i.Core MX93 is an energy-efficient SOM suitable for machine learning, IoT, industrial and automotive device based on the newest NXP®'s i.MX 93 processor.

The new module is equipped with Arm® Cortex®-A55 @ up to 1.7 GHz processor with dedicated NPU. Includes industrial features and temperature grade, a wide set of peripherals and connectivity options such as 2x USB 2.0, and several display outputs.
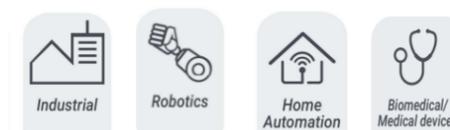

HIGHLIGHTS

- Standard Edimm 2.0
- Powerful dual Arm Cortex - A55 processor with Neural Processing Unit (NPU)
- Suitable for high performance ML applications

APPLICATIONS

Industrial   Robotics   Home Automation   Biomedical/Medical devices

FEATURES

CPU	NXP i.MX 93	
CORES	2x Arm Cortex -A55 @ up to 1.7 GHz processor and 1x Arm Cortex-M33 @250Mhz.	
MEMORY	Up to 2GB LPDDR4 @3700MTs	
AI & GRAPHICS	Arm® Ethos™ U-65 microNPU Hardware Compositor for blending/composition, resize, color space graphics conversion	
VIDEO INTERFACES	• Single channel LVDS up to 1366x768 or 1280x800 • MIPI-DSI – 4 lanes up to 1920x1200 • MIPI-CSI	
NETWORKING	2x Gb Ethernet interfaces (1x RGMII option available)	

USB	• USB OTG 2.0 • USB HOST 2.0
MASS STORAGE	Starting from 4GB eMMC drive soldered on-board
PERIPHERAL INTERFACES	UART, I²C, SPI, JTAG, CAN,SDIO, GPIOs
POWER SUPPLY	+5V DC
OPERATING SYSTEM	Yocto Linux
OPERATING TEMPERATURE*	Industrial qualified
DIMENSIONS	32 x 67,6 mm

* 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.

BLOCK DIAGRAM
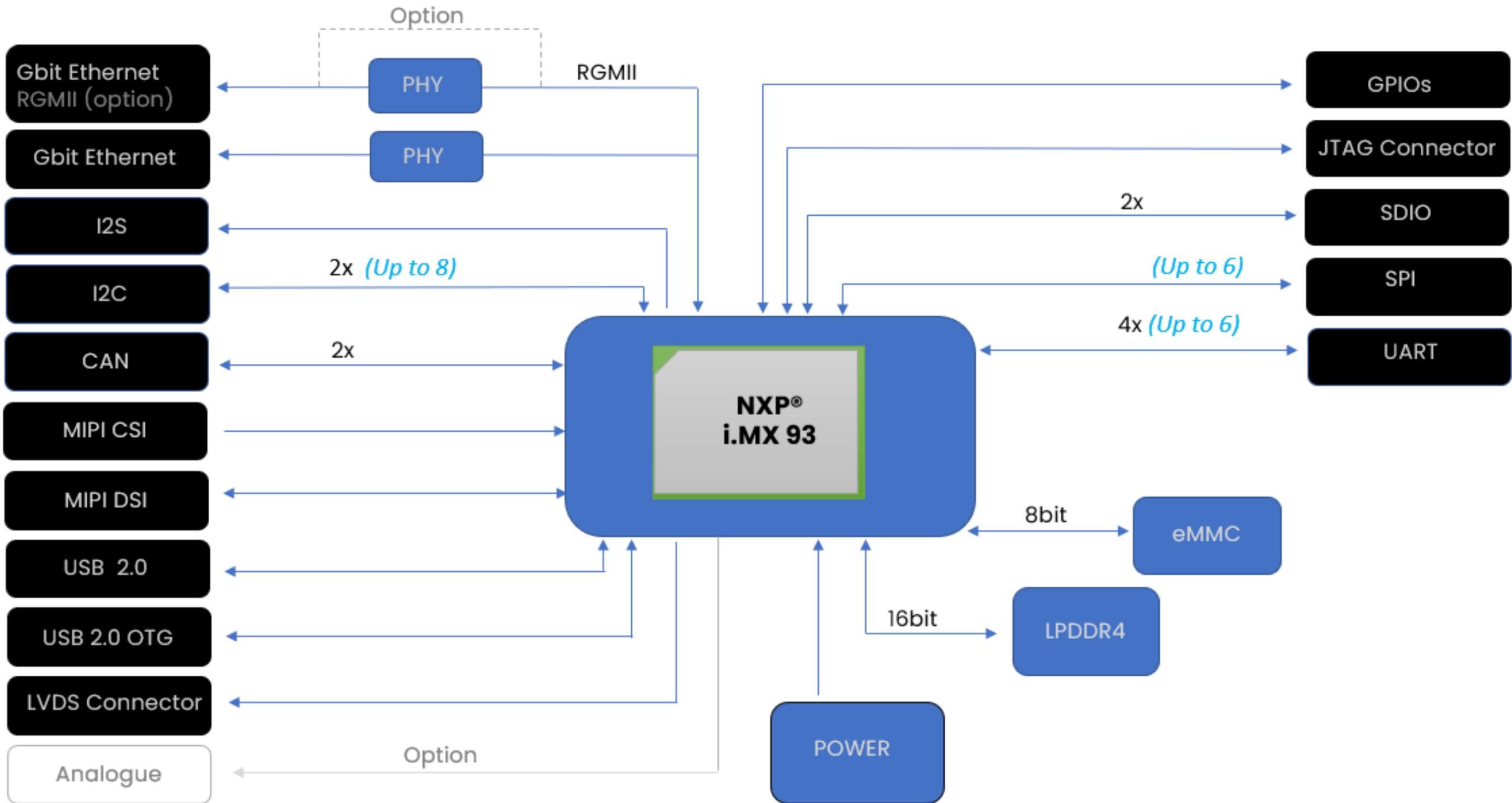
Note: Using additional peripherals (*in blue*), may cause losing the availability of other functionalities.