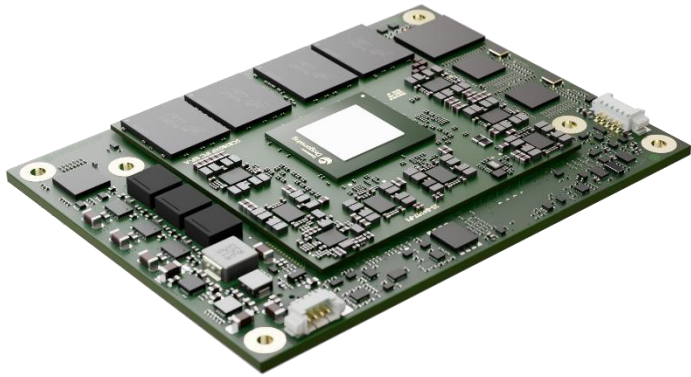


Qualcomm® Dragonwing™ IQ-X Series conga-HPC/mIQ-X



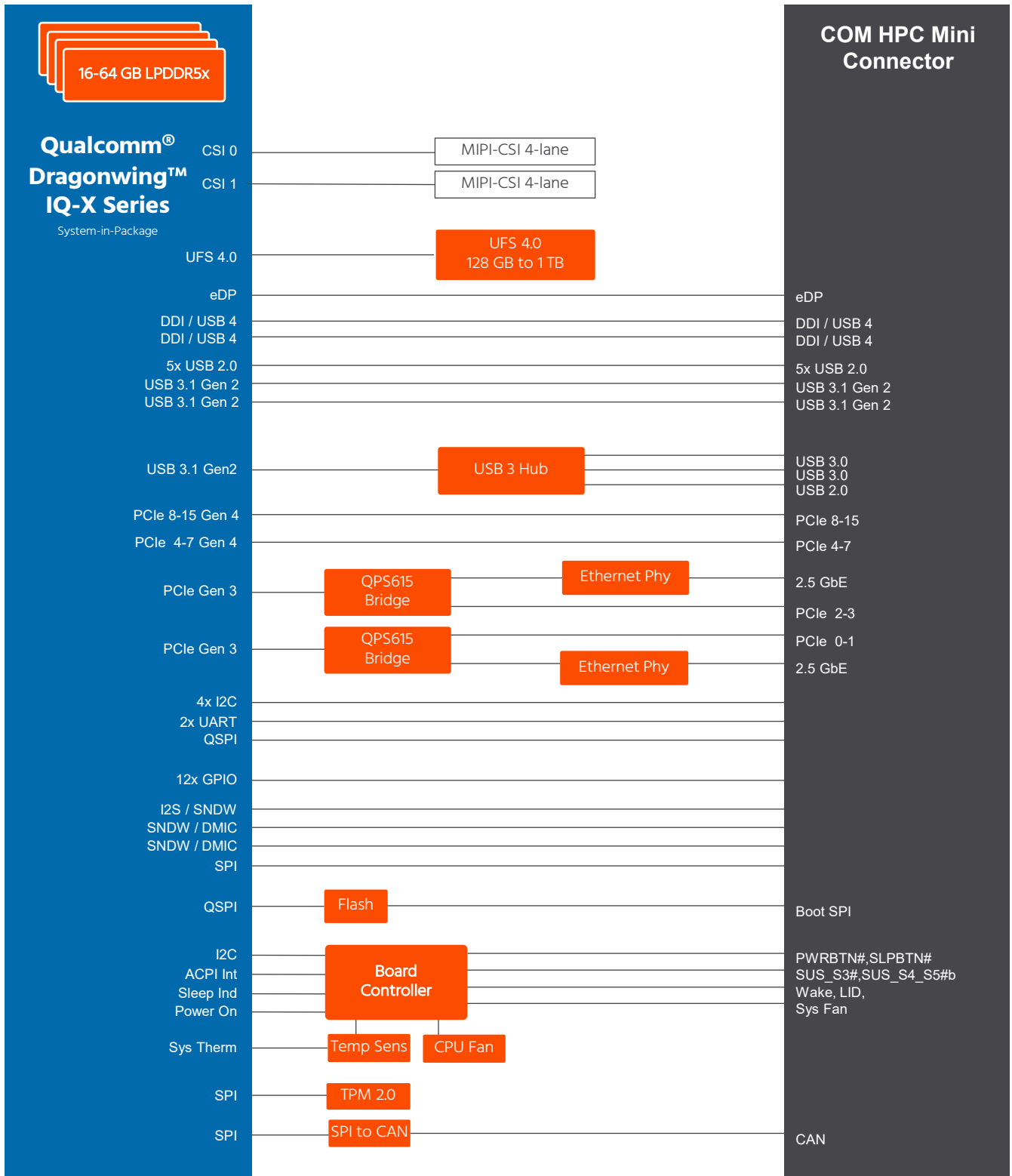
- First high-performance ARM on COM-HPC Mini
- Up to 12 Qualcomm® Oryon™ CPU cores
- Qualcomm® Hexagon™ NPU with 45 TOPS
- High performance Qualcomm® Adreno™ GPU
- PCI Express Gen 4 | USB 4
- Industrial Temperature Range -40°C to +85°C

COM+HPC®

Form Factor	COM-HPC® Mini	
CPUs	Qualcomm® Dragonwing™ IQ-X Series modules featuring Oryon™ CPU with up to 12 cores	
DRAM	Soldered down LPDDR5x memory from 16GB up to 64GB capacity up to 8400 MT/s	
Mass Storage	UFS 4.0 SSD up to 1 TB capacity	
Graphics	Qualcomm® Adreno™ GPU Qualcomm® Spectra™ ISP	
AI Acceleration	Qualcomm® Hexagon™ NPU with up to 45 TOPS	
Display	Up to 2x DDI (2x shared with USB4) eDP v1.4 up to 4k (UHD) resolution	
Ethernet	2x 2.5 GbE via Qualcomm® QCA8081 Ethernet PHY transceiver IEEE 1588v2 support MACsec	
I/O Interfaces	Up to 16x PCIe lanes (12x PCIe Gen4 + 4x PCIe Gen3) Up to 2x USB 4 2x USB 3.1 Gen2 + 2x USB 3.0 6x USB2.0 2x 4-lane CSI 2x UART 2x UART 12x GPIOs QSPI GP SPI 4x I2C CAN	
Audio	I2S SoundWire (optional)	
Embedded Controller	Multi-stage Watchdog Manufacturing and Board Information Board Statistics Power Loss Control Hardware Health Monitoring System FAN control	
Embedded BIOS Feature	AMI Aptio® V UEFI firmware for ARM 64 Mbyte serial SPI with congatec Embedded BIOS feature OEM Logo OEM CMOS default settings LCD Control Display Auto Detection Backlight Control Flash Update	
Security	Trusted Platform Module (TPM 2.0)	
Power Management	Embedded Controller ACPI with battery support	
Operating Systems	Ubuntu Pro Linux Yocto Microsoft® Windows 11 IoT Enterprise LTSC	
Temperature	Operating: -40°C to 85°C	Storage: -40°C to 85°C
Humidity	Operating 10% to 85% r. H. non cond.	Storage 5% to 85% r. H. non cond.
Size	95 x 70 mm	



conga-HPC/mIQ-X | Block Diagram



 Assembly Option

conga-HPC/mIQ-X | Modules Order Information

Article	PN	Description
conga-HPC/mIQ-X7-64G UFS128	053100	COM-HPC Mini module based on Qualcomm® Dragonwing IQ-X7 with 12 Oryon CPU cores up to 3.4GHz 64GB soldered down LPDDR5x memory Adreno GPU Hexagon NPU with 45 TOPS Adreno DPU Spectra ISP 6MB system cache 128GB onboard UFS 28-45W TDP Industrial grade temperature range from -40°C to 85°C.
conga-HPC/mIQ-X7-32G UFS128	053101	COM-HPC Mini module based on Qualcomm® Dragonwing IQ-X7 with 12 Oryon CPU cores up to 3.4GHz 32GB soldered down LPDDR5x memory Adreno GPU Hexagon NPU with 45 TOPS Adreno DPU Spectra ISP 6MB system cache 128GB onboard UFS 28-45W TDP Industrial grade temperature range from -40°C to 85°C.
conga-HPC/mIQ-X7-16G UFS128	053102	COM-HPC Mini module based on Qualcomm® Dragonwing IQ-X7 with 12 Oryon CPU cores up to 3.4GHz 16GB soldered down LPDDR5x memory Adreno GPU Hexagon NPU with 45 TOPS Adreno DPU Spectra ISP 6MB system cache 128GB onboard UFS 28-45W TDP Industrial grade temperature range from -40°C to 85°C.
conga-HPC/mIQ-X5-32G UFS128	053103	COM-HPC Mini module based on Qualcomm® Dragonwing IQ-X5 with 8 Oryon CPU cores up to 3.4GHz 32GB soldered down LPDDR5x memory Adreno GPU Hexagon NPU with 45 TOPS Adreno DPU Spectra ISP 6MB system cache 128GB onboard UFS 28-45W TDP Industrial grade temperature range from -40°C to 85°C.
conga-HPC/mIQ-X5-16G UFS128	053104	COM-HPC Mini module based on Qualcomm® Dragonwing IQ-X5 with 8 Oryon CPU cores up to 3.4GHz 16GB soldered down LPDDR5x memory Adreno GPU Hexagon NPU with 45 TOPS Adreno DPU Spectra ISP 6MB system cache 128GB onboard UFS 28-45W TDP Industrial grade temperature range from -40°C to 85°C.

conga-HPC/mIQ-X | Accessories Order Information

Article	PN	Description
conga-HPC/mIQ-X-CSA-B	053150	Standard active cooling solution for COM-HPC module conga-HPC/mIQ-X with 24.5mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-HPC/mIQ-X-CSA-T	053151	Standard active cooling solution for COM-HPC module conga-HPC/mIQ-X with 24.5mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-HPC/mIQ-X-CSP-B	053152	Standard passive cooling solution for COM-HPC module conga-HPC/mIQ-X with 23.7mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-HPC/mIQ-X-CSP-T	053153	Standard passive cooling solution for COM-HPC module conga-HPC/mIQ-X with 23.7mm overall heatsink height. All standoffs are M2.5mm threaded.
conga-HPC/mIQ-X-HSP-B	053154	Standard heatspreader for COM-HPC module conga-HPC/mIQ-X. All standoffs are with 2.7mm bore hole.
conga-HPC/mIQ-X-HSP-T	053155	Standard heatspreader for COM-HPC module conga-HPC/mIQ-X. All standoffs are M2.5mm threaded.