SOM-SMARC-Genio510

SMARC® Rel. 2.1.1 module with MediaTek Genio 510 Applications Processors

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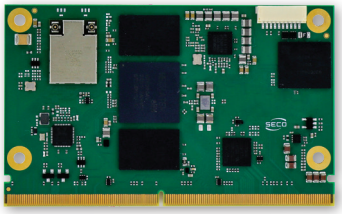


HIGHLIGHTS

CPU
MediaTek Genio 510

CONNECTIVITY
Up to 1x Gb Ethernet, 1x USB 3.1, 2x USB 2.0, 1x CAN, 4 x UART, opt Wi-Fi +BT 5.0, MIPI-CSI, 1x I2S

GRAPHICS
Mali G57 MC2 GPU

MEMORY
Soldered-down LPDDR4X-3733 memory, up to 8GB total

Available in Industrial Temperature Range

MAIN FIELDS OF APPLICATION

Coffee & Vending

Medical

Smart Devices

Digital Signage

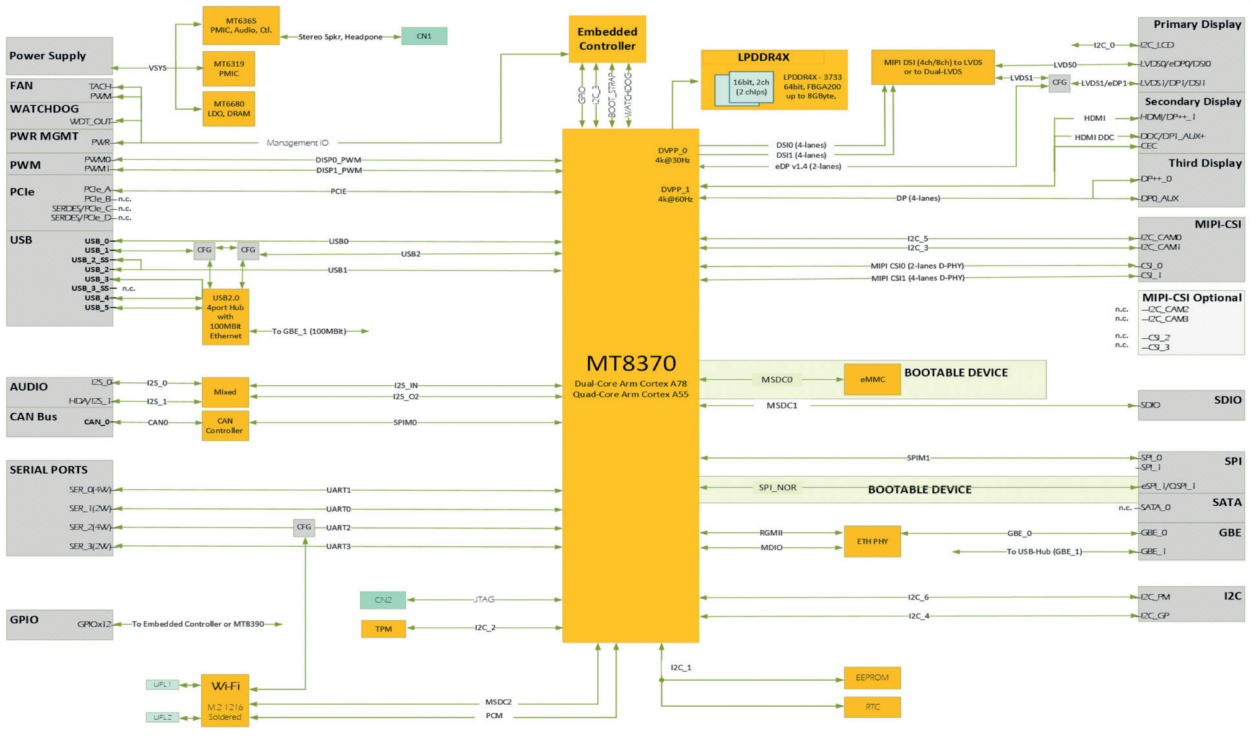
FEATURES

Processor	2x Arm® Cortex®-A78 @ 2.2 GHz 4x Arm® Cortex®-A55 @ 2.0 GHz AI Accelerator: Cadence Tensilica VP6 with Mediatek APU3.0 System Companion Chip: MDSP RV55 DSP: Candence Tensilica HiFi5 Image Signal Processor (ISP)
Memory	Soldered-down LPDDR4X-3733/LPDDR4-3200 memory, up to 8GB total
Video Interfaces	LVDS dual channel or eDP (factory alternatives) HDMI® DP
Video Resolution	MIPI/eDP: up to 2560x1600p60 HDMI®/DP: up to 4K60
Graphics	Mali-G57 MC2 GPU
Mass Storage	eMMC 5.1 Drive soldered on-board, up to 64GB (boot device) SDIO Interface
Networking	1x Gigabit Ethernet (RGMII) 1x 100Mbit Ethernet (USB) Optional Wifi 802.11 a/b/g/n/ac 2x2 and BT 5.3 utilising onboard module with M2.1216 standard form factor
USB	1x USB3.1 1x USB2.0 Host/Slave 4x USB2.0 Host
Audio	2x I2S port
Serial Ports	2x UART (4-wires) 2x UART (2-wires)
CAN Bus	1x CAN interfaces (via SPI CAN Controller)
Other Interfaces	GPIOs MIPI-CSI camera interface General Purpose I2C Bus PWM ports
Security	TPM
Embedded Controller Functionalities	Power management Watchdog Boot select signals GP I/O
Power Supply	$+5V_{DC}$ ± 5% and +3.3V_RTC
Operating System	Linux Yocto Kirkstone Android T (13)
Operating Temperature*	0 ÷ +60°C (Commercial Range) -20 ÷ +85°C (Extended 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

BLOCK DIAGRAM



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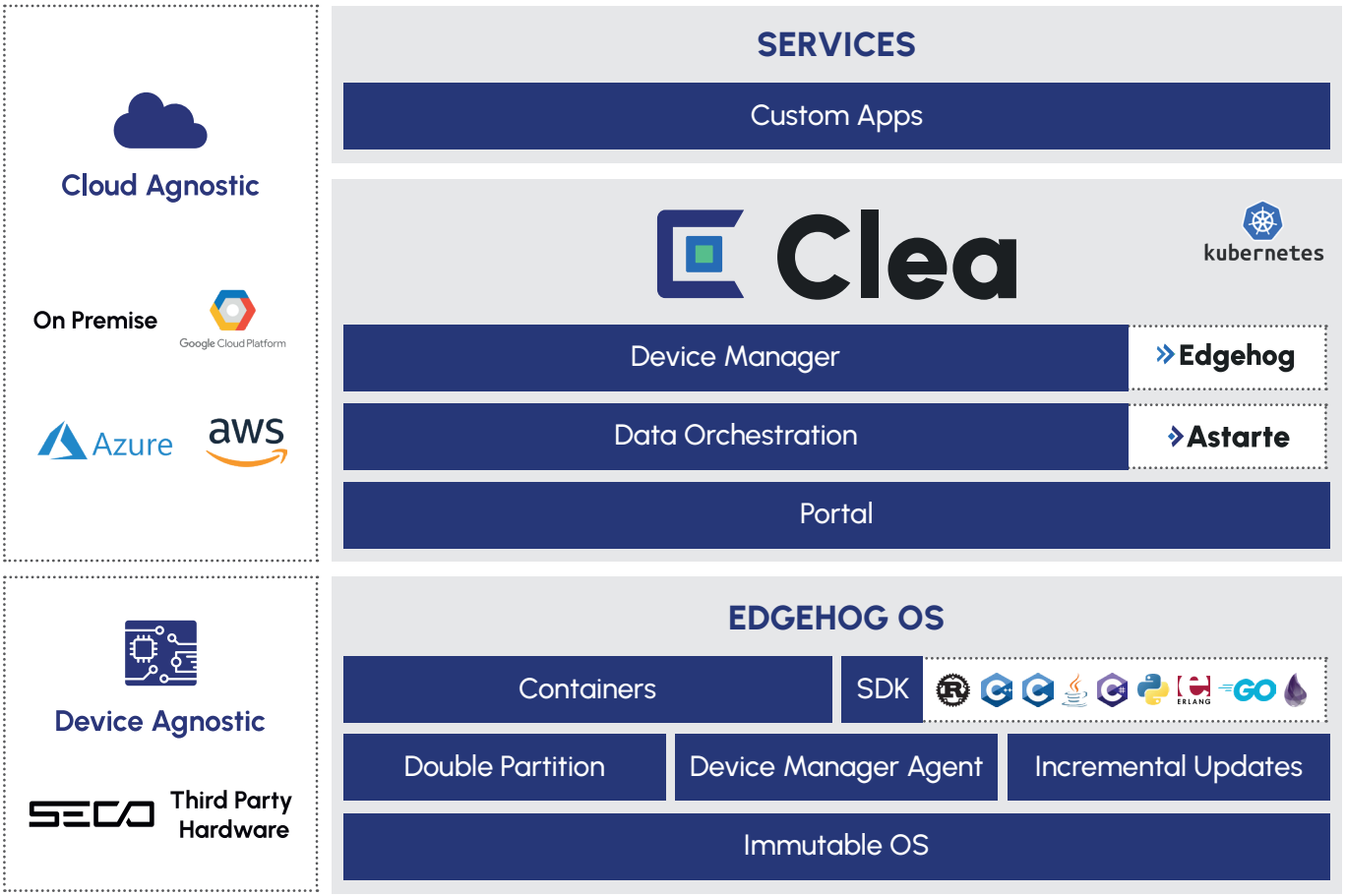
DATA ORCHESTRATION

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.



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CLEA DOCS

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