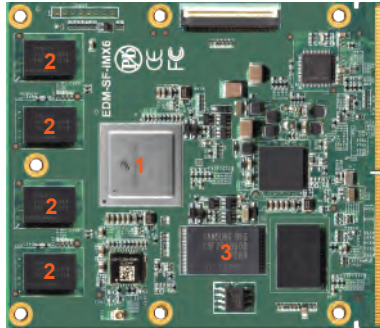# EDM-SF-iMX6

The Freescale i.MX6 EDM Standard module comes with multiple LVDS, HDMI and TLL to connect to any type of display at a very low power consumption level.

EDM-SF-iMX6

= SELECT 1 OPTION

EDM Standard/Extended

Power 5 VDC	LAN	LVDS/eDP 2nd	HDMI/DP 2nd	PCIe x4	SATA 2nd	LPC	HDA	SPDIF	CANBus x2	SD	SPI x2	UART x2	Buttons + GPIO	RSVD
		LVDS/eDP 1st	HDMI/DP 1st	PCIe x1	SATA 1st	USB OTG	USB Host	I2S 1st				I²C x2		RTC

Core System

CPU	Freescale i.MX 6Quad @1.2GHz(1)
	Freescale i.MX 6Dual @1.2 GHz
	Freescale i.MX 6DualLite @1 GHz
	Freescale i.MX 6Solo @1 GHz
PMIC	MMPF0100NPZES
System memory	1GB DDR3 (2)
Storage	512 MB NAND Flash (3)
	or 4GB iNAND
CAN Bus	2x High End CAN-Bus Controller version 2.0B compliant
Debug Interface	JTAG Interface
Camera interface	by connector

Connectivity

Network	Atheros AR8031 Gigabit LAN
Wireless LAN	Broadcom BCM4329
	802.11 b/g/n

Video

Chipset	VPU
	2 IPUv3H
	GPU3Dv4 (Open GL ES 2.0)
	GPU2Dv2 (BitBlt
	GPUVG (Open VG 1.1)
	ASRC

Audio

Interface	I²S, SPDIF
Audio codec	on EDM baseboard

I/O

Storage	SATA
Serial Port	2x UART
USB	USB 2.0
	USB OTG

Power Specifications

Input power	5 VDC
Smart Battery	Yes

Mechanical and Environmental

Temperature	Commercial: 0° to 70° C
	Extended: -20° to 70° C
	Industrial: -40° to 85° C (no wifi)
Humidity	10-90%
Form Factor	EDM Standard form factor
Dimensions	82 x 95 mm
	(3⅜ x 3¾ inch)
MTBF	>100,000 hours
Weight	20 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz

Operating Systems

Standard support	Linux, Android,
	Windows Embedded Compact 7

Ordering Information

EDM-SF-iMX6Q
Freescale iMX6 Quad core EDM Standard module
EDM-SF-iMX6D
Freescale iMX6 Dual core EDM Standard module
EDM-SF-iMX6DL
Freescale iMX6 DualLite core EDM Standard module
EDM-SF-iMX6S
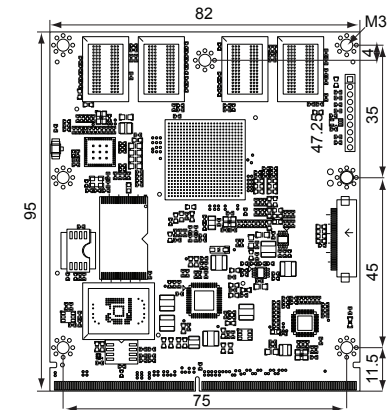Freescale iMX6 Single core EDM Standard module

Optional Accessories

EDM-S-Bracket	EDM standard baseboard mount bracket
HSP-EDM-S-10W	EDM passive heatsink
HS-EDM-SF-iMX6	EDM-SF-iMX6 compatible heatspreader

Feel free to contact us for custom tailored interface board request for your projects.

Dimensions

units in mm

(ES) Equipements Scientifiques SA - Département Modules & Systèmes Informatiques - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 81 - Fax. 01 47 01 16 22 - e-mail: msi@es-france.com - Site Web: www.es-france.com

(ES) Equipements Scientifiques SA - Département Modules & Systèmes Informatiques - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 81 - Fax. 01 47 01 16 22 - e-mail: msi@es-france.com - Site Web: www.es-france.com

EDM Standard

The Concept

System on Modules (SoM's) provides a flexible solution to OEM's that require a modular computing solution but do not have the resources or volume to design a custom board. By choosing EDM modules customers are ensured that a whole spectrum of CPU architectures are covered ranging from low power efficient ARM Cortex-A9 CPU's to Intel ATOM based modules to Intel i7 multicore processor modules.

Custom Baseboard Design.

Customers can design their own baseboard using the freely available schematics and leverage on the available software source code that comes standard with every EDM Module and therefore bringing a custom designed solution to market using a very short design cycle.

For customers that lack engineering staff TechNexion also offers custom engineered baseboard design and manufacturing services where our expertise as co-founder of the EDM standard will assist you to ensure your design is fully compatible and future upgrade proof while moving to next generation EDM modules.
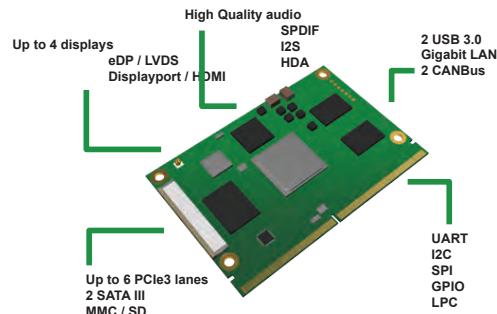
Longevity

TechNexion EDM Modules are designed by only using components from embedded roadmaps of strategic suppliers and are backed up with value added technical services such as life cycle management, revision control and end-of-life support.

All information about techNexion EDM can be found at the TechNexion homepage.

High Quality audio
SPDIF
I2S
HDA

Up to 4 displays
eDP / LVDS
Displayport / HDMI

2 USB 3.0
Gigabit LAN
2 CANBus

UART
I2C
SPI
GPIO
LPC

Up to 6 PCIe3 lanes
2 SATA III
MMC / SD

TechNexion and Open Source

TechNexion is a strong advocate of open source soft- and hardware. As a result all EDM baseboard schematics are freely available for download to assist "you" to develop your own baseboard.

Furthermore for customers that like our EDM modules and standard baseboards we have 2D and 3D files available to quickly integrate our products in your own custom enclosure.

TechNexion standard delivers software support for the following Operating Systems.

Android binary test images, instructions to make your own as well as complete **source code** available.

Linux binary test images and full **source code** of x-loader, u-boot, kernel and support packages available.

Windows CE BSP with **source code** and configuration scripts for our development kits are available.

Development Kits

Kickstart your project development cycle with our plug and play development kits that come pre-loaded with working software and all tools to assist you to validate performance and explore additional possibilities without the need to invest a huge amount of time and resources upfront.

Why would you choose EDM Modules?

EDM is the first true x86/ARM Cross platform pin-to-pin compatible standard

EDM is an open standard under the Creative Commons Share Alike license without membership fees, NDA's and restricted area's

EDM baseboard schematics and reference board are completely open-source. Every hardware vendor can submit their CPU Module for validation to ensure the unit is 100% software and hardware compatible with the standard to allow end users to swap between modules without hardware/software compatibility issues currently known when swapping between different Q7 or COM Express vendors.

EDM is the first worldwide standard that provides not only hardware and but also software compatibility between different modules.
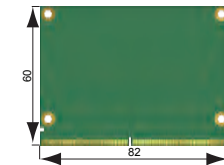
About EDM Standard

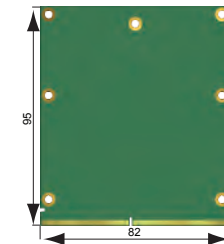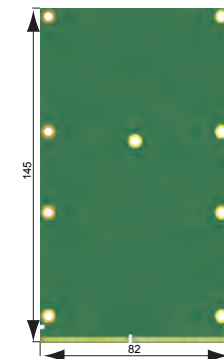More information about the EDM Standard and how it can benefit your projects.

Visit : http://www.edm-standard.org

EDM Form Factors
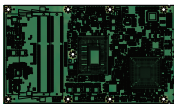
EDM Compact
60
82

EDM Standard
95
82

EDM Extended
145
82

		EDM Compact									
Power 5 VDC	LAN	TTL	GPMC	I2S 2nd	SPDIF	CANBus x2	SD	SPI x2	UART x2	Buttons + GPIO	RSVD
		LVDS/ eDP 1st	HDMI/ DP 1st	PCIe x2	SATA 1st	USB OTG	USB Host	I2S 1st			I²C x2	RTC

		EDM Standard/Extended										
Power 5 VDC	LAN	LVDS/ eDP 2nd	HDMI/ DP 2nd	PCIe x4	SATA 2nd	LPC	HDA	SPDIF	CANBus x2	SD	SPI x2	UART x2	Buttons + GPIO	RSVD
		LVDS/ eDP 1st	HDMI/ DP 1st	PCIe x2	SATA 1st	USB OTG	USB Host	I2S 1st				I²C x2	RTC

EDM Standard - Overview

EDM Module:	EDM-CF-iMX6	EDM-CT-AM437x	EDM-SF-iMX6	EDM-SF-AM437x	EDM-XI-QM77
Size	Compact (C)	Compact (C)	Standard (S)	Standard (S)	Extended (X)
Architecture	Cortex A9	Cortex A9	Cortex A9	Cortex A9	x86 i3 i7
CPU	1.2 GHz	1 GHz	1.2 GHz	1 GHZ	1.6 - 2.5 GHz
Chipset	MMPF0100NPZES	TWL6030	MPF0100NPZES	TWL6030	QM77
WiFi	○	○	○	○	
Memory	1 GB	1 GB	1 GB	1 GB	Dual Socket
NAND/ iNAND	512 MB / 4GB	512 MB / 4GB	512 MB / 4GB	512 MB / 4GB	
GPMC	●	●			
TTL	●	●			
LVDS	1	1	2	2	2
HDMI	1	1	1	1	2
DP					2
I²S	2	2	1	1	1
HDA					●
SPDIF	●	●	●	●	
SATA	1	1	1	1	2
SDIO	●	●	●	●	
PCIe	x1	x1	x1	x1	x6
USB host	●	●	●	●	●
USB OTG / Client	●	●	●	●	
CAN Bus	2	2	2	2	2
SPI	2	2	2	2	2
I²C	2	2	2	2	1
UART	2	2	2	2	2
RTC	●	●	●	●	●
Camera Interface	1	1	1	2	

○ = Option available at ordering
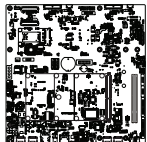
Baseboard:	Fairy	Elf	Druid	Seer	Wizard
EDM module	Compact	Compact	All	All	All
Size	3.5"	3.5"	A5	A5	mATX
Application	Mobile	Automation	Thin Client	Panel PC	EVM
8~30 VDC	●	●	●	●	●
Battery	●	●	●	●	●
TTL 45 pin (5")	●	●			●
LVDS	1	1	2 (to HDMI)	2	2
DP / HDMI	HDMI	HDMI	2 HDMI	HDMI	2 DP / 2 HDMI
Audio	I²S	I²S	both	both	both
SPDIF	●	●	●	●	●
Speaker	2W	2W	2W	10W	10W
Gigabit LAN	●	●	●	●	●
Serial UART/ 232/422/485	2	4	2	2	2
CAN	2	2	2	2	2
GPIO	8	8	8	8	8
USB Host / OTG	3 / 1	3 / 1	3 / 1	3 / 1	3 / 1
3G	1	1	1	1	1
PCIe	mini	mini	mini	mini	mini + PCI x4
SATA	1	1	1	1	2
SD	micro	micro	internal	internal	SD
Touch Display	●	●		●	●
NFC sensor	●				
Mobile sensors	●				●
SPI/I2C EEPROM	●	●	●	●	●
LPC TPM interface			●		●
SPI/I2C pinheader	●	●	●	●	●