

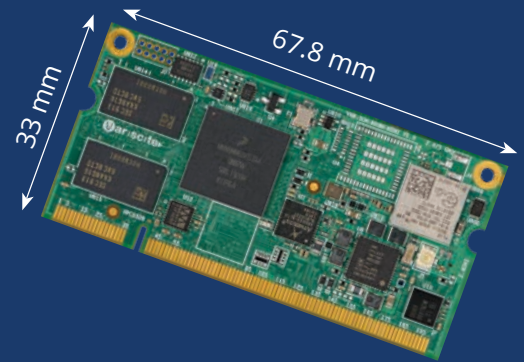
VAR-SOM-MX8M-MINI

Low-power and cost-optimized solution with ultimate scalability

from \$53

Based on NXP's i.MX 8M Mini with up to 1.8GHz Quad-core ARM Cortex-A53 plus 400MHz Cortex-M4 real-time processor and up to 4 GB DDR4, the VAR-SOM-MX8M offers a low-power and cost-optimized solution with ultimate scalability options to suit a wide range of applications and cost requirements.

The SoM is pin-compatible with the VAR-SOM Pin2Pin product family. This impressive product family stretches across a wide range of performance levels including the i.MX6UL/6ULL/6ULZ, i.MX 6, i.MX 8X, i.MX8 8M Mini, i.MX 8M Nano and up to the i.MX 8QuadMax, providing Variscite's customers with flexibility, extended lifetime, as well as reduced development time, cost, and risk.



This popular platform supports a variety of interfaces including certified single band 802.11b/g/n as well as dual-band 802.11ac/a/b/g/n option, 4.2 BT/BLE, Gigabit Ethernet, CAN bus, dual USB2.0 and LVDS. Additionally, the SoM provides an integrated HW engines supporting 1080p video encoding/decoding, 2D and 3D GPU, HQ audio all in a full industrial range of -40 to 85°C and a generous longevity commitment of 15-years.

Main Features

NXP i.MX 8M Mini

- Quad 1.8GHz ARM Cortex-A53
- Real-time 400MHz Cortex-M4 co-processor
- Neon Media Processor Engine (MPE)
- Up to 4GB DDR4 memory, up to 64GB eMMC, 512 MB NAND storage

Display and video support

- 1080p60 H.265/H.264/VP9 Decode, 1080p60
- MIPI DSI 1080p60
- Integrated resistive/capacitive touch screen
- Dual channel LVDS display

Networking

- 10/100/1000Mbps Ethernet
- Certified single-band 802.11b/g/n or dual-band 802.11ac/a/b/g/n
- Bluetooth 5.2/BLE

High-speed interfaces

- PCIe
- 2 x USB 2.0 OTG

Audio

- Digital audio (SAI, SPDIF, PDM)
- Analog, digital microphone (stereo)
- Headphone out, line-in

Camera

- MIPI CSI2 serial input

Other interfaces

- CAN Bus, I2C, QSPI, SPI, PWM, JTAG, UART, SD/MMC, GPIO, timers

OS support

- Linux
- Android

Power

- Single 3.5-5V

Dimensions (W x L x H):

- 67.8 mm x 33.0 mm x 4.7 mm

-40 to 85°C industrial temperature support

Low-power consumption:

- Optimized power consumption in both operational and suspend modes



Complementing the VAR-SOM-MX8M-MINI

VAR-SOM-MX8M-MINI Evaluation Kit

The VAR-DVK-VS8M-MINI allows full performance and capability evaluation, serving as an evaluation, development and production platform for hardware and software teams.

Evaluation kit content

- Symphony-Board populated with VAR-SOM-MX8M-MINI
- 7" LCD + capacitive touch panel
- Power supply and communication cables
- Documentation and design package



Symphony-Board

Supporting the VAR-SOM-MX8M-MINI

The Symphony-Board ensures a scalable and simplified development and reference board to achieve a short time-to-market for customer's designs and end-products.



Display support

- DSI, dual LVDS display

Touch panel

- Capacitive touch (6-pin FFC/FPC)
- Resistive touch (4-pin FFC/FPC)

Audio

- Headphone
- Line-in
- Digital mic

Storage

- SD/SDIO/MMC card socket

High speed interfaces

- 2x USB 2.0 ports
- 10/100/1000Mbps Ethernet RJ45
- mPCIe

Camera

- MIPI CSI serial (extension connector)

Additional expansion connectors

- SPI, SPDIF, GPIO
- UART, I2C, CAN Bus
- PWM
- SAI

Debug

- Micro USB

RTC backup battery

- CR1225 coin battery socket

Power

- 12V DC input

Size

- 16.9cm x 8.9cm

About Variscite

Variscite is a leading System on Module (SoM) and Single-Board-Computer (SBC) design and manufacture company. A trusted provider of development and consulting services for a variety of embedded platforms, Variscite transforms clients' visions into successful products.

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