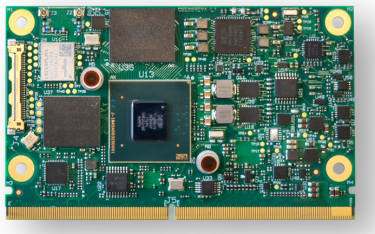
SOM-SMARC-MX952

SMARC® Rel. 2.1.1 module with NXP i.MX 952 Applications Processor

Efficient HMI processing and on-device AI acceleration for connected edge applications.



HIGHLIGHTS

CPU
NXP i.MX 952: 4x Cortex-A55 @1.7GHz,
1x M33 core @333MHz, 1x M7 core @800MHz

CONNECTIVITY
1x 1GbE, optional Wi-Fi + BT/BLE module

MULTIMEDIA
2D GPU and NPU ML accelerator
up to 0.5 TOP/s

MEMORY
Up to 16GB

Available in Industrial Temperature Range

MAIN FIELDS OF APPLICATION

Transportation | Industrial Automation | Smart Devices | Smart Buildings & Smart Cities

FEATURES

Processor	NXP i.MX 952 Applications Processors · 4x Arm® Cortex™ - A55 @1.7GHz · Arm® Cortex™ - M33 @333Mhz · Arm® Cortex® - M7 @800Mhz
System Memory	Up to 16GB LPDDR5 6.4GT/s (32-bit)
NPU	0.5 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
Video Resolution	LVDS, HDMI®: up to 1080p @60Hz
Graphics	GPU Arm Mali-G310 (108 GFLOPS) with 2D acceleration
Mass Storage	Up to 128GB eMMC 5.1 drive soldered on-board (boot device) SD 4-bit interface (boot device)
Networking	1x 2.5GBE 1x 1GBE / 2x 1GBE Optional Wi-Fi (802.11a/b/g/n/ac/ax) + BT/BLE 5.3 module soldered on-board
USB	Up to 5x USB 2.0 host ports
PCI-e	1x 1-lane PCI-e Gen3 ports (mux w/2.5GbE)
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 Clea OS
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.

Information subject to change. Please visit www.edge.seco.com to find the latest version of this datasheet

Build, Deploy and Maintain Secure Edge Products at Scale.

The secure framework for industrial edge devices, combining fleet operations, cybersecurity, data orchestration and Edge AI enablement.

Fleet Operations at Scale

Manage and monitor distributed device fleets.

Cybersecurity by Design

Zero-trust architecture, secure lifecycle management and CRA support.

Secure OS with LTS

A secure Yocto-based foundation with OTA updates, container runtime and long-term maintainability.

Edge AI Enablement

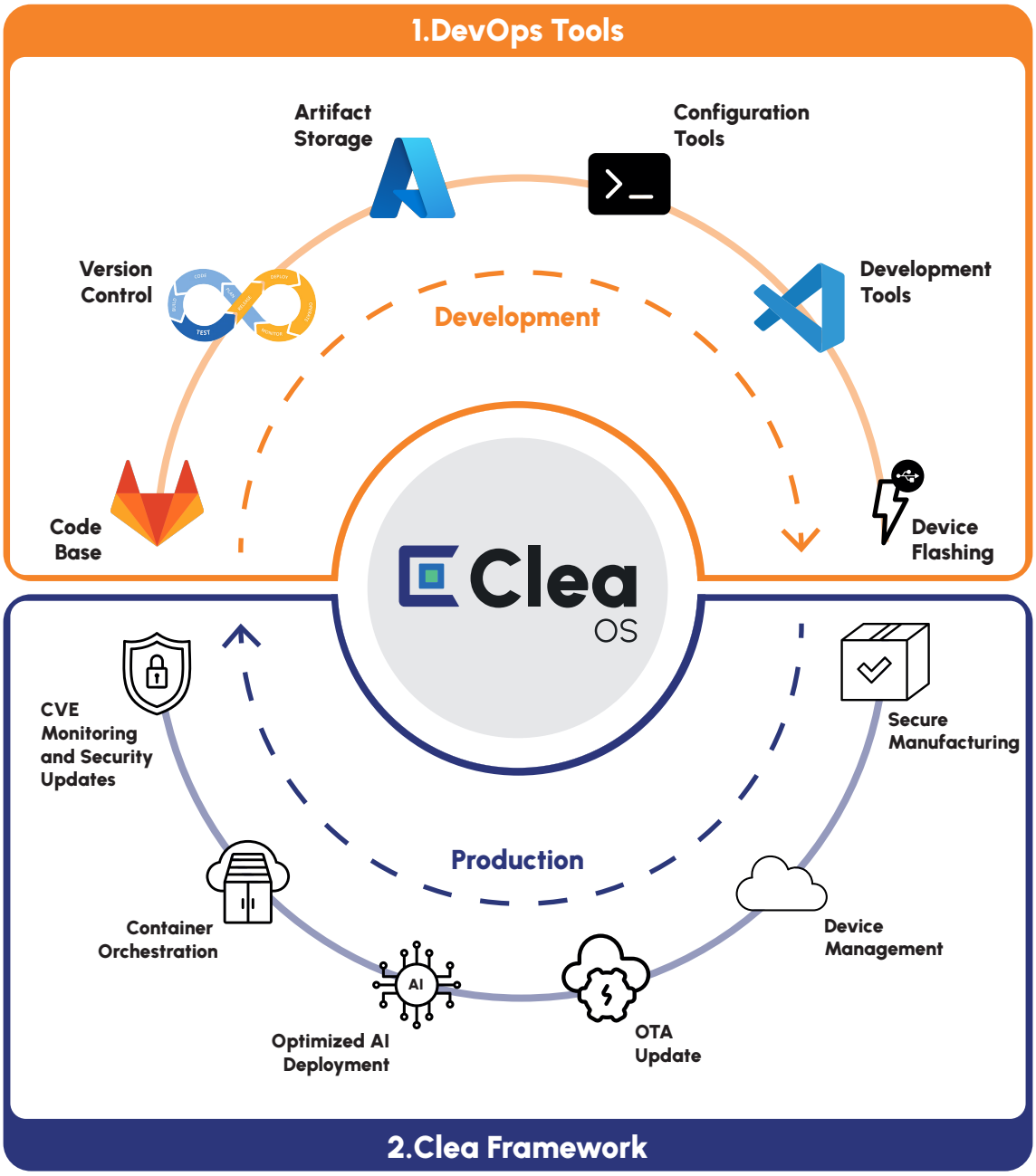
Deploy and manage hardware-aware AI services at the edge

Hardware & Cloud Agnostic

Run on ARM, x86, cloud or on-prem infrastructures.

From Development to Operations

Clea supports the entire product lifecycle, from embedded software development and deployment to fleet operations, maintenance and continuous updates.



Discover how Clea enables secure fleet operations, data orchestration and Edge AI at scale on **clea.ai**

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