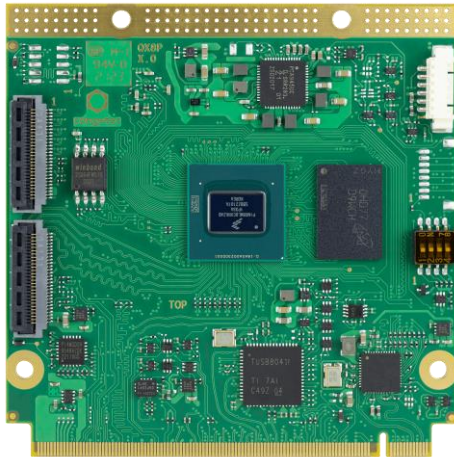


NXP i.MX 8M Plus for Industry 4.0 & AI

conga-QMX8-Plus

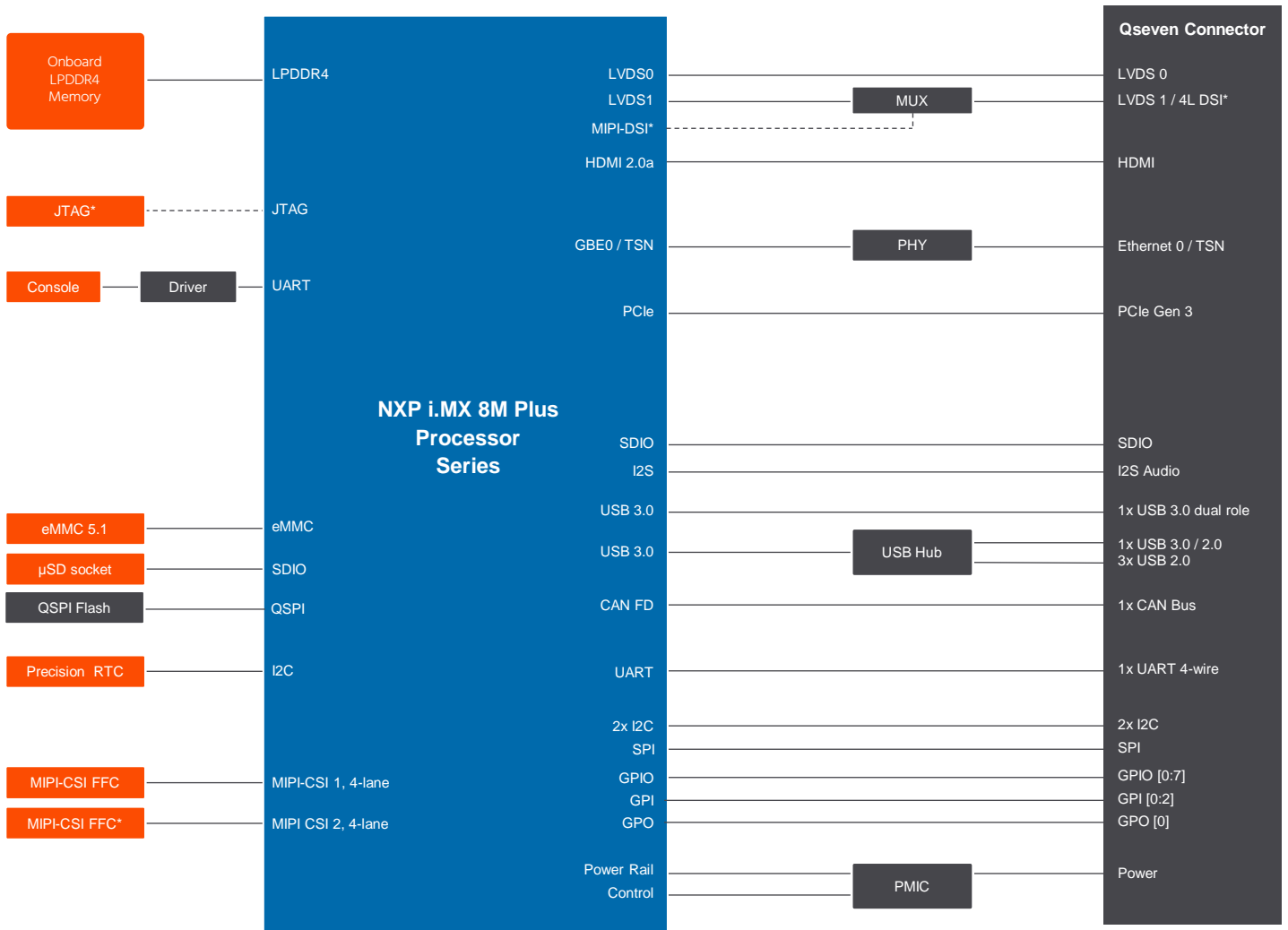


- NXP i.MX 8M Plus 14nm processor series with ARM 4-Core Cortex-A53 / M7 + NPU
- Enhanced AI, Machine Learning and Vision capabilities featuring NPU and integrated camera ISP's
- Ultra low power architecture with 2-5W
- Extended longevity up to 15 years
- Temperature range up to -40°C .. +85°C



Form factor	Qseven Specification 2.1				
CPU SoC	NXP i.MX 8M Plus Processor Cores				
		ARM Cortex-A53	ARM Cortex-M7	NPU	GPU
	i.MX 8M Plus Quad (consumer) i.MX 8M Plus Quad (industrial)	4x @ 1.8 GHz 64bit 4x @ 1.6 GHz 64bit	1x @ 800MHz 1x @ 800MHz	1x up to 2.3 TOPS 1x up to 2.3 TOPS	GC7000UL/GC520L GC7000UL/GC520L
DRAM	Up to 6 GByte onboard LPDDR4 memory 4000 MT/s inline ECC				
AI & Machine Learning	Neural Processing Unit (NPU) with up to 2.3 TOPS NXP eIQ Machine Learning SW tools and libraries				
Ethernet	1x Gbit Ethernet with IEEE 1588 and TSN Support				
I/O Interfaces	1x dual-role USB 3.0 3x USB 2.0 1x USB 3.0 1x SDIO 3.0 1x onboard µSD card socket 1x PCIe 3.0 2x I ² C 1x SPI 1x UART with Handshake 1x CAN FD 12x GPIOs				
Mass Storage	eMMC 5.1 up to 128 GByte SPI NOR Flash up to 32 MByte				
Sound	1x I ² S HiFi 4 DSP				
Graphics	Integrated in SoC GC7000UL 3D graphics with 2 high performance vec4 shaders GC520L 2D graphics VPU up to 1080p60 H.265/H.264 decoding and encoding OpenGL ES 3.1 Vulkan OpenCL 1.2 FP OpenVG 1.1 2 independent displays				
Video Interfaces	1x dual channel 24-bit LVDS 1x HDMI 2.0a 1x MIPI-DSI 4-lane shared with second LVDS channel (optional) Up to 2x MIPI-CSI 4-lane onboard connectors 2x integrated Image Signal Processors (ISP) for cameras with up to 12 MP resolution				
Features	Watchdog Timer Cortex-A53 Console optional JTAG debug interface High Precision Real Time Clock				
Security	Cryptographic Acceleration and Assurance Module (CAAM) Resource Domain Controller ARM®TrustZone® High Assurance Boot support Encryption Engine AES-128/192/256, 3DES, ARC4, RSA4096, TRNG SHA-1, SHA-2, SHA-256, MD-5 RSA-1024, 2048, 3072, 4096 and secure key storage side channel attack resistance				
Boot Loader	U-Boot boot loader				
Operating Systems	Linux, Yocto Project Android				
Power Consumption	Typical 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 cond.		Storage: 5 - 95% r. H. non cond.		
Size	70mm x 70 mm				

conga-QMX8-Plus | Block Diagram



* Assembly Option