

# I-Pi SMARC IMX8M Plus

I-Pi SMARC Plus Prototyping  
 DevKit powered by NXP  
 i.MX8M Plus



## Features

- Based on NXP i.MX8M Plus 4-core SoC with integrated NPU, VPU, and GPU units
- Equipped with SMARC 2.1 compatible module specially designed for industrial embedded applications requiring long life, high MTBF, and strict revision control
- Industrial-grade quality and 15-year product availability
- Supports Yocto, Android, Ubuntu OS

## Specifications

Core System	SoC	NXP i.MX8M Plus 4-core SoC
	NPU	2.3 TOPS Neural Processing Unit
	Architecture	Arm Cortex-A53 + 4x Cortex-M7
	Memory	2GB LPDDR4
	Storage	32GB eMMC 5.0
	IoT Security	TPM 2.0*, TrustZone, Crypto ATECC608A, RDC, OCRAM, CAAM, PKHA, RTIC, True RNG, SNVS
Video	GPU Core	Vivante GC7000UL
	Video Decoding	1080p60 HEVC, H.265 for decode, H.264, VP9, VP8
	Video Encoding	1080p60 H.265, H.264
	Camera	1x MIPI-CSI (4 data lanes), 1x MIPI-CSI (2 data lanes)
Audio	Codec	WM890
Ethernet	LAN	2x GbE (1x TSN capable)

## Specifications

Connectors/Headers	Display	1x HDMI 2x LVDS
	Audio	1x 3.5mm Audio jack
	Network	2x RJ45
	USB	2x USB 3.0, 2x USB2.0, 1x micro USB
	Buttons	1x Reset 1x Power
	SD Card Slot	1x microSD
	SIM Card Slot	1x SIM
	M.2 Card Slots	1x M.2 B-key PCIe 1x M.2 E-key PCIe
	40-pin RPI Expansion Header	GPIO / I <sup>2</sup> C / PWM / SPI / UART
	40-pin Expansion Header	I <sup>2</sup> C / CAN / SPI / UART
Power	Input	19V+/-5% DC
	Connector	DC Jack
Operating Systems	Standard Support	Yocto / Android / Ubuntu / Windows 10 IoT
Mechanical	Form Factor	SGET SMARC Specification v2.1
	Dimensions	SMARC short size module (82mm x 50mm)
	Operating Temperature	Standard: 0°C to 60°C Rugged: -20°C to 85°C*
	Humidity	Operating: 5-90% RH, non-condensing Storage: 5-95% RH
	Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27 MIL-STD-202 F Method 213B, Table 213-I, Condition A Method 214A, Table 214-I, Condition D
	HALT	Thermal Stress, Vibration Stress, Thermal Shock and Combined Test

## Ordering Information

Development Kit	Description/Configuration
I-Pi SMARC IMX8M Plus US-Wi-Fi	SMARC LEC-IMX8MP Prototyping Dev Kit with 2G-32G and US power cable
I-Pi SMARC IMX8M Plus EU-Wi-Fi	SMARC LEC-IMX8MP Prototyping Dev Kit with 2G-32G and EU power cable

\*optional, subject to the module used

