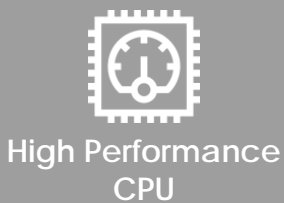
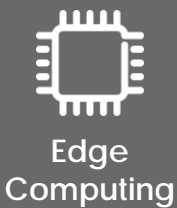


# VEST SMX i.MX8M Plus

VPN8P3/4/5-SMX

VEST is a leading embedded solutions provider, committing to excellence and innovation. Our VEST SMX i.MX8M Plus 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.



## ABOUT OUR PRODUCT

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.

Introducing the VEST SMX i.MX8M Plus SMARC 2.1 SOM suitable for diverse range of applications, such as

- 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
- 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



# Specifications

CPU Details	
CPU	Up to 4x Cortex®-A53 @ 1.8GHz, Cortex®-M7 @ 800MHz
CPU Core	SoloLite   Solo   Dual   QuadLite   Quad
GPU	1GC7000UL (2 shaders) OpenGL® ES 1.1/2.0/3.0/3.1, Open VG™ 1.1, Vulkan®, Open CL™ 1.2, GC520L (2D)
NPU	Neural Processing Unit (NPU) Operating at up to 2.3 TOPS
Memory	
Memory	2GB (up to 8GB) 32-bit LPDDR4 up to 4.0GT/s
Storage	8GB (up to 128GB) 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	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, 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 6 Pin Header   JTAG-1.27mm Pitch 2x 5 Pin Header
Buttons and Indicators	3x On/Off Button, Reset and Force Recovery   5 Pin Header 2mm Pitch Header   1x On/Off, Reset, User LED Control   Power LED Indicator-5x, PoE Sected, SYS_5V0, VDD_5V0, POE_OUT & VDD_3V3   Boot Mode Dip Switch
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)

