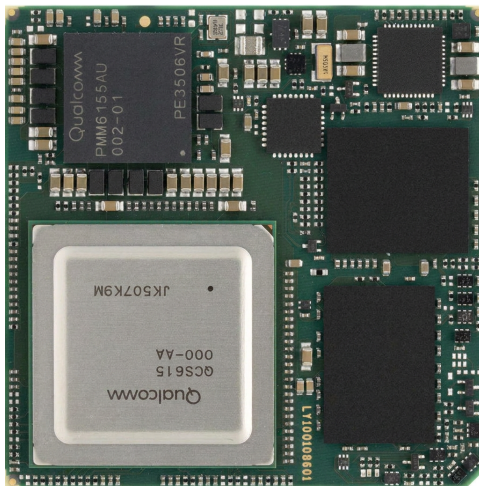


TRIA OSM-LF-IQ615

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
 - 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
- 3x UART, 2x SPI, 1x QSPI, 5x I2C, 2x I2S Audio
- Yocto Linux, Ubuntu (on request)

OSM



- 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 Contacts, 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 • 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 2x UART with 2-wire hand shake
Bus Interfaces	5x 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 I²C 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 26x GPIO, configurable as input or output, interrupt capable 2x 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
OS Support	Yocto Linux Board Support Package
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 TRIA OSM-LF-IQ615

Order Reference

Order No.	Description	Reference	Status*
121079	OSM module Size L (45x45 mm) with Qualcomm IQ615 (2x Cortex-A76 + 6x Cortex A55), 4GB LPDDR4, 16GB eMMC, eDP/DP, MIPI-DSI, 3x MIPI-CSI (Port A+B + RSVD), 1x GbE (RGMII), 1x PCIe, 1x USB3.0, 1x USB2.0, 1x UFS, TPM 2.0, Extended Temperature (-25..+85°C) (Engineering Sample - get in touch with your sales)	MSC OSM-LF-IQ615-24N0901E ES2 PCBES	OR
121945	OSM module Size L (45x45 mm) with Qualcomm IQ615 (2x Cortex-A76 + 6x Cortex A55), 8GB LPDDR4, 64GB eMMC, eDP/DP, MIPI-DSI, 3x MIPI-CSI (Port A+B + RSVD), 1x GbE (RGMII), 1x PCIe, 1x USB3.0, 1x USB2.0, 1x UFS, TPM 2.0, Industrial Temperature (-40..+85°C) (Engineering Sample - get in touch with your sales)	MSC OSM-LF-IQ615-36N0901I ES2 PCBES	OR
122150	OSM-SB-EP5 SBC with OSM-LF-IQ615 OSM Module (#121079) Qualcomm IQ615 (2x Cortex-A76 + 6x Cortex A55), 4GB LPDDR4, 16GB eMMC, TPM 2.0, Extended Temperature (-25..+85°C) (Engineering Sample - get in touch with your sales)	MSC OSM-SB-EP5-615-24N0901E ES2 PCBES	OR
122465	OSM-SB-EP5 SBC with OSM-LF-IQ615 OSM Module (#121945) Qualcomm IQ615 (2x Cortex-A76 + 6x Cortex A55), 8GB LPDDR4, 64GB eMMC, TPM 2.0, Industrial Temperature (-40..+85°C) (Engineering Sample - get in touch with your sales)	MSC OSM-SB-EP5-615-36N0901I ES2 PCBES	OR
121262	OSM module Size L (45x45 mm) with Qualcomm IQ615 (2x Cortex-A76 + 6x Cortex A55), 4GB LPDDR4, 16GB eMMC, eDP/DP, MIPI-DSI, 3x MIPI-CSI (Port A+B + RSVD), 1x GbE (RGMII), 1x PCIe, 1x USB3.0, 1x USB2.0, 1x UFS, TPM 2.0, Extended Temperature (-25..+85°C) (Get in touch with your sales for pre-orders)	MSC OSM-LF-IQ615-OC-24N0901E PCBFTX	PV

Ordering Information for TRIA OSM-LF-IQ615

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

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