

Computer On Module

- Processor Freescale i.MX 6 Dual Lite, 800MHz
- RAM 512MB / 1GB DDR3 SDRAM
- ROM 128MB NAND Flash
- Power supply Single 3.1V to 5.5V
- Size 31mm SO-DIMM
- Temperature Grade Industrial (-40°C to 105°C Tj)

Key Features

- 10/100Mbps Ethernet
- Two High Speed USB 2.0 ports
- Full HD LCD controller, 24bpp
- OpenGL ES 2.0 hardware accelerator
- Multi-format HD 1080p60 video decoder and 1080p30 encoder hardware engine
- Two Camera Interfaces
- NEON MPE coprocessor
 - SIMD Media Processing Architecture
 - dual, single-precision floating point execute pipeline
- Unified 1MB L2 cache
- Several interfaces:
 - 3x UART, 2x SDIO, 2x SSI/AC97/I2S, I2C, CSPI, Keypad, Ext. Memory I/F
- 3.3V I/O
- IEEE1588 support
- 2x Controller Area Network (FlexCAN)
- PCIe 2.0 (1-lane)

LVDS Option only:

- Dual LVDS display port

OS Support

- Windows Embedded Compact 7
- Linux
- Android by kernel concepts www.kernelconcepts.de
- QNX by SITRE www.sitre.fr

Development System

- Starter-Kit V



**Dual
Cortex A9**

Board highlights:

- Highly integrated
- Standard TX-DIMM pinout
- as small as possible - only 31mm
- 3.3V I/O

The TX6 is a member of the TX module series, specially designed for Freescales i.MX multimedia processors. TX modules are complete computers, implemented on a board smaller than a credit card, and ready to be designed into your embedded system. TX modules includes a Freescale® i.MX processor, SDRAM and Flash memory. The integrated LCD-controller enables direct connection of an LCD screen. The TX6 is specifically targeted at embedded applications where size, high cpu-performance and cost are critical factors.

Computer on module

- Freescale® i.MX Dual Lite up to 800 MHz
- 512 Mbyte (32bit) / 1GByte (64bit) SDRAM DDR3-800
- 128 Mbyte NAND Flash memory
- DIMM200-module (67,6mm x 31 mm x 4mm)
- Operating temperature ranges (Processor junction temperature)
 - Extended Consumer Grade: -20°C ..105°C
 - Industrial Grade: -40°C ..105°C
 - Automotive Grade: -40°C ..125°C, AEC-Q100 Grade 3

Processor

The i.MX 6Dual Lite processors represent Freescale Semiconductor's latest achievement in integrated multimedia applications processors. These processors are part of a growing family of multimedia-focused products that offer high performance processing and are optimized for lowest power consumption. The i.MX 6Dual Lite processors feature Freescale's advanced implementation of the dual ARM Cortex™-A9 core, which operates at speeds up to 1 GHz. They include 2D and 3D graphics processors, 3D 1080p video processing, and integrated power management. Each processor provides a 64-bit DDR3/LVDDR3/LPDDR2-800 memory interface and a number of other interfaces for connecting peripherals, such as WLAN, Bluetooth™, GPS, hard drive, displays, and camera sensors.

High Performance CPU : ARM Dual Cortex-A9

- ARM Cortex-A9, with ARMv7™, Neon, VFPv3 and Trustzone support
- 32K instruction and data L1 caches and 256 KB to 1 MB of L2 cache
- Multi-stream-capable HD video engine delivering 1080p60 decode, 1080p30 encode and 3D video playback in HD in high performance families
- Superior 3D graphics performance with a shader performing up to 50 MT/s. Separate 2D and/or Vertex acceleration engines for an optimal user interface experience
- Stereoscopic image sensor support for 3D imaging

Standard TX-DIMM pinout:

- 4-wire UARTs (x3)
- LCD
- I2C / PWM
- Serial Audio Interfaces (x2)
- 4-wire SD-Card/SDIO

High-Speed communication interfaces incl. onboard Ethernet PHY / on-chip USB PHY allows direct use of connectors/magnetics on the baseboard without the need for additional logic:

- 10/100 Mbps Ethernet
- 480 Mbps USB OTG (Host or Device)
- 480 Mbps USB Host

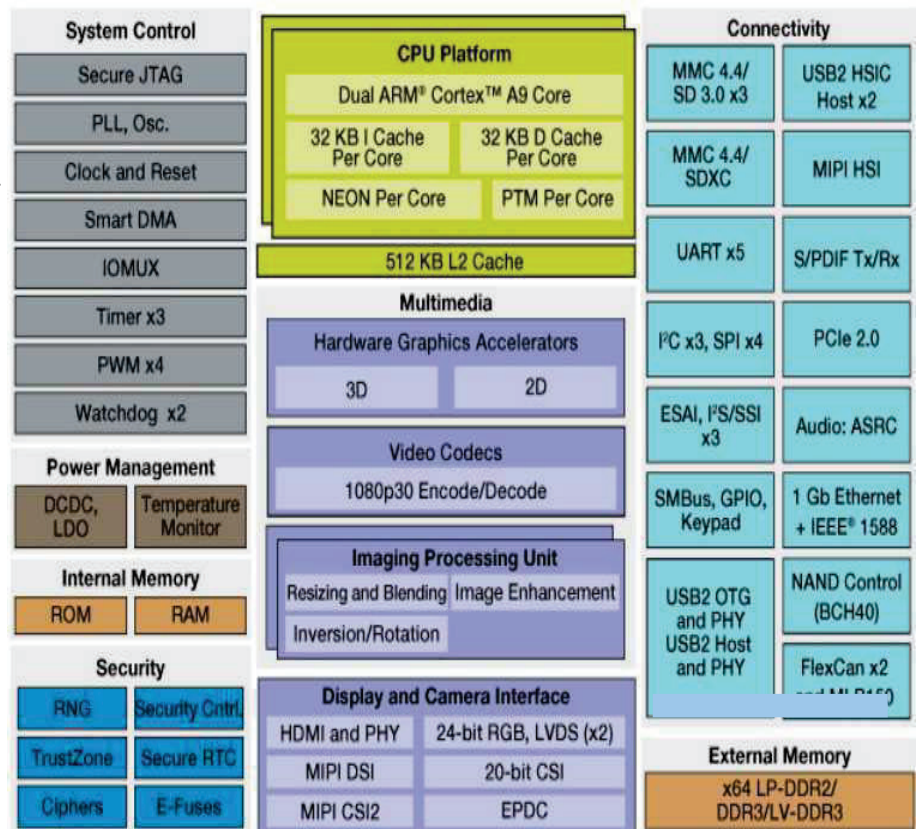
Power Supply

The TX6 accepts an input voltage from various sources:

- 1-cell Li-Ion/Polymer (up to 4.2V)
- 5.0V USB supply or AC wall adapter
- 3.3V

Read more in our TX-Guide:

www.karo-electronics.com/TX-Guide



Order Number	CPU	SDRAM	Flash	Temp. Grade
TX6DL/800/512S/128F/I	800MHz MCIMX6U7 Dual Core Industrial	512MB	128MB	Industrial
TX6DL/800/1024S/128F/I	800MHz MCIMX6U7 Dual Core Industrial	1024MB	128MB	Industrial