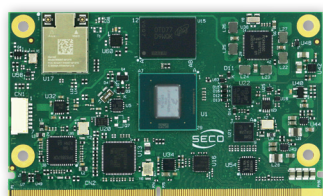




LEVY

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

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



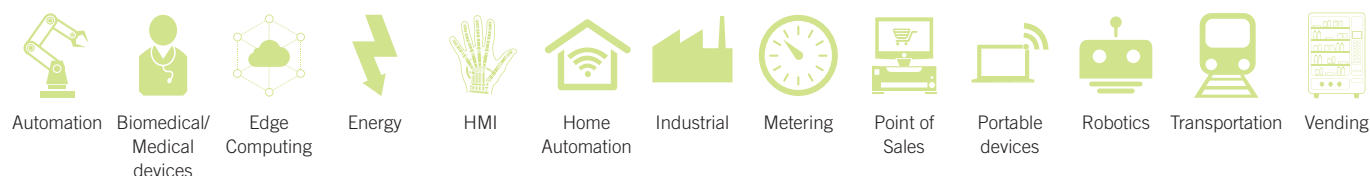
HIGHLIGHTS

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 - 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	2x 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, OpenGL 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, LVDS, eDP Up to 1920 x 1080p @60	Operating System	Linux Android
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	Up to 2 x USB 2.0 Host Ports 2 x USB 3.0 Host Ports 1 x USB 2.0 OTG 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

