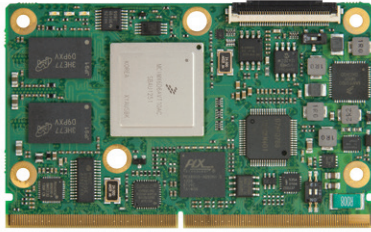


# LEC-iMX6

SMARC® Short Size Module with Freescale i.MX6 Solo, DualLite, Dual or Quad Processor



\*LEC = Low Energy Computer-on-Module

## Features

- Freescale SoC i.MX6 ARM Cortex A9 Solo, DualLite, Dual or Quad processor
- Integrated 2D/3D graphics processors, 3D 1080p video processing, power management
- Onboard DDR3L/1067 system memory from 512 MB to 2 GB
- Supports up to 64 GB eMMC, 1x SD/MMC, 1x SATA 3Gb/s
- Extreme Rugged™ operating temperature: -40°C to +85°C

## Specifications

### Core System

CPU	Freescale i.MX6 Solo, DualLite, Dual or Quad processor i.MX6 Quad, 4 cores, 800 MHz, 1 MB L2 cache, 3 displays, 1x SATA i.MX6 Dual, 2 cores, 800 MHz, 1 MB L2 cache, 3 displays, 1x SATA i.MX6 DualLite, 2 cores, 800 MHz, 512 kB L2 cache, 1 display, no SATA i.MX6 Solo, 1 core, 800 MHz, 512 kB L2 cache, 1 display, no SATA
Memory	Onboard DDR3L-1066 system memory from 512 MB to 2 GB
Boot Loader	U-Boot boot loader
L2 Cache	From 512 kB to 1 MB
SEMA Board Controller	Supports: Voltage/Current monitoring, Logistics and Forensic information, Flat Panel Control, General Purpose I <sup>2</sup> C, Failsafe SPI Flash, Watchdog Timer
Debug Headers	JTAG debug interface on test-points

### Graphics

LCD	Parallel LCD 24-bit
LVDS	LVDS single channel 24-bit
HDMI	HDMI 1.4a

### Video

High-performance video processing unit (VPU), supports SD and HD-level video decoders and SD-level encoders as a multi-standard video codec engine, as well as several important video processing functions, such as rotation and mirroring

### Audio

Audio Codec	Located on carrier
Interface	S/PDIF

### Ethernet

Interface	10/100/1000 GbE
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### I/O Interfaces

USB	2x USB 2.0 host, 1x USB OTG
SATA	1x SATA 3Gb/s
Serial	4x UART
Flash Memory	Up to 64 GB eMMC (custom option)
GPIO	12x GPIO with interrupt
PCIe	1x PCIe x1
SDIO	1x SDIO
SPI	2x SPI
I <sup>2</sup> C	3x I <sup>2</sup> C
I <sup>2</sup> S	1x I <sup>2</sup> S
S/PDIF	1x S/PDIF
WDT	1x WDT
CAN	2x CAN
Management	Battery and System Management

### Camera

Serial	MIPI CSI camera, 2 lanes
Parallel	PCAM, 10-bit

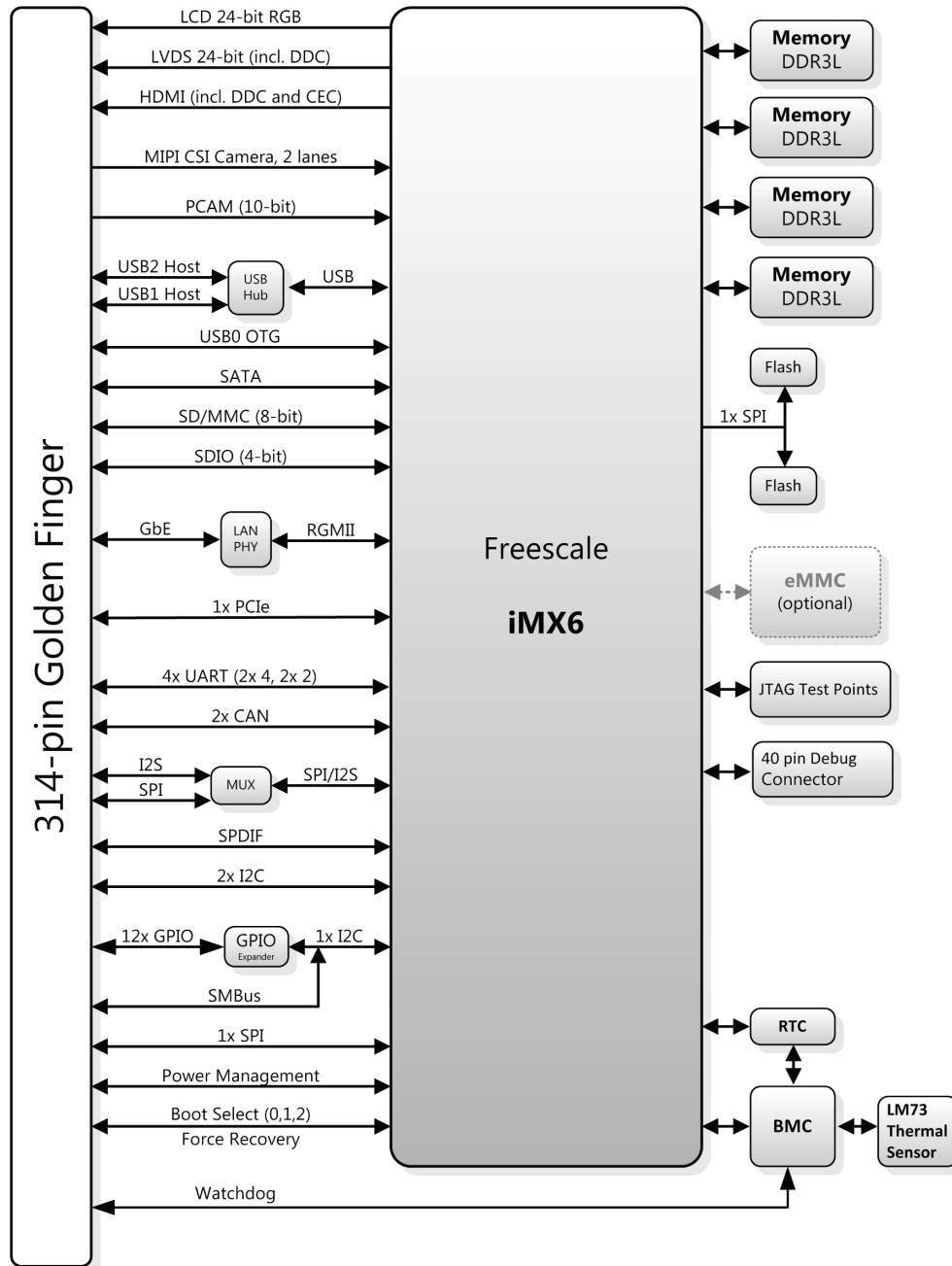
### Mechanical and Environmental

Form Factor	SMARC Specification v1.0
Dimensions	SMARC short size module, 82 mm x 50 mm
Operating Temperature	Standard: 0°C to +60°C Extreme Rugged™: -40°C to +85°C
Humidity	5-90% RH non-condensing 5-95% RH storage (and operating with conformal coating)
Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27 MIL-STD-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D
HALT	Thermal Stress, Vibration Stress, Thermal Shock and Combined Test

### Operating Systems

Standard Support	Windows Embedded Compact 7, Linux
On request	Android, VxWorks, QNX

## Functional Diagram



## Ordering Information

### Modules

Model Number	Description/Configuration
LEC-iMX64-2G-8G-ER	SMARC * Short Module with Freescale i.MX6, Quad, 2 GB RAM, 8 GB eMMC, -40°C to +85°C
LEC-iMX62-2G-8G-ER	SMARC * Short Module with Freescale i.MX6, Dual, 2 GB RAM, 8 GB eMMC, -40°C to +85°C
LEC-iMX62-1G-4G-ER	SMARC * Short Module with Freescale i.MX6, Dual, 1 GB RAM, 4 GB eMMC, -40°C to +85°C

LEC-iMX62L-2G-8G-ER	SMARC * Short Module with Freescale i.MX6, DualLite, 2 GB RAM, 8 GB eMMC, -40°C to +85°C
LEC-iMX61-1G-8G-ER	SMARC * Short Module with Freescale i.MX6, Solo, 1 GB RAM, 8 GB eMMC, -40°C to +85°C
LEC-iMX6-HS	Heatspreader for LEC-iMX6

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