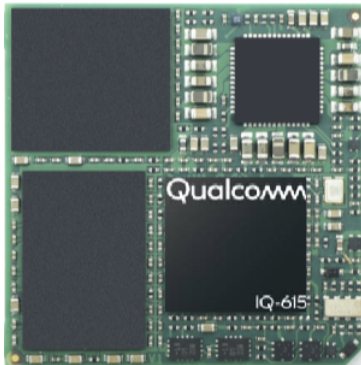



TRIA OSM-LF-IQ615

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
 - **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 Contacts, RM 1,25 mm
CPU	<p>Octal Core CPU powered by the Dragonwing IQ-615 Processor from Qualcomm</p> <ul style="list-style-type: none"> • Dual core Arm Cortex-A76 up to 1.9GHz • And hexa core Arm Cortex-A55 up to 1.6GHz <p>Hexagon™ V66 DSP with Dual hexagon Vector (1.1 TOPs)</p>
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	<p>1x UART Console with Rx, Tx only 1x UART with 2-wire hand shake 1x UART w/o hand shake</p>
Bus Interfaces	<p>6x I2C up to 400 Kbit/s 1x SPI + 1x QSPI/SPI 1x UFS 2.1 1x SDIO 1x PCIe Gen2</p>
Display Controller	<p>Adreno 612 GPU Spectra™ 230 image processing engine (ISP) Adreno 443 VPU Video Decode/Encode 4k60(D)/1k60/(E)</p>
Display Interfaces	<p>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</p>
Network Interface	1x Ethernet, (RGMII) with up to 1Gbps
Audio Interface	2x I2S Audio
Security Device	<p>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</p> <p>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</p> <p>TrustZone services: Secure file system, secure display, and eFuse read/write, RPMB, Crypto lib</p>
Miscellaneous	<p>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</p>
Feature Highlights	OSM, Size-L compatible
Firmware	UEFI Bootloader (Uboot on request)
OS Support	<p>Yocto Linux Board Support Package Ubuntu Linux (on request)</p>

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*
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)

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