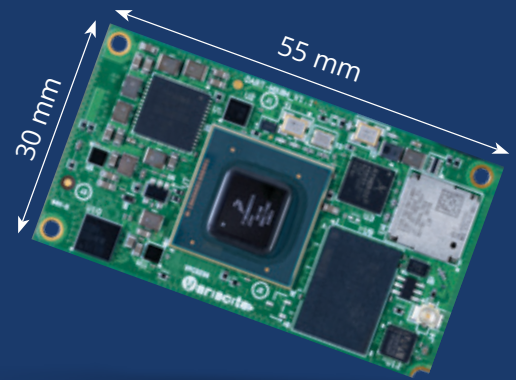


# DART-MX8M

Miniature SoM with ultra-multimedia performance

from \$67



The DART-MX8M offers an ideal solution for embedded systems that require high-end multimedia applications in a small form factor, as well as portable and battery-operated products.

The tiny 30mm x 55mm form SoM is based on NXP i.MX 8M Quad 1.5GHz ARM Cortex-A53 plus 266MHz Real-time Cortex-M4 co-processor. The high multimedia performance spec encompasses UltraHD 4K video HEVC/H265/H264/VP9 decode with HDR, high-quality audio, UltraHD 4K display, HD 2D/3D graphics

acceleration and camera inputs. The DART-MX8M includes a variety of interfaces and connectivity options: Certified dual-band Wi-Fi 802.11ac/a/b/g/n, BT/ BLE, GbE, dual USB3, dual PCIe, SPI and UART.

The VAR-DT8MCustomBoard carrier board complements an attractive full reference kit of the DART-MX8M used by Variscite's customers for evaluation, development and mass production.

## Main Features

### NXP i.MX 8M

- Dual and Quad 1.5GHz ARM Cortex-A53
- Real-time 266MHz Cortex-M4 co-processor
- Neon Media Processor Engine (MPE)
- Up to 4GB LPDDR4-3200 memory, up to 64GB eMMC storage

### Display and video Support

- UltraHD 4K Display
- 4Kp60 HEVC/H.265 decoder
- MIPI DSI 1080p60
- HDMI 2.0a/eDP/DP
- Resistive/capacitive touch screen
- Dual channel LVDS display

### Networking

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

### High Speed interfaces

- 2 x PCIe
- 2 x USB 3.0 OTG

### Audio

- Digital audio (SAI, SPDIF)
- Analog, Digital microphone (stereo)
- Headphone out, Line-in

### Camera

- Dual MIPI CSI2 serial input

### Other Interfaces:

- I2C, QSPI/SPI, PWM, JTAG, UART, SD/MMC, GPIO, Timers

### OS Support

- Linux
- Android

### Power

- Single 3.4-4.5V

### Dimensions (W x L x H):

- 30.0 mm x 55.0 mm x 4.5 mm

### -40 to 85°C industrial temperature support

### Low Power consumption:

- Optimized power consumption in both operational and suspend modes



# Complementing the DART-MX8M

## DART-MX8M Evaluation Kit

The VAR-DVK-DT8M allows full performance and capability evaluation, serving as an evaluation, development and production platform for hardware and software teams.

### Evaluation Kit content

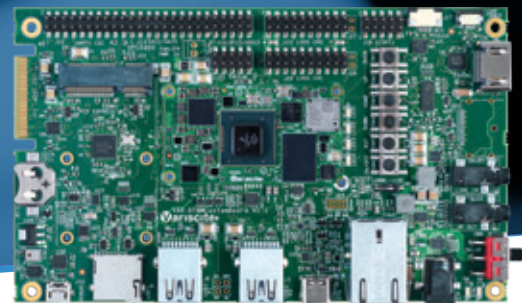
- VAR-DT8MCustomBoard populated with DART-MX8M
- 7" LCD + capacitive touch panel
- Power supply and communication cables
- Documentation and design package



## VAR-DT8MCustomBoard

### VAR-DT8MCustomBoard - Supporting DART-MX8M

The VAR-DT8MCustomBoard 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, LVDS display, HDMI, DisplayPort in one line

### 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
- Optional NAND

### High speed interfaces

- 5x USB 3.0/2.0 ports: 1x OTG, 2x HOST, 2x HOST over PCIe interface
- 10/100/1000Mbps Ethernet RJ45
- 2 x mPCIe

### Camera

- 2x MIPI CSI serial

### Additional expansion Connectors

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

### Debug

- Micro USB

### RTC backup battery

- CR1225 coin battery socket

### Power

- 5V DC input

### Size

- 15.0cm x 9.0cm

## 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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