

# EDM2-CF-iMX6



## EDM Type 2 Compact Form Factor Freescale i.MX6 System on Module



ARM Cortex-A9 Freescale i.MX6 scalable single/dual/quad core EDM type 2 compact System-on-Module

Communication by gigabit LAN, WiFi 802.11 b/g/n and Bluetooth v.4.0

Targeting multimedia applications with dual channel LVDS, HDMI, S/PDIF, I<sup>2</sup>S, MIPI camera and display.

Power 5 VDC	LAN	LVDS	HDMI	PCIe x4	SATA 2nd	LPC	HDA	SPDIF	CANBus x2	SD	SPI x2	UART x2	Buttons + GPIO	RSVD
		LVDS	HDMI	PCIe x1	SATA 1st	USB OTG	USB Host	I <sup>2</sup> S 1st				FC x2		RTC

### Core System

Signalling CPU  
EDM Type 2 compliant  
Freescale i.MX6Quad @1.0GHz  
Freescale i.MX6Dual @1.0 GHz  
Freescale i.MX6DualLite @1.0 GHz  
Freescale i.MX6Solo @1.0 GHz

System Memory Storage  
up to 2GB DDR3  
eMMC / iNAND  
or optional NAND Flash

Debug Interface  
JTAG Interface  
FPC Connector  
MIPI interface camera  
MIPI interface DSI display

### I/O

Storage  
1x SATA 2.0 (Dual / Quad only)  
1x SDIO/ MMC

Expansion  
1x PCIe 2.0

Display  
HDMI v1.4  
2 channel LVDS 18/24 bit

USB  
USB Host 2.0  
USB OTG 2.0  
2x Flex CAN

CAN Bus  
version 2.0B compliant

Serial Port  
2x UART

Other  
SPI, I<sup>2</sup>C, GPIO

### Power Specifications

Input Power 5 VDC

### Operating Systems

Standard Support  
Linux  
Android

Extended Support  
Commercial Linux  
Windows Embedded Compact 7  
Real Time OS

### Connectivity

Network  
Atheros AR8031 Gigabit LAN

Wireless LAN  
Broadcom BCM4330  
802.11 b/g/n @ 2.4 Ghz

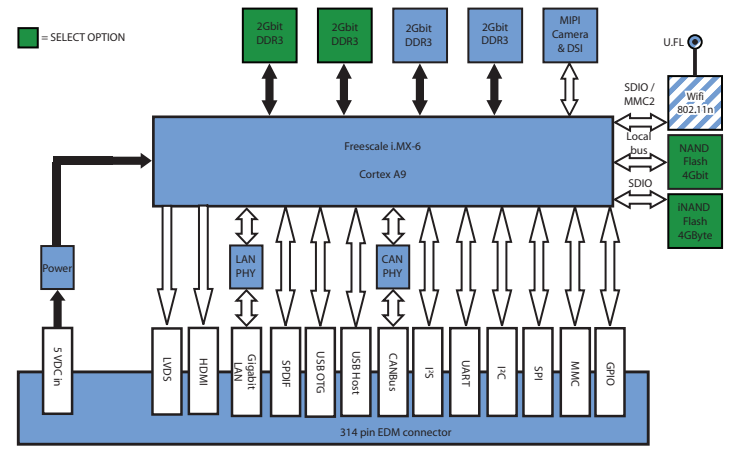
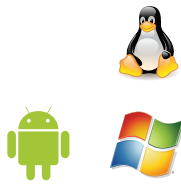
Bluetooth  
Bluetooth v. 4.0

### Audio

Interface  
I<sup>2</sup>S (1 channel), S/PDIF  
Audio Codec  
on EDM Carrier Board

### Video

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



### Mechanical and Environmental

Temperature  
Commercial: 0° to 60° C  
Extended: -20° to 70° C  
\* Industrial: -40° to 85° C  
(\* = no wifi, no eMMC)

Humidity  
10-90%

Module Connector  
314 pins MXM3

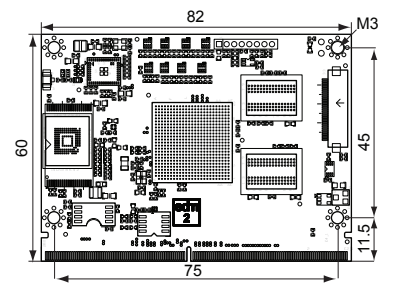
Form Factor  
EDM Compact Form Factor  
82 x 60 mm  
(3 1/8 x 2 3/8 inch)

Dimensions  
>100,000 hours

MTBF  
Weight  
Shock  
Vibration  
20 grams  
50G / 25ms  
20G / 0-600 Hz

### Dimensions

units in mm



### Ordering Information

<b>EDM2-CF-iMX6Q10-BW</b>	Freescale i.MX6 Quad core EDM Compact Type 2 with WiFi and Bluetooth
<b>EDM2-CF-iMX6Q10</b>	Freescale i.MX6 Quad core EDM Compact Type 2
<b>EDM2-CF-iMX6D10-BW</b>	Freescale i.MX6 Dual core EDM Compact Type 2 with WiFi and Bluetooth
<b>EDM2-CF-iMX6D10</b>	Freescale i.MX6 Dual core EDM Compact Type 2
<b>EDM2-CF-iMX6U10-BW</b>	Freescale i.MX6 DualLite core EDM Compact Type 2 with WiFi and Bluetooth
<b>EDM2-CF-iMX6U10</b>	Freescale i.MX6 DualLite core EDM Compact Type 2
<b>EDM2-CF-iMX6S10-BW</b>	Freescale i.MX6 Single core EDM Compact Type 2 with WiFi and Bluetooth
<b>EDM2-CF-iMX6S10</b>	Freescale i.MX6 Single core EDM Compact Type 2

### Optional Accessories

<b>EDM-C-Bracket</b>	EDM compact Carrier Board mount bracket
<b>HSP-EDM-C-10W</b>	EDM passive heatsink
<b>HS-EDM-CF-iMX6</b>	EDM-CF-i.MX6 compatible heatspreader

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

2013-03. All specifications are subject to change without notice.



### Start Kits

EDM2-CF-iMX6S10-START  
EDM2-CF-iMX6U10-START  
EDM2-CF-iMX6D10-START

EDM Compact Type 2 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB iNAND + Gigabit LAN + 2 CAN (**EDM2-CF-iMX6S10-R512-Ni4G-L-2C**)  
EDM Compact Type 2 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN (**EDM2-CF-iMX6U10-R1GB-Ni4G-L-2C**)  
EDM Compact Type 2 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + SATA & EDM Compact passive heatsink (**EDM2-CF-iMX6D10-R1GB-Ni4G-L-S-2C + EDM-HS-CP12-20-05-01**)  
EDM Compact Type 2 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + SATA & EDM Compact passive heatsink (**EDM2-CF-iMX6Q10-R2GB-Ni4G-L-S-2C + EDM-HS-CP12-20-05-01**)

EDM2-CF-iMX6Q10-START

EDM Compact Type 2 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0 & EDM antenna kit (**EDM2-CF-iMX6S10-R512-Ni4G-BW-L-2C + EDM-ANT-P150-A138-045D-2450-BK**)  
EDM Compact Type 2 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0 & EDM antenna kit (**EDM2-CF-iMX6U10-R1GB-Ni4G-BW-L-2C + EDM-ANT-P150-A138-045D-2450-BK**)  
EDM Compact Type 2 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0 & EDM antenna kit & EDM Compact passive heatsink (**EDM2-CF-iMX6D10-R1GB-Ni4G-BW-L-S-2C + EDM-ANT-P150-A138-045D-2450-BK + EDM-HS-CP12-20-05-01**)  
EDM Compact Type 2 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0 & EDM antenna kit & EDM Compact passive heatsink (**EDM2-CF-iMX6Q10-R2GB-Ni4G-BW-L-S-2C + EDM-ANT-P150-A138-045D-2450-BK + EDM-HS-CP12-20-05-01**)

EDM2-CF-iMX6S10-BW-START

EDM2-CF-iMX6U10-BW-START

EDM2-CF-iMX6D10-BW-START

EDM2-CF-iMX6Q10-BW-START

### Standard Partnumbers

EDM2-CF-iMX6S10-R512-Ni4G-L-2C  
EDM2-CF-iMX6U10-R1GB-Ni4G-L-2C  
EDM2-CF-iMX6D10-R1GB-Ni4G-L-S-2C  
EDM2-CF-iMX6Q10-R2GB-Ni4G-L-S-2C

EDM Compact Type 2 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB iNAND + Gigabit LAN + 2 CAN  
EDM Compact Type 2 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN  
EDM Compact Type 2 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + SATA  
EDM Compact Type 2 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + SATA

EDM2-CF-iMX6S10-R512-Ni4G-BW-L-2C  
EDM2-CF-iMX6U10-R1GB-Ni4G-BW-L-2C  
EDM2-CF-iMX6D10-R1GB-Ni4G-BW-L-S-2C  
EDM2-CF-iMX6Q10-R2GB-Ni4G-BW-L-S-2C

EDM Compact Type 2 Freescale i.MX6 Solo 1Ghz + 512MB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0  
EDM Compact Type 2 Freescale i.MX6 Duallite 1Ghz + 1GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + 802.11bgn + Bluetooth 4.0  
EDM Compact Type 2 Freescale i.MX6 Dual 1Ghz + 1GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0  
EDM Compact Type 2 Freescale i.MX6 Quad 1Ghz + 2GB RAM + 4GB iNAND + Gigabit LAN + 2 CAN + SATA + 802.11bgn + Bluetooth 4.0

### Optional Accessories

EDM-ANT-P150-A138-045D-2450-BK  
EDM-HS-CP12-20-05-01  
EDMCONNECTORKIT

EDM antenna kit containing U.FL to SMA patch cable + 4.5 dB, 2.4/5 GHz, black color antenna.  
EDM Compact 12 mm passive heatsink + 20\*20 mm thermopad with 0.5 mm thickness for Lidded Freescale CPUs + mylar.  
10 EDM AS0B821-S78B-7H connectors + 40 standoff's + 40 screws.

### How to create a Custom Partnumber (MOQ's apply)

EDM-CF1-IMX6Q10-R1GB-Ni4G-BW-L-S-2C-TE-xxxx

EDM  
EDM Type  
Formfactor of Module  
Chipvender  
CPU type  
CPU cores  
CPU speed  
Memory  
Storage  
Wireless LAN  
Network LAN  
SATA  
CANbus  
Temperature  
Customer ID code

Embedded Design Module  
Pin definition of EDM Type 1 or Type 2  
C = Compact; S = Standard; X = Extended  
F = Freescale  
for example : i.MX6  
S = Single core; U = DualLite; D = Dualcore; Q = Quadcore  
10 = 1GHz; 08 = 800MHz  
R512 = 512MB; R1GB = 1GB; R2GB = 2GB  
Ni4G = iNAND 4GB; N512 = 512 NAND Flash (iNAND is only possible in Commercial and Extended temperature. For Industrial Temperature only NAND Flash is possible.  
None = no wireless communication; W = WiFi; BW = Bluetooth + WiFi (only available in commercial and extended temperature)  
None = no Ethernet; L = 1000Gbps Ethernet LAN  
None = no SATA; S = SATA (only on i.MX6 Dual or i.MX6 Quad  
None = no CANbus; 1C = 1 CANbus; 2C = 2 CANbus  
None = Commercial Temp (0~60C); TE = Extended Temp (-20~70C); TI = Industrial Temp (-40~85C); TEC = Extended Temperature Certified; TIC = Industrial Temperature Certified  
xxxx = special order code for custom softwrae loading or BOM option