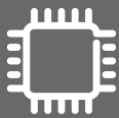
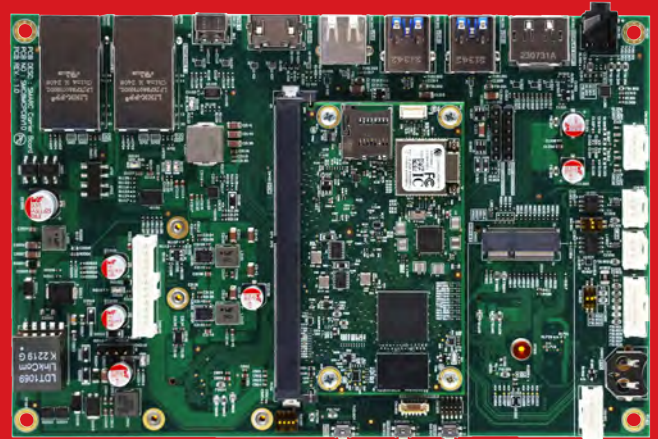


# VEST i.MX8M Plus SMARC Dev Kit

VEST-8MP-00-SMX-DEV

VEST is a leading embedded solutions provider, committing to excellence and innovation. VEST i.MX8M Plus SMARC Dev Kit in SMARC 2.1 standard form factor expedite product development and manufacturing for supply resilience, enabling swift market entry for your products and ensuring a competitive advantage.



Edge Computing



Rich Multimedia



High Performance CPU



Robust Security Features

## ABOUT OUR PRODUCT

Introducing the VEST i.MX8M Plus SMARC Development (Dev) Kit. This comprehensive solution comprises a System on a Module (SOM) and a Carrier board.

Unleash the full potential of the NXP i.MX8M Plus, featuring ARM® Cortex®-A53 processor and Neural Processing Unit (NPU). This empowers Artificial Intelligence (AI) and Machine Learning (ML) capabilities, enhances multimedia performance, supports cutting-edge Edge Computing, provides robust video graphics, and enables rapid processing – all within a compact, cost-efficient, and power-efficient package. VEST software board support package contains software drivers for Leopard Imaging 8.4 Megapixels LI-IMX715-MIPI Camera, allowing optional upgrade possibilities on your product.

VEST i.MX8M Plus SMARC 2.1 SOM suitable for diverse range of applications, such a

- Edge Computing
- Video / Audio Conferencing
- Advanced Human Machine Interface Application
- Point of Sales, Digital Signage, Smart Retail, Smart Cities
- Point of Care
- Portable Test and Measurement Instruments
- Automation for Industry 4.0

## Key Features

- Dedicated NPU to accelerate AI and machine learning
- Accelerate real-time data processing, with dual display
- Rich multimedia capabilities
- Up to 4K camera support
- Built-in 10W audio amplifier (plug and play speaker driver)
- Secured data integrity, safeguard against unauthorized access
- Multiple high-speed interfaces that comply with industrial standards facilitate seamless integration with various peripherals

## Support



**VESTConnect360**  
Cloud Management System



**ADVANCED PRODUCTS CORPORATION PTE LTD (APC)**

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# Specifications

CPU Details	
CPU	Up to Cortex®-A53 @ 1.8GHz, Cortex®-M7 @ 800MHz
GPU	1GC7000UL (2 shaders) OpenGL® ES 1.1/2.0/3.0/3.1, Open VG™ 1.1, Vulkan®, Open CL™ 1.2 FP, GC520L (2D)
NPU	Neural Processing Unit (NPU) Operating at up to 2.3 TOPS
Memory	
Memory	2GB 32-bit LPDDR4 up to 4.0GT/s
Storage	8GB eMMC5.1
External Storage	Micro SD 3.0 Socket Push-Push Type
Operating System / Driver	
BSP	Yocto Linux, Ubuntu and Android
Driver	LI-IMX715-MIPI Camera (Leopard Imaging)
Multimedia	
Video Encoder	1080p60 H.265, H.264
Video Decoder	1080p60 HEVC, H.265, H.264, VP9, VP8
Hi-Fi Audio	Cadence® Tensilica® HiFi 4 DSP @ 800MHz
Camera	2x MIPI CSI (4-lane each) 2x ISP up to 12 MP Resolution
Display and Touch	HDMI 2.0a Tx   LVDS Connector with backlight for 7" & 10" LCD Panel   I2C Touch Connector for 7" & 10" LCD Panel
Audio	Headphone Jack with Microphone Input   4 Pin Header for Speaker L&R, Up to 10W/ch into 8ohm Load
Connectivity	
Wireless	On SOM Board Dual Band Wi-Fi/Bluetooth Module (802.11a/b/g/n/ac and BT 5.0)
Networking	2x 10/100/1000 BaseT RJ45 Ethernet with PoE, 1x Ethernet with TSN Support, 2x CAN FD
USB	1x USB 2.0/3.0 Type C with PD   2x USB 2.0/3.0 Type A   1x USB 2.0 Type A
Serial Communication	RS485 with 120ohm Termination Resistor (Default) or RS232
I/O Expansion	M.2 Key B Form Factor Expansion Daughter Board Socket   4-Lane MIPI CSI x 2   I2C x 2   UART x 2   SPI x 2   GPIO  M.2 Key B Expansion Daughter Board Socket   LVDS (4/8-lane, default) or MIPI DSI (4-lane)   I2C   GPIO  PCIe M.2 Key E 2230 Form Factor   1 Lane PCIe Gen 3.0   USB   SDIO   I2S   UART   GPIO
Debugging & Programming	2x Debug-UART Header, 2.54mm Pitch 5pin Header   JTAG-1.27mm Pitch 2 x 5 Pin Header
Buttons and Indicators	1x On/Off Button   1x Reset Button   1x On/Off, Reset, Power LED Control Signal Connector-2mm Pitch 5 Pin Header   Power LED Indicator-2x, 3.3V & 5V
Power	PoE (25w/channel), USB-C (60w)
Physical	
Form Factor	180mm x 120mm (Carrier Board) , 82mm x 50mm SMARC SOM
Operating Temperature	Commercial   Industrial (Optional)

## What Encompasses i.MX8M Plus SMARC Development Kit

## Optional Upgrade



VEST i.MX8M Plus SMARC Dev Board



Heat Sink



Power Adapter



Plug and Socket



Antenna x2



LI-IMX715-MIPI Camera

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