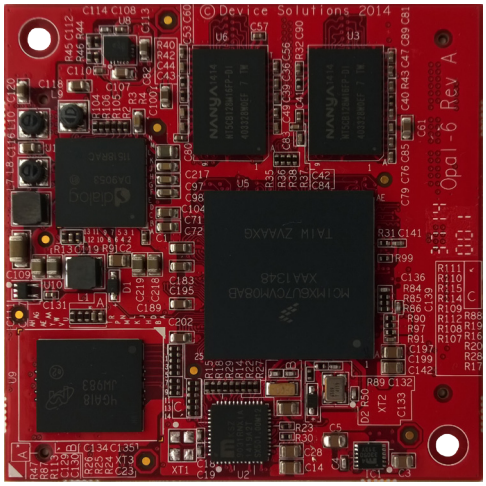
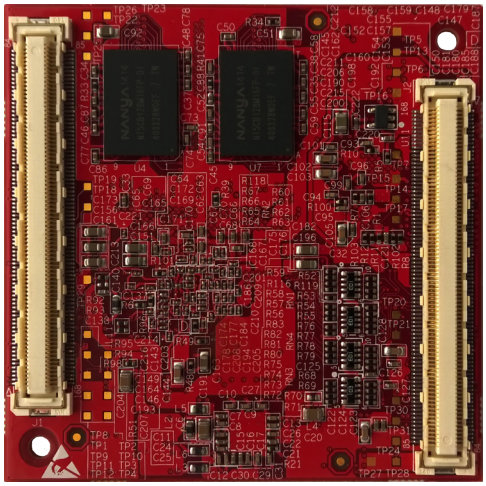
device solutions

Opal-6 i.MX6 System on Module

Accelerating Embedded Development

Create powerful connected devices faster with the Opal-6 System on Module (SoM)





Reduce Development Time, Cost and Risk

Focus on your product, not complex processor design
When you start a project using Opal-6, you eliminate a big piece of complex and risky design work. The memory interfacing and power supply work is already done! You can also forget about multi-layer PCB design with several BGA chips. That is all packaged into a module that is easy to integrate into your final design.

Start writing your application, not porting an Operating System
Don't spend time writing low-level code, or spending weeks bringing up your prototypes. Opal-6 runs Linux, Android and Windows Embedded Compact 2013. Choose the OS you need, the tools you know, and get to work on the features your customers are looking for.

Get started on real hardware
The Opal-6 IoT Development Kit provides a platform for evaluation and prototyping of new designs. Common features are available on the board and expansion connectors make it easy to add application specific components.

Powerful Multimedia Features

Multiple display options
Opal-6 interfaces directly with LVDS panels HDMI displays. Two of these interfaces may be used simultaneously.

Video and Graphics acceleration
Opal-6 includes video and graphics acceleration hardware enabling full HD video playback and stunning user interfaces.

High Level of Integration for a Faster Design Cycle

Connectivity
The IoT Development Kit for Opal-6 includes internet connectivity via Ethernet, WiFi and cellular via PCIe and a global SIM card. Connect to industrial and automotive devices using FlexCAN and serial interfaces.

Applications include:

- Automotive Displays
- IoT Gateways
- Industrial HMI
- Building and Home Automation
- Medical Devices
- Retail, Vending & Kiosks

freescale Connect Partner

Windows Embedded Partner

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Opal-6 SoM Features

Core
- Freescale i.MX6 Solo or DualLite applications processor including Cortex-A9 core(s) at 800MHz+
- 512MBytes - 2GBytes DDR3 RAM 64-bit bus when using DualLite
- 4GBytes+ eMMC Flash
- Power Management IC
- +5V Voltage input

Hardware Acceleration
- Video and Image Processing (Full HD 1920x1080)
- 2D/3D Graphics
- Security

Connectivity
- 10/100/1000 Ethernet PHY included on Opal-6 CPU
- 2 x FlexCAN
- High-Speed USB Host & OTG
- 3 x SD/SDIO/MMC
- 3 x I2S/SSI/AC97 for audio
- 5 x UART
- 4 x ECSPI
- 4 x I2C
- 4 x PWM
- PCIe v2.0
- 3.3V General Purpose I/O

Graphics and User Interface
- 4 display interfaces with up to 3 active at any one time. 266Mpixels/second at 24bit/pixel.
- Interface to RGB, LVDS, MIPI displays & HDMI
- Parallel & MIPI camera inputs
- Resistive touch screen controller
- Keypad controller

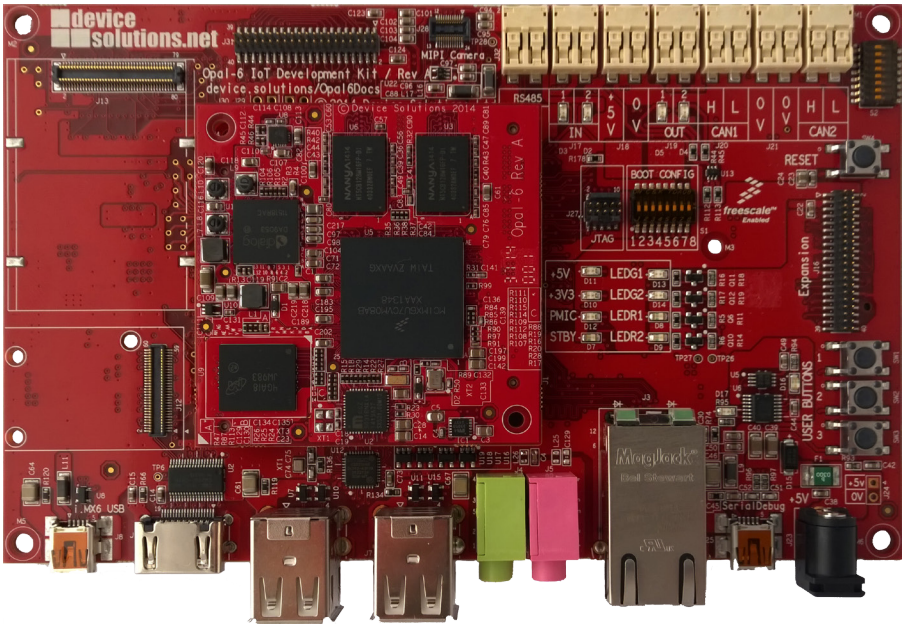
Form-Factor
- 2 x 168-pin 0.5mm Hirose Connectors
- Industrial temperature options

Operating System Support
- Linux
- Android 4.x
- Microsoft Windows® Embedded Compact 7 & Windows Embedded Compact 2013

Opal-6 IoT Development Kit

The Opal-6 IoT Development Kit is an ideal platform for evaluation and prototyping new devices.

Highlights
- Opal-6 i.MX6 DualLite CPU Module
- 10/100/1000 Ethernet
- PCIe & on-board SIM for global cellular connectivity
- WiFi a/b/g/n option
- Dual LVDS connectors for Freescale 10.1" panel
- HDMI monitor
- Dual CAN including transceivers
- Protected 5V I/O on push-wire connectors
- 4 x USB Host ports



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