SmarCore MX8MPlus

This Engicam module for machine learning, IoT connectivity, multimedia and HMI applications is based on SMARC standard. SmarCore MX8M Plus is based on NXP ® i.MX 8M Plus equipped with Cortex ® -A53 cores plus Cortex®-M7 with NPU (Neural Processing Unit) up to 2.3 TOPS.

HIGHLIGHTS

- Standard SMARC 2.1
- Powerful quad Arm ® Cortex -A53 processor with NPU
- Suitable for machine learning, vision and advanced multimedia applications

APPLICATIONS

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

FEATURES

CPU	NXP® i.MX 8M Plus
CORES	Quad Arm Cortex-A53 @1.8GHz and Cortex-M7 @800MHz
MEMORY	Up to 4GB LPDDR4
GRAPHICS	GC7000UL (2 shaders), OpenGL ES 2.0/3.0/3.1, Vulkan, OpenCL 1.2; GC520 (2D)
VIDEO INTERFACES	• LVDS 18/24bit up to Full HD • MIPI-DSI – 4 lanes option • HDMI up to Full HD • 2x MIPI-CSI - 4 lanes
VIDEO PROCESSING	• 1080p60 HEVC (h.265, VP9, VP8) dec • 1080p60 HEVC (h.265) enc
AUDIO	I²S interface
NETWORKING	2x GB Ethernet interface
USB	• Up to 5x USB (3x USB 2.0 + 2x USB 3.0)
MASS STORAGE	Starting from 8GB eMMC drive soldered on-board
PERIPHERAL INTERFACES	UART, I²C, JTAG, CAN, SDIO, SPI, GPIOs
PCIE	1x PCIe Gen3
OPERATING SYSTEM	• Linux • Yocto • Android
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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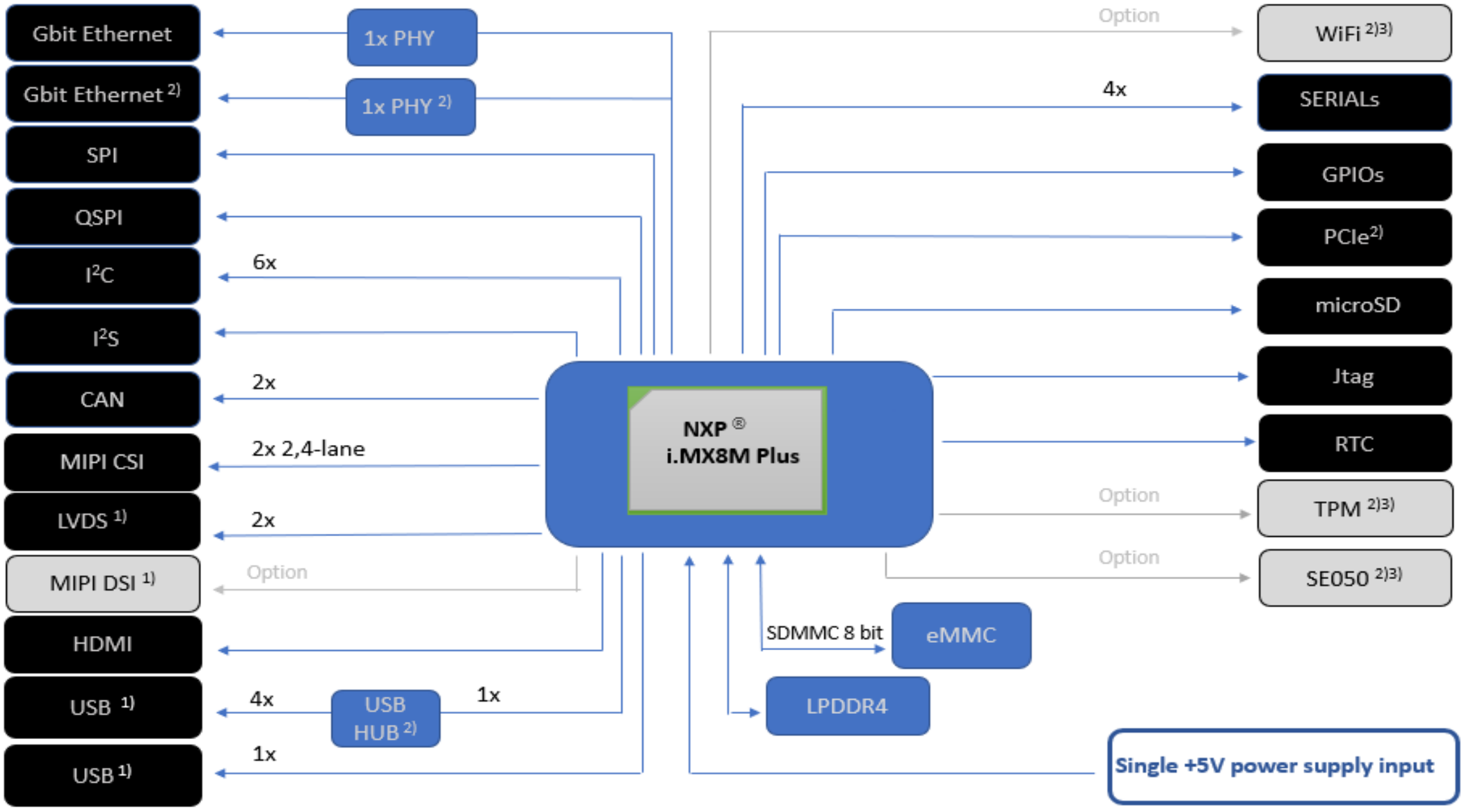
BLOCK DIAGRAM



1) For further information see related chapter
2) Not available in the BASIC version
3) Only on request