i.MX8M Plus–System on Module (SOM)

Cloud Service

Processor

Freescale iMX8M Plus Arm® Cortex®-A53

Software

Linux, Android, Yocto

FirstView follows up on the success of i.MX6 and i.MX8X Series SOM offering with a rugged, reliable and low cost i.MX8MPlus Version. The FVC-MX8MPlus-SOM is an embedded single board module optimized for performance and power with a life cycle that removes concerns for obsolescence. The board is designed to be paired with a custom carrier board to fit specific applications in a wide range of environments.

i.MX8M Plus Smarc 2.0 Module

i.MX8M Plus CPU general-purpose system on module compliant with SMARC 2.0. Designed to work in Industrial, Automotive and consumer environment

Features of the SOM module

	NXP i.MX 8M Plus ARM Processor Cores			
	Commercial	Arm Cortex®-A53	Arm Cortex®-M7	Part differentiator description
CPU	i.MX 8M Plus Quad	4 x 1.8GHz	800 MHz	NPU1, ISP2,VPU3, HiFi4,CAN
	i.MX 8M Plus Quad Lite	4 x 1.8GHz	800 MHz	CAN, CAN-FD
	i.MX 8M Plus Dual	2 x 1.8GHz	800 MHz	NPU,ISP, VPU,HiFi4, CAN
	Industrial			
	i.MX 8M Plus Quad	4 x 1.6 GHz	800 MHz	NPU, ISP, VPU, HiFi4, CAN-FD
	i.MX 8M Plus Quad	4 x 1.6 GHz	800 MHz	ISP, VPU, CAN-FD
	i.MX8M Plus Quad Lite	4 x 1.6 GHz	800 MHz	CAN-FD
	i.MX8M Plus Dual	2 x 1.6 GHz	800 MHz	NPU,ISP, VPU,HiFi4, CAN-FD

DRAM	x16/x32 LPDDR4/DDR4(Inline ECC), Up to 8GByte onboard LPDDR4 memory @ 4000 MT/s	I/O Interfaces	5x USB3.0 & USB 2.0 (shared with 1x USB OTG client) 1x PCIe 3.0, 3x SDIO 3.0,3xI²C Bus,2x SPI, up to 3x UART (1x with handshake GPIOs), , HDMI 2.0a Tx (eARC), Camera ISP 2x 187 MP/1x 375 MP dewarp,CAN x2
Ethernet	1 x Gigabit Ethernet	Video Decode and Encode	1080p60 H.265, H.264, VP9, VP8 decoder 1080p60 H.265, H.264 encoder
Storage	eMMC 5.1 up to 128 GByte with HS400 compliance, Dual-ch QuadSPI	Graphics	GC7000UL (2 shaders), OpenGL ES 1.1/2.0/3.0/3.1, Open VG 1.1, Vulkan, OpenCL 1.2; GC520L (2D)
Sound	2x I²S | Hi Res Audio | 32-bit up to 384KHz with DSD512 and TDM support	Embedded Features	Watchdog Timer I²C bus 320Kbps, JTAG debug interface Real Time Clock
Display	2 x LVDS0, LVDS1 Tx 4-Lane, (8-lane)	Temperature	Industrial: Operating: -40 to +85°C Storage: -40 to +85°C Commercial: Operating: 0 to +60°C Storage: -40 to +85°C
Form factor	82 x 50 mm	Extended longevity	up to 15 years

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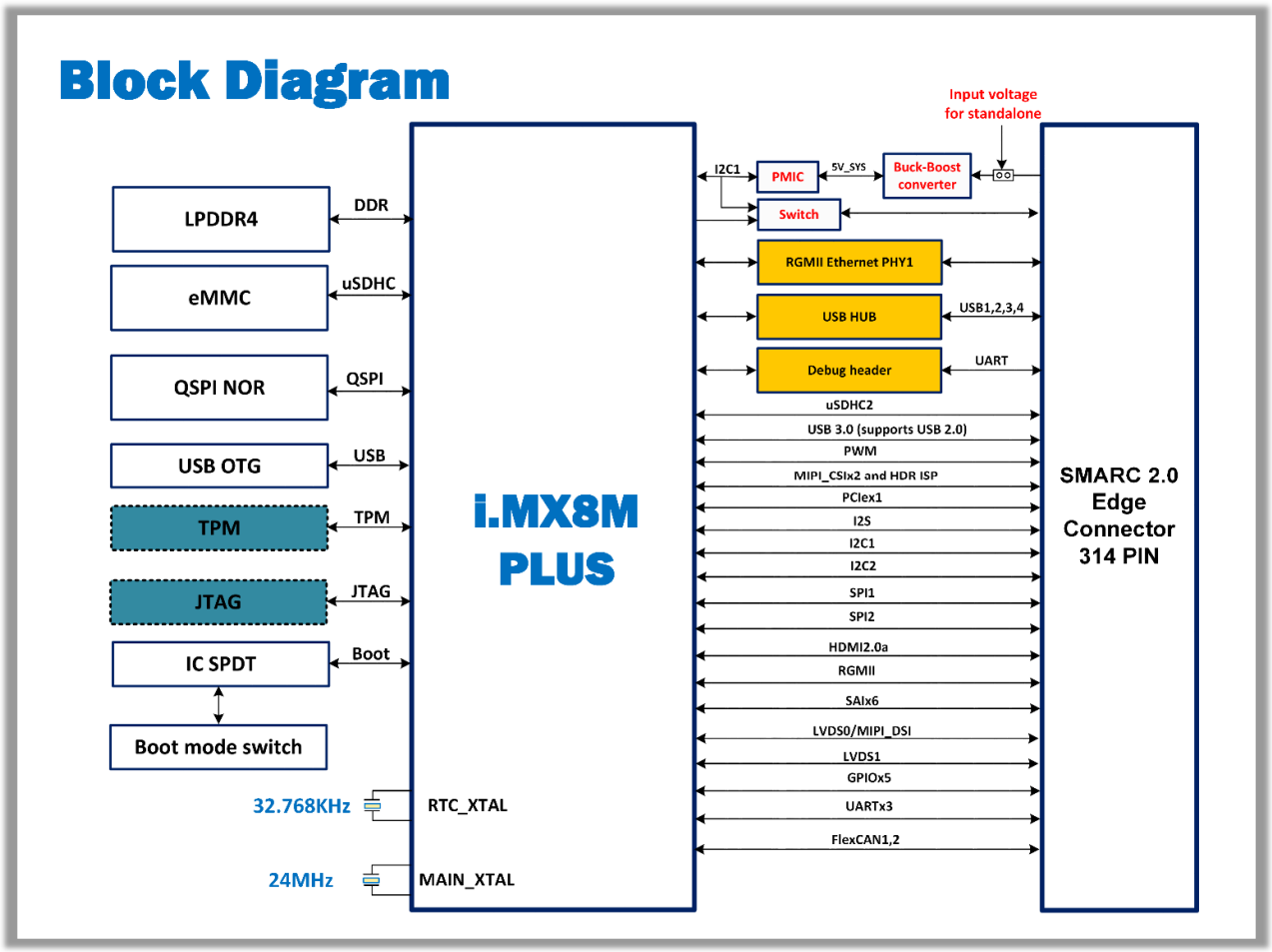
Additional Features

- The i.MX 8M Plus family focuses on machine learning and vision, advanced multimedia, and industrial IoT with high reliability. High industrial reliability with DRAM inline ECC and ECC on on-chip RAM.
- LP-DDR4 memory interface for high performance and low standby power, or DDR3L interfaces for lowest system cost. For fast boot from SPI NOR flash, eMMC 5.1 and NAND
- A powerful and efficient upgrade path for next-generation solutions. The Cortex-A53 is Arm's first Armv8-A processor aimed at providing power efficient 64-bit processing.
- Double the clock rate! SoC designs get the same data bandwidth with 16 data bits clocked at 1600MHz instead of the DDR3 designs get with 800MHz.
- LPDDR4 is the mobile equivalent of DDR4 memory. Compared to DDR4, it offers reduced power consumption but does so at the cost of bandwidth. LPDDR4 has dual 16-bit channels resulting in a 32-bit total bus. The DDR4 has an 8word prefetch or a 64bit channel. Therefore, LPDDR4 RAM halves the bus but makes up for this with a measly operating voltage of 1.1-1.2V



Services

FirstView Consultants can provide full software support, custom modifications, development of carrier boards, and technical consulting for your project.

Applications

- Automotive
- Industrial
- Multimedia
- Healthcare
- Security
- Smart City and Smart Home