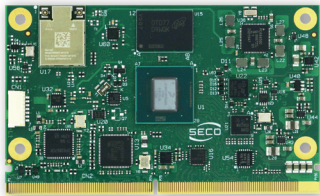




LEVY formerly codenamed SM-D18

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

Low-power design for embedded applications of machine learning at higher levels



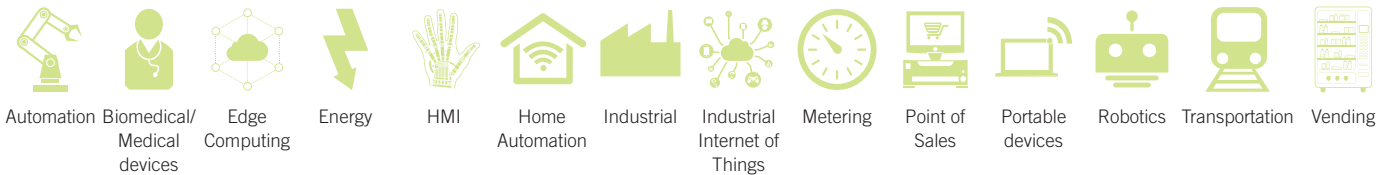
HIGHLIGHTS

CPU NXP i.MX 8M Plus Applications Processors	CONNECTIVITY 2x Gigabit Ethernet; opt. Wi-Fi +BT 5.0; 2x 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 3 independent displays	MEMORY up to 6GB soldered down LPDDR4-4000 memory

Available in Industrial Temperature Range



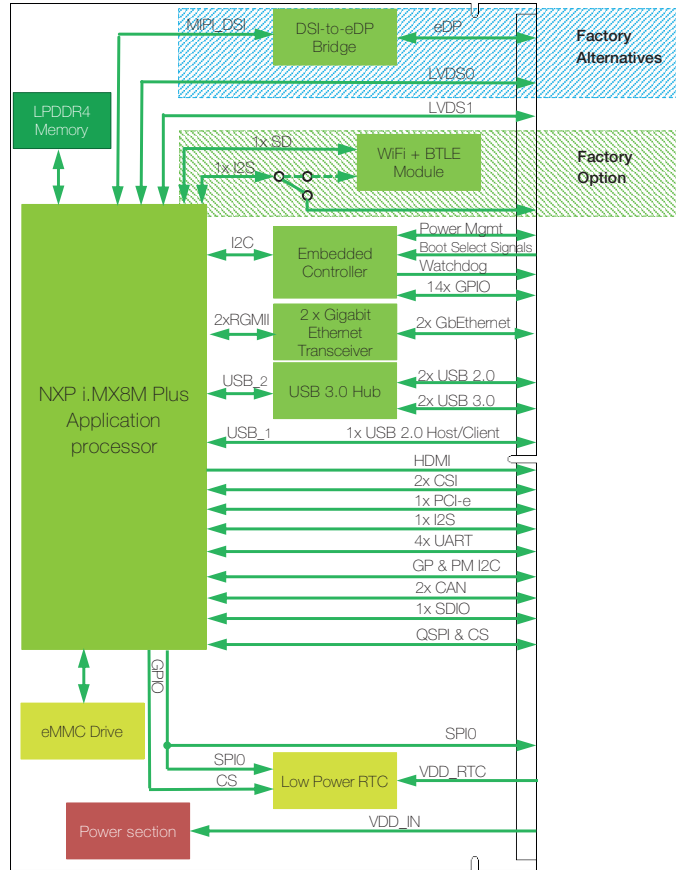
MAIN FIELDS OF APPLICATION



FEATURES

Processor	NXP i.MX 8M Plus family SoCs: Dual or Quad Arm Cortex®-A53 Cores + general purpose Cortex® M7 800MHz processor <ul style="list-style-type: none"> NXP i.MX 8M Plus Quad, 4x Arm Cortex®-A53 Cores up to 1.8GHz NXP i.MX 8M Plus Dual, 2x Arm Cortex®-A53 Cores up to 1.8GHz NXP i.MX 8M Plus Quad Lite, 4x Arm Cortex®-A53 Cores up to 1.8GHz, no VPU / NPU 	PCI-e	Up to 1x PCI-e x1 Gen3 port
Max Cores	4+1	Audio	Up to I2S Audio interfaces
Memory	Soldered down LPDDR4-4000 memory, 32-bit interface, up to 6GB	Serial Ports	2x 2-wires UART 2x 4-wires UART
NPU	2.3 TOPS Neural Network performance (not for Quad Lite)	CAN Bus	2x CAN interfaces
Graphics	Integrated Graphics Processing Unit GC7000UL, supports 3 independent displays. Embedded VPU, supports HW decoding of HEVC/H.265, AVC/H.264, MPEG-4, MPEG-2, MVC, VC-1, RV, VP6, VP7, VP8, VP9, JPEG, HW encoding of HEVC/H.265, AVC/H.264 Supports OpenVG 1.1, OpenGL ES 3.1, OpenCL 1.2 Full Profile and Vulkan	Other Interfaces	1x 4-lanes CSI camera interface 1x 2-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
Video Interfaces	Up to 3 video display interfaces HDMI 2.0a interface, supporting HDCP 2.2 and HDCP 1.4/1.3 2xLVDS Single Channel / 1xLVDS Dual Channel or eDP + 1xLVDS Single Channel (factory alternatives)	Power Supply	+5V _{DC} and +3.3V _{RTC}
Video Resolution	HDMI: Up to 3840 x 2160 @30 LVDS / eDP: Up to 1920 x 1080 @60	Operating System	Linux
Mass Storage	Soldered onboard eMMC 5.1 Drive, up to 64GB SD 4-bit interface	Operating Temperature*	0°C ÷ +60°C (Commercial version) -40°C ÷ +85°C (Industrial version)
Networking	Up to 2 x Gigabit Ethernet interfaces Optional WiFi + BT LE module onboard	Dimensions	50 x 82 mm (1.97" x 3.23")
USB	2 x USB 2.0 Host Ports 2 x USB 3.0 Host Ports 1 x USB 2.0 Host/Client port	*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



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

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