

HIGH Performance NXP i.MX 8 Series

conga-QMX8

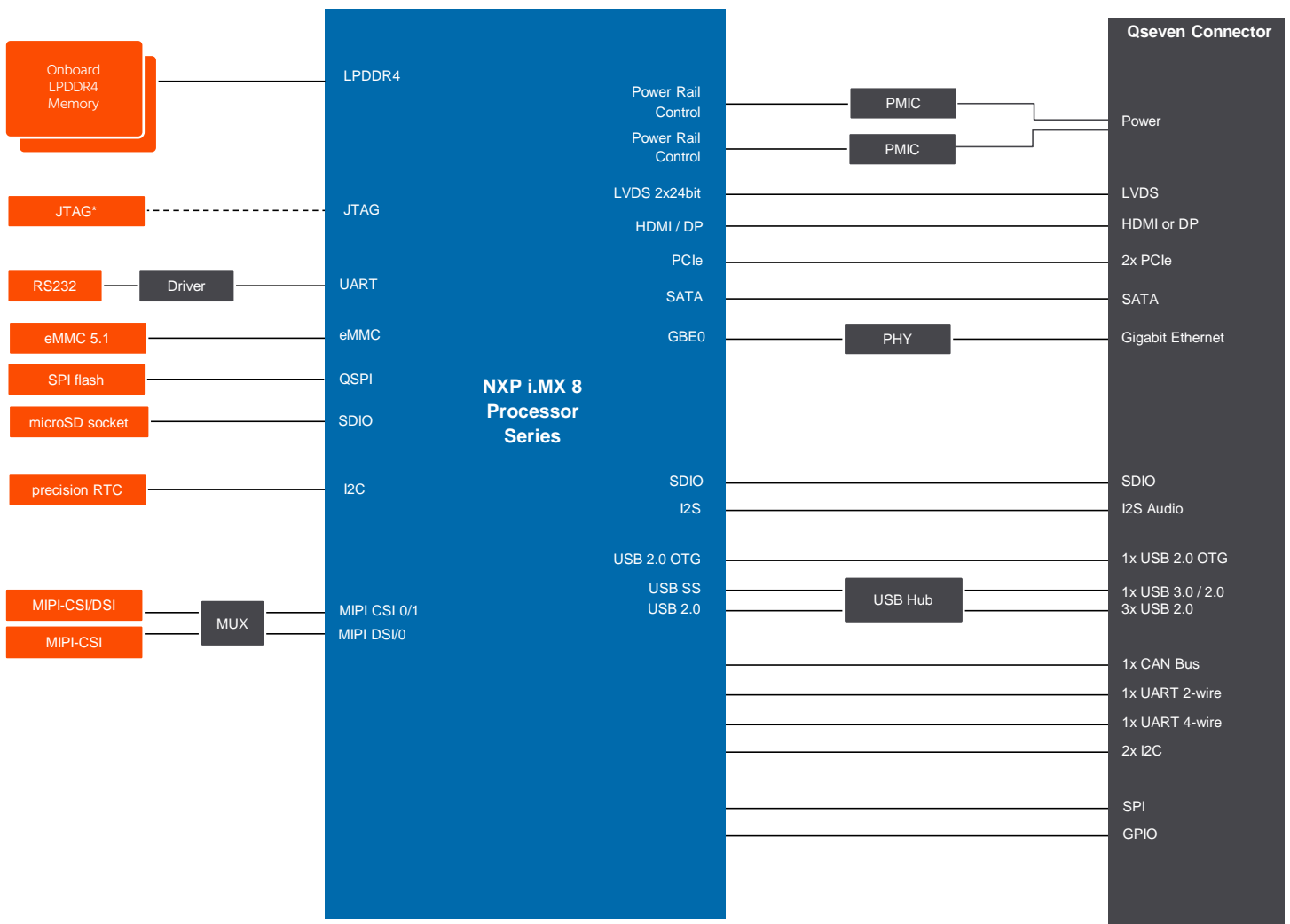


- NXP i.MX 8 processor series with ARM Cortex-A72 / A53 / M4F core complex
- Advanced Performance and Virtualization
- Graphics up to 4k display resolution
- Vision extensions and dual MIPI camera support
- Extended longevity up to 15 years
- Temperature range up to -40°C ...+85°C



Form Factor	Qseven Rev. 2.1															
CPU	NXP i.MX 8 ARM Processors															
	<table border="1"> <thead> <tr> <th></th> <th>ARM Cortex-A72</th> <th>ARM Cortex-A53</th> <th>ARM Cortex-M4F</th> <th>GPU</th> </tr> </thead> <tbody> <tr> <td>i.MX 8QuadMax</td> <td>2x</td> <td>4x</td> <td>2x</td> <td>2x GC7000 XSVX</td> </tr> <tr> <td>i.MX 8QuadPlus</td> <td>1x</td> <td>4x</td> <td>2x</td> <td>2x GC7000 XSVX</td> </tr> </tbody> </table>		ARM Cortex-A72	ARM Cortex-A53	ARM Cortex-M4F	GPU	i.MX 8QuadMax	2x	4x	2x	2x GC7000 XSVX	i.MX 8QuadPlus	1x	4x	2x	2x GC7000 XSVX
	ARM Cortex-A72	ARM Cortex-A53	ARM Cortex-M4F	GPU												
i.MX 8QuadMax	2x	4x	2x	2x GC7000 XSVX												
i.MX 8QuadPlus	1x	4x	2x	2x GC7000 XSVX												
DRAM	Up to 8 GByte onboard LPDDR4 memory 3200 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) up to 1x USB 3.0 1x SDIO 3.0 1x SATA 6 Gbit/s 2x PCIe 3.0 I ² C Bus SPI 2x UART (1x with Handshake, 1x shared with MFG pins) 1x CAN FD GPIOs															
Mass Storage	eMMC 5.1 up to 128 Gbyte onboard microSD 3.0 card socket															
Audio	1x I ² S optional processors with HiFi 4 DSP for advanced echo cancellation and speech recognition															
Graphics	Integrated NXP i.MX 8 Series dual core GC7000 XSVX multimedia GPU VPU up to h.264 decode (4Kp30) and H.264 encode (1080p30) 3D Graphics with up to 16 Vec4 shaders and 64 EUs Split-GPU architecture up to 3 independent displays OpenGL ES 3.2 Vulkan OpenVX 1.1 OpenCL 1.2 EP OpenVG 1.1															
Video Interfaces	1x HDMI 2.0a with HDCP 2.2 1x dual channel LVDS 24 bit DP 1.3 (shared with HDMI) 2x MIPI-CSI 4-lane through flat-foil connector optional 1x MIPI-DSI shared with MIPI-CSI															
Features	Watchdog Timer I ² C bus 400 kHz Cortex-A35 Console optional JTAG debug interface High Precision Real Time Clock															
Virtualization	Multiple Domain Hardware Virtualization Multiple Operating System support System MMU Resource partitioning and split GPU															
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	Typ. application 5-15W @ 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 (2¾" x 2¾")															

conga-QMX8 | Block Diagram



* Assembly Option

conga-QMX8 | Order Information

Article	PN	Description
conga-QMX8/QCM-4GB eMMC16	016400	Qseven module with high performance NXP i.MX 8Quad Max processor with 2x ARM Cortex-A72, 4x ARM Cortex-A53 and 2x ARM Cortex-M4F, 4GB onboard LPDDR4 memory and 16GB onboard eMMC. Commercial temperature range.
conga-QMX8/QCP-4GB eMMC16	016401	Qseven module with high performance NXP i.MX 8Quad Plus processor with 1x ARM Cortex-A72, 4x ARM Cortex-A53 and 2x ARM Cortex-M4F, 4GB onboard LPDDR4 memory and 16GB onboard eMMC. Commercial temperature range.
conga-QMX8/QCP-2GB eMMC16	016403	Qseven module with high performance NXP i.MX 8QuadPlus processor with 1x ARM Cortex-A72, 4x ARM Cortex-A53 and 2x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Commercial temperature range.
conga-QMX8/i-QCM-4GB eMMC16	016421	Qseven module with high performance NXP i.MX 8Quad Max processor with 2x ARM Cortex-A72, 4x ARM Cortex-A53 and 2x ARM Cortex-M4F, 4GB onboard LPDDR4 memory and 16GB onboard eMMC. Industrial temperature range.
conga-QMX8/i-QCP-4GB eMMC16	016422	Qseven module with high performance NXP i.MX 8Quad Plus processor with 1x ARM Cortex-A72, 4x ARM Cortex-A53 and 2x ARM Cortex-M4F, 4GB onboard LPDDR4 memory and 16GB onboard eMMC. Industrial temperature range.
conga-QMX8/i-QCP-2GB eMMC16	016424	Qseven module with high performance NXP i.MX 8QuadPlus processor with 1x ARM Cortex-A72, 4x ARM Cortex-A53 and 2x ARM Cortex-M4F, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Industrial temperature range.
conga-QMX8/CSP-B	016450	Passive cooling solution for Qseven module conga-QMX8 with lidded NXP i.MX8 ARM processor. All standoff are with 2.7mm bore hole.
conga-QMX8/CSP-T	016451	Passive cooling solution for Qseven module conga-QMX8 with lidded NXP i.MX8 ARM processor. All standoff are M2.5mm thread.
conga-QMX8/HSP-B	016452	Standard heat spreader for Qseven module conga-QMX8 with lidded NXP i.MX8 ARM processor. All standoff are with 2.7mm bore hole.
conga-QMX8/HSP-T	016453	Standard heat spreader for Qseven module conga-QMX8 with lidded NXP i.MX8 ARM processor. All standoff are M2.5mm thread.
conga-QEVAL/Qseven 2.0 ARM	007005	Evaluation carrier board for Qseven ARM modules.
conga-HDMI adapter full-HD	500025	HDMI adapter card with support for full-HD resolution for Qseven ARM evaluation carrier board. Suitable for ARM Qseven modules on conga-QEVAL 2.0 ARM.
Cab-RS232-Debug-ARM	48000023	RS232 adapter cable for conga-QMX6 module console connection.