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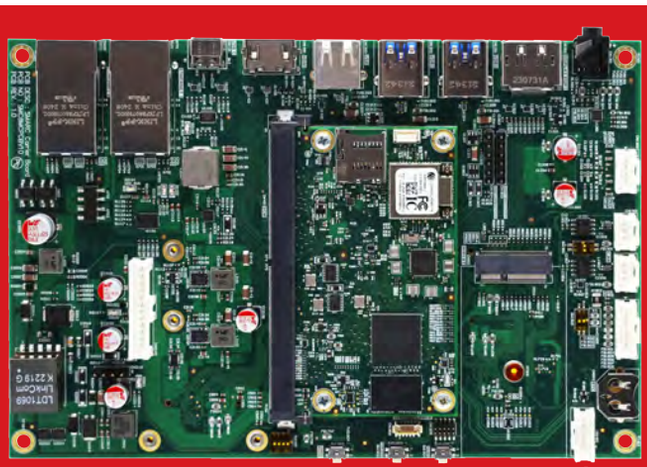
# VEST i.MX8M Nano SMARC Dev Kit

VEST-8MN-07-SMX-DEV

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



**Industrial / Commercial IoT**

**Efficient CPU**

**Robust Security Features**

## ABOUT OUR **PRODUCT**

Introducing the VEST i.MX8M Nano 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 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 general-purpose processing.

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

- 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
- Consumer audio devices

## Key Features

- Provides a balance between performance and efficiency
- Low power consumption, making it suitable for battery-powered devices
- A wide range of connectivity options and interfaces for cameras and displays
- Built-in security features like secure boot, cipher acceleration, and DRM support
- Compact size, ideal for space-constrained applications
- A wide range of audio interfaces

## Support

VESTConnect360
Cloud Management System

SMARC module

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# Specifications

| CPU Details | |
|---|---|
| CPU | Up to 4x Arm® Cortex®-A53 @ 1.5GHz \| Cortex®-M7 @ 750 MHz |
| GPU | GC7000UL (2 shaders) OpenGL® ES 2.0/3.0/3.1, Vulkan®, Open CL™ 1.2 FP |

| Memory | |
|---|---|
| Memory | 1GB 16-bit LPDDR4-3200 |
| Storage | 8GB eMMC5.1 |
| External Storage | Micro SD 3.0 Socket Push-Push Type |

| Operating System / Driver | |
|---|---|
| BSP | Yocto Linux, Ubuntu and Android |

| Multimedia | |
|---|---|
| Camera | 1x MIPI CSI (4-lane) |
| 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 | 10/100/1000 BaseT RJ45 Ethernet with PoE, 2x CAN FD |
| USB | 1x USB 2.0 Type C with PD |
| 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 1 \| I2C x 1 \| UART x 2 \| SPI x 2 \| GPIO<br><br>M.2 Key B Expansion Daughter Board Socket \| LVDS (4/8-lane, default) or MIPI DSI (4-lane) \| I2C \| GPIO<br><br>PCIe M.2 Key E 2230 Form Factor \| 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 | 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) |

## What Encompasses i.MX8M Nano SMARC Development Kit

VEST i.MX8M Nano SMARC Dev Kit Board


LCD 7" or 10" (Option)

Heat Sink

Power Adapter

Plug and Socket

Antenna



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