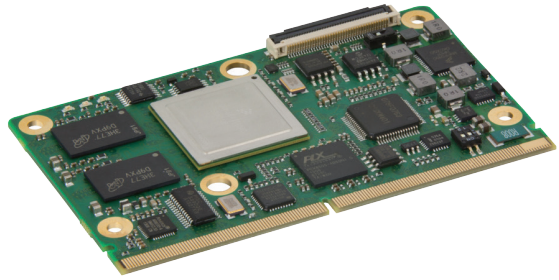
LEC-iMX6

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

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, Power Sequencing, Logistics and Forensic
Information, Flat Panel Control, I²C Bus Control, GPIO Control, User Flash, Failsafe
BIOS (dual BIOS), Watchdog Timer and Fan Control

Debug Headers

JTAG debug interface on test-points

Ethernet

Interface

10/100/1000 GbE

Audio

Audio Codec

Located on carrier

Interface

S/PDIF

Camera

Serial

MIPI CSI camera, 2 lanes

Parallel

PCAM, 10-bit

I/O Interfaces

PCIe

1x PCIe x1

USB

2x USB 2.0 host, 1x USB OTG

SATA

1x SATA 3Gb/s

Flash Memory

Up to 64 GB eMMC (custom option)

GPIO

12x GPIO with interrupt

SDIO

1x SDIO

SPI

2x SPI

I²C

3x I²C

I²S

1x I²S

S/PDIF

1x S/PDIF

WDT

1x WDT

CAN

2x CAN

Management

Battery and System Management

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Specifications

Graphics

LCD
Parallel LCD 24-bit

LVDS
LVDS single channel 24-bit

HDMI
HDMI 1.4a

Graphics
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

Mechanical and Environmental

Form Factor
Form Factor
SMARC Specifications 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 operating, non-condensing
5-95% RH storage (and operating with conformal coating)

HALT
Thermal Stress, Vibration Stress, Thermal Shock and Combined Test

Operation System

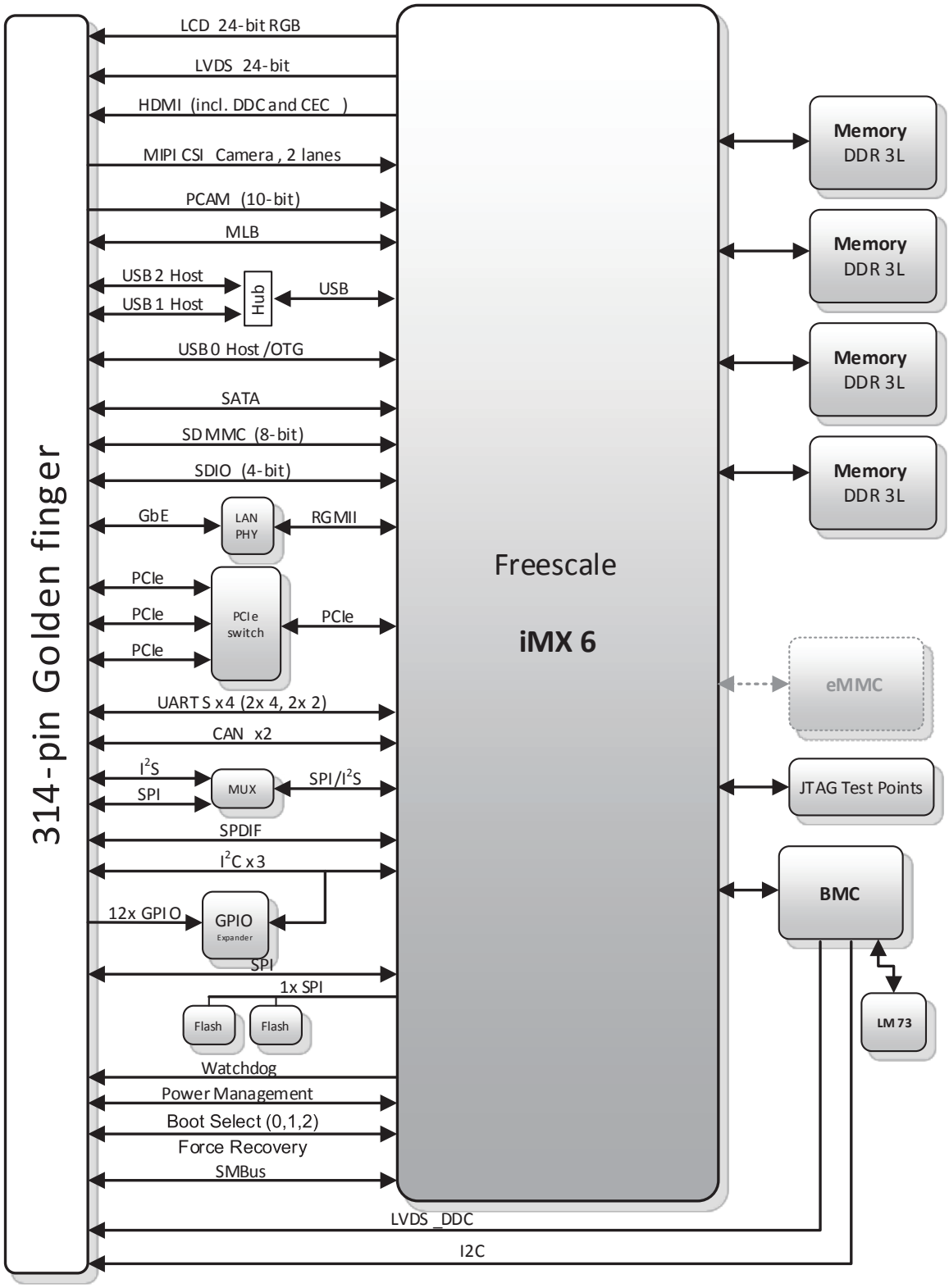
Standard Support
Windows Embedded Compact 7, Linux

Extended Support (BSP)
Android, VxWorks, QNX

Intelligent Middleware

SEMA
Local management, control of embedded computer systems Extended EAPI for monitoring, controlling and analytics applications Multiple OS support and across platforms (x86, ARM)

Functional Diagram



Ordering Information

- **LEC-iMX64-2G-8G-ER**
  SMARC Short Module with Freescale i.MX6, Quad, 2 GB RAM, 8 GB eMMC, Extreme Rugged operating temperature: -40°C to +85°C
- **LEC-iMX62-2G-8G-ER**
  SMARC Short Module with Freescale i.MX6, Dual, 2 GB RAM, 8 GB eMMC, Extreme Rugged operating temperature: -40°C to +85°C
- **LEC-iMX62-1G-4G-ER**
  SMARC Short Module with Freescale i.MX6, Dual, 1 GB RAM, 4 GB eMMC, Extreme Rugged operating temperature: -40°C to +85°C
- **LEC-iMX62L-2G-8G-ER**
  SMARC Short Module with Freescale i.MX6, DualLite, 2 GB RAM, 8 GB eMMC, Extreme Rugged operating temperature: -40°C to +85°C
- **LEC-iMX61-1G-8G-ER**
  SMARC Short Module with Freescale i.MX6, Solo, 1 GB RAM, 8 GB eMMC, Extreme Rugged™ operating temperature: -40°C to +85°C
- **LEC-iMX6-HS2**
  Heatspreader for LEC-iMX6 Solo/Dual Lite

*other configurations by request

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