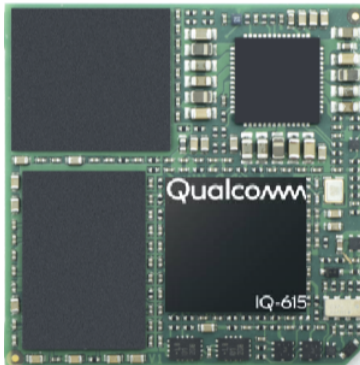


MSC OSM-LF-IQ615

Qualcomm IQ6 Series IQ615 ARM® Cortex™-A76/A55



45 x 45 mm

4W - 5W

-40 +85



Qualcomm

Highlights

- Octal Core CPU powered by the Dragonwing IQ-615 Processor from Qualcomm
 - Dual core Arm Cortex-A76 up to 1.9GHz
 - **And** hexa core Arm Cortex-A55 up to 1.6GHz
- Adreno 612 GPU
- Hexagon™ V66 DSP with Dual hexagon Vector (1.1 TOPs)
- Spectra™ 230 image processing engine (ISP)
- Adreno 443 VPU Video Decode/Encode 4k60(D)/1k60/(E)
- Up to 8GB LPDDR4x SDRAM 3110MT/s
- Up to 256GB eMMC Flash
- 1x UFS 2.1, 1x SDIO
- 1x USB 2.0, 1x USB 3.1
- 1x PCIe Gen2
- MIPI-DSI, 1x DP v.1.4 (up to 4 Displays)
- 3x MIPI-CSI (4lane up to 4 cameras)
- 1x Ethernet (RGMII) up to 1 Gbps
- 4x UART, 2x SPI, 1x QSPI, 6x I2C, 2x I2S Audio
- Yocto Linux, Ubuntu (on request)
- Optimized design for low cost and low power applications
- OSM Size-L – “Large”: 45 mm x 45 mm / with 662 contacts

Technical Data

Technology	ARM
Formfactor	OSM-LF, 662 Pin, RM 1,25 mm
CPU	Octal Core CPU powered by the Dragonwing IQ-615 Processor from Qualcomm • Dual core Arm Cortex-A76 up to 1.9GHz • And hexa core Arm Cortex-A55 up to 1.6GHz Hexagon™ V66 DSP with Dual hexagon Vector (1.1 TOPs)
Chipset	SOC
RAM	Up to 8GB LPDDR4x SDRAM 3110MT/s
Flash	Up to 256GB eMMC Flash
Storage Interfaces	1x UFS 2.1, 1x SDIO
USB	1x USB 2.0, 1x USB 3.1
Serial Interfaces	1x UART Console with Rx, Tx only 1x UART with 2-wire hand shake 2x UART w/o hand shake
Bus Interfaces	6x I2C up to 400 Kbit/s 1x SPI + 1x QSPI/SPI 1x UFS 2.1 1x SDIO 1x PCIe Gen2
Display Controller	Adreno 612 GPU Spectra™ 230 image processing engine (ISP) Adreno 443 VPU Video Decode/Encode 4k60(D)/1k60/(E)
Display Interfaces	MIPI-DSI (4 lanes), 1x DP v.1.4 (up to 4 Displays) Up to a maximum of 5 MP, e.g.: 2x 1920x1080 @ 60fps (FHD) + 1x 1280x720 @ 60fps
Network Interface	1x Ethernet, (RGMII) with up to 1Gbps
Audio Interface	2x I2S Audio
Security Device	Secure boot, secure debug, TrustZone, Qualcomm® Trusted Execution Environment, hardware supported KeyStore, HDCP v1.4 and 2.2 for DisplayPort, secure I ² C and secure SPI, AVB2.0 Crypto engines: Crypto engine v5 (CE5), DRBG/PRNG (FIPS-compliant), inline crypto engine (FIPS-compliant), ICE (In-line-crypto-engine) based disk encryption, PRNG with TRNG seed TrustZone services: Secure file system, secure display, and eFuse read/write, RPMB, Crypto lib
Miscellaneous	Watchdog Timer for system reset (programmable, 1s ... 600s) RTC 11x GPIO, configurable as input or output, interrupt capable 1x PWM Up to 4 cameras over 3 x 4-lane MIPI CSI-2 v1.3 (D-PHY 1.2, C-PHY 1.0) Note: 3rd MIPI CSI interface on RSVD-pins)
Feature Highlights	OSM, Size-L compatible
Firmware	UEFI Bootloader (Uboot on request)
OS Support	Yocto Linux Board Support Package Ubuntu Linux (on request)

Power Requirement	Power Supply +5V +/-5% Power Consumption 4W-5W typ.
Environment	Temperature Range: Commercial: 0° ... 70°C (operating) -20° ... 85°C (storage) Extended: -25° ... 85°C (operating) -40° ... 85°C (storage) Industrial: -40° ... 85°C (operating) -40° ... 85°C (storage) Humidity: 5 ... 95% (operating, non condensing) 5 ... 95% (storage, non-condensing)
Dimensions	45 x 45 mm
Certificates	UL / CE
Carrier	TRIA OSM-SB-EP5

Technical Data for MSC OSM-LF-IQ615

Order Reference

Order No.	Description	Reference	Status*
116416	OSM 1.2 size L module with Qualcomm IQ-615 2x A76 @1.9GHz + 6x A55 @1,6GHz, 3W CPU TDP, Graphics: Adreno 612 GPU, DSP: 1.1 TOPs, 2GB LPDDR4 SDRAM 3110MT/s, Ethernet: 1x 1Gbit RGMII, 8GB eMMC memory, PCIe: 1x PCIe Gen2 x1, TPM 2.0, Industrial Temperature -40°... +85°C (Engineering Sample - get in touch with your sales)	MSC OSM-LF-IQ-615-13N0501I-TN ES1 PCBES	PV
117842	OSM 1.2 size L module with Qualcomm IQ-615 2x A76 @1.9GHz + 6x A55 @1,6GHz, 3W CPU TDP, Graphics: Adreno 612 GPU, DSP: 1.1 TOPs, 4GB LPDDR4 SDRAM 3110MT/s, Ethernet: 1x 1Gbit RGMII, 16GB eMMC memory, PCIe: 1x PCIe Gen2 x1, TPM 2.0, Industrial Temperature -40°... +85°C (Engineering Sample - get in touch with your sales)	MSC OSM-LF-IQ-615-24N0501I-TN ES1 PCBES	PV
117843	OSM 1.2 size L module with Qualcomm IQ-615 2x A76 @1.9GHz + 6x A55 @1,6GHz, 3W CPU TDP, Graphics: Adreno 612 GPU, DSP: 1.1 TOPs, 8GB LPDDR4 SDRAM 3110MT/s, Ethernet: 1x 1Gbit RGMII, 32GB eMMC memory, PCIe: 1x PCIe Gen2 x1, TPM 2.0, Industrial Temperature -40°... +85°C (Engineering Sample - get in touch with your sales)	MSC OSM-LF-IQ-615-35N0501I-TN ES1 PCBES	PV
EXT-TBD4	OSM 1.2 size L module with Qualcomm IQ-615 2x A76 @1.9GHz + 6x A55 @1,6GHz, 3W CPU TDP, Graphics: Adreno 612 GPU, DSP: 1.1 TOPs, 2GB LPDDR4 SDRAM 3110MT/s, Ethernet: 1x 1Gbit RGMII, 8GB eMMC memory, PCIe: 1x PCIe Gen2 x1, TPM 2.0, Extended Temperature -25°... +85°C (Engineering Sample - get in touch with your sales)	MSC OSM-LF-IQ-615-13N0501E-TN ES1 PCBES	PV
EXT-TBD5	OSM 1.2 size L module with Qualcomm IQ-615 2x A76 @1.9GHz + 6x A55 @1,6GHz, 3W CPU TDP, Graphics: Adreno 612 GPU, DSP: 1.1 TOPs, 4GB LPDDR4 SDRAM 3110MT/s, Ethernet: 1x 1Gbit RGMII, 16GB eMMC memory, PCIe: 1x PCIe Gen2 x1, TPM 2.0, Extended Temperature -25°... +85°C (Engineering Sample - get in touch with your sales)	MSC OSM-LF-IQ-615-24N0501E-TN ES1 PCBES	PV
EXT-TBD6	OSM 1.2 size L module with Qualcomm IQ-615 2x A76 @1.9GHz + 6x A55 @1,6GHz, 3W CPU TDP, Graphics: Adreno 612 GPU, DSP: 1.1 TOPs, 8GB LPDDR4 SDRAM 3110MT/s, Ethernet: 1x 1Gbit RGMII, 32GB eMMC memory, PCIe: 1x PCIe Gen2 x1, TPM 2.0, Extended Temperature -25°... +85°C (Engineering Sample - get in touch with your sales)	MSC OSM-LF-IQ-615-35N0501E-TN ES1 PCBES	PV

Ordering Information for MSC OSM-LF-IQ615

*PV = Preferred variant; OR = on Request (in OEM quantities only)

Tria Technologies GmbH
Industriestr. 16
76297 Stutensee
info@tria-technologies.com

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