBm	±2dB
	MCS2	23dBm	29dBm	-85dBm	±2dB
	MCS3	23dBm	29dBm	-84dBm	±2dB
	MCS4	23dBm	29dBm	-82dBm	±2dB
	MCS5	23dBm	29dBm	-80dBm	±2dB
	MCS6	21dBm	27dBm	-77dBm	±2dB
	MCS7	21dBm	27dBm	-74dBm	±2dB
	MCS8	19.5dBm	25.5dBm	-72dBm	±2dB
	MCS9	19.5dBm	25.5dBm	-74dBm	±2dB
	MCS10	18.5dBm	24.5dBm	-71dBm	±2dB
	MCS11	18.5dBm	24.5dBm	-68dBm	±2dB
	MCS0	23dBm	29dBm	-91dBm	±2dB
	MCS1	23dBm	29dBm	-88dBm	±2dB
	MCS2	23dBm	29dBm	-85dBm	±2dB
	MCS3	23dBm	29dBm	-84dBm	±2dB

6GHz 802.11n/ax HE80	MCS4	23dBm	29dBm	-82dBm	±2dB
	MCS5	23dBm	29dBm	-80dBm	±2dB
	MCS6	21dBm	27dBm	-77dBm	±2dB
	MCS7	21dBm	27dBm	-74dBm	±2dB
	MCS8	19.5dBm	25.5dBm	-72dBm	±2dB
	MCS9	19.5dBm	25.5dBm	-71dBm	±2dB
	MCS10	18.5dBm	24.5dBm	-69dBm	±2dB
	MCS11	18.5dBm	24.5dBm	-66dBm	±2dB
6G 802.11n/ax HE160	MCS0	22dBm	28dBm	-86dBm	±2dB
	MCS1	22dBm	28dBm	-85dBm	±2dB
	MCS2	22dBm	28dBm	-85dBm	±2dB
	MCS3	22dBm	28dBm	-81dBm	±2dB
	MCS4	22dBm	28dBm	-78dBm	±2dB
	MCS5	22dBm	28dBm	-76dBm	±2dB
	MCS6	21dBm	27dBm	-73dBm	±2dB
	MCS7	21dBm	27dBm	-71dBm	±2dB
	MCS8	19.5dBm	25.5dBm	-68dBm	±2dB
	MCS9	19.5dBm	25.5dBm	-65dBm	±2dB
	MCS10	17.5dBm	23.5dBm	-62dBm	±2dB
	MCS11	17.5dBm	23.5dBm	-59dBm	±2dB

Product Version

	P/N	CPU	Chains	Frequency
1	DR9074-6EI	QCN9074	4	5950-7150
2	DR9074-6E	QCN9024	4	5950-7150

M.2 Pin Definitions

Pin No.	Name	Pin No.	Name
1	GND	2	VDD3P3_ PCIE
3		4	VDD3P3_ PCIE
5		6	PCIE_ LED0
7	GND	8	GPIO46 WCI2 _UART_TXD PCIE
9	TP19	10	GPIO47_ WCI2_ UART_RXD_ PCIE
11		12	
13		14	
15	VDD_XPA_ PCIE	16	PCIE_ LED1
17	VDD_XPA_ PCIE	18	GND

19	VDD XPA _PCIE	20	
21	VDD XPA _PCIE	22	
23	VDD_XPA_ PCIE		
33	GND	32	
35	PCIE0_ RX0 P	34	
37	PCIE0_ RX0_ N	36	
39	GND	38	MOD BT STS 2
41	PCIE0_TX0_ P	40	MOD_WL_ACT_2
43	PCIE0_TX0_ N	42	PINE_BT_ ACT_2
45	GND	44	MOD_ BT_ STS
47	PCIE0_ REFCLK_ P	46	MOD WL ACT
49	PCIE0_ REFCLK_ N	48	PINE_ BT_ACT
51	GND	50	
53	PCIE0_ CLKREQ _3 P3 _ N	52	PCIE0_ PERST_3P3
55	PCIE0_WAKE _3 P3_ N	54	
57	GND	56	
59	PCIE0_ RX1 P	58	
61	PCIE0_ RX1_ N	60	
63	GND	62	
65	PCIE0_TX1_ P	64	
67	PCIE0_TX1_ N	66	
69	GND	68	
71		70	
73		72	VDD3P3_ PCIE
75	GND	74	VDD3P3_ PCIE