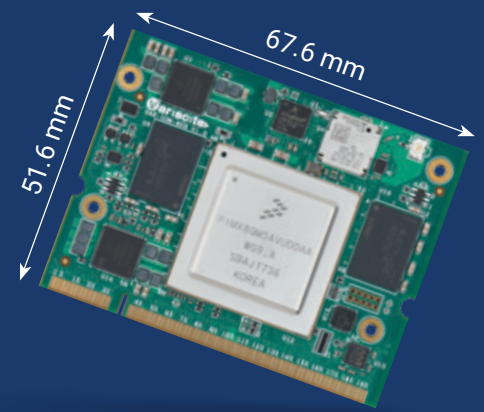


VAR-SOM-MX8

Advanced processing power and high-end multimedia

Based on NXP i.MX 8QuadMax/QuadPlus/DualMax, the VAR-SOM-MX8 carries Dual 1.8GHz ARM Cortex-A72, Quad 1.2GHz Cortex-A53 and 2x 266MHz real-time Cortex-M4F co-processor. The SoM introduces advanced processing power, high-end graphics, UltraHD 4K video capabilities and a variety of high-speed interfaces and connectivity options like certified dual-band Wi-Fi 802.11ac/a/b/g/n, BT/BLE, dual GbE, dual USB3, PCIe, CAN FD, UltraHD 4K display support, high-quality audio, high performance 2D/3D graphics acceleration and camera inputs.

The VAR-SOM-MX8 is a member of Variscite's pin2pin compatible family, which also includes the VAR-SOM-MX8X, VAR-SOM-MX6, VAR-SOM-SOLO/DUAL and VAR-SOM-6UL. This compatibility allows Variscite's



customers to use the same system design with full scalability, from entry level – i.MX 6UL/ULL, through i.MX 6 Solo/DualLite/Dual/Quad/QuadPlus, i.MX 8X and up to iMX8 QuadMax/QuadPlus/DualMax.

The Symphony carrier board complements an attractive full reference kit of the VAR-SOM-MX8, used by Variscite's customers for evaluation, development and mass production.

Main Features

NXP i.MX 8 processor

- 2 x 1.8GHz ARM Cortex™-A72 plus 4 x 1.2GHz ARM Cortex™-A53
- Real-time 2x ARM Cortex™-M4F
- Neon Media Processor Engine (MPE)
- Internal HiFi 4 DSP
- 2 x GC7000XSVX high performance GPU

Memory and Storage:

- Up to 8GB LPDDR4 memory, up to 64GB eMMC storage

Display and video Support

- UltraHD 4K Display
- 4Kp60 HEVC/H.265/H.264 decode, FHD encode
- MIPI DSI 1920X1080 at 60Hz
- HDMI 2.0a/eDP/DP
- Touch screen
- Dual channel LVDS display 1920X1080 at 60Hz

Networking

- 2x 10/100/1000Mbps Ethernet
- Certified WiFi 802.11ac/a/b/g/n and Bluetooth 4.2/BLE

High Speed interfaces

- Dual USB 3.0/2.0
- PCIe

Camera and video input

- Dual MIPI CSI2 serial input

Audio

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

Other Interfaces:

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

OS Support

- Linux
- Android

Power

- Single 3.3V

Dimensions (W x L x H):

- 67.6 mm x 51.6 mm x 5.0 mm

-40 to 85°C industrial temperature support

Low Power consumption

- Optimized power consumption in both operational and suspend modes



Complementing the VAR-SOM-MX8

VAR-SOM-MX8 Evaluation Kit

The VAR-DVK-MX8 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-MX8
- 7" LCD + capacitive touch panel
- Power supply and communication cables
- Documentation and design package

Symphony-Board

Symphony-Board - Supporting VAR-SOM-MX8

The Symphony carrier 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, HDMI / DP / eDP

Touch Panel

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

High speed interfaces

- 2x USB 3.0/2.0 ports
- 2x 10/100/1000Mbps Ethernet RJ45
- mPCIe

Storage

- SD/SDIO/MMC card socket

Audio

- Headphone
- Line-in
- Digital mic

Camera

- MIPI CSI serial (extension connector)

Additional expansion Connectors

- SPI, GPIO
- UART, I2C, CAN/CAN-FD
- 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.

For more information contact:

sales@variscite.com

Copyright ©2019 Variscite. All rights reserved. Variscite Ltd. logos and product names are registered trademarks of Variscite Ltd. No part of this document may be reproduced by any means, nor translated to any electronic medium without the written consent of Variscite. Information contained in this document is believed to be accurate and reliable; however, Variscite assumes no responsibility for its use. Specifications are subject to change without notice.

