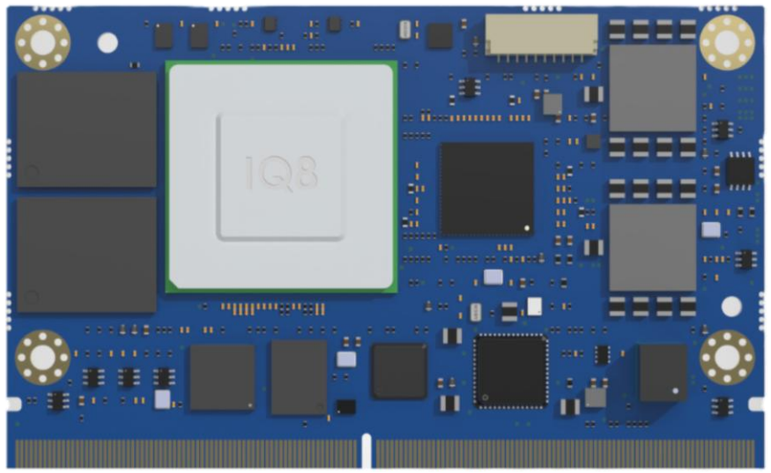
SmarCore iQ8

This Engicam module delivers on-device AI performance with industrial-grade features and advanced camera, and advanced compute performance at low-power, based on SMARC® standard. SmarCore iQ8 is based on Qualcomm Dragonwing™ iQ8 Series for real-time and high-performance applications.



HIGHLIGHTS

- Standard SMARC 2.2
- Powerful Qualcomm Dragonwing IQ8 Series with NPU, GPU and VPU
- Suitable for IoT and advanced AI applications

APPLICATIONS

Artificial Intelligence · Industrial · Digital Signage Infotainment · Transportation · Automotive · Avionics · Surveillance · Robotics · Biomedical/ Medical devices · Gaming · Home Automation

FEATURES

CPU	Qualcomm Dragonwing IQ-8275
CORES	• 2x Kryo Gold Prime @ 2.35 GHz • 2x Kryo Gold @ 2.1 GHz • 4x Kryo Silver @ 1.95 GHz • MCU-like Subsystem (4x real-time cores @ 1.85 GHz)
MEMORY	Up to 32GB LPDDR5x@6400MT/s
AI & GRAPHICS	- Qualcomm® Hexagon™ 40 TOPS (dense) NPU - Adreno 623 GPU • OpenGL ® ES 3.2 • Vulkan ® 1.2 • OpenCL 2.0
VIDEO INTERFACES	• 2x MIPI-CSI 2,4-lane • MIPI-DSI/LVDS • DP • HDMI
VIDEO PROCESSING	• Up to 4K135 AV1, HEVC, H.264/H.265/VP9/ MPEG-2 decoder • Up to 4K85 HEVC, H.265/H.264 encoder
AUDIO	• 2x I²S interfaces
NETWORKING	• 1x up to 2.5 Gb Ethernet interface • 1x 1Gb Ethernet interface (1x RGMII)- MCU-like Subsystem
USB	• 1x USB 3.0 • 4xUSB 2.0 HUB • 1x USB 2.0 OTG
MASS STORAGE	• Starting from 8GB eMMC drive soldered on-board • UFS3.1 option
PERIPHERAL INTERFACES	UART,CAN, SPI, I²C, GPIOs
PCIE	2x PCIe Gen4 2-lane or 1x PCIe Gen4 4-lane
OPERATING SYSTEM	Linux Yocto
POWER SUPPLY	+5V DC
DIMENSIONS	Standard SMARC short size module
OPERATING TEMPERATURE*	Industrial qualified

* Valid for all components except CPU. Customer shall consider junction temperature for CPU. Temperature will widely depend on application. Specific cooling solutions could be necessary for the final system.

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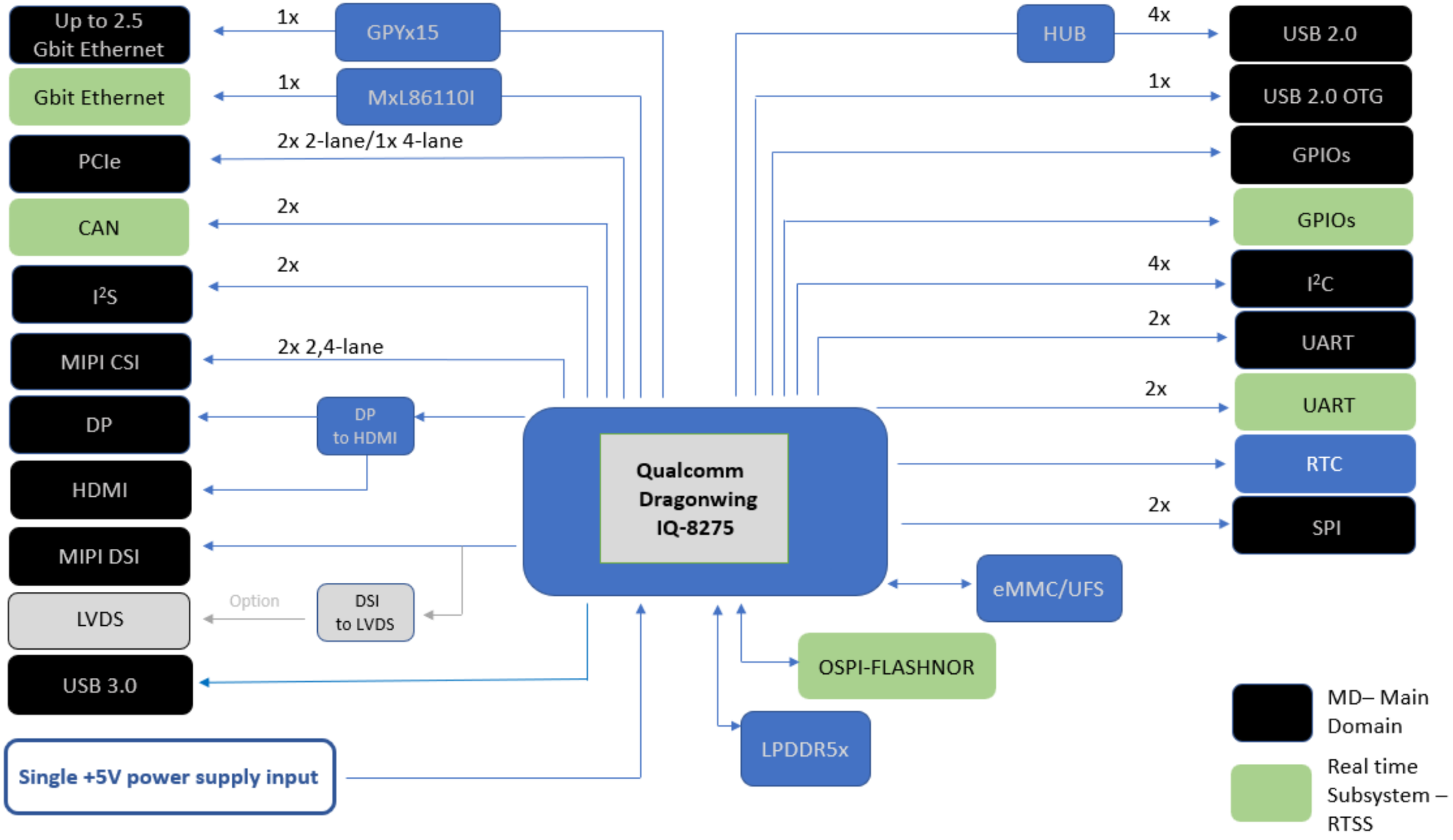
BLOCK DIAGRAM