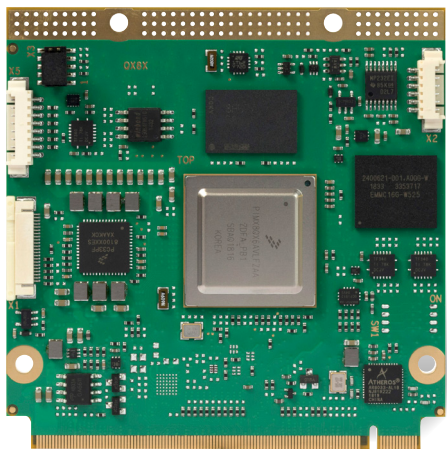


# ULTRA LOW POWER NXP i.MX8-X SERIES

## conga-QMX8X



- NXP i.MX8-X ARM Cortex-A35 and Cortex-M4F
- Ultra Low Power 2-4W
- Industrial Grade, Improved Reliability and Virtualization
- 3D Graphics up to two independent HD displays
- MIPI CSI-2 camera interface
- Extended longevity up to 15 years
- Temperature range up to -40°C .. +85°C

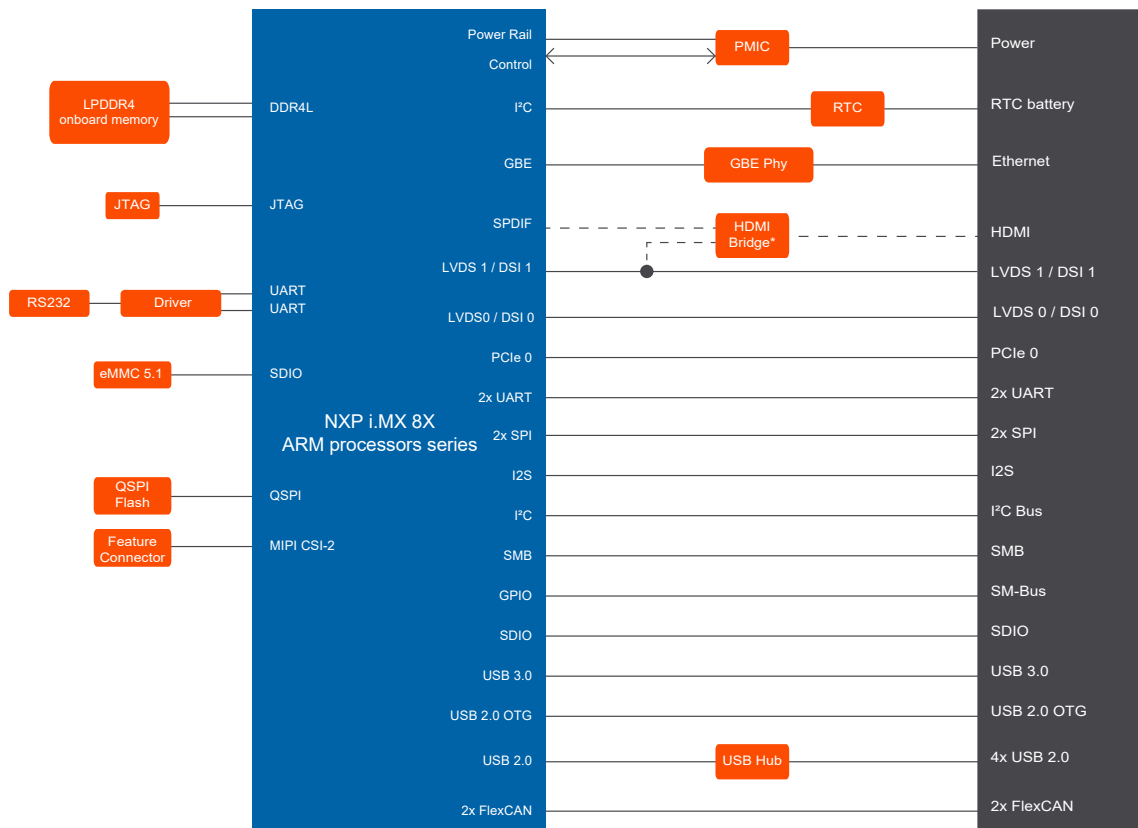


Formfactor	Qseven Rev. 2.1   70x70 mm <sup>2</sup>		
CPU	NXP i.MX8-X ARM Processor Cores		
		ARM Cortex-A35	ARM Cortex-M4F GPU
	i.MX8 QuadXPlus	4x	1x GC7000Lite
	i.MX8 DualXPlus	2x	1x GC7000Lite
i.MX8 DualX	2x	1x GC7000UltraLite	
DRAM	Up to 4 GByte onboard LPDDR4 memory   2400 MT/s		
Ethernet	1x Gbit Ethernet (opt. with IEEE 1588 support)		
I/O Interfaces	5x USB 2.0 (shared with 1x USB OTG client)   up to 1x USB 3.0   1x SDIO 3.0   1x PCIe 3.0   2x I <sup>2</sup> C Bus   2x SPI 1x UART offboard (with Handshake)   2x UART onboard   2x FlexCAN   GPIOs		
Mass Storage	eMMC 5.1 up to 64 GByte		
Sound	I <sup>2</sup> S   1x Tensilica® HiFi 4 DSP		
Graphics	Integrated in NXP i.MX8-X Series single GT7000Lite multimedia GPU VPU up to 4K h.265 dec / 1080p h.264 enc/dec   3D Graphics with up to 4 high performance vec4 shaders and 16 execution units up to 2 independent displays   OpenGL ES 3.1   Vulkan VX extensions   OpenCL 1.2 EP   OpenVG 1.1		
Video Interfaces	1x dual channel or 2x single channel LVDS 24 bit   opt. HDMI 1.3 through bridge (shared with second LVDS channel) 2x MIPI-DSI with 4-lanes shared with LVDS   1x MIPI-CSI 4-lanes		
Features	Watchdog Timer   I <sup>2</sup> C bus 400 kHz   JTAG debug interface   High Precision Real Time Clock		
Virtualization	Hardware Virtualization with Domain Separation   Multiple Operating System Support		
Security	High Assurance Boot support, SHE   Inline Encryption Engine (AES-128) TRNG, AES-128, AES-256, 3DES, ARC4, RSA4096, SHA-1, SHA-2, SHA-256, MD-5   RSA-1024, 2048, 3072, 4096 and secure key storage		
Boot Loader	U-Boot boot loader		
Operating Systems	Linux   Yocto   Android		
Power Consumption	Ultra Low Power Cortex A-35   Typ. application 2-5W @ 5V		
Temperature	Operating:	0 to +60°C commercial grade -40 to +85°C industrial grade	
	Storage:	-40 to +85°C	
Humidity	Operating:	10 to 90% r. H. non cond.	
	Storage:	5 to 95% r. H. non cond.	
Size	70 x 70 mm (2¾" x 2¾")		

# conga-QMX8X | Block diagram

conga-QMX8X

Qseven 2.1



# conga-QMX8X | Order Information

Article	PN	
conga-QMX8-X/QXP-4G eMMC16	016500	Qseven module with ultra low power NXP i.MX8 QuadXPlus processor with 4x ARM Cortex-A35 and 1x ARM Cortex-M4F, 4GB onboard LPDDR4 memory and 16GB onboard eMMC. Commercial temperature range.
conga-QMX8-X/DXP-2G eMMC16	016501	Qseven module with ultra low power NXP i.MX8 DualXPlus processor with 2x ARM Cortex-A35 and 1x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Commercial temperature range.
conga-QMX8-X/DX-2G eMMC16	016502	Qseven module with ultra low power NXP i.MX8 DualX processor with 2x ARM Cortex-A35 and 1x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Commercial temperature range.
conga-QMX8-X/QXP-2G eMMC16	016503	Qseven module with ultra low-power NXP i.MX8-X QuadXPlus processor with 4x ARM Cortex-A35 and 1x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Commercial temperature range.
conga-QMX8-X/i-QXP-4G eMMC16	016510	Qseven module with ultra low power NXP i.MX8 QuadXPlus processor with 4x ARM Cortex-A35 and 1x ARM Cortex-M4F, 4GB onboard LPDDR4 memory and 16GB onboard eMMC. Industrial temperature range.
conga-QMX8-X/i-DXP-2G eMMC16	016511	Qseven module with ultra low power NXP i.MX8 DualXPlus processor with 2x ARM Cortex-A35 and 1x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Industrial temperature range.
conga-QMX8-X/i-DX-2G eMMC16	016512	Qseven module with ultra low power NXP i.MX8 DualX processor with 2x ARM Cortex-A35 and 1x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Industrial temperature range.
conga-QMX8-X/i-QXP-2G eMMC16	016513	Qseven module with ultra low-power NXP i.MX8-X QuadXPlus processor with 4x ARM Cortex-A35 and 1x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Industrial temperature range.

Article	PN	
conga-QEVAL	007005	Evaluation platform for Qseven 2.0 ARM based modules. Based on standard conga-QEVAL with special jumper settings for ARM.