



SOM-SMARC-MX8X

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

Safety-certifiable and efficient performance in SMARC® Standard module



HIGHLIGHTS



CPU
NXP i.MX 8X Applications Processors



CONNECTIVITY
2x Gigabit Ethernet; opt. Wi-Fi +BT 5.0; CSI camera; 2x USB 3.0; 3x USB2.0; 1x PCI-e x1; 2x CAN Bus; 4xUART; 14x GPIOs; QuadSPI interface;



GRAPHICS
Integrated GPU, supports 2 independent displays



MEMORY
up to 4GB soldered down LPDDR4-2400 memory

Available in Industrial Temperature Range



MAIN FIELDS OF APPLICATION



Coffee & Vending



Medical



Transportation



Industrial Automation



Smart Devices



Smart Buildings & Smart Cities



Digital Signage



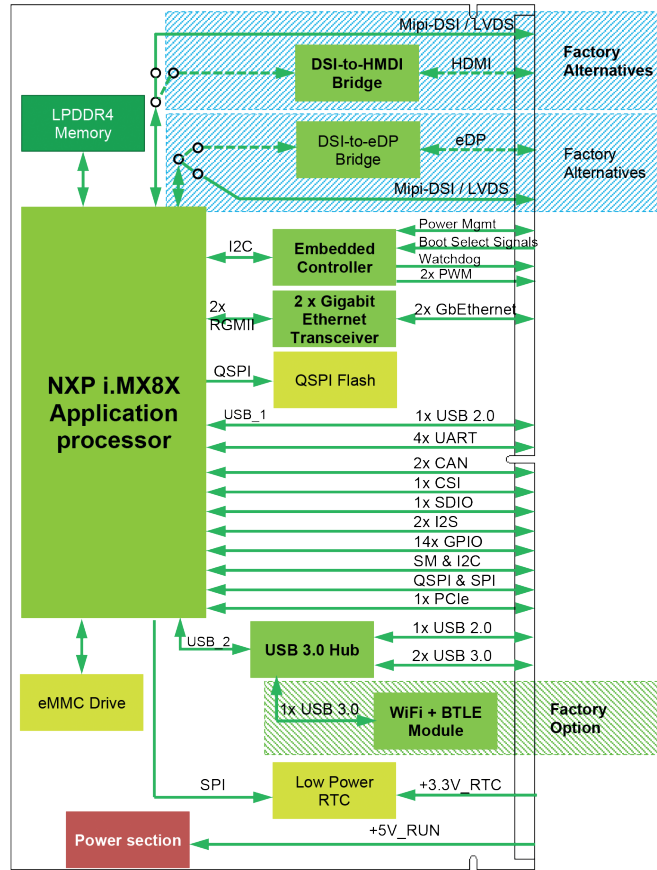
Energy & Utilities

FEATURES

Processor	NXP i.MX 8X family SoCs: Dual or Quad Arm® Cortex®-A35 Cores + 1x Cortex® M4F core for real-time processing	USB	Up to 3 x USB 2.0 Host Ports 2 x USB 3.0 Host Ports
Max Cores	4+1	PCI-e	1x PCI-e 3.0 x1 port
Memory	Soldered down LPDDR4 memory @ 1200MHz, 32-bit interface, up to 4GB	Audio	Up to 2x I2S Audio interfaces
Graphics	Embedded GC7000Lite GPU Supports OpenGL 3.0, 2.1, OpenGL ES 3.1, OpenCL 1.2 Full Profile and 1.1, OpenVG 1.1, and Vulkan Embedded VPU, supports HW decoding of HEVC/H.265, AVC/H.264, MPEG-2, VC-1, RV10, VP8, H.263 and MPEG4.2t. HW encoding of AVC/H.264 2 independent displays supported	Serial Ports	2x 2-wires UART 2x 4-wires UART
Video Interfaces	Factory alternatives: · 2x LVDS / Mipi-DSI Single Channel or 1xLVDS / Mipi-DSI Dual Channel 18-/24-bit interface · LVDS / Mipi-DSI Single Channel 18-/24-bit interface + HDMI interface · eDP 4-lane interface + LVDS / Mipi-DSI single Channel 18-/24-bit interface · eDP 4-lane interface + HDMI interface	CAN Bus	2x CAN interfaces
Video Resolution	MIPI-DSI, LVDS, eDP, HDMI Up to 1920 x 1080 @ 60Hz	Other Interfaces	1x 4-lanes CSI camera interface 2x PWM Up to 14x GPIOs I2C bus SM bus SPI interface QuadSPI interface Watchdog Boot select signals Power Management Signals
Mass Storage	Optional Soldered onboard eMMC 5.1 Drive, up to 64GB SD 4-bit interface QSPI NOR Flash soldered on-board	Power Supply	+5V _{DC} and +3.3V _{RTC}
Networking	Up to 2 x Gigabit Ethernet interfaces On-board WiFi 802.11 a/b/g/n + BT LE 5.0 module, optional	Operating System	Linux 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.

DATA ORCHESTRATION

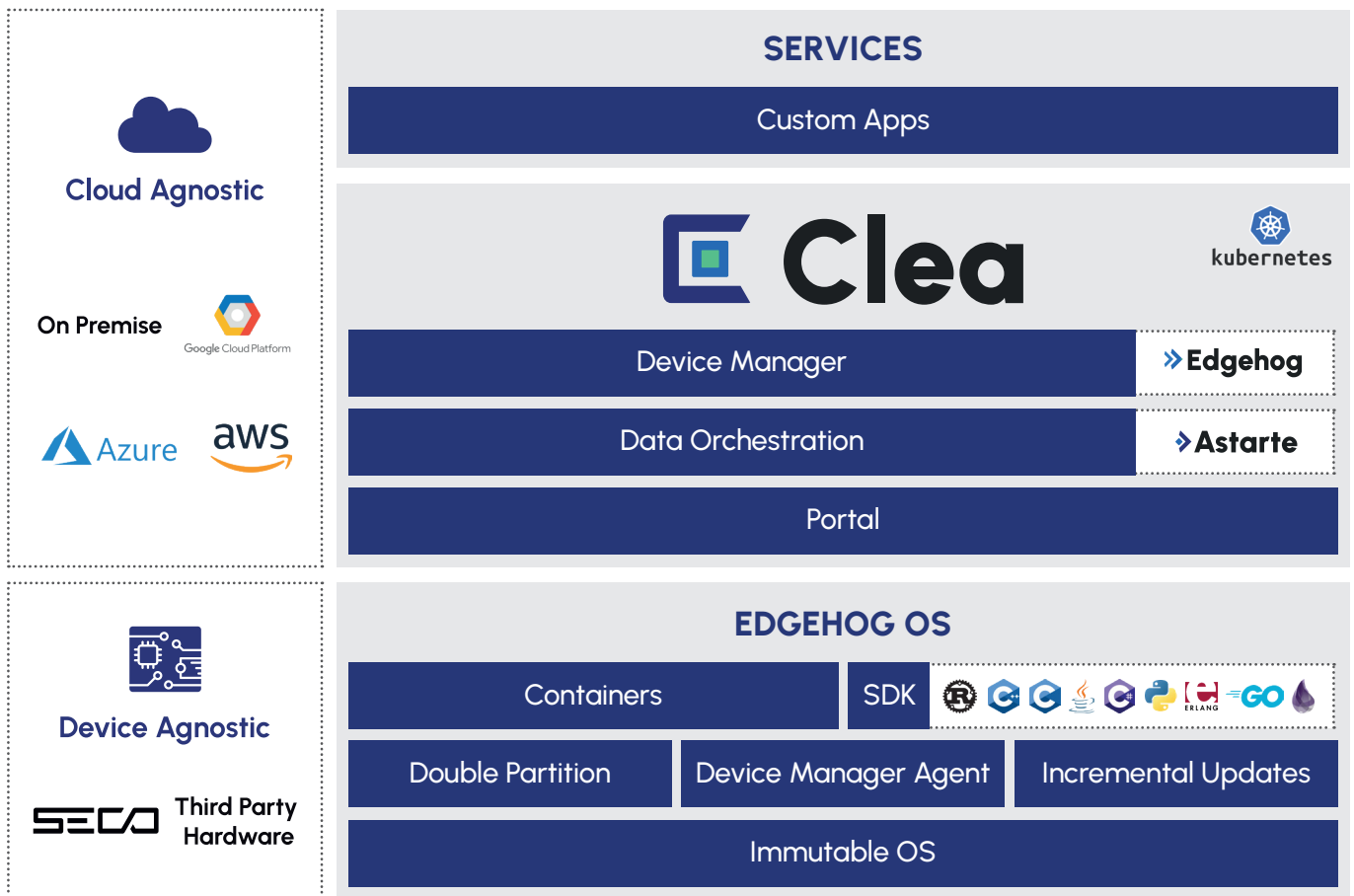
Integrate third-party services, simplify data flows and analysis, and enhance business efficiency by enabling easy and fast utilization of AI.

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.

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



CLEA DOCS

