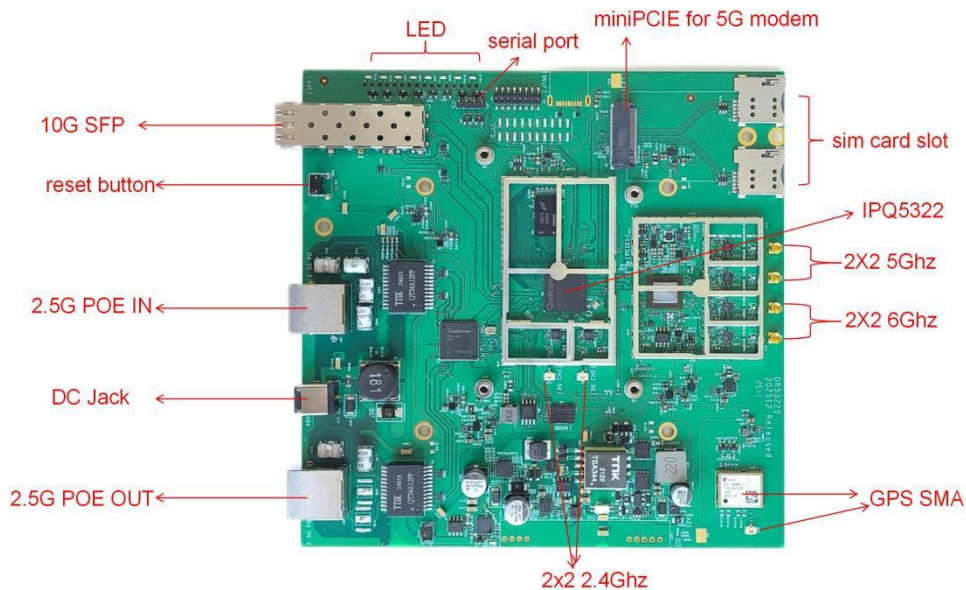


Features

- Qualcomm IPQ5322 Quad-Core Cortex-A53 @ 1.5GHz processor.
- 2x2 on-board 2.4GHz radio, up to 573Mbps physical data rate.
- 2x2 5G & 2x2 6G MU-MIMO, up to 8,647Mbps physical data rate;
- On board radio;
- 1 x 2.5Gbps ethernet port, 1x 10Gbps SFP, 1 x 2.5Gbps poe out



Applications

- 802.11be MU-MIMO OFDMA Access Point.
- Internet of Things (IoT).
- HD streaming and gaming.

Absolute Maximum Rating

Parameter	Rating	Unit
Supply Voltage	48V	V
Environmental Temperature Operating	-20° C to 70° C	° C
Environmental Temperature Storage	-40° C to 90° C	° C
Environmental Humidity Operating	5% to 95% (non-condensing)	%
Environmental Humidity Storage	Max. 90% (non-condensing)	%

Hardware Specifications

Symbol	Parameter
CPU	Qualcomm IPQ5322 Quad-Core Cortex-A53 @ 1.5GHz processor 'Miami' Series
Reference Design	Qualcomm AP.MI01.2
System Memory	1GB, DDR4 16-bit (1x16-bit) interface
Flash	NAND Flash: 128MB NOR Flash: 8MB
Wireless	On-board 2x2 2.4GHz MU-MIMO 802.11b/g/n/ax/be, max 24dBm per chain Onboard 2x2 5Ghz 2x2 6Ghz QCN9274/QCN6274 wifi7 module 2x MMCX-N connectors(5G) 2x MMCX-N connectors(6G)
Frequency Range	2.412~2.472GHz 5GHz: 5.15~5.825GHz 6GHz: 5.925GHz-7.125GHz
PeakGain	3dBi for 2.4GHz
ModulationTechniques	OFDMA:BPSK,QPSK,16-QAM,64-QAM,256-QAM,1024-QAM,4096-QAM
Interface	1 x 2.5Gigabit Ethernet LAN/WAN RJ45 Port 1 x 2.5G poe out RJ45 Port 1 x 10G SFP Port 1 x JTAG 10Pin Connector 2 x 4Pin Connector 2 x UFL Connector 1x RESET Button
LED	PWR, LAN1, LAN2, 5G, 6G, GPIOx, GPIOx, GPIOx
DC Power	1 x DC Jack Connector:48V; 802.3 11BT POE
PowerConsumption (Boardonly)	TBD
Certification	REACH & RoHS Compliance

RF Performance Table for 2.4GHz

Operating Mode	Data Rate	TX Power		RX Specificatiois	Tolerance
		Per Chain	4 Chains		
2.4GHz 802.11be EHT20	MCS0	24dBm	27dBm	TBD	±2dB
	MCS1	23dBm	26dBm	TBD	±2dB
	MCS2	22dBm	25dBm	TBD	±2dB
	MCS3	21dBm	24dBm	TBD	±2dB
	MCS4	20dBm	23dBm	TBD	±2dB
	MCS5	20dBm	23dBm	TBD	±2dB
	MCS6	19dBm	22dBm	TBD	±2dB
	MCS7	19dBm	22dBm	TBD	±2dB
	MCS8	18dBm	21dBm	TBD	±2dB
	MCS9	18dBm	21dBm	TBD	±2dB
	MCS10	17dBm	20dBm	TBD	±2dB
	MCS11	17dBm	20dBm	TBD	±2dB
2.4GHz 802.11be EHT40	MCS0	24dBm	27dBm	TBD	±2dB
	MCS1	23dBm	26dBm	TBD	±2dB
	MCS2	22dBm	25dBm	TBD	±2dB
	MCS3	21dBm	24dBm	TBD	±2dB
	MCS4	20dBm	23dBm	TBD	±2dB
	MCS5	20dBm	23dBm	TBD	±2dB
	MCS6	19dBm	22dBm	TBD	±2dB
	MCS7	19dBm	22dBm	TBD	±2dB
	MCS8	18dBm	21dBm	TBD	±2dB
	MCS9	18dBm	21dBm	TBD	±2dB
	MCS10	17dBm	20dBm	TBD	±2dB
	MCS11	17dBm	20dBm	TBD	±2dB

RF Performance Table at 5GHz

Operating Mode	Data Rate	TX Power		RX Specifications	Tolerance
		Per Chain	2 Chains	Sensitivity	
5GHz 802.11be EHT20	MCS 0	22dBm	25dBm	-93dBm	±2dB
	MCS 1	22dBm	25dBm	-91dBm	±2dB
	MCS 2	22dBm	25dBm	-88dBm	±2dB
	MCS 3	22dBm	25dBm	-85dBm	±2dB
	MCS 4	20dBm	23dBm	-82dBm	±2dB
	MCS 5	20dBm	23dBm	-79dBm	±2dB
	MCS 6	20dBm	23dBm	-77dBm	±2dB
	MCS 7	20dBm	23dBm	-75dBm	±2dB
	MCS 8	18.5dBm	21.5dBm	-71dBm	±2dB
	MCS 9	18.5dBm	21.5dBm	-68dBm	±2dB
	MCS 10	17.5dBm	20.5dBm	-66dBm	±2dB
	MCS 11	17.5dBm	20.5dBm	-63dBm	±2dB
	MCS 12	17dBm	20dBm	-60dBm	±2dB
	MCS 13	17dBm	20dBm	-57dBm	±2dB
5GHz 802.11be EHT40	MCS 0	21dBm	24dBm	-91dBm	±2dB
	MCS 1	21dBm	24dBm	-89dBm	±2dB
	MCS 2	21dBm	24dBm	-86dBm	±2dB
	MCS 3	21dBm	24dBm	-83dBm	±2dB
	MCS 4	20dBm	23dBm	-80dBm	±2dB
	MCS 5	20dBm	23dBm	-76dBm	±2dB
	MCS 6	19.5dBm	22.5dBm	-74dBm	±2dB
	MCS 7	19.5dBm	22.5dBm	-72dBm	±2dB
	MCS 8	18.5dBm	21.5dBm	-69dBm	±2dB
	MCS 9	18.5dBm	21.5dBm	-67dBm	±2dB
	MCS 10	17.5dBm	20.5dBm	-63dBm	±2dB
	MCS 11	17.5dBm	20.5dBm	-60dBm	±2dB
	MCS 12	17dBm	20dBm	-57dBm	±2dB
	MCS 13	17dBm	20dBm	-55dBm	±2dB
5GHz 802.11n EHT80	MCS 0	21dBm	24dBm	-89dBm	±2dB
	MCS 1	21dBm	24dBm	-86dBm	±2dB
	MCS 2	21dBm	24dBm	-83dBm	±2dB
	MCS 3	21dBm	24dBm	-80dBm	±2dB
	MCS 4	20dBm	23dBm	-77dBm	±2dB
	MCS 5	20dBm	23dBm	-72dBm	±2dB
	MCS 6	19.5dBm	22.5dBm	-70dBm	±2dB
	MCS 7	19.5dBm	22.5dBm	-68dBm	±2dB
	MCS 8	18.5dBm	21.5dBm	-65dBm	±2dB
	MCS 9	18.5dBm	21.5dBm	-63dBm	±2dB
	MCS 10	17.5dBm	20.5dBm	-60dBm	±2dB
	MCS 11	17.5dBm	20.5dBm	-57dBm	±2dB
	MCS 12	17dBm	20dBm	-54dBm	±2dB
	MCS 13	17dBm	20dBm	-52dBm	±2dB

RF Performance Table at 5GHz

Operating Mode	Data Rate	TX Power		RX Specifications	Tolerance
		Per Chain	2 Chains		
5GHz 802.11be EHT160	MCS 0	21dBm	24dBm	-87dBm	±2dB
	MCS 1	21dBm	24dBm	-83dBm	±2dB
	MCS 2	21dBm	24dBm	-80dBm	±2dB
	MCS 3	21dBm	24dBm	-78dBm	±2dB
	MCS 4	20dBm	23dBm	-74dBm	±2dB
	MCS 5	20dBm	23dBm	-70dBm	±2dB
	MCS 6	19.5dBm	22.5dBm	-68dBm	±2dB
	MCS 7	19.5dBm	22.5dBm	-66dBm	±2dB
	MCS 8	18.5dBm	21.5dBm	-63dBm	±2dB
	MCS 9	18.5dBm	21.5dBm	-61dBm	±2dB
	MCS 10	17dBm	20dBm	-57dBm	±2dB
	MCS 11	17dBm	20dBm	-55dBm	±2dB
	MCS 12	16dBm	19dBm	-52dBm	±2dB
	MCS 13	16dBm	19dBm	-50dBm	±2dB

RF Performance Table at 6GHz

Operating Mode	Data Rate	TX Power		RX Specifications	Tolerance
		Per Chain	2 Chains		
6GHz 802.11be EHT20	MCS 0	22dBm	25dBm	-93dBm	±2dB
	MCS 1	22dBm	25dBm	-91dBm	±2dB
	MCS 2	22dBm	25dBm	-88dBm	±2dB
	MCS 3	22dBm	25dBm	-85dBm	±2dB
	MCS 4	20dBm	23dBm	-82dBm	±2dB
	MCS 5	20dBm	23dBm	-79dBm	±2dB
	MCS 6	20dBm	23dBm	-77dBm	±2dB
	MCS 7	20dBm	23dBm	-75dBm	±2dB
	MCS 8	18.5dBm	21.5dBm	-71dBm	±2dB
	MCS 9	18.5dBm	21.5dBm	-68dBm	±2dB
	MCS 10	17.5dBm	20.5dBm	-66dBm	±2dB
	MCS 11	17.5dBm	20.5dBm	-63dBm	±2dB
	MCS 12	17dBm	20dBm	-60dBm	±2dB
	MCS 13	17dBm	20dBm	-57dBm	±2dB
6GHz 802.11be EHT40	MCS 0	21dBm	24dBm	-91dBm	±2dB
	MCS 1	21dBm	24dBm	-89dBm	±2dB
	MCS 2	21dBm	24dBm	-86dBm	±2dB
	MCS 3	21dBm	24dBm	-83dBm	±2dB
	MCS 4	20dBm	23dBm	-80dBm	±2dB
	MCS 5	20dBm	23dBm	-76dBm	±2dB
	MCS 6	19.5dBm	22.5dBm	-74dBm	±2dB
	MCS 7	19.5dBm	22.5dBm	-72dBm	±2dB
	MCS 8	18.5dBm	21.5dBm	-69dBm	±2dB
	MCS 9	18.5dBm	21.5dBm	-67dBm	±2dB

	MCS 10	17.5dBm	20.5dBm	-63dBm	±2dB
	MCS 11	17.5dBm	20.5dBm	-60dBm	±2dB
	MCS 12	17dBm	20dBm	-57dBm	±2dB
	MCS 13	17dBm	20dBm	-55dBm	±2dB
6GHz 802.11be EHT80	MCS 0	21dBm	24dBm	-89dBm	±2dB
	MCS 1	21dBm	24dBm	-86dBm	±2dB
	MCS 2	21dBm	24dBm	-83dBm	±2dB
	MCS 3	21dBm	24dBm	-80dBm	±2dB
	MCS 4	20dBm	23dBm	-77dBm	±2dB
	MCS 5	20dBm	23dBm	-72dBm	±2dB
	MCS 6	19.5dBm	22.5dBm	-70dBm	±2dB
	MCS 7	19.5dBm	22.5dBm	-68dBm	±2dB
	MCS 8	18.5dBm	21.5dBm	-65dBm	±2dB
	MCS 9	18.5dBm	21.5dBm	-63dBm	±2dB
	MCS 10	17.5dBm	20.5dBm	-60dBm	±2dB
	MCS 11	17.5dBm	20.5dBm	-57dBm	±2dB
	MCS 12	17dBm	20dBm	-54dBm	±2dB
	MCS 13	17dBm	20dBm	-52dBm	±2dB

LED & GPIO header

DR5322S	Functional	GPIOs		
DS2	Power LED		High active	
DS5	Eth2 LED (PSE Ethernet Port)		High active	
DS4	Eth1 LED (PD Ethernet Port)		High active	
DS9	SFP LED		Low active	
DS7	5G_WIFI_LED(Low active)	GPIO26	High active	S1
DS8	6G_WIFI_LED(Low active)	GPIO25	High active	S2
DS10	2G_WIFI_LED(High active)	GPIO36	High active	S3
DS12	System LED(High active)	GPIO31	High active	S4

Serial Port

Item	Information	Note
1	PWR	
2	Uart0 TX	
3	Uart0 RX	
4	GND	

Product Version

	P/N	CPU	Chains	Frequency
1	DR5322S	IPQ5322&QCN9274/QCN6274	6	2.412~2.472GHz 5GHz: 5.15~5.825GHz 6GHz: 5.925GHz-7.125GHz