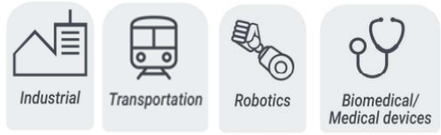
i.Core STM32MP2

i.Core STM32MP2 is based on the Next-gen STM32 MPUs by ST® Microprocessors, with industrial-grade 64-bit MPU for secure Industry 4.0 and advanced edge computing applications that require high-end multimedia capabilities. This new SOM includes single or dual Arm® Cortex®-A35 up to 1.5 GHz and Arm® Cortex® -M33 at 400 GHz, NPU at 1.35 TOPS and 3D GPU for advanced HMI applications. Robustness, extended connectivity, high-end graphics and strong security.

HIGHLIGHTS

- Neural Processing Unit (NPU)
- 3 x Ethernet 10/100
- 1080p graphics capabilities (3D GPU, H.264 hardware video Codec)
- MIPI DSI and LVDS displays

APPLICATIONS



FEATURES

CPU	ST® STM32MP25x
CORES	Single or dual core Arm Cortex-A35 @1.5 GHz and Arm Cortex M33@400MHz
MEMORY	Up to 4GB LPDDR4 @2400MTs
GRAPHICS	• 3D GPU: VeriSilicon® - Up to 900 MHz • OpenGL® ES 3.2.8 – Vulkan 1.2 • OpenCL™ 3.0, OpenVX™ 1.3 • Up to 150 Mtriangle/s, 900 Mpixel/s
VIDEO INTERFACES	• MIPI®DSI 4 data lanes up to 2.5 Gbit/s each • Dual channel LVDS up to 1.1 Gbit/s per lane • Up to QXGA (2048×1536) @60 fps with dual link • MIPI-CSI
VIDEO PROCESSING	• 1080p60 HEVC (h.264, VP8) dec • 1080p60 HEVC (h.264, VP8) enc
AUDIO	• I²S interface
NETWORKING	3x 10/100 Ethernet interfaces
USB	• 1x USB HOST 2.0 • 1x USB HOST/DEVICE 2.0 (USB 3.0 on PCIe)
MASS STORAGE	Starting form 8GB eMMC drive soldered on-board
PERIPHERAL INTERFACES	UART, I²C, SPI, CAN Bus, PWM, SDIO i/f, JTAG i/f, PCIe, GPIOs
POWER SUPPLY	+5V DC
OPERATING SYSTEM	• Linux • Yocto
OPERATING TEMPERATURE *	Up to -40°/+125°
DIMENSIONS	67,6 x 32,1 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.

ENGICAM
EMBEDDED SOLUTIONS

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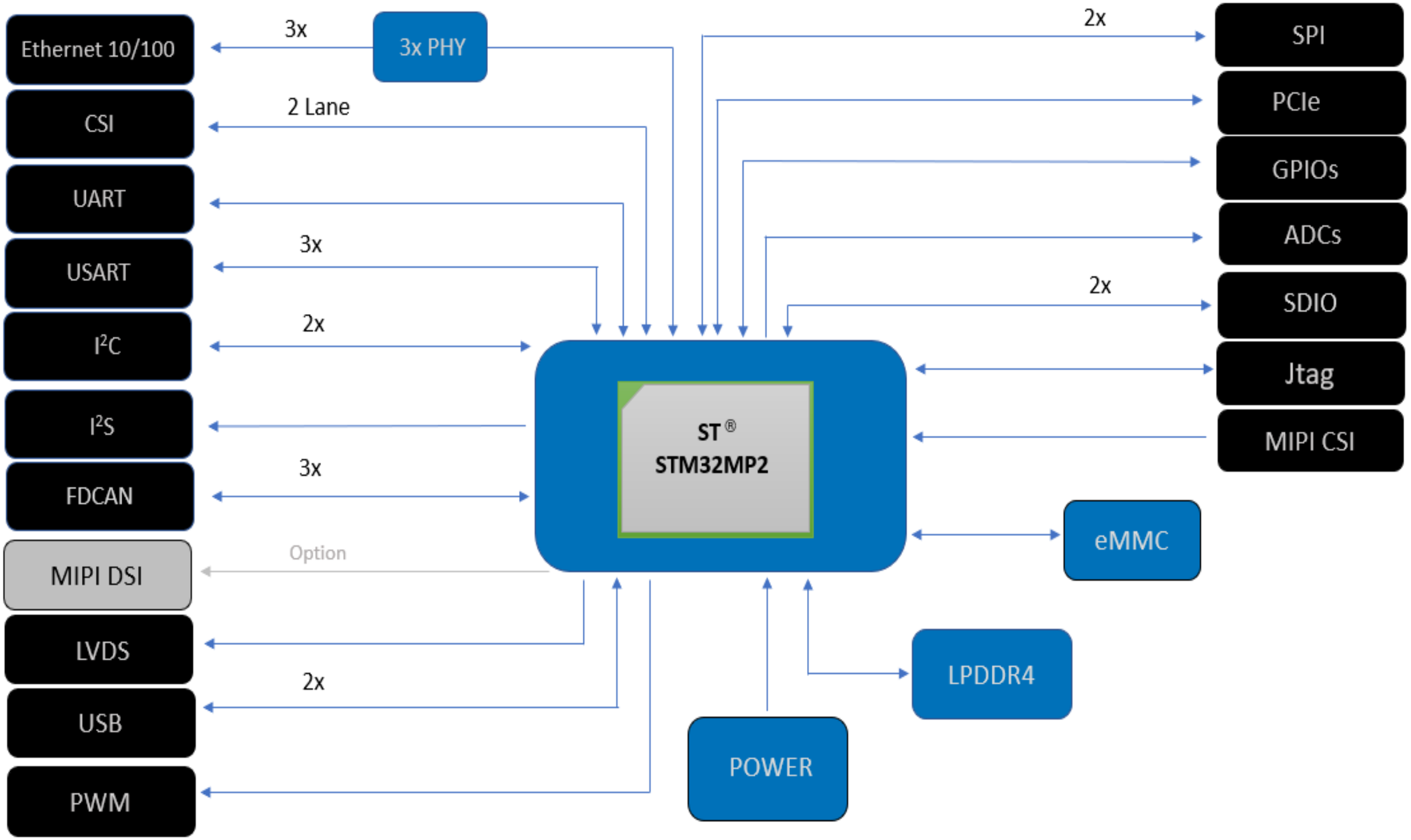
BLOCK DIAGRAM



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