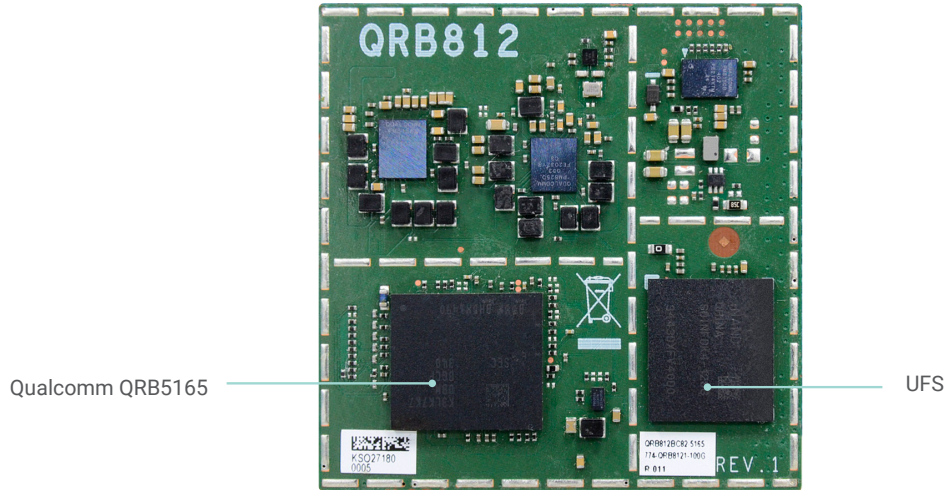
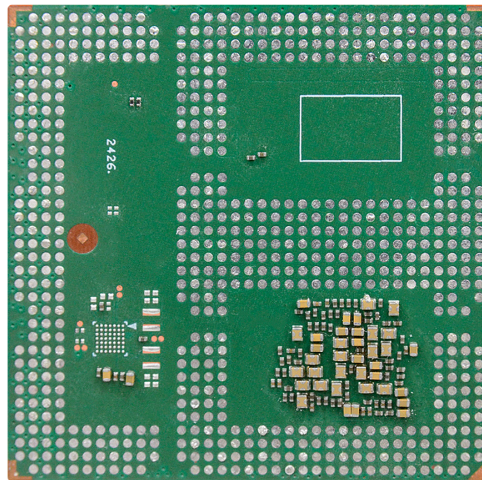


QRB812

Qualcomm QRB5165 Processor
OSM 1.1

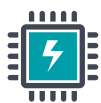


Front View



Bottom View

KEY FEATURES



Qualcomm

QRB5165, 8x Kryo 585
2.84GHz



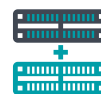
LPDDR5

8GB LPDDR5 memory
down



Dual Displays

1 4-lane MIPI-DSI,
1 USB-C DP



Multiple Expansion

2 PCIe x2 (Gen3),
1 PCIe x1 (Gen3),
2 USB 3.1 Gen2,
6 MIPI-CSI



Application

For Automation AMR,
Robotic or Drone

SPECIFICATION

SYSTEM	Processor	QRB5165, Kryo 585 2.84Ghz - Quad high-performance Kryo Gold cores • Three Kryo Gold cores with a 256 KB L2 cache per core, Fmax at 2.419 GHz • One Kryo Gold prime core with a 512 KB L2 cache, Fmax at 2.842 GHz - Quad low-power Kryo Silver cores with a 128 KB L2 cache per core, Fmax at 1.805 GHz	
	Memory	PoP LPDDR5, 8GB memory down	
GRAPHICS	Controller	Adreno 650 GPU	
	Feature	Open GL ES 3.2, Vulkan 1.1, DX12 FL 12_1, OpenCL 2.0	
	Display	1 x 4-lane MIPI-DSI (to HDMI on carrier board) 1 x DP 1.4 (thru USB Type-C on carrier board)	
I/O	Interface	2 x PCIe x2 (Gen3) 1 x PCIe x1 (Gen3) 2 x I ² C 2 x SPI 4 x PWM 2 x UART(TX/RX/RTS/CTS) 2 x UART(TX/RX) 1 x UART(console) 1 x 4-bit SDIO 6 x 4-lane MIPI-CSI 2 x USB 3.1 Gen 2 (USB0 for Download or USB Type-C) 16 x GPIO	
STORAGE	UFS	128GB UFS 3.1	
SECURITY	TEE	Qualcomm® Trusted Execution Environment v5	
POWER	Type	5VDC	
	Consumption	TBD	
OS SUPPORT	Linux	Ubuntu	
ENVIRONMENT	Temperature	Operating: -5°C~65°C	Storage: -40°C~85°C
	Humidity	Operating: 10%~90% RH	Storage: 10%~90% RH
	MTBF	TBD	
MECHANICAL	Form Factor	OSM 1.1 (*Please be advised that certain pins do not adhere OSM standards. For further details, kindly refer to the user manual.)	
	Dimensions	45 mm (1.77") x 45 mm (1.77")	
STANDARDS AND CERTIFICATIONS	Certification	CE, FCC, RoHS	

ORDERING INFORMATION

Model Name	P/N	Processor	Memory	UFS	Display	Power	Operating Temp.
QRB812BC82-5165	TBD	Qualcomm QRB5165	8GB	128GB	MIPI- DSI + USB-C DP	5VDC	-5°C~65°C

PACKING LIST

1 QRB812 module
