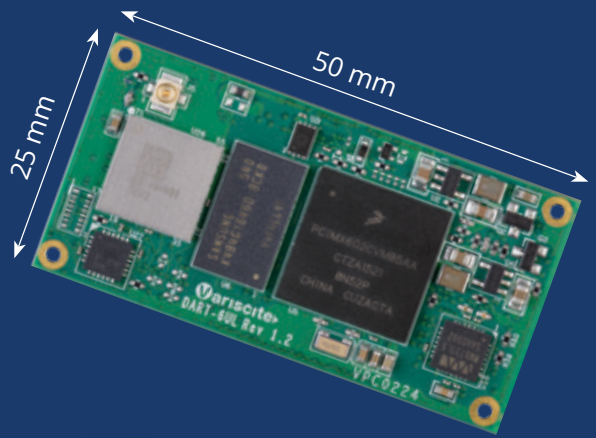# DART-6UL

Optimizing Power, Size and Cost

from $24

25 mm
50 mm

The DART-6UL, measuring only 25mm x 50mm, is a highly flexible System-on-Module (SoM) based on NXP's i.MX 6UltraLite / 6ULL / 6ULZ family and carries up to 900MHz ARM Cortex-A7 processor.

A versatile platform, the DART-6UL provides a variety of interfaces and connectivity options -all packaged at an optimized power, size and cost. This superior price/performance offering is ideal for fast emerging applications such as Internet-of-Things (IoT), as well as other portable and battery operated embedded systems.

The DART-6UL highly integrated connectivity includes a certified WiFi, Bluetooth/BLE, dual Ethernet, dual USB, audio, display with touch panel and serial interfaces. In addition, the system supports industrial operating grade, targeting embedded application requiring a wide temperature range.

The VAR-6ULCustomBoard carrier board complements an attractive full reference kit of the DART-6UL, which can be used for customers' evaluation, development and end-product mass production.

Main Features

NXP i.MX 6UltraLite / 6ULL / 6ULZ
- Power optimized up to 900MHz, ARM Cortex-A7
- 1GB DDR3L, 512MB NAND / 64GB eMMC
- Integrated security features
- 2D pixel acceleration engine (PxP)

Display Support
- 24bits Parallel LCD up to WXGA (1366 x 768)
- Touch screen controller

Networking
- 2x 10/100Mbps Ethernet
- Certified WiFi 802.11ac/a/b/g/n and Bluetooth 5.2/BLE

USB
- USB 2.0 OTG
- USB 2.0 Host

Audio
- Digital audio SSI(AUDMUX)/SPDIF
- Analog microphone (stereo)
- Headphone out, Line-in
- ESAI (6ULL only)

Camera
- Parallel input

Other Interfaces
- Dual CAN, I2C, SPI, PWM, JTAG, UART, SD/MMC

OS Support
- Linux

Power
- Single 3.3V

Dimensions (W x L xH):
- 25mm x 50mm x 4mm

-40 to 85°C Industrial temperature range

Low Power consumption
- Optimized power consumption in both operational and suspend modes

Complementing the DART-6UL

DART-6UL Evaluation Kit

The VAR-DVK-6UL allows full performance and capability evaluation, serving as an evaluation, development and production platform for hardware and software teams.

Evaluation Kit content

- VAR-6ULCustomBoard populated with DART-6UL
- 7" LCD + capacitive touch panel
- Power supply and communication cables
- Documentation and design package

VAR-6ULCustomBoard

VAR-6ULCustomBoard - Supporting DART-6UL

The VAR-6ULCustomBoard 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
- 24-bit RGB
- 18-bit LVDS

Touch Panel
- Capacitive touch support (6-pin FFC/FPC)
- Resistive touch support (via header)

Audio
- Headphone
- Line-in

USB
- 2 x USB 2.0 host
- Optional 1 x USB OTG

Ethernet
- 2 x 10/100Mbps Ethernet RJ45

Storage
- SD/MMC card socket

Additional expansion Connectors
- SPI, I2C
- CAN Bus
- UART, RS232
- Digital Audio
- PWM

Debug
- Micro USB
- JTAG (header)

RTC backup battery
- CR1225 coin battery socket

Power
- 5V DC input

Size
- 7cm x 10cm

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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Variscite