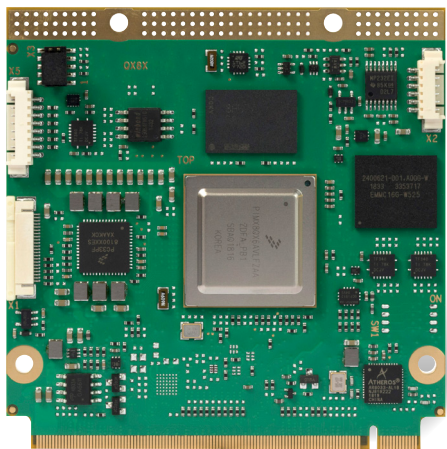
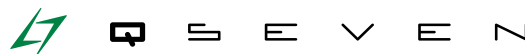


ULTRA LOW POWER NXP i.MX8-X SERIES

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

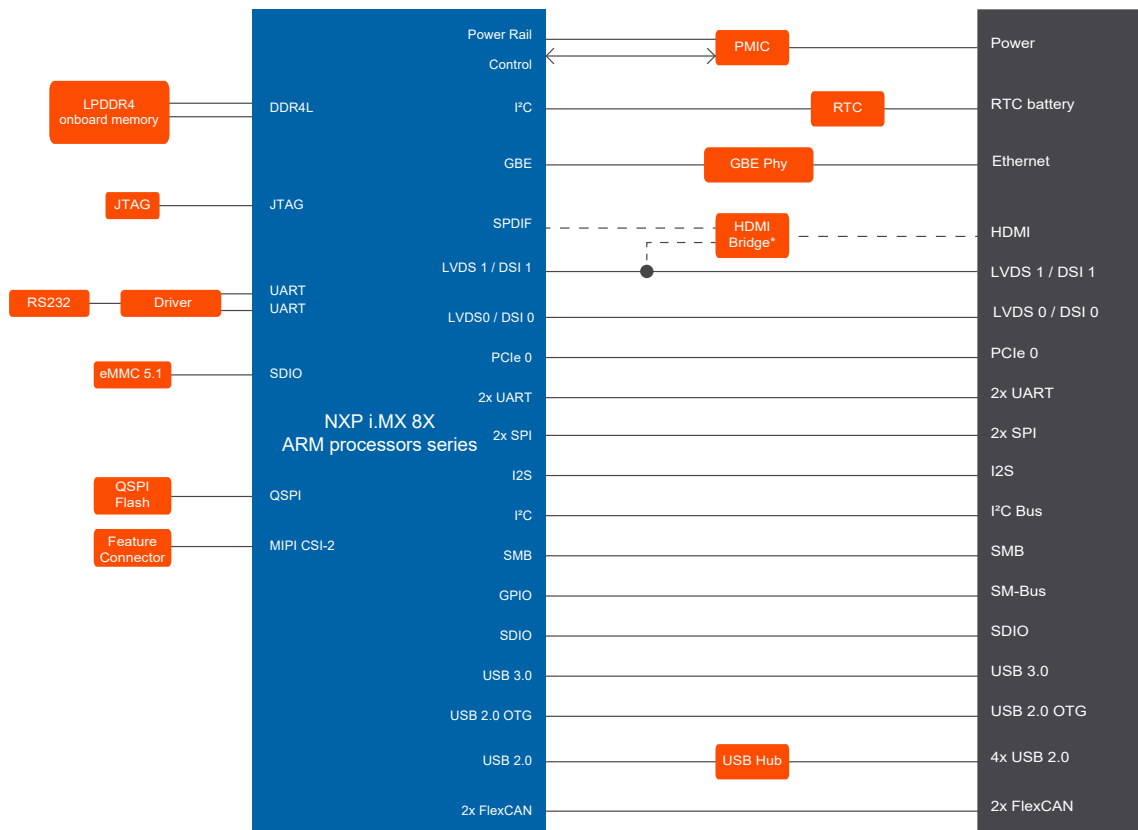


| | | | |
|-------------------|---|--|--------------------|
| Formfactor | Qseven Rev. 2.1 70x70 mm ² | | |
| CPU | NXP i.MX8-X ARM Processor Cores | | |
| | | ARM Cortex-A35 | ARM Cortex-M4F GPU |
| | i.MX8 QuadXPlus | 4x | 1x GC7000Lite |
| | i.MX8 DualXPlus | 2x | 1x GC7000Lite |
| | i.MX8 DualX | 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 ² 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 ² 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 ² 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



* stuffing option

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. |

© 2018 congatec AG. All rights reserved.

All data is for information purposes only. Although all the information contained within this document is carefully checked, no guarantee of correctness is implied or expressed. Product names, logos, brands, and other trademarks featured or referred are the property of their respective trademark holders. These trademark holders are not affiliated with congatec AG. Rev. Nov. 12, 2018 MR