Your Partner in Innovation
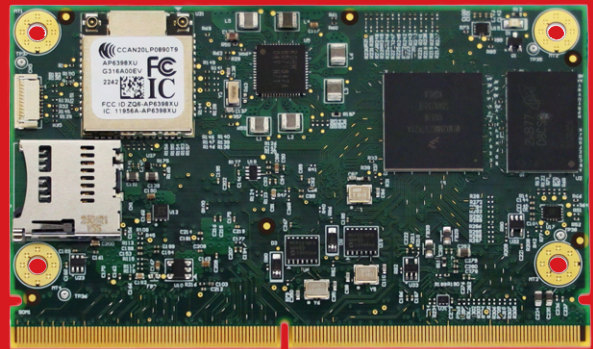Embedded Solutions

NXP
Gold
Partner

VEST SMX i.MX8M Nano

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

Industrial / Commercial IoT

Efficient CPU

Robust Security Features

ABOUT OUR
PRODUCT

Unleash the full potential of the NXP i.MX8M Nano, featuring Arm® Cortex®-A53 cores and Cortex®-M7 core. This provides cost-effective integration and affordable performance for smart, connected, power-efficient devices requiring graphics, vision, voice control, intelligent sensing and edge computing including machine learning.

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

- Human Machine Interface Application
- Smart Home, Smart Lighting, Building and Home Security, Building Automation
- Healthcare, Medical, Transportation.
- Infotainment and audio
- Test & Measurement, Metering instruments
- Industrial and Robotics

Key Features

- Accelerate real-time data processing and power efficiency
- Rich multimedia and graphics capabilities
- Secured data integrity, safeguard against unauthorized access
- Multiple high-speed interfaces that comply with industrial standards facilitate seamless integration with various peripherals
- NXP eIQ™ software suite

Support

VESTConnect360
Cloud Management System

SMARC module

STANDARDIZATION GROUP FOR EMBEDDED TECHNOLOGIES

ADVANCED PRODUCTS CORPORATION PTE LTD (APC)

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E-Store: shop.apc-vest.com
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Specifications (VEST SMX i.MX8M Nano)

CPU Details

CPU	Up to 4x Cortex® A53 @ 1.5GHz, Cortex® -M7 @ 750MHz
GPU	GC7000UL with 2 shaders for 3D Graphics

Memory

Memory	1GB (up to 3GB) 16-bit LPDDR4-3200
Storage	8GB (up to 128GB) eMMC 5.1
External Storage	1x Micro SD 3.0 Socket Push-Push Type via SDIO 3.0

Operating System / Driver

BSP	Yocto Linux, Ubuntu and Android

Security

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

Multimedia

Camera	MIPI CSI (4-lane)
Display	Dual Channel LVDS (default) or MIPI DSI (4-lane)
Audio	1x SAI

Connectivity

Wireless	On SOM Board Dual Band Wi-Fi/Bluetooth Module (802.11a/b/g/n/ac and BT 5.0) (Optional)
Networking	1x On Board 10/100/1000 Mbps Ethernet PHY
USB	1x USB 2.0 OTG
Serial Communication	3x UART (for Wifi-BT version) or 4x UART (for without Wifi-BT version)
SPI	2x SPI or 1 SPI with 1x CAN FD (Depends on board build configurations)
CAN	2x CAN FD w/o SPI, or 1x CAN FD with 1x SPI (Depends on board build configurations)
I2C	4x 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.	VPN8MN5-SMX-31-WC
	VPN8MN5-SMX-31-0C
	VPN8MN3-SMX-31-WC
	VPN8MN3-SMX-31-0C
	VPN8MN1-SMX-31-WC
	VPN8MN1-SMX-31-0C
	VPN8N0-SMX-31-0I

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