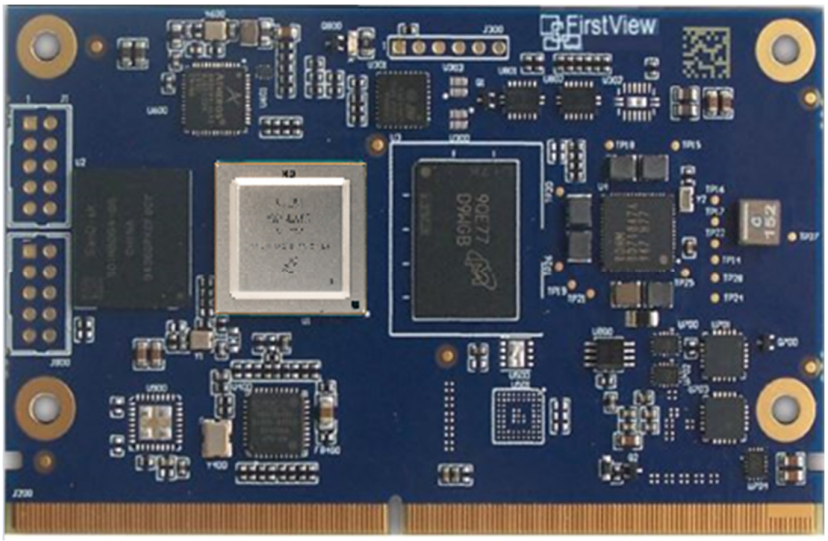
i.MX8QX Plus–Agility (SOM)



Cloud Service

Processor

Freescale iMX8QX Plus Arm® Cortex®-A35

Software

Linux, Android, Windows

FirstView follows up on the success of i.MX6 and i.MX8X Series SOM offering with a rugged, reliable and low cost i.MX8QXPlus Version. The FVC-MX8QXPlus-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.MX8QX Plus Smarc 2.0 Module

i.MX8XQuad/Dual 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 8Quad /Dual X plus ARM Processor Cores			
CPU	Commercial	Arm Cortex®-A35	Arm Cortex®-M4F	Part differentiator description
	i.MX 8 Quad X Plus	4 x 1.2GHz	264 MHz	With GPU, VPU, DSP, 24-bit Parallel LCD
	i.MX 8 Dual X Plus	2 x 1.2GHz	264 MHz	With GPU, VPU, 24-bit Parallel LCD
	Industrial			
	i.MX 8 Quad X Plus	4 x 1.2GHz	264 MHz	With GPU, VPU, DSP, 24-bit Parallel LCD
	i.MX 8 Dual X Plus	2 x 1.2GHz	264 MHz	With GPU, VPU, 24-bit Parallel LCD

DRAM	Up to 8GByte onboard LPDDR4 memory @ 4000 MT/s	I/O Interfaces	2x USB 2.0 and 3.0(shared with 1x USB OTG client) 1x PCIe 2.0, 2x CAN,2x SDIO 3.0, 6xI²C Bus, 4x SPI up to 5x UART (1x with handshake GPIOs)
Ethernet	1x Gigabit Ethernet	Video Decode and Encode	VPU Video Decoder H.264 & H.265 and Video Encoder H.264
Storage	eMMC 5.1 up to 128 GByte with HS400 compliance, SPI Nor-Flash	Graphics	Supports OpenGL 3.0, 2.1,; OpenGL ES 3.1, 3.0, 2.0, and 1.1; OpenCL 1.2 Full Profile and 1.1; Open VG 1.1; and Vulkan
Sound	2x I²S | Hi Res Audio | 32-bit up to 384KHz with DSD512 and TDM support	Embedded Features	Watchdog Timer I²C bus JTAG debug interface Real Time Clock
Display	Interfaces 1x dual channel 24bit LVDS through bridge (default)1x eDP 1.4 1x MIPI-DSI 4-lanes (shared with LVDS).DSI to HDMI converter IC used	Temperature	Industrial: Operating: -40 to +85°C Storage:-40 to +85°C Automotive: Operating: -40° to +105° C Storage: -40 to +85°C
Form factor	82 x 50 mm	Extended longevity	up to 15 years

NXP GOLD PARTNER

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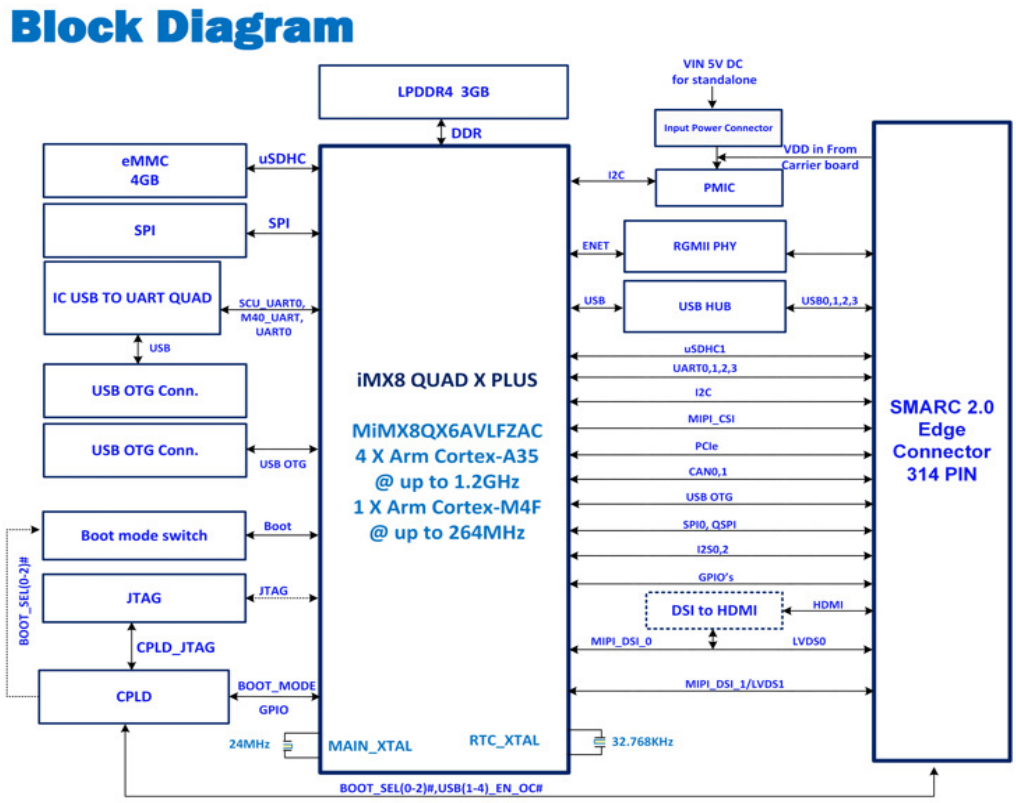
i.MX8QX Plus–Agility (SOM)

Additional Features

- The i.MX 8X processor with optional Error Correcting Code (ECC) is the first i.MX product to support Industrial Safety Integrity Level 3 (SIL 3) certification for applications PLC, I/O, robotic control and drones
- 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 5.0 and NAND
- A powerful and efficient upgrade path for next-generation solutions. The Cortex-A35 is Arm's most efficient Armv7 core.
- 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

Block Diagram



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

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