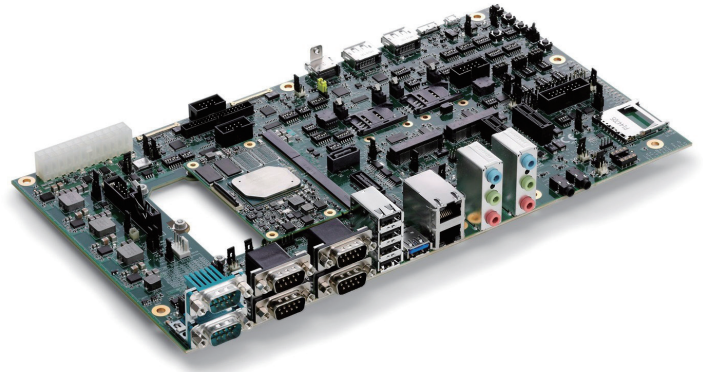


# LEC-BASE 2.0

## SMARC® evaluation carrier board for SMARC® 2.0 compliant modules

### Features

- SMARC® 2.0 compliant carrier board with MXM3 connector
- Board size of 305 mm x 170 mm
- Compatible with both short and full size SMARC® 2.0 modules
- Supports dual channel LVDS or eDP, HDMI or DP++, DP++
- Dual GbE
- Connector for MIPI CSI camera add-on card
- ATX power supply



### Specifications

#### • Interfaces

##### Display

Single/dual channel LVDS (18/24bit) incl. backlight control or 2x eDP, 1x HDMI and DP++ or 2x DP++

##### Camera

SGET connector for MIPI CSI camera add-on card

##### SDIO

4-bit SD card slot

##### SPI

Off module boot use (optional)  
1x SPI interface header, 1x eSPI/SPI interface header

##### I<sup>2</sup>S

1x I<sup>2</sup>S audio codec SGTL5000 (default) or TLV320AIC3107 (configuration option) to audio connector (ARM)

##### HDA

1x HDA to ALC888S-VD2-GR audio codec and audio connector (x86)

##### I<sup>2</sup>C

4x I<sup>2</sup>C  
- Power Management  
- LCD  
- Camera  
- GP

##### Asynchronous Serial Port

4x via RS-232 Transceiver  
Two with 2 wire handshake (RXD, TXD, RTS#, CTS#)  
Two with data only (RXD, TXD)

##### CAN Bus

2x CAN bus (D-SUB9)  
Via CAN Transceiver

##### USB

4x USB2.0 (tower)  
2x USB3.0/2.0 (tower)  
1x micro USB2.0 OTG/client  
2x USB2.0 via miniPCIe

##### PCI Express

Total of 4x PCIe x1  
2x PCIe x1 slots  
2x mini PCIe x1 slots  
PCIe Gen1, Gen 2 or Gen 3 (module dependent)  
PCIe wake signal (depending on module)  
2x SIM card slots

##### SATA

1x SATA Gen1, Gen2 or Gen3 (module dependent)

##### Ethernet

2x RJ-45 10/100/1000 Ethernet (module dependent)

##### Boot Select Jumpers

Module: SPI/eMMC/NOR/NAND  
Carrier: SPI/eMMC/SD Card/SATA  
Usage is module dependent

##### GPIO

12-pin header (including fan control and HDA reset)

#### • Mechanical and Environmental

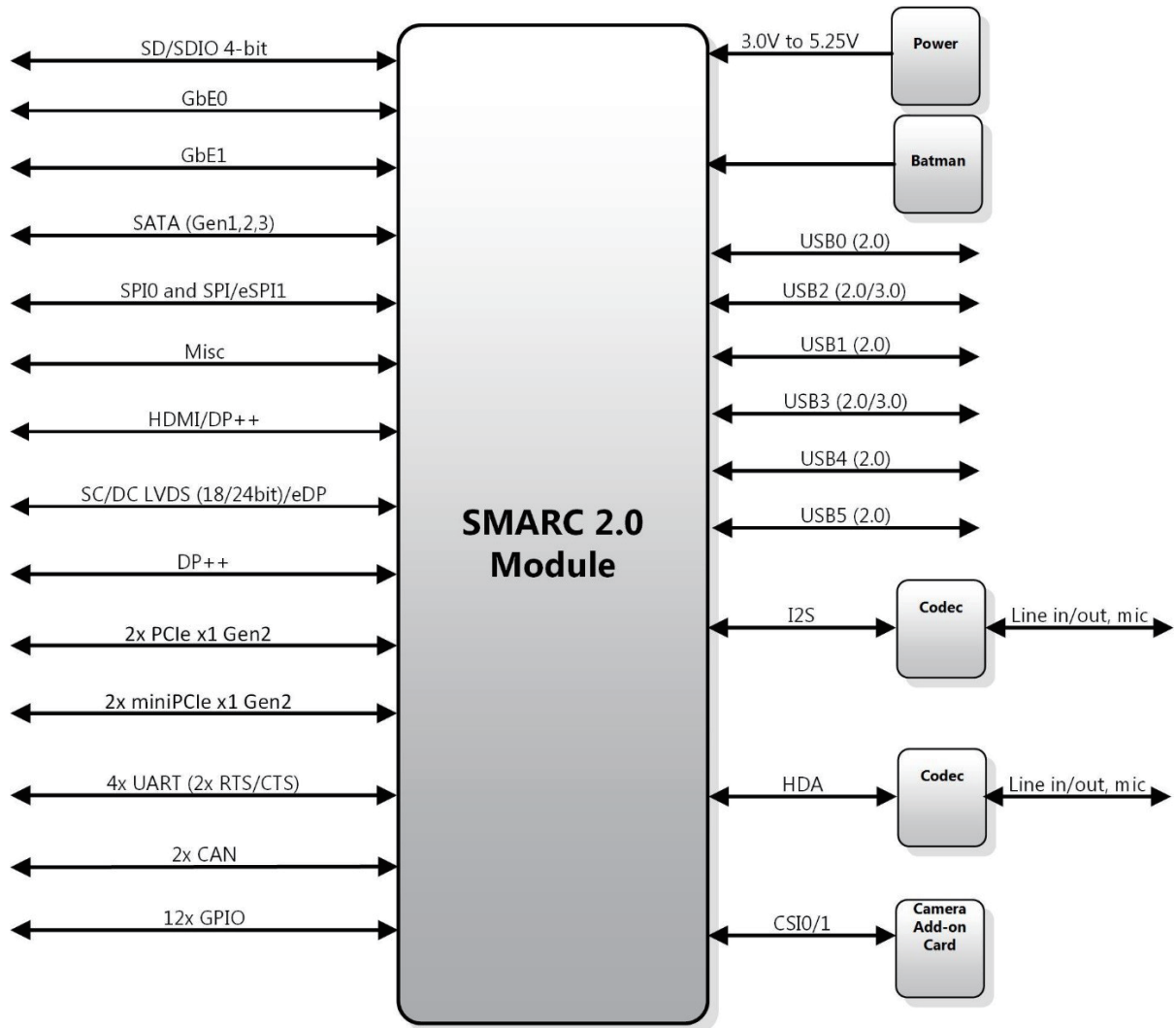
##### Dimension

305 mm x 170 mm (L x W)

##### Board Connector

MXM 314 pins

## Functional Diagram



### Intelligent Middleware



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

### Ordering Information

- LEC-BASE-2.0**  
 SMARC evaluation carrier board for SMARC 2.0 compliant modules

\*other configurations by request