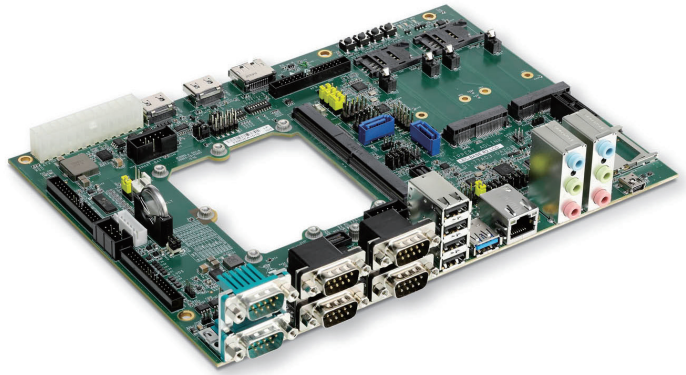
LEC-BASE MINI

2nd Generation SMARC Reference Carrier Board

Features

- SMARC 1.1 compliant carrier board with MXM3 connector
- Reduced board size of 237 mm x 170 mm
- Compatible with both short and full size SMARC modules
- Standard conguration supports parallel RGB, single channel LVDS and HDMI display
- Custom conguration supports dual channel LVDS, HDMI and third HDMI/DP display
- Connector for camera add-on card
- ATX power supply



Specifications

Interfaces

Display	Standard conguration: Parallel LCD, single channel LVDS (18/24bit), HDMI Custom conguration: Dual channel LVDS, HDMI, additional HDMI/DP (see order information) RGB and LVDS backlight control header
Camera	Connector for plug-in camera add-on card
SDIO	4-bit SD card slot
eMMC	8-bit eMMC interface header
SPI	Off module boot use (optional) 2x SPI interface headers
I²S	3x I²S interface I2S0 to SGL5000 (default) or AIC3106 (custom option) to audio connector (ARM) I2S1 directly to pin header I2S2 to AlC886 and audio connector (x86)
I²C	4x I²C - Power Management - LCD - Camera - GP
Asynchronous Serial Port	4x asynchronous serial ports (UART) - Two with 2 wire handshake (RXD, TXD, RTS#, CTS#) - Two with data only (RXD, TXD) - Logic level interface
CAN Bus	2x CAN bus (D-SUB9) Logic level signals from module based CAN bus protocol controllers RXD, TXD only
USB	4x USB2.0 host 1x USB3.0 host (from AFB, module dependent) 1x mini USB2.0 OTG/client 2x USB2.0 via miniPCIe
PCI Express	One PCIe x1 link connector Two mini PCIe x1 slots PCIe Gen1, Gen 2 or Gen 3 (module dependent) PCIe support signals PCIe wake signal (depending on module) 2x SIM card slots
SATA	2x SATA Gen1, Gen2 or Gen3 (module dependent)
Ethernet	1x RJ-45 10/100/1000 Ethernet
S/PDIF	S/PDIF header for audio
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)
Alternate Function Blocks	Dedicated AFB connector Pinout is module dependent (see SMARC specication)

Mechanical and Environmental

Dimension	237 mm x 170 mm (L x W)
Board Connector	MXM 314 pins

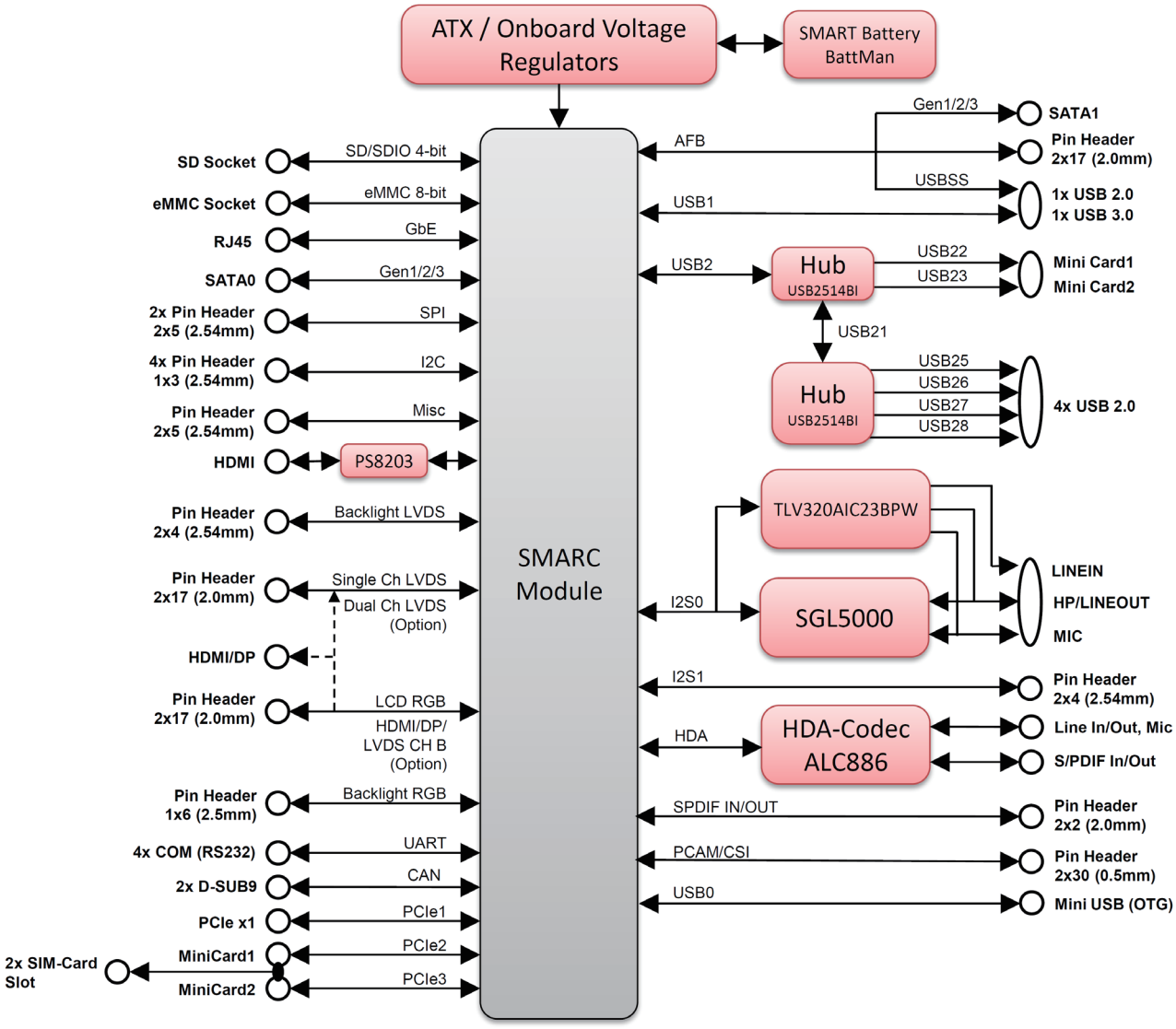
Ordering Information

- **LEC-BASE MINI Standard**
  2nd Generation SMARC evaluation carrier with triple display (RGB LCD, SC LVDS and HDMI
- **LEC-BASE MINI Custom**
  2nd Generation SMARC evaluation carrier with triple display (DC LVDS, HDMI and HDMI/DP)

*other configurations by request

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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)

Intelligent IOT Platform

Platform Name	SEMA Cloud®
Description	Application ready comprehensive industrial grade IoT Platform Connecting Devices to a Cloud Platform and to Web Applications Remote monitoring and controlling managing of connected devices Enabling integration of operational device data into business processes Cloud based Platform as a Service (PaaS)

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