



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# EDM2-ELF - Carrier Board for EDM Type 2 Compact Module

## Key Features

Develop your mobile embedded device quickly with the Elf EDM Carrier Board which features a variety of sensors and interconnects.

HDMI, TTL and LVDS display interfaces.

Communication by dual PCI Express (with SIM cardslots).

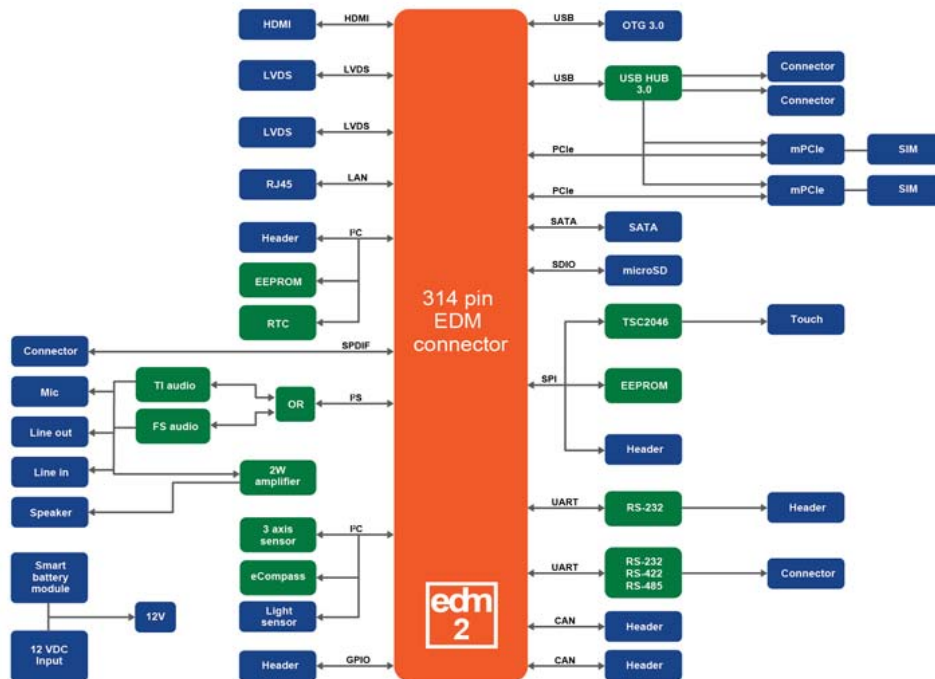
Dual CAN Bus, Dual UART, USB and 8 GPIO's for Industrial control.



## Interface Overview

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

## Block Diagram



## Specifications

System on Module EDM Type 2 compact form factor

## Expansion

Expansion Slots 2x mini-PCIe + SIM cardslot  
(for 3G communication)

## I/O Interfaces

Connector 1x SATA  
1x micro SD cardslot (SDIO)  
1x Gigabit LAN  
2x USB 3.0 Host  
1x micro USB 3.0 / 2.0 OTG  
1x UART (RS-232/422/485)

Header 2x CAN Bus  
1x UART (RS-232)  
2x SPI  
8x GPIO  
2x I2C  
Manufacturing pins

## Video

Connector 1x HDMI  
2 channel LVDS 18/24 bit

## Audio

Codec Jumper selectable:  
Freescale SGTL5000 (I<sup>2</sup>S),  
TI TLV320AIC23B (I<sup>2</sup>S)

Connector 1x 3.5 mm jack Stereo Audio in  
1x 3.5 mm jack Stereo Audio out  
1x 3.5 mm jack Microphone  
S/PDIF

Speaker 2W amplified speaker connectors

## Touch

Controller TSC2046 (4 wire by SPI)

Connector 4 wire touch panel

## Sensors

3-axis Movement ST Microelectronics LIS331DLH

Light Sensor Intersil ISL29023IROZ-T7

Compass Freescale MAG3110FCR1

Real Time Clock Maxim integrated DS1337+

## Power Specifications

Input Power Requirements 12 VDC +/- 5%



Battery

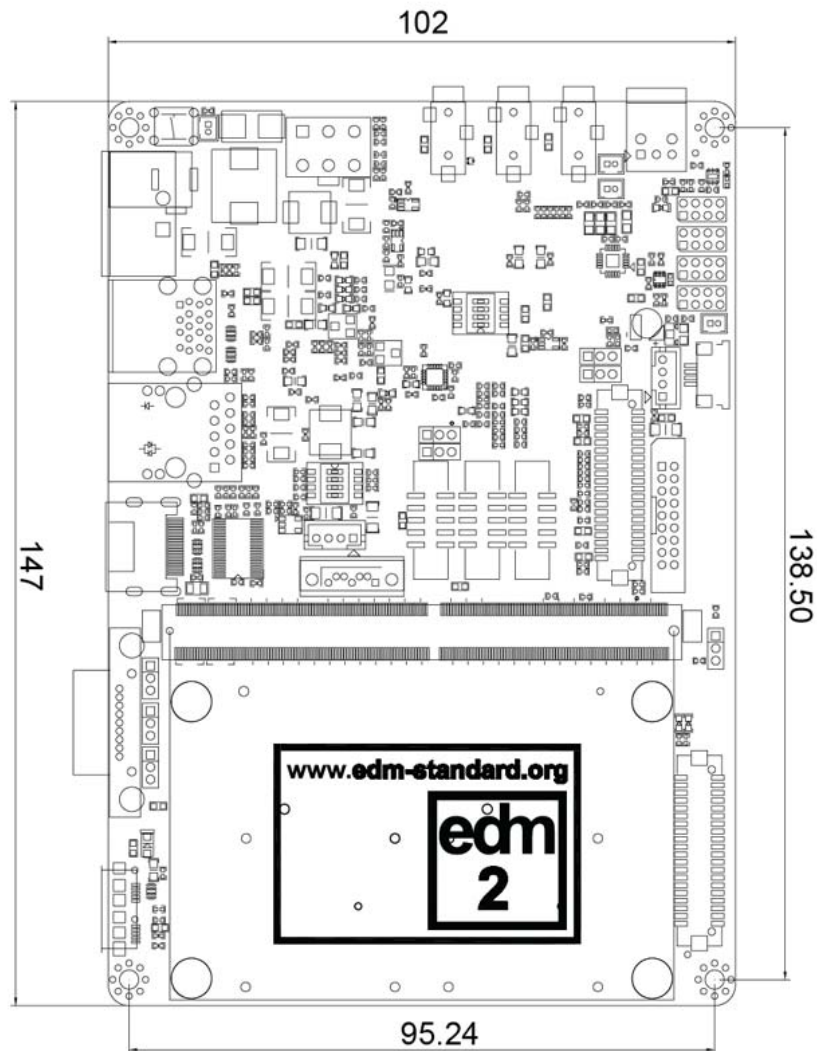
Smart battery connector

**Environmental and Mechanical**

Temperature	Commercial : 0° to 60° C Extended : -20° to 70° C Industrial : -40° to 85° C
Humidity	10 - 90%
Module Connector	314 pins MXM3
Form Factor	3.5" Form Factor
Dimensions	147 x 102 mm 5¾ x 4 inch
MTBF	>100,000 hours
Weight	115 grams
Shock	50G / 25ms
Vibration	20G / 0-600 Hz
Certification	Compliant with CE, FCC, RoHS, REACH directives

**Dimensional Drawing**

All dimensions are in mm



## **Ordering Information**

### **EDM2-ELF**

3.5 inch form factor Elf carrier board for EDM type 2 system-on-modules

### **EDM2-ELF-START**

Elf EDM type 2 evaluation board including cablekit and adaptor