

# 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, including the i.MX 6UL/6ULL modules, through i.MX 6, i.MX 8M Nano, TI AM625x, i.MX 93, i.MX 8M Mini, i.MX 8M Plus up to i.MX 8X and i.MX 8QuadMax-based modules 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, 5.2 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 128GB eMMC

### 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
- WiFi/BT antenna



## 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 Modules (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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