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# Datasheet

## iBase

### RM-QCS610

Wide-Temperature SMARC™ 2.1 CPU Module  
with Qualcomm QCS610 Processor



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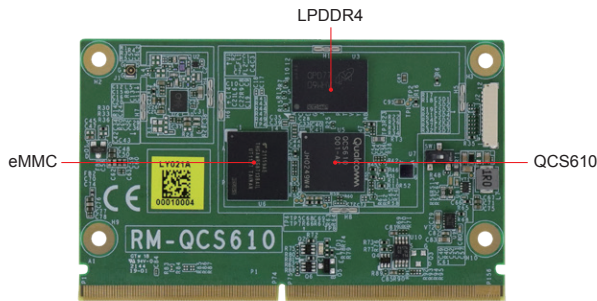
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# RM-QCS610

## SMARC 2.1 CPU Module

Wide-Temperature SMARC™ 2.1 Module  
with Qualcomm QCS610 Processor



### Features

- Qualcomm QCS610 SoC
- up to 4GB LPDDR4, 21GB eMMC
- Qualcomm Adreno 612 GPU 3D graphics accelerator with 64-bit addressing 845 MHz
- 4K video capture and playback at 30fps
- 3.15 TOPS @Caffe
- Validated with Linux Ubuntu 14.04 / Android 10 (2021/2, CS)
- Long life time supply with Qualcomm solution
- Compliant with SMARC™ 2.1

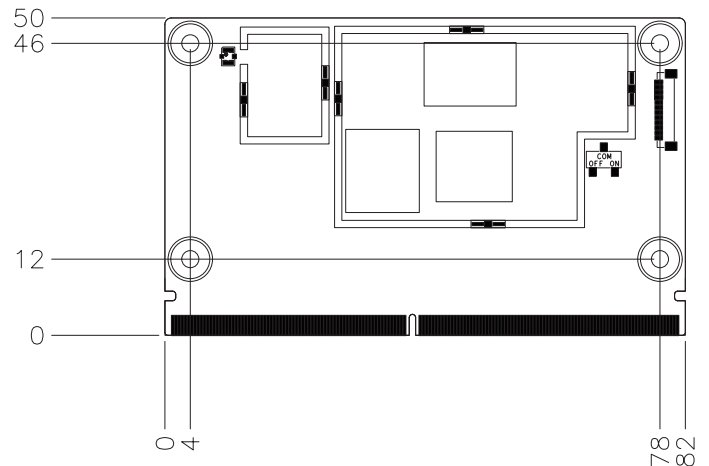
### Specifications

Form Factor	SMARC™ 2.1
Processor	QCS610 Kryo Gold: Dual high-performance cores 2.2 GHz Kryo Silver: Hexa low-power cores 1.8 GHz
System Memory	On board - 2GB LPDDR4 - 4GB LPDDR4 (optional)
Flash Memory	16GB eMMC (for Linux OS) 21GB eMMC (for Android OS)
Display	1x HDMI up to 1920 x 1200 at 60 Hz 1x MIPI DSI
Video Codec	4K30 8-bit H.264/HEVC/VP8/VP9 Multi-format codec up to 4K30 video encode Multi-stream codec (4K30) (HEVC) + 720p30 (YUV) + 480p30 (VA-YUV) Dual 14-bit image signal processing (ISP) + Lite ISP: 24 MP (2x IFE + 1x IFE Lite, 16 + 16 + 2 MP), 4K30, MCTF, SHDR, C-PHY, DPHY 4K30 8-bit H.264/HEVC/VP8
Graphics	Adreno 612; 845 MHz, 3D graphics accelerator with 64-bit addressing
Audio Interface	1x I <sup>2</sup> S
LAN	1x GbE Lan
USB	USB1/2 *USB 2.0 (Type-A) USB3/4 *USB 3.0 (gen-1 with OTG support)
Image Capture Interface	1x MIPI CSI (2 lane) + 1x MIPI CSI (2 or 4 lane)
Serial Interface	4x UART, 2x SPI
Media Interface	N/A
PCI-E	N/A
SATA	N/A
GPIO	12x GPIO
I <sup>2</sup> C	4x I <sup>2</sup> C
Others	wireless WCN3980 (optional)
CAN Bus	N/A
Dimensions	82mm x 50mm (3.2" x 2")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-30°C ~ +85°C
OS Support	Linux Ubuntu 14.04 / Other OS (by request)
Certification	CE/ FCC Class-A

### Ordering Information

RM-QCS610L	Industrial grade SMARC™ 2.1 CPU module, Qualcomm QCS610 SoC, 2GB LPDDR4, 16GB TLC eMMC
RM-HSK-Q	Heat sink for IBASE RM-QCS610 series module

### Dimensions



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