

# EDM1-CF-IMX6



## Main Features

- ARM Cortex-A9 Freescale i.MX6 scalable single/dual/quad core EDM type 1 compact System-on-Module
- Gigabit LAN, WiFi 802.11 b/g/n and Bluetooth v. 4.0 communication interface
- Targeting multimedia applications with LVDS, TTL, HDMI, S/PDIF, I<sup>2</sup>S, MIPI camera and display



|                |     |      |      |            |                         |                                     |             |              |    |           |                                     |                   |      |
|----------------|-----|------|------|------------|-------------------------|-------------------------------------|-------------|--------------|----|-----------|-------------------------------------|-------------------|------|
| Power<br>5 VDC | LAN | TTL  |      | GPMC       |                         | I <sup>2</sup> S<br>2 <sup>nd</sup> | SPDIF       | CANBus<br>x2 | SD | SPI<br>x2 | UART<br>x2                          | Buttons<br>+ GPIO | RSVD |
|                |     | LVDS | HDMI | PCIe<br>x1 | SATA<br>1 <sup>st</sup> | USB<br>OTG                          | USB<br>Host |              |    |           | I <sup>2</sup> S<br>1 <sup>st</sup> |                   |      |

## Specifications

### Core System

|                 |  |
|-----------------|--|
| Signalling      | EDM Type 1 compliant   |
| CPU             | Freescale i.MX6Quad @ 1Ghz<br>Freescale i.MX6Dual @ 1Ghz<br>Freescale i.MX6DualLite @ 1Ghz<br>Freescale i.MX6Solo @ 1Ghz |
| System Memory   | up to 2GB DDR3   |
| Storage         | eMMC (default 4GB)<br>optional NAND Flash (MOQ apply)  |
| Debug Interface | JTAG Interface by thruhole   |
| FPC Connector   | MIPI Interface Camera<br>MIPI Interface Display  |

### Connectivity

|           |                            |
|-----------|----------------------------|
| Network   | Atheros AR8031 Gigabit LAN |
| WiFi      | Broadcom BCM4330 802.11bgn |
| Bluetooth | Broadcom BCM4330 BT 4.0    |

### I/O Interfaces

|             |   |
|-------------|---|
| Storage     | 1x SATA 2.0 (Dual /Quad only)<br>1x SDIO / MMC                  |
| Expansion   | 1x PCIe 2.0   |
| Display     | HDMI v1.4<br>1 channel LVDS 18/24 bit<br>24 bit RGB TTL         |
| USB         | USB Host 2.0<br>USB OTG 2.0                                     |
| CAN Bus     | 2x Flex CAN version 2.0B compliant                              |
| Serial Port | 2x UART   |
| Other       | SPI, I <sup>2</sup> C, I <sup>2</sup> S, GPIO, Local Bus (GPMC) |

### Video

|                             |  |   |
|-----------------------------|--|---|
| GPU 3D                      | <b>Solo / Duallite</b><br>Vivante GC880<br>35Mtri/s 266Mpxl/s<br>OpenGL ES 2.0 | <b>Dual / Quad</b><br>Vivante GC2000<br>200Mtri/s 1000Mpxl/s<br>OpenGL ES 2.0<br>& Halti, CL EP |
| GPU 2D<br>(Vector Graphics) | emulated on GPU 3D   | Vivante GC355<br>300Mpxl/s<br>OpenVG 1.1  |
| GPU 2D<br>(Composition)     | Vivante GC320<br>600Mpxl/s, BLIT   | Vivante GC320<br>600Mpxl/s, BLIT  |
| Video Decode                | 1080p30 + D1   | 1080p60 H.264   |
| Video Encode                | 1080p30 H.264<br>BP / Dual 720p  | 1080p30 H.264<br>BP / Dual 720p   |

### Audio

|             |                                      |
|-------------|--------------------------------------|
| Interface   | I <sup>2</sup> S (2 channel), S/PDIF |
| Audio Codec | on EDM Carrier Board                 |

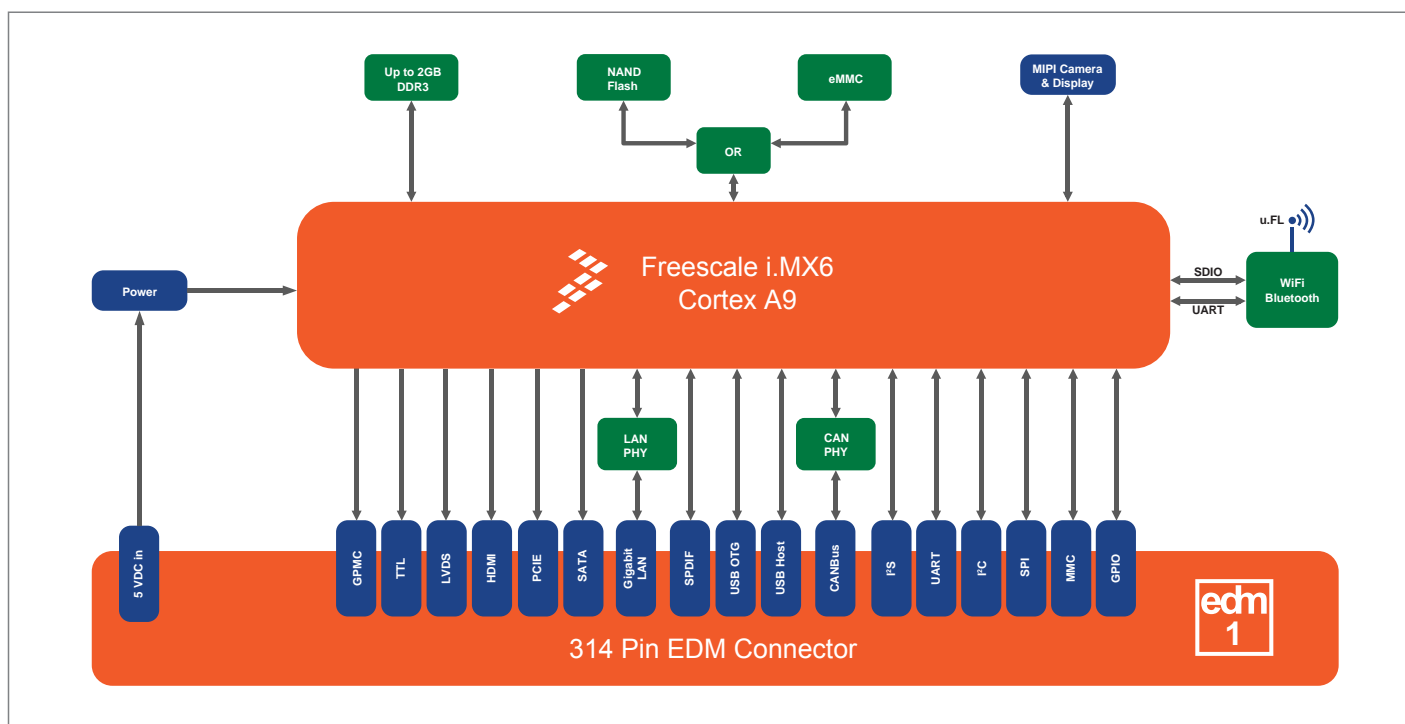
### Power Specifications

|             |              |
|-------------|--------------|
| Input power | 5 VDC +/- 5% |
|-------------|--------------|

### Operation Systems

|                  |  |
|------------------|--|
| Standard Support | Linux<br>Android   |
| Extended Support | Commercial Linux<br>Windows Embedded Compact<br>Real Time OS |

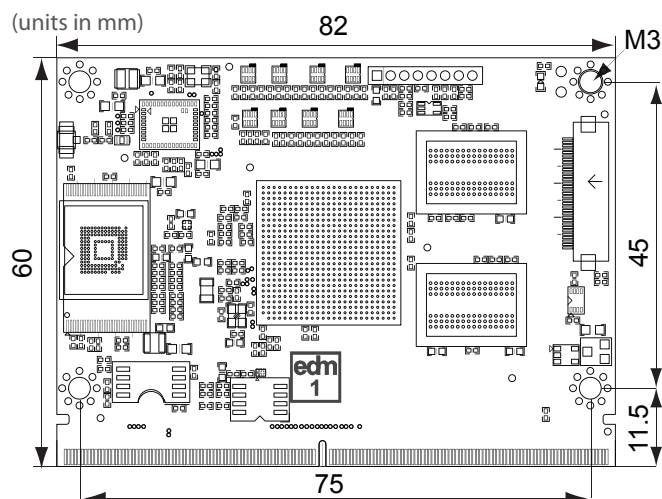
## Block Diagram



## Environmental and Mechanical

|                  |  |
|------------------|--|
| Temperature      | Commercial : 0° to 60° C<br>Extended : -20° to 70° C<br>Industrial : -40° to 85° C (no WiFi) |
| Humidity         | 10 to 90%  |
| Module Connector | 314 pins MXM3  |
| Form Factor      | EDM Compact Form Factor  |
| Dimensions       | 82 x 60 mm<br>(3 $\frac{1}{8}$ x 2 $\frac{3}{8}$ inch)                                       |
| MTBF             | >100,000 hours   |
| Weight           | 20 grams   |
| Shock            | 50G / 25ms   |
| Vibration        | 20G / 0-600 Hz   |

## Dimensions



## Ordering Information

- EDM1-CF-IMX6S10-R512-NI4G-L-2C**  
EDM Compact Type 1 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB eMMC+ Gigabit LAN + 2 CAN
- EDM1-CF-IMX6U10-R1GB-NI4G-L-2C**  
EDM Compact Type 1 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN
- EDM1-CF-IMX6D10-R1GB-NI4G-L-S-2C**  
EDM Compact Type 1 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA
- EDM1-CF-IMX6Q10-R2GB-NI4G-L-S-2C**  
EDM Compact Type 1 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA
- EDM1-CF-IMX6S10-R512-NI4G-BW-L-2C**  
EDM Compact Type 1 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0
- EDM1-CF-IMX6U10-R1GB-NI4G-BW-L-2C**  
EDM Compact Type 1 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0
- EDM1-CF-IMX6D10-R1GB-NI4G-BW-L-S-2C**  
EDM Compact Type 1 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0
- EDM1-CF-IMX6Q10-R2GB-NI4G-BW-L-S-2C**  
EDM Compact Type 1 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB eMMC + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0

\* Feel free to contact us for custom tailored Carrier Board request for your projects.