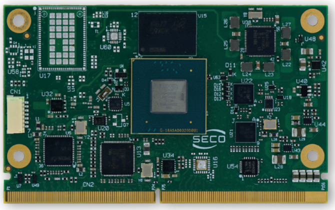
SOM-SMARC-MX95

SMARC® Rel. 2.1.1 module with NXP i.MX 95 Applications Processors

Optimized processing and advanced ML acceleration for next-generation computing



HIGHLIGHTS

CPU NXP i.MX 95: 6x Cortex-A55 @2GHz ,1x M33 core @333MHz, 1x M7 core @800MHz	**CONNECTIVITY** 2x GbE, optional Wi-Fi + BT/BLE module, support for 3rd 10Gps interface
MULTIMEDIA 2D/3D GPU and NPU ML accelerator up to 2.0 TOP/s	**MEMORY** Up to 16GB LPDDR5

Available in Industrial Temperature Range

MAIN FIELDS OF APPLICATION

Transportation

Industrial Automation

Smart Devices

Smart Buildings & Smart Cities

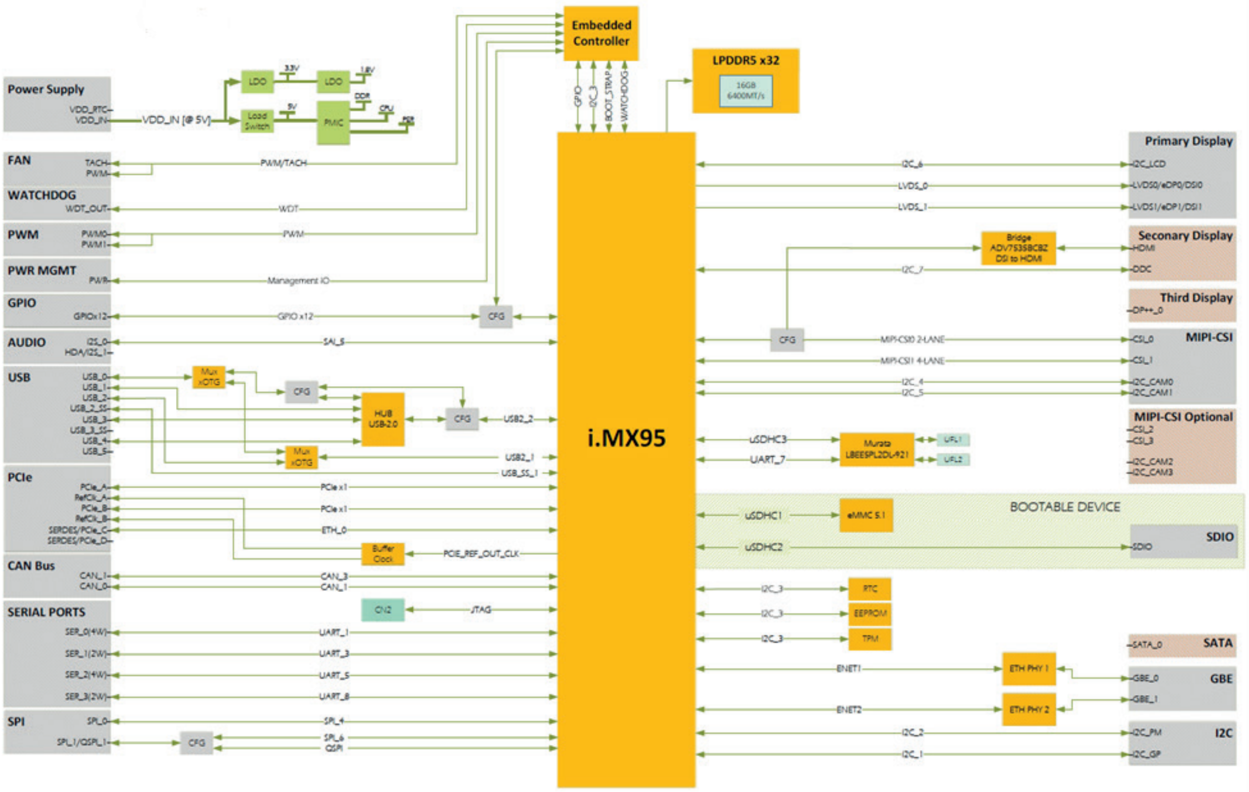
FEATURES

Processor	**NXP i.MX95** Applications Processors · 6x Arm® Cortex™-A55 @2GHz · Arm® Cortex™-M33 @333Mhz · Arm® Cortex®-M7 @800Mhz
System Memory	Up to 16GB LPDDR5 6.4GT/s (32-bit)
NPU	2.0 TOP/s Neural Network performance, up to 1.0 GHz
Video Interfaces	2x LVDS single channel / 1xLVDS dual channel Optional HDMI® interface 1x 4-lanes CSI camera interface Optional 1x 2-lanes CSI camera interface (alternative to HDMI® interface)
Video Resolution	LVDS, HDMI®: up to 1080p @60Hz
Graphics	GPU Arm Mali-G310 V2 with 2D/3D acceleration
Mass Storage	Up to 128GB eMMC 5.1 drive soldered on-board (boot device) SD 4-bit interface (boot device)
Networking	Up to 2x Gigabit Ethernet interfaces Optional Wi-Fi (802.11a/b/g/n/ac/ax) + BT/BLE 5.3 module soldered on-board SERDES (XGMII) interface for additional third Ethernet interface, up to 10Gbps supported
USB	Up to 5x USB 2.0 host ports 1x USB SuperSpeed 5Gbps port Up to 1x USB 2.0 OTG port
PCI-e	Up to 2x PCI-e x1 Gen3 ports
Audio	1x I2S audio interface

Serial Ports	2x UART (4-wires) 2x UART (2-wires)
CAN Bus	2x CAN interfaces
Other Interfaces	2x general purpose PWM FAN Management Signals Up to 12x GPIOs 1x general purpose I2C bus 1x power management I2C bus 1x general purpose SPI interface 1x QuadSPI interface or additional general purpose SPI interface Watchdog Boot select signals Power management signals JTAG Header Optional TPM 2.0 soldered on-board
Power Supply	$+5V_{DC}$ ± 5% and +3.3V_RTC
Operating System	Linux Yocto
Operating Temperature*	0 ÷ +60°C (Commercial Range) -40 ÷ +85°C (Industrial Range)
Dimensions	82 x 50 mm

*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

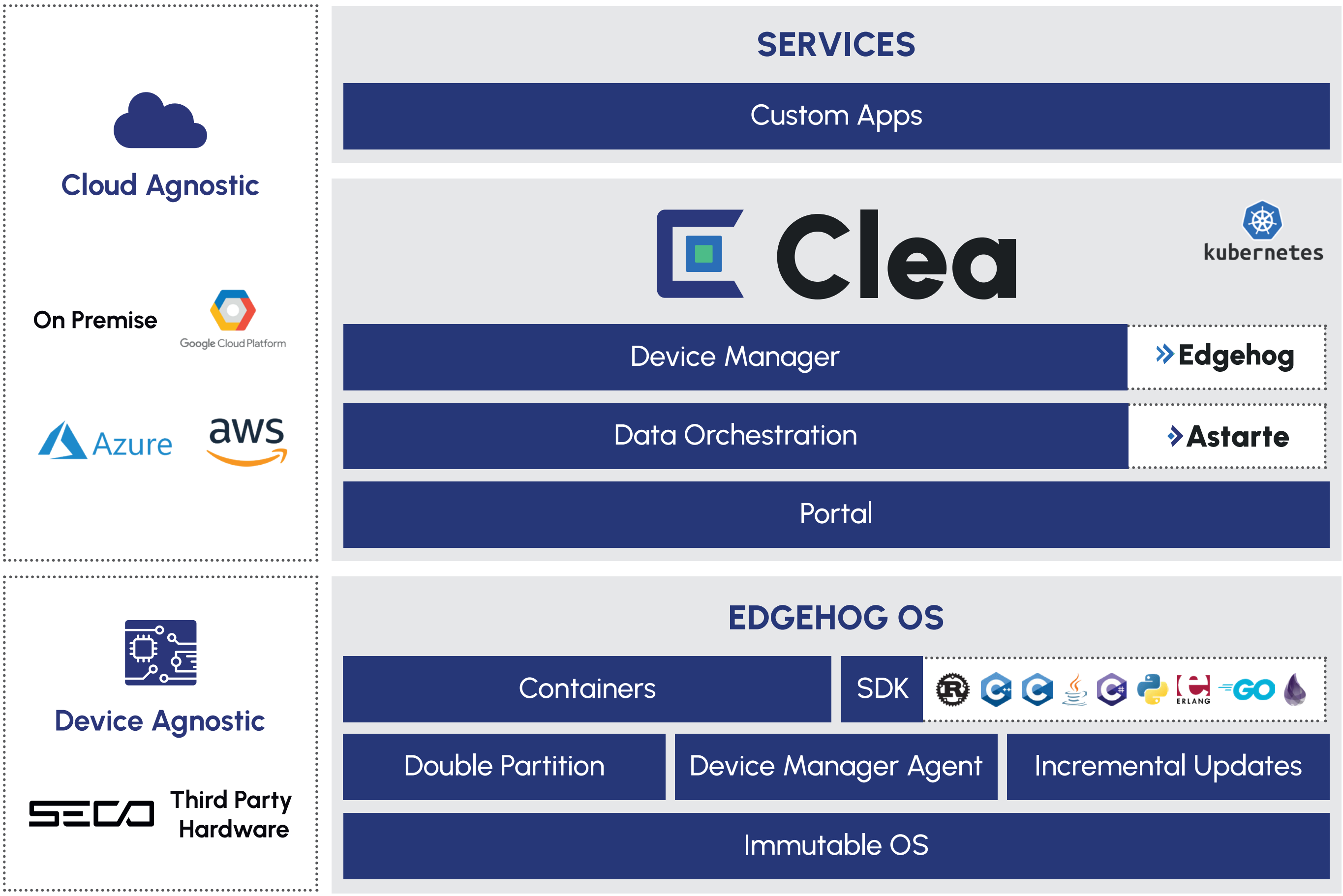
Update, configure, and manage remote devices. Optimize time and costs to maximize operational efficiency and security without the need for costly field interventions.

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.



Cloud Agnostic

On Premise

Device Agnostic

Third Party Hardware

SERVICES

Custom Apps

Device Manager — Edgehog

Data Orchestration — Astarte

Portal

EDGEHOG OS

Containers | SDK

Double Partition | Device Manager Agent | Incremental Updates

Immutable OS

Scan to know more about our solution

EDGEHOG OS

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