SOM-SMARC-MX8M

SMARC® Rel. 2.1.1 module with NXP i.MX 8M Applications Processors

Standard solution for next generation multimedia applications

early access

HIGHLIGHTS

CPU
NXP i.MX 8M Applications Processors

CONNECTIVITY
WiFi + BT LE; CSI camera; QuadSPI interface; 14 x GPI/Os

GRAPHICS
Integrated Graphics Processing Unit, supports 2 independent displays

MEMORY
Up to 4GB soldered down LPDDR4-3200 memory, 32-bit interface

Available in Industrial Temperature Range

MAIN FIELDS OF APPLICATION

Coffee & Vending | Transportation | Smart Devices | Smart Buildings & Smart Cities | Digital Signage

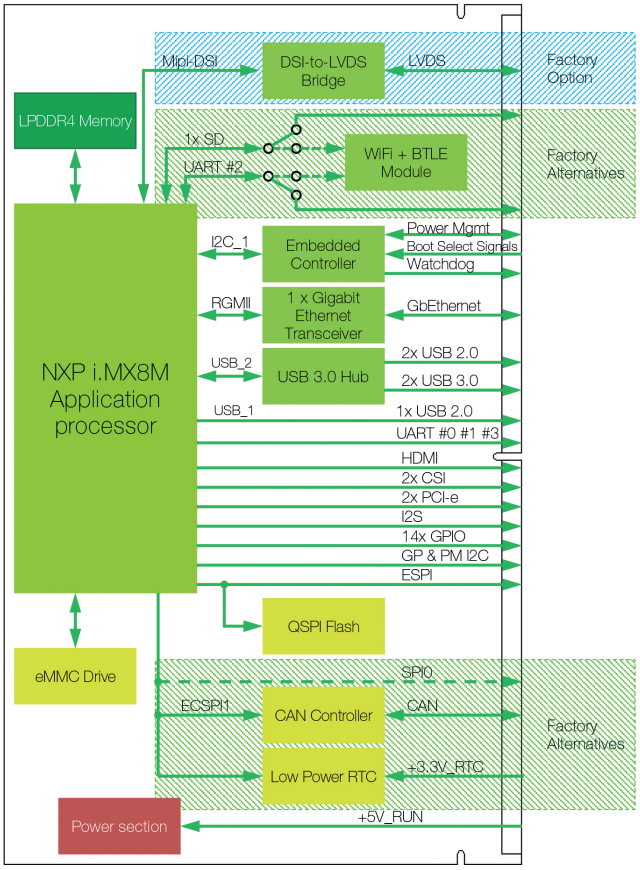
FEATURES

Processor	NXP i.MX 8M Family based on Arm® Cortex®-A53 cores + general purpose Cortex®-M4 processor: · **i.MX 8M Quad** - 4x Cortex®-A53 cores up to 1.5GHz · **i.MX 8M Dual** - 2x Cortex®-A53 cores up to 1.5GHz · **i.MX 8M QuadLite** - 4x Cortex®-A53 cores up to 1.5GHz, no VPU
Memory	Soldered Down LPDDR4-3200 memory, 32-bit interface, up to 4GB
Graphics	Integrated Graphics Processing Unit, supports 2 independent displays Embedded VPU, supports HW decoding of HEVC (H.265), H.264, H.263, MPEG-4, MPEG-2, AVC, VC-1, RV, DivX, VP6, VP8, VP9, JPEG Supports OpenGL ES 3.1, Open CL 1.2. OpenGL 2.X, Vulkan, DirectX, Open VG 1.1
Video Interfaces	HDMI® 2.0a interface, supporting HDCP 2.2 and HDCP 1.4 18- / 24-bit Dual Channel LVDS interface (factory option)
Video Resolution	HDMI®: Up to 4096 x 2160 @ 60 (4K) LVDS: Up to 1920 x 1080 @ 60Hz
Mass Storage	Optional SD 4-bit interface QSPI Flash soldered-onboard eMMC 5.0 drive soldered on-board
Networking	1 x Gigabit Ethernet interface Optional WiFi + BT LE module onboard
USB	2 USB 3.0 Host ports 2 USB 2.0 Host ports 1 USB 2.0 OTG port
PCI-e	2x PCI-e x1 ports
Audio	I2S Audio Interface

Serial Ports	Up to 2x UART Tx/Rx/RTS/CTS 2x UART Tx/Rx 1x CAN Bus (TTL level)
Other Interfaces	1x 4-lanes + 1x 2-lanes CSI camera interfaces I2C Bus SM Bus 2x SPI interfaces QuadSPI interface 14 x GPI/Os Boot select signals Power Management Signals
Power Supply	+5V$_{DC}$ +3.3V_RTC
Operating System	Linux Yocto Android
Operating Temperature*	0°C ÷ +60°C (Commercial version) -40°C ÷ +85°C (Industrial version)
Dimensions	50 x 82 mm (1.97" x 3.23")

*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider application-specific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.

BLOCK DIAGRAM



Streamline and expedite your edge computing implementations

EDGEHOG OS

A flexible operating system that adapts to your needs, thanks to the customization tool and Docker support. Reliability and security are built-in through a dual-partition system and native integration with Exein's robust AI-based protection.

DEVICE MANAGER

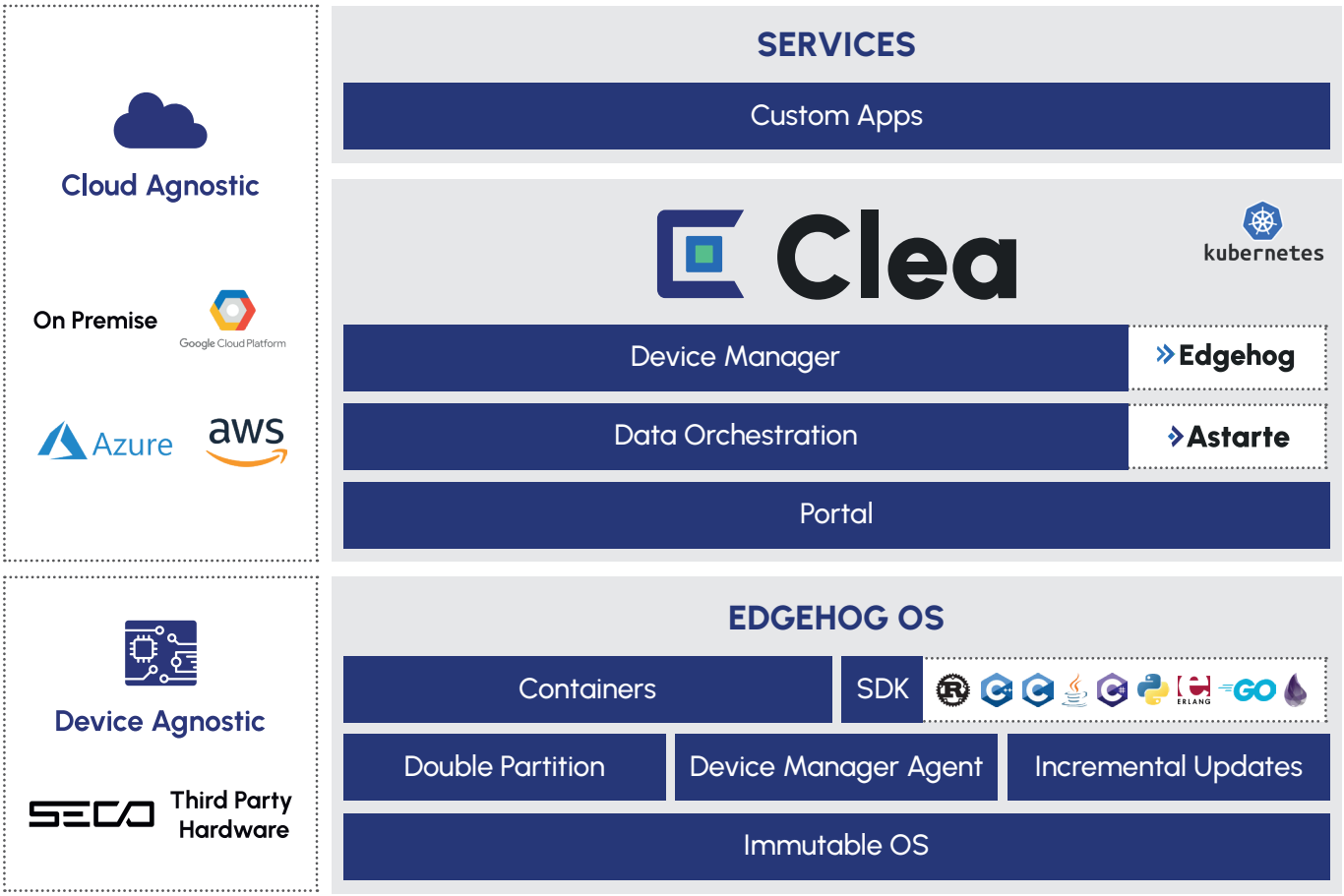
Update, configure, and manage remote devices. Optimize time and costs to maximize operational efficiency and security without the need for costly field interventions.

DATA ORCHESTRATION

Integrate third-party services, simplify data flows and analysis, and enhance business efficiency by enabling easy and fast utilization of AI.

PORTAL

Analyze data from remote devices, customize the user experience with applications tailored to user needs, and manage user rights, company access, and tenant privileges.



Scan to know more about our solution

EDGEHOG OS

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SECO:

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