Features

- Qualcomm Atheros QCN90X4
- Maxim Tx power 20dBm per chain,
- Data Rateup to 4949Mbps
- Support 5.18GHz-5.825GHz & 5.950GHz-7.150 GHz
- 4 spatial streams (4SS)
- MiniPCIe connector
- 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

DR9074E-5G6E based on QCN90X4 Chipset is an enterprise wireless module integrated with 4x4 MU-MIMO Dual Band Wireless Module designed specifically to provide users with mobile access to high-bandwidth video streaming, voice, and data transmission for office and challenging RFenvironment in factories, warehouses establishment.

Absolute Maximum Rating

Parameter	Rating	Unit
Operating Temperature Range	-20 ~ 70	º C
Storage Temperature Range	-40 ~ 90	º C
Operating Humidity Range	5 ~ 95（non-condensing）	%
Storage Humidity Range	0 ~ 90（non-condensing）	%

Hardware Specifications

Symbol	Parameter
Chipset	Qualcomm Atheros QCN9074(QCN9024)
WLAN Host Interface	PCI Express 3.0 Interface
System Memory	2Mbit serial I²C bus EEPROM
Standard Operating Voltage	3.3V
Operating Systems	QSDK
Host Interface	MiniPCIE
Antenna Cable / Port	4 x UF.L Connectors,4T4R
Frequency Range	5.15GHz-5.95GHz & 5.925GHz-7.125GHz
Data Rates for WALN	Maxim TX power 20dBm per chain, up to 4949Mbps
Channel Spectrum Widths for WLAN	Support 20/40/80/ 160MHz
Modulation Techniques	OFDMA: BPSK, QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-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% (non-condensing)
Certification	TBD
Power Consumption	15W（Maximum）， 9.5W(Normally)
Dimensions (WxHxD)	30mm x 50mm x 14.5mm

WiFi6 and WiFi6E 4x4 MU-MIMO QCN90X4 Dual Band WiFi Module

Radio TX RX Specifications 6G

Mode	Data rate	TX Power(dbm) (per Chain)	TX Power(dbm) (4 Chains)	RX Sensitivity(dbm)	Tolerance
6GHz 802.11n/ac VHT20	MCS0	20	26	-97	±2dB
	MCS7	17	23	-83	±2dB
	MCS8	16	22	-81	±2dB
6GHz 802.11n/ac VHT40	MCS0	19	25	-95	±2dB
	MCS7	17	23	-80	±2dB
	MCS8	16	22	-77	±2dB
	MCS9	15	21	-74	±2dB
6GHz 802.11ac VHT80	MCS0	19	25	-91	±2dB
	MCS7	17	23	-75	±2dB
	MCS8	16	22	-72	±2dB
	MCS9	15	21	-69	±2dB
6GHz 802.11ac VHT160	MCS0	18	24	-84	±2dB
	MCS7	16	22	-74	±2dB
	MCS8	15	21	-71	±2dB
	MCS9	14	20	-68	±2dB
6GHz 802.11ax HE20	MCS0	19	25	-96	±2dB
	MCS9	16	22	-77	±2dB
	MCS10	15	21	-74	±2dB
	MCS11	14	20	-71	±2dB
6GHz 802.11ax HE40	MCS0	19	25	-94	±2dB
	MCS9	16	22	-74	±2dB
	MCS10	15	21	-71	±2dB
	MCS11	14	20	-68	±2dB
6GHz 802.11ax HE80	MCS0	18	24	-91	±2dB
	MCS9	15	21	-71	±2dB
	MCS10	14	20	-69	±2dB
	MCS11	13	19	-66	±2dB
6GHz 802.11ax HE160	MCS0	18	24	-86	±2dB
	MCS9	13	19	-65	±2dB
	MCS10	12	18	-62	±2dB
	MCS11	11	17	-59	±2dB

Radio TX RX Specifications 5G

Mode	Data rate	TX Power(dbm) (per Chain)	TX Power(dbm) (4 Chains)	RX Sensitivity(dbm)	Tolerance
5GHz 802.11a	6Mbps	20	26	-97	±2dB
	54Mbps	19	25	-82	±2dB
5GHz 802.11n/ac VHT20	MCS0	20	26	-97	±2dB
	MCS7	17	23	-83	±2dB
	MCS8	16	22	-81	±2dB
5GHz 802.11n/ac VHT40	MCS0	19	25	-95	±2dB
	MCS7	17	23	-80	±2dB
	MCS8	16	22	-77	±2dB
	MCS9	15	21	-74	±2dB
5GHz 802.11ac VHT80	MCS0	19	25	-91	±2dB
	MCS7	17	23	-75	±2dB
	MCS8	16	22	-72	±2dB
	MCS9	15	21	-69	±2dB
5GHz 802.11ac VHT160	MCS0	18	24	-84	±2dB
	MCS7	16	22	-74	±2dB
	MCS8	15	21	-71	±2dB
	MCS9	14	20	-68	±2dB
5GHz 802.11ax HE20	MCS0	19	25	-96	±2dB
	MCS9	16	22	-77	±2dB
	MCS10	15	21	-74	±2dB
	MCS11	14	20	-71	±2dB
5GHz 802.11ax HE40	MCS0	19	25	-94	±2dB
	MCS9	16	22	-74	±2dB
	MCS10	15	21	-71	±2dB
	MCS11	14	20	-68	±2dB
5GHz 802.11ax HE80	MCS0	18	24	-91	±2dB
	MCS9	15	21	-71	±2dB
	MCS10	14	20	-69	±2dB
	MCS11	13	19	-66	±2dB
5GHz 802.11ax HE160	MCS0	18	24	-86	±2dB
	MCS9	13	19	-65	±2dB
	MCS10	12	18	-62	±2dB
	MCS11	11	17	-59	±2dB

MiniPCIE Pin Definitions

Pin No.	Name	Pin No.	Name
1	PCIE0_WAKE_3P3_N	2	VDD3P3_PCIE
3		4	GND
5		6	
7	PCIE0_CLKREQ_3P3_N	8	
9	GND	10	
11	PCIE0_REFCLK_N	12	
13	PCIE0_REFCLK_N	14	
15	GND	16	
17		18	GND
19		20	
21	GND	22	PCIE0_PERST_3P3
23	PCIE0_TX0_N	24	VDD3P3_PCIE
25	PCIE0_TX0_P	26	GND
27	GND	28	
29	GND	30	
31	PCIE0_RX0_N	32	
33	PCIE0_RX0_P	34	GND
35	GND	36	
37	GND	38	
39	VDD3P3_PCIE	40	GND
41	VDD3P3_PCIE	42	
43	GND	44	
45		46	
47		48	
49		50	GND
51		52	

Product Version

Version	Chip	Feature
DR9074E	QCN9024	5.180GHz-5.95GHz & 5.950GHz-7.150 GHz
DR9074EI	QCN9074	5.180GHz-5.95GHz & 5.950GHz-7.150 GHz