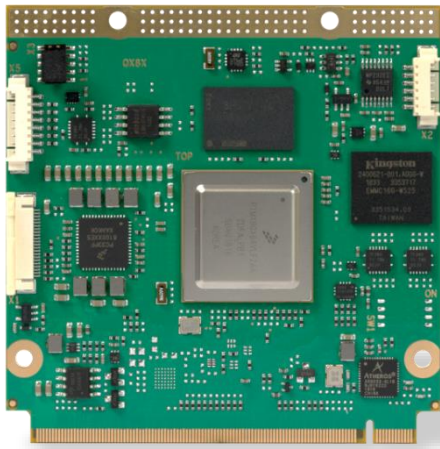


ULTRA LOW POWER NXP i.MX 8X SERIES

conga-QMX8-X

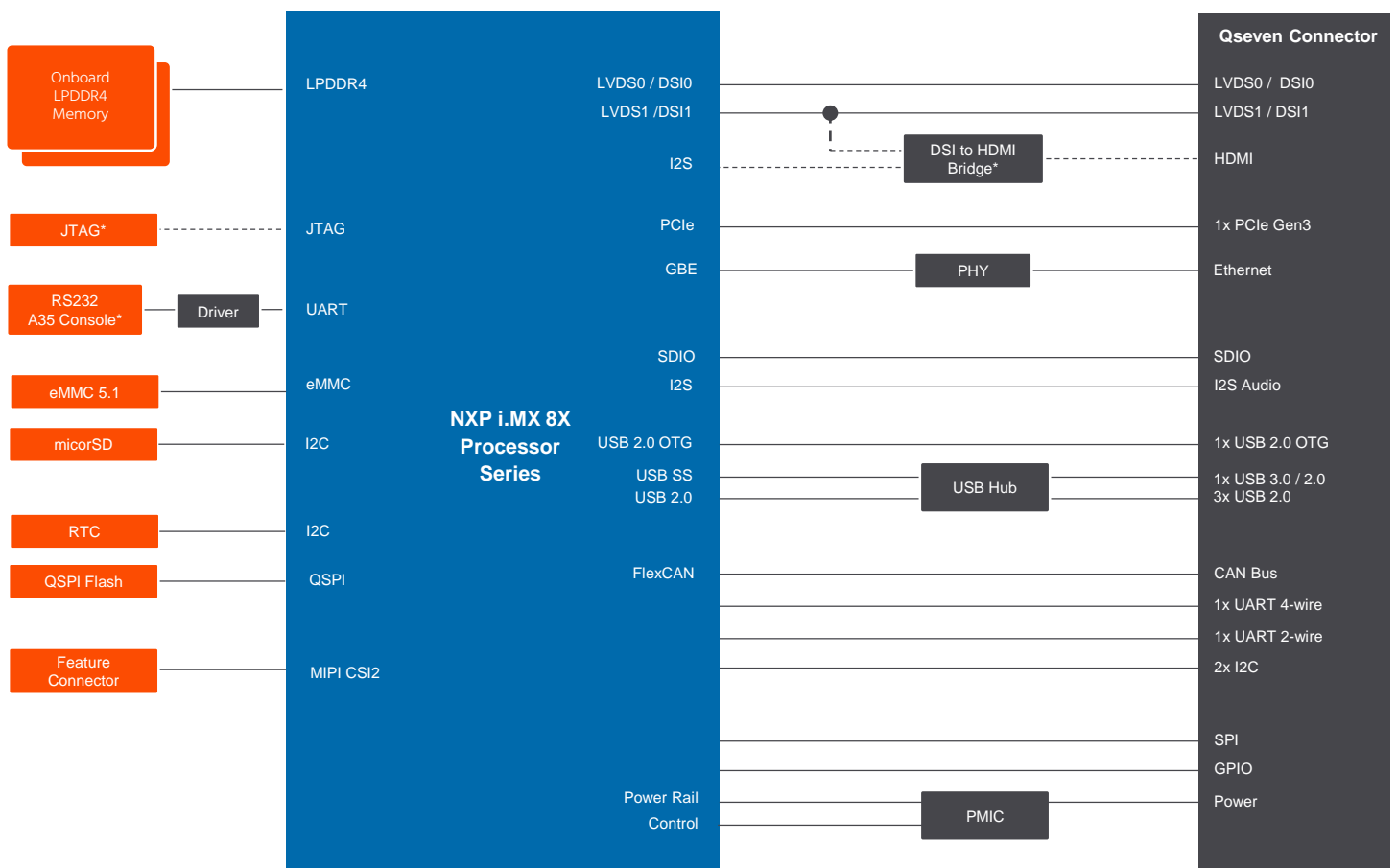


- NXP i.MX 8X processor series with ARM Cortex-A35 / M4F core complex
- Ultra low power architecture with 2-5W
- Highest reliability and improved virtualization
- Support for two independent HD displays
- Extended longevity up to 15 years
- Temperature range up to -40°C .. +85°C



Form factor	Qseven Rev. 2.1			
CPU	NXP i.MX8-X ARM Processors			
		ARM Cortex-A35	ARM Cortex-M4F	GPU
	i.MX 8QuadXPlus	4x	1x	1x GC7000Lite
	i.MX 8DualXPlus	2x	1x	1x GC7000Lite
DRAM	Up to 4 GByte onboard LPDDR4 memory 2400 MT/s			
Ethernet	1x Gbit Ethernet with IEEE 1588 support			
I/O Interfaces	Up to 4x USB 2.0 (1x shared with USB OTG client) 1x USB 3.0 1x SDIO 3.0 1x PCIe 3.0 I ² C Bus SPI 2x UART (1x with Handshake, 1x on MFG pins) 1x FlexCAN GPIOs			
Mass Storage	eMMC 5.1 up to 128 GByte			
Sound	I2S optional processor with HiFi 4 DSP			
Graphics	Integrated in NXP i.MX 8X Series GC7000Lite 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 2 nd LVDS channel) 2x MIPI-DSI with 4-lanes shared with LVDS 1x MIPI-CS12 4-lanes			
Features	Watchdog Timer I ² C bus 400 kHz Cortex-A35 Console optional 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			
Operating Systems	Linux Yocto Linux Android			
Power Consumption	Ultra Low Power Cortex A-35 Typ. application 2-5W @ 5V			
Temperature Range	Operating Temperature Range:	0 to +60°C commercial grade -40 to +85°C industrial grade		
	Storage Temperature Range:	-40 to +85°C		
Humidity	Operating: 10 - 90% r. H. non condensing	Storage: 5 - 95% r. H. non condensing		
Size	70 x 70 mm (23/4" x 23/4")			

conga-QMX8-X | Block Diagram



* Assembly Option

conga-QMX8-X | Order Information

Article	PN	Description
conga-QMX8-X/QXP-4G eMMC16	016500	Qseven module with ultra low power NXP i.MX 8QuadXPlus 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.MX 8DualXPlus 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.MX 8QuadXPlus 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/QXP-4G eMMC16/HDMI	016504	Qseven module with ultra low power NXP i.MX 8QuadXPlus processor with 4x ARM Cortex-A35 and 1x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Features HDMI bridge. Commercial temperature range.
conga-QMX8-X/i-QXP-4G eMMC16	016510	Qseven module with ultra low power NXP i.MX 8QuadXPlus 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.MX 8DualXPlus 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.MX 8QuadXPlus processor with 4x ARM Cortex-A35 and 1x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Industrial temperature range.
conga-QMX8-X/i-CSP-B	016550	Passive cooling solution for Qseven module conga-QMX8-X with lidded NXP i.MX 8X ARM processor. All standoffs are with 2.7mm bore hole.
conga-QMX8-X/i-CSP-T	016551	Passive cooling solution for Qseven module conga-QMX8-X with lidded NXP i.MX 8X ARM processor. All standoffs are with M2.5mm thread.
conga-QMX8-X/i-HSP-B	016552	Heat spreader solution for Qseven module conga-QMX8-X with lidded NXP i.MX 8X ARM processor. All standoffs are with 2.7mm bore hole.
conga-QMX8-X/i-HSP-T	016553	Heat spreader solution for Qseven module conga-QMX8-X with lidded NXP i.MX 8X ARM processor. All standoffs are with M2.5mm thread.
conga-QEVAL/Qseven 2.0 ARM	007005	Evaluation carrier board for Qseven ARM modules.