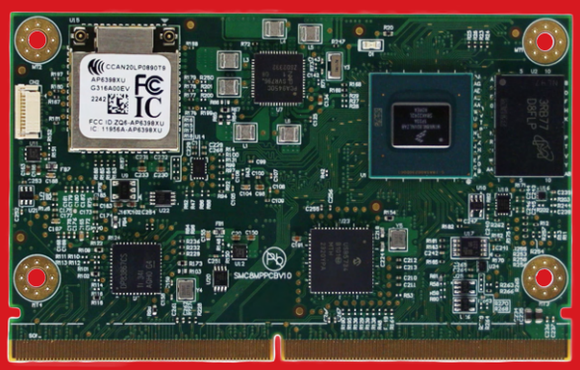
Your Partner in Innovation
Embedded Solutions

NXP Gold Partner

VEST SMX i.MX8M Plus

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.



Edge Computing

Rich Multimedia

High Performance CPU

Robust Security Features

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

LEOPARD IMAGING

SMARC module

SGET STANDARDIZATION GROUP FOR EMBEDDED TECHNOLOGIES

ADVANCED PRODUCTS CORPORATION PTE LTD (APC)

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Specifications (VEST SMX i.MX8M Plus)

CPU Details	
CPU	Up to 4x Cortex® A53 @ 1.8GHz, Cortex®-M7 @ 800MHz
GPU	GC7000UL with 2 shaders for 3D Graphics | GC520L for 2D
NPU	Neural Processing Unit (NPU) operating at up to 2.3 TOPS

Memory	
Memory	2GB 32-bit LPDDR4-4000
Storage	16GB eMMC 5.1
External Storage	1x SDIO 3.0

Operating System / Driver	
BSP	Yocto Linux, Ubuntu, Android and NXP Real Time Edge Software
Driver	LI-IMX715-MIPI Camera (Leopard Imaging), Hailo-RT

Security	
SOC	Arm® TrustZone® DRM Ciphers, Secure Clock, eFuse key storage, Random Number, 32KB Secure RAM
Secure IOT/Cloud	Security key Storage

Multimedia	
Video Encoder	1080p60, H.265, H.264
Video Decoder	1080p60, H.265, H.264, VP9, VP8
Camera	2x MIPI CSI (4-lane each), ISP up to 12 MP
Display	HDMI 2.0a TX, LVDS (4/8-lane) TX, MIPI DSI (4-lane)
Hi-Fi Audio	Cadence® Tensilica® HiFi 4 DSP @ 800MHz
Audio	2x SAI

Connectivity	
Wireless	(On board Dual Antenna 2.5 GHz/5GHz WLAN (802.11 a/b/g/n/ac), BT 5.0) (Optional)
Networking	1x 10/100/1000 BaseT RJ45 Ethernet, 1x 10/100/1000 BaseT RJ45 Ethernet with TSN
USB	1x USB 3.0/USB 2.0 OTG 2x USB 2.0 Host, 2x USB 3.0 Host via on-board USB Hub
PCIe	1x PCIe Gen 3.0
Serial Communication	3x UART (for Wifi-BT version) | 4x UART (for without Wifi-BT version) | 2x SPI | 2x CAN FD
I2C	5x I2C
GPIO	9x GPIOs (Note that additional GPIOs are retrieved from unused control signals eg. Camera control signals)
Debugging	1x JTAG Connector
Power	5Vdc +/-5%

Physical	
Form Factor	82mm x 50mm SMARC 2.1
Operating Temperature	Commercial / Industrial (Optional)

Ordering Information	
Part No.	VE8MP4SMX42WC VE8MP4SMX42WI

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