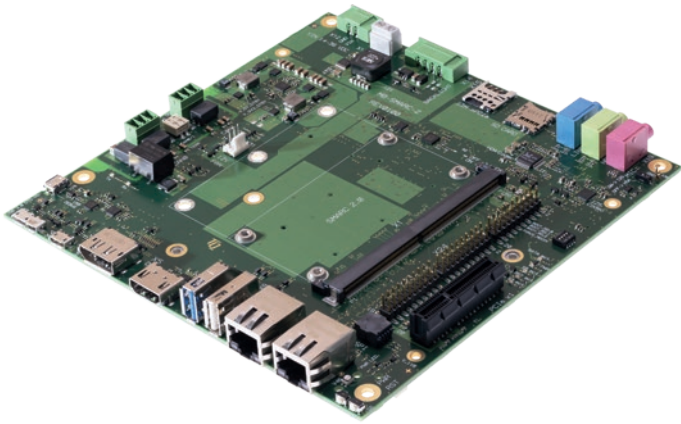


# MB-SMARC-2

x86/Arm® Family



**SMARC 2.0/2.1 Carrier Board for x86 and Arm® Modules.**

## HIGHLIGHTS

- ▶ x86 and Arm® modules can be used without any changes
- ▶ Based on the MINI ITX form factor 170 × 170mm
- ▶ Compatible with both short and full size SMARC 2.0/2.1 modules
- ▶ Supports dual channel LVDS or eDP, HDMI, DP++
- ▶ Dual GbE
- ▶ Connector for MIPI CSI camera add-on card
- ▶ USB 3.0

Based on



## TECHNICAL SPECIFICATION

**Supported Modules** SMARC 2.0/2.1 full size or short size x86 and Arm® module with SMARC 2.0/2.1 compliant pinout

**External Interfaces**

- 1x Dual channel LVDS with backlight power and backlight control
- 1x eDP
- 1x HDMI
- 1x DP
- 2x Gigabit Ethernet
- 1x USB 3.0 OTG
- 1x USB 3.0
- 1x USB 2.0
- 1x USB 2.0 pin header
- 2x CAN FD (galv. Isolated)
- 1x Audio jack for microphone line in/out and headphone
- 2x MIPI CSI pin header
- 1x PCIe x1 Connector
- 1x micro SD card holder
- 1x M.2 Key E (USB 2.0, PCIe) for WLAN/BT
- 1x Mini PCIe (PCIe, USB 2.0, micro SIM card)
- 1x M.2 Key B (SATA)

**External Interfaces**

- 2x RS232 transceiver (2 serial interfaces)
- 1x RS232 (via FTDI and Micro USB)
- 1x SIM card slot
- Power in: 14 - 36 Volt DC
- 1x 12 Volt fan
- 1x battery holder CR2032
- 1x SPI socket with boot select jumper
- 1x HD audio codec (x86)
- 1x I<sup>2</sup>S Audio Codec (Arm®)
- Reset and power button
- 1x SMBus, I2C, COM signal header Force Recovery, LID, PCIe wake signals

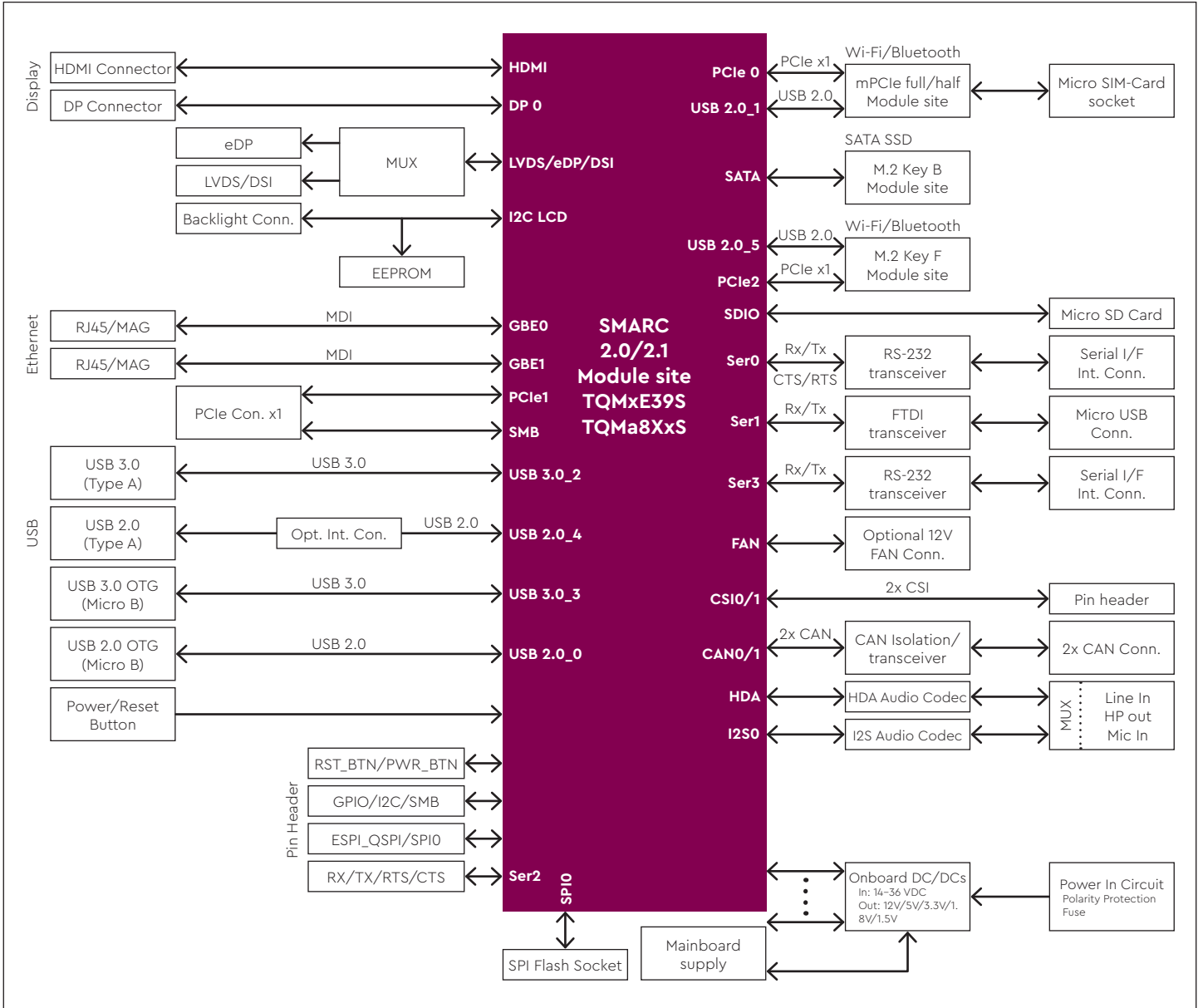
**Supportet Featur**

TQMxE39S and TQMa8XxS:  
LVDS, DP0, RJ45 (GBE0), USB 3.0 Type A, USB 2.0 Type A, USB 2.0 (mPCIe Socket, M.2 Key E), PWR- und RST-Button, mPCIe Socket inklusive Micro SIM, Micro SD-Card, Serial Port 0/1, Micro USB (Debug), FAN, CSI, Audio

Only TQMa8XxS:  
DSI, RJ45 (GBE1), CAN, USB 2.0 OTG, Audio (I<sup>2</sup>S)

Only TQMxE39S:  
HDMI, eDP, RJ45 (PCIe), USB 3.0 OTG, M.2 Key M, M.2 Key E (PCIe), Audio (HDA), Serial Port 2/3

## BLOCK DIAGRAM MB-SMARC-2



## ORDERING INFORMATION

### MB-SMARC-2-AA

2x RS232, 2x CAN FD separated, 1x USB 3.0 OTG, 1x USB 3.0 HOST, 4x USB 2.0 HOST, 1x USB 3.0, 2x ETH 10/100/1000, 1x Display Port, 2x LVDS/DSI, 1x HDMI, 1x PCIe, 1x MINI PCIe + SIM Card, Audio, Reset-Button, SD interface, 2x MIPI-CSI

Other configurations on request

### STKXE39S-Individuell

Starterkit for Module TQMxE39S (depends on selected module)

### STKa8XxS-Individuell

Starterkit for Module TQMa8XxS (depends on selected Module)

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