

February 2015

FACE Modules Portfolio Overview

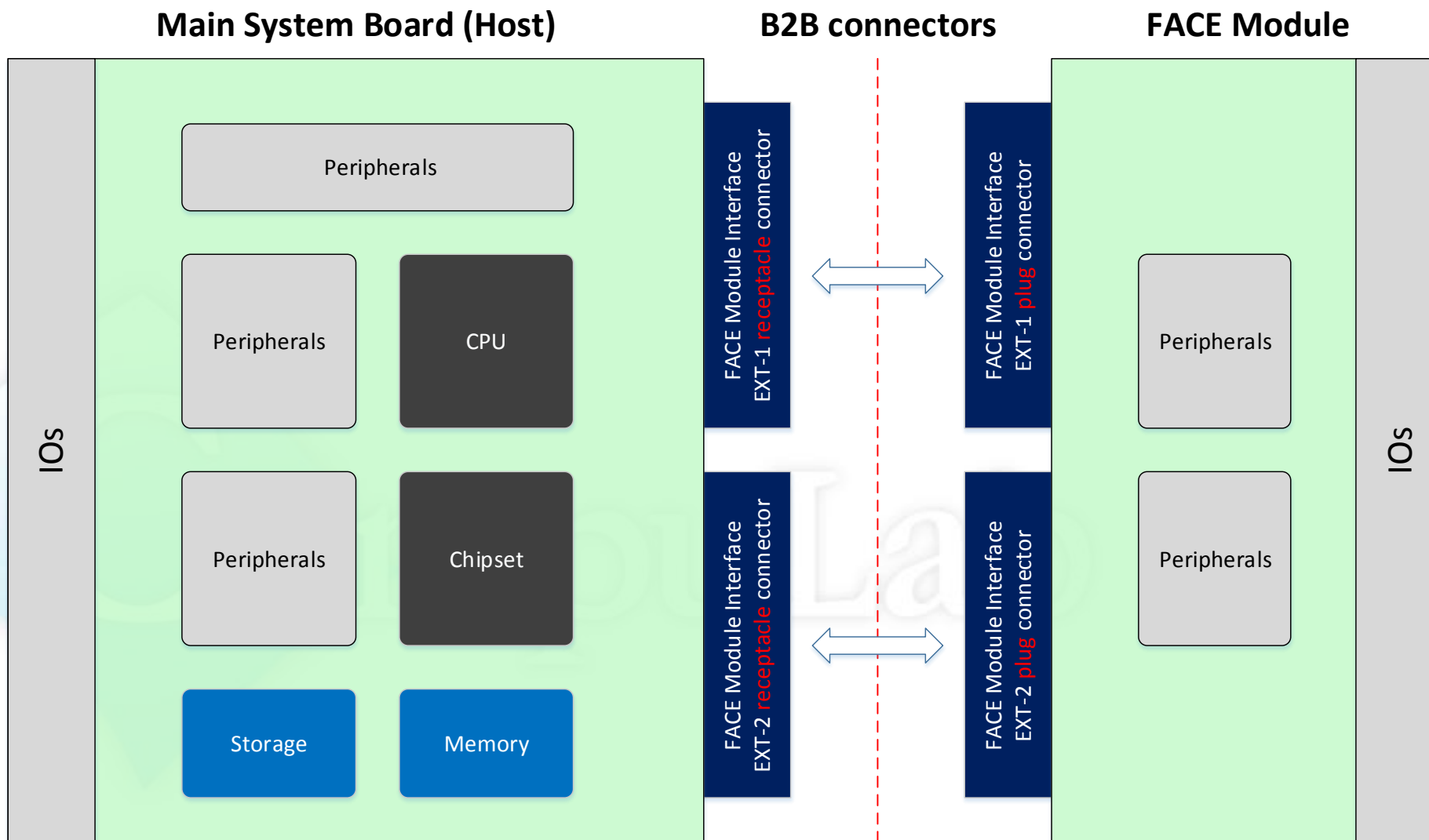
Maxim Birger



Agenda

- Concept
- Highlights
- FM-4USB – USB2.0 FACE Module
- FM-USB3 – USB3.0 FACE Module
- FM-SER – Serial FACE Module
- FM-XTDEU2/4 – Single LAN FACE Module
- FM-LANE4U2/4 – Quad LAN FACE Module
- FM-XTDM2 – Dual Mini PCI Express FACE Module
- FM-VC – Video Capture FACE Module
- FM-POE – Quad LAN + Power over Ethernet FACE Module
- Reference Material

Concept



Highlights

- **Function And Connectivity Extension Module** provides extended peripheral and I/O functionality
- Flexible Host interface design
- High speed connectivity offers PCI Express, SATA and USB Host interfaces
- Industry standard LPC Bus, RS232, SMBus/I2C and GPIOs
- Off-the-shelf popular solutions
- Application specific 3rd party design



FM-4USB – USB2.0 FACE Module



FM-4USB – Features & Applications

Features

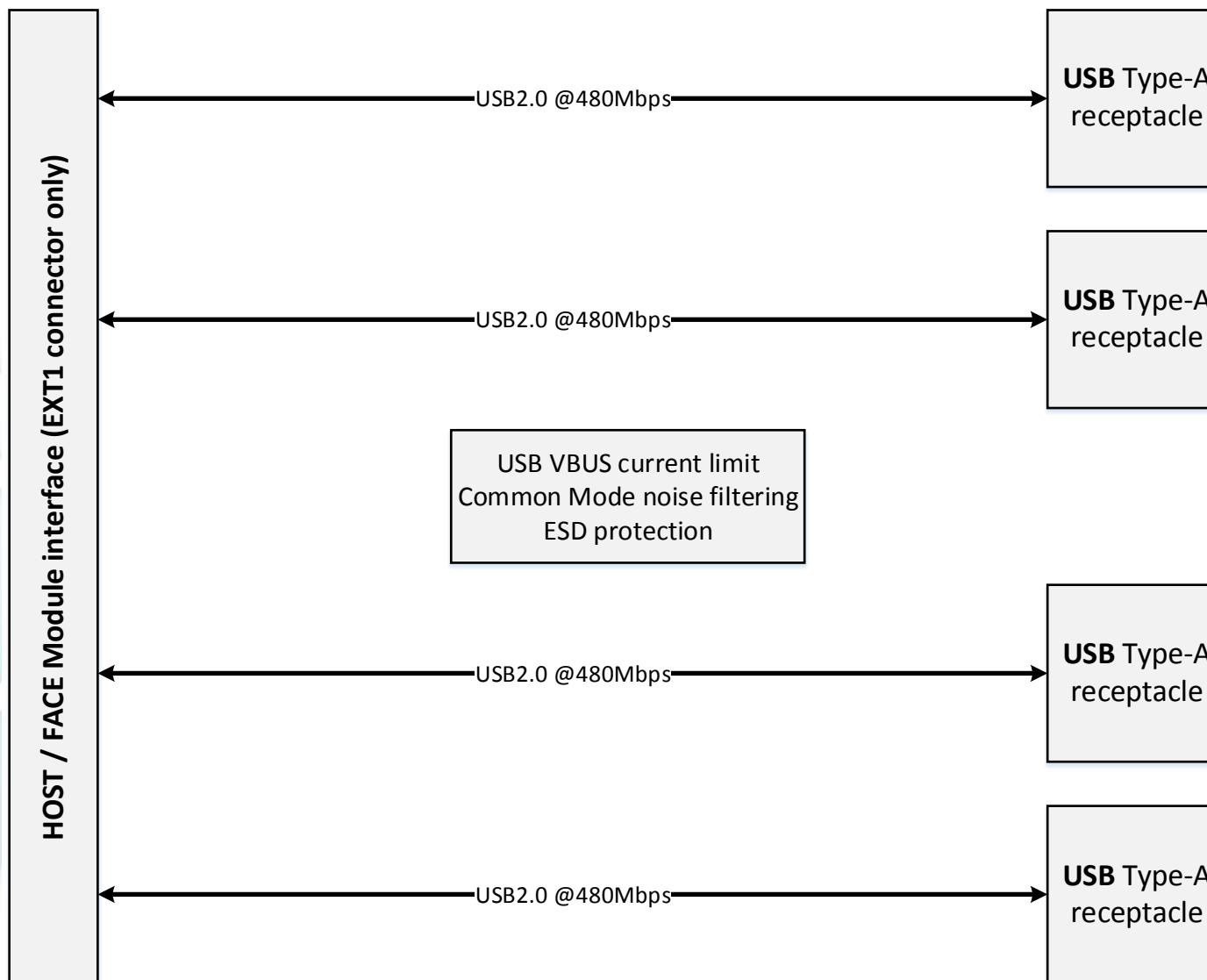
- 4x USB2.0 downstream ports, up to 480Mbps half-duplex

Applications

- Basic FACE Module for general purpose applications requires USB2.0 connectivity

CompuLab

FM-4USB – Block Diagram



FM-USB3 – USB3.0 FACE Module



FM-USB3 – Features & Applications

Features

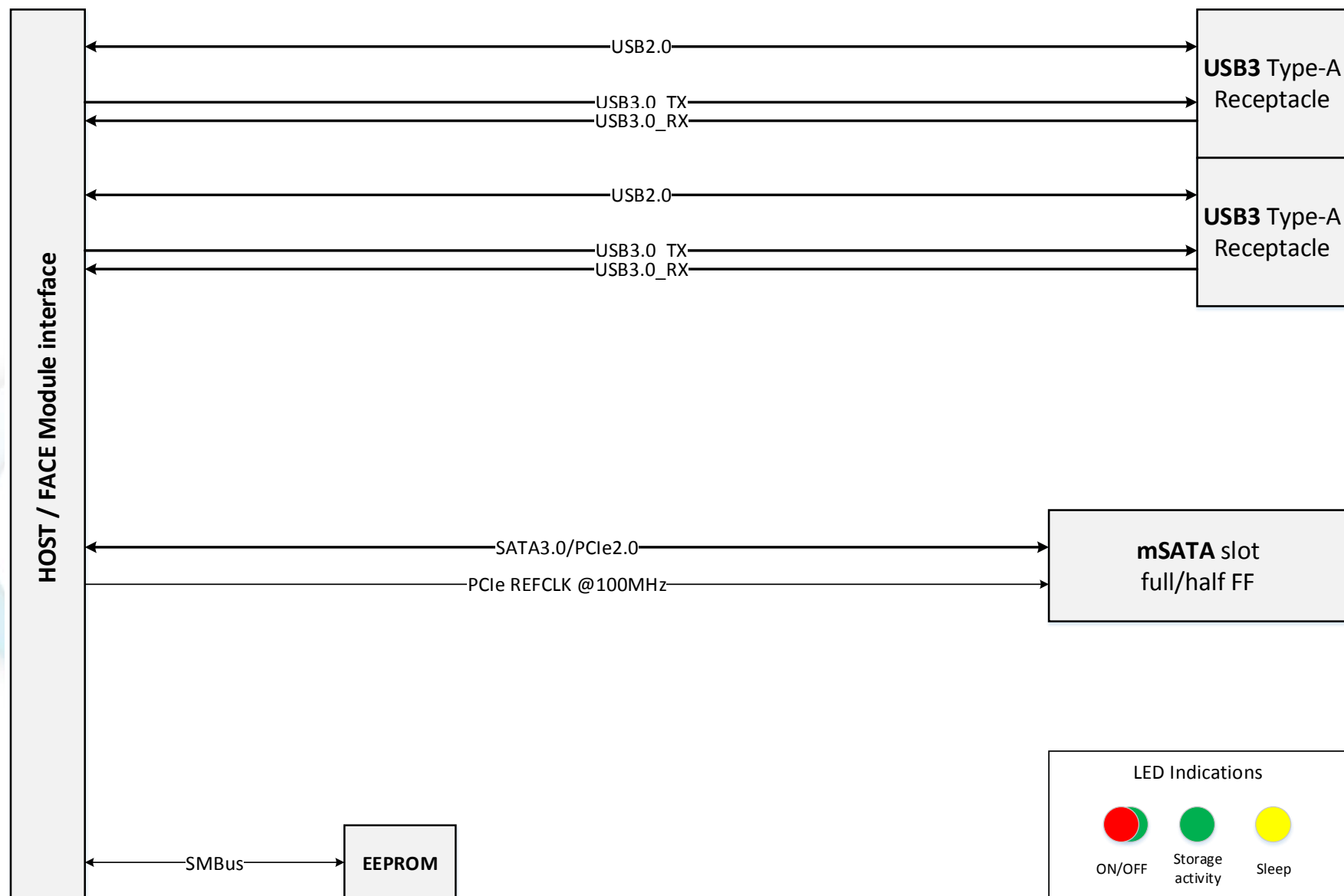
- 2x USB3.0 downstream ports (USB2.0 supported on separate pins), up to 5Gbps full-duplex
- 1x mSATA slot allow to connect mSATA SSD storage (on IPC2 i5/i7 models only)
- System LED indication

Applications

- General purpose applications requires Medium to High Bandwidth connectivity solutions

Note: Suitable with IPC2 computers only

FM-USB3 – Block Diagram



Module FM-SER – Serial FACE Module



FM-SER – Features & Applications

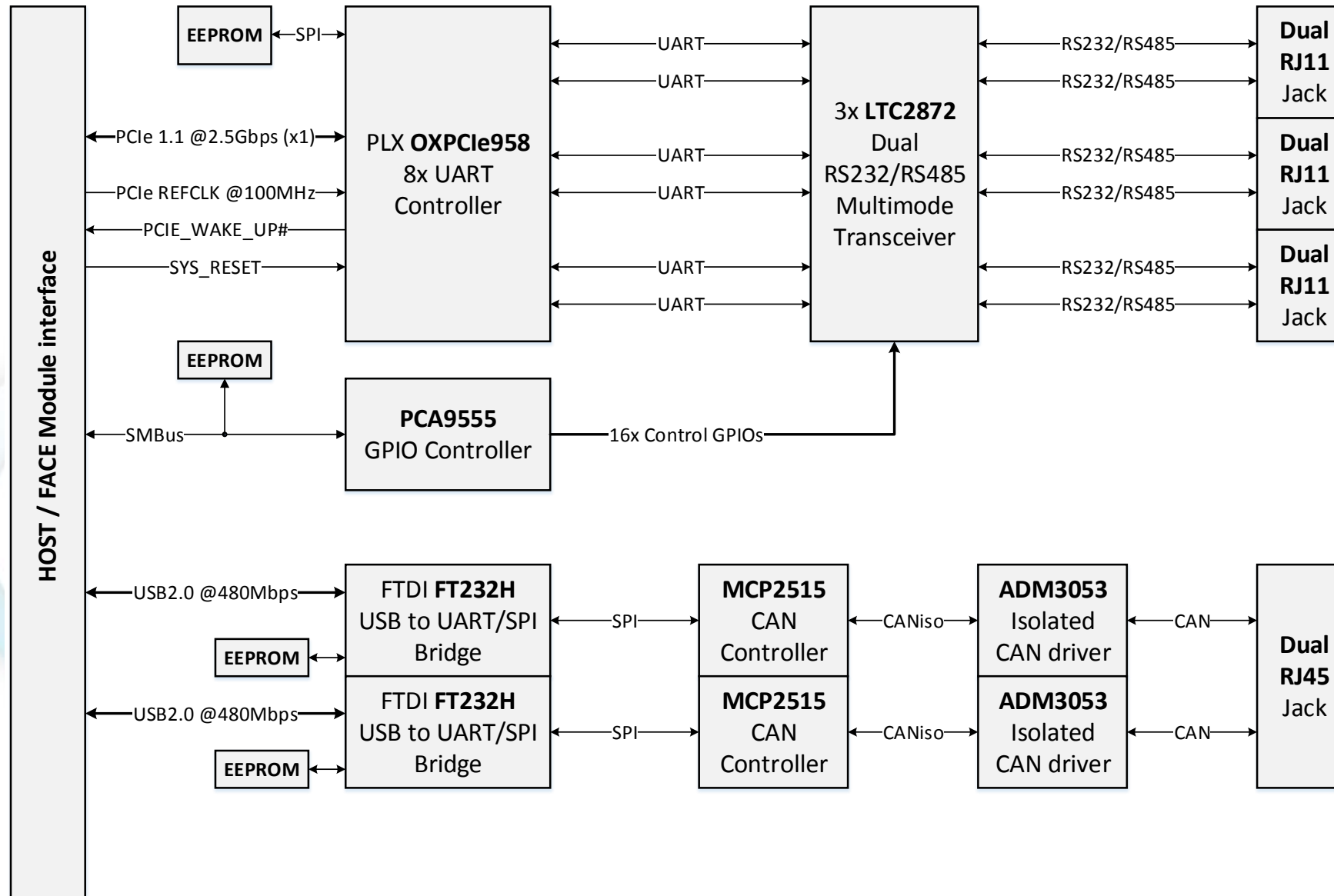
Features

- 6x ports supporting RS232 / RS485 /RS422 operation via RJ11 connectors
 - PLX UART Controller featuring PCI Express Host interface
 - 6x High performance UARTs
 - Asynchronous baud rates up to 15Mbps
- 2x CAN bus ports via RJ45 connectors
 - 2x CAN Bus Controllers and Isolated line drivers
 - 2x FTDI Controllers enabling USB to UART bridge and featuring USB2.0 Host interface

Applications

- Automotive
- Instrumentation

FM-SER – Block Diagram



FM-XTDEU2/4 – Single LAN FACE Module (former FM-1LAN feat. two versions)



FM-XTDEU2/4 – Features & Applications

Features

- 1x GbE LAN 10/100/1000BASE-T compliant with IEEE 802.3/u/ab
- 4x USB2.0 downstream ports, up to 480Mbps half-duplex
- 2x mini PCIe slots supporting half size FF featuring PCI Express Gen2 Host interface, up to 5Gbps full duplex

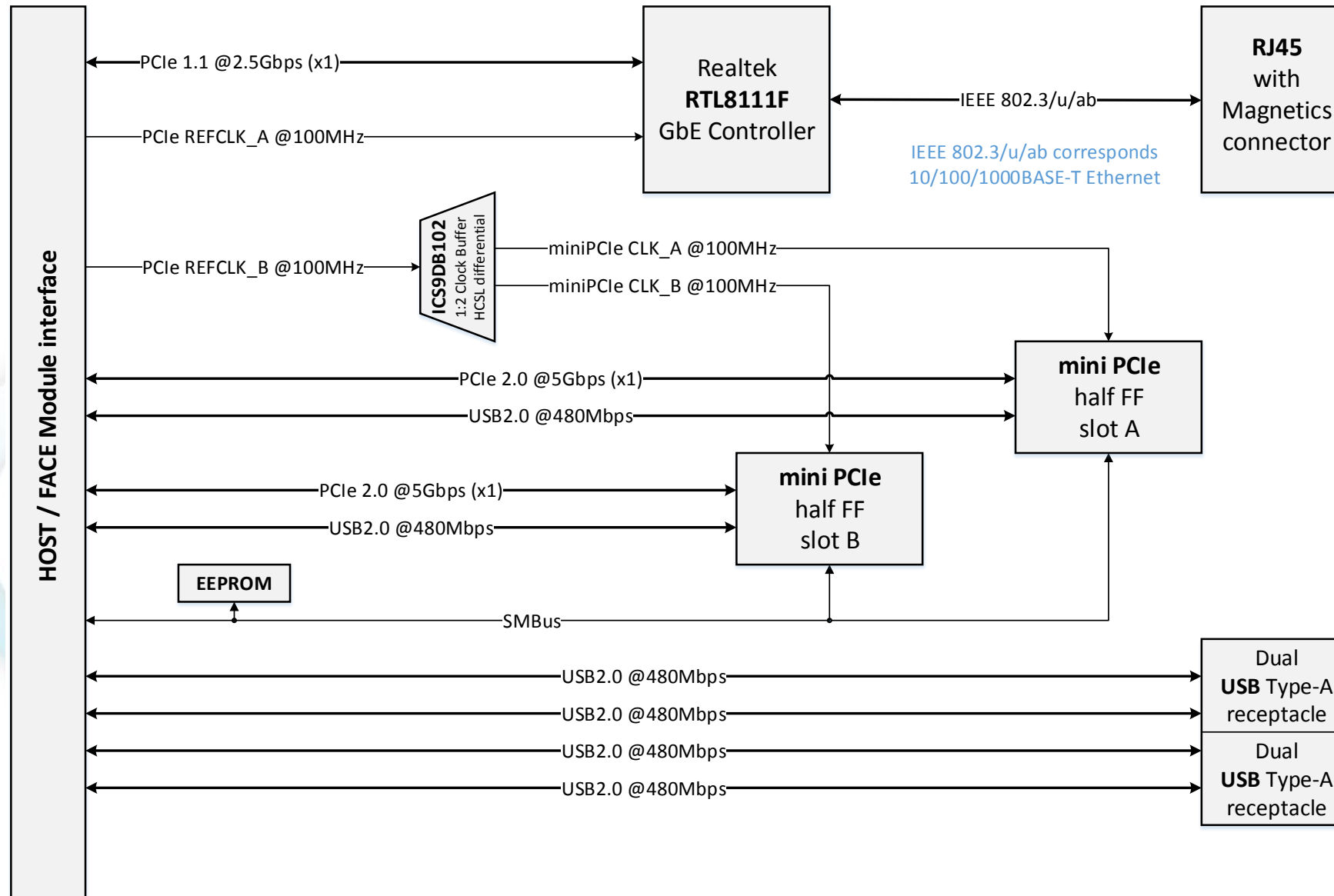
Applications

- Networking
- Telecom

Comments

- IPC2 and fit-PC4 systems support FM-XTDEU2 (two USB2.0 ports).
- Other systems support FM-XTDEU4 (four USB2.0 ports).

FM-XTDEU2/4 – Block Diagram



FM-LANE4U2/4 – Quad LAN FACE Module (former FM-4LAN feat. two versions)



FM-LANE4U2/4 – Features & Applications

Features

- 4x GbE LAN 10/100/1000BASE-T compliant with IEEE 802.3/u/ab
- 4x USB2.0 downstream ports, up to 480Mbps half-duplex

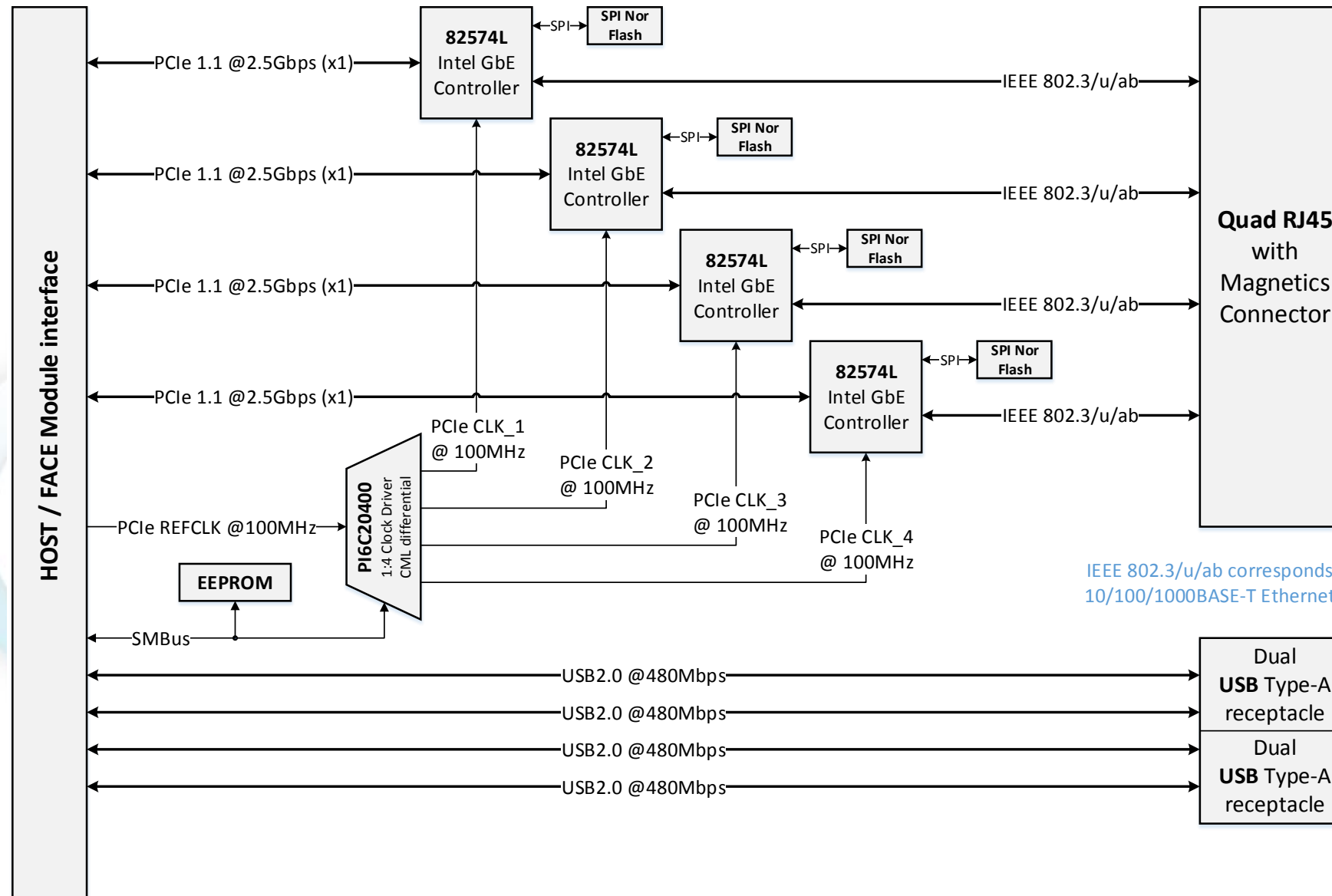
Applications

- Networking
- Telecom

Comments

- IPC2 system supports FM-LANE4U2 (two USB2.0 ports).
- Other systems support FM-LANE4U4 (four USB2.0 ports).

FM-LANE4U2/4 – Block Diagram



FM-XTDM2 – Dual Mini PCI Express FACE Module (former FM-2PCIE)



FM-XTDM2 – Features & Applications

Features

- 2x mini PCIe slots supporting mini PCI Express modules, featuring PCI Express Gen2 Host interface up to 5Gbps full duplex
- Full/half size modules form factor

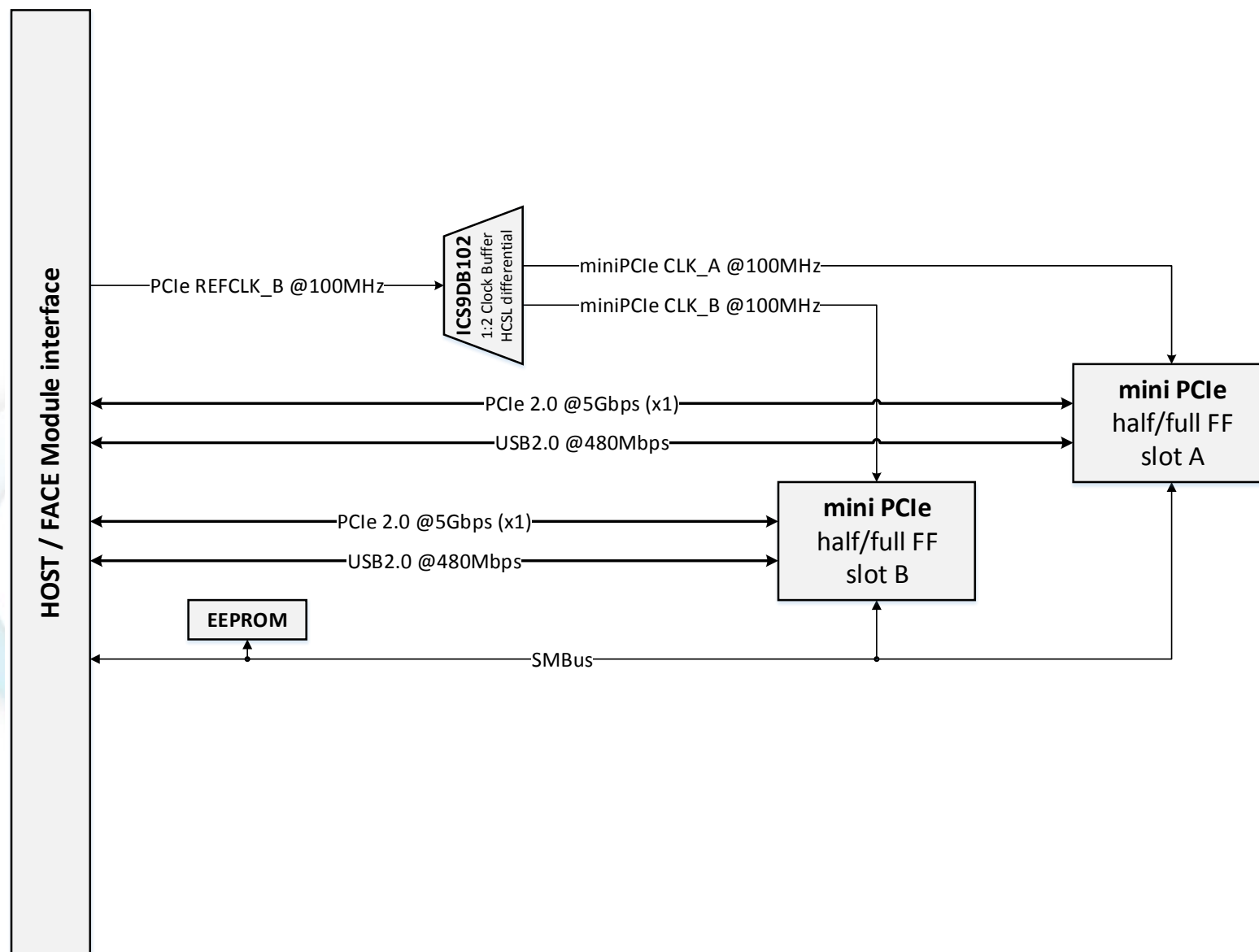
Applications

- General purpose applications requires Medium to High Bandwidth connectivity solutions
- Systems requires flexible and modular design in the form of mini PCI Express

Comments

- FM-XTDM2 on IPC2 support PCI Express interfaces only on both mini PCIe slots. USB interface is not supported.

FM-XTDM2 – Block Diagrams



FM-VC – Video Capture FACE Module



FM-VC – Features & Applications

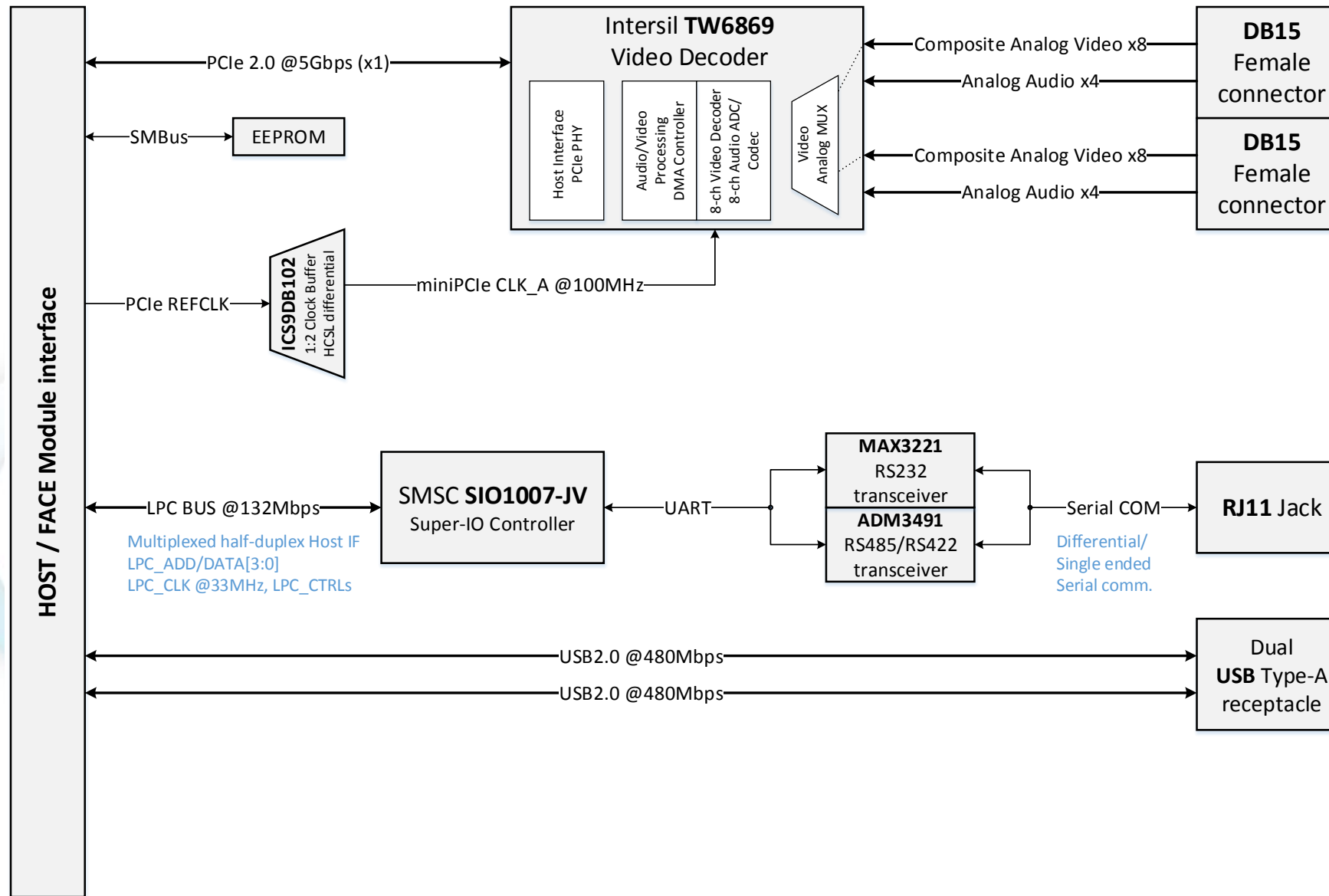
Features

- 8x Real time capture Composite Analog Video NTSC/PAL/SECAM channels
- 16x Non-real time capture Composite Analog Video NTSC/PAL/SECAM channels
- 8x Real time capture Analog Audio channels
- 2x DB15 female connectors for AV capture
- 2x USB2.0 downstream ports, up to 480Mbps half-duplex
- 1x Serial port supporting RS232/RS422/RS488 communication via RJ11

Applications

- Security applications
- Video capture and Surveillance, CCTV
- Video analytics

FM-VC – Block Diagram



FM-POE – Quad LAN with PoE capabilities FACE Module



FM-POE – Features & Applications

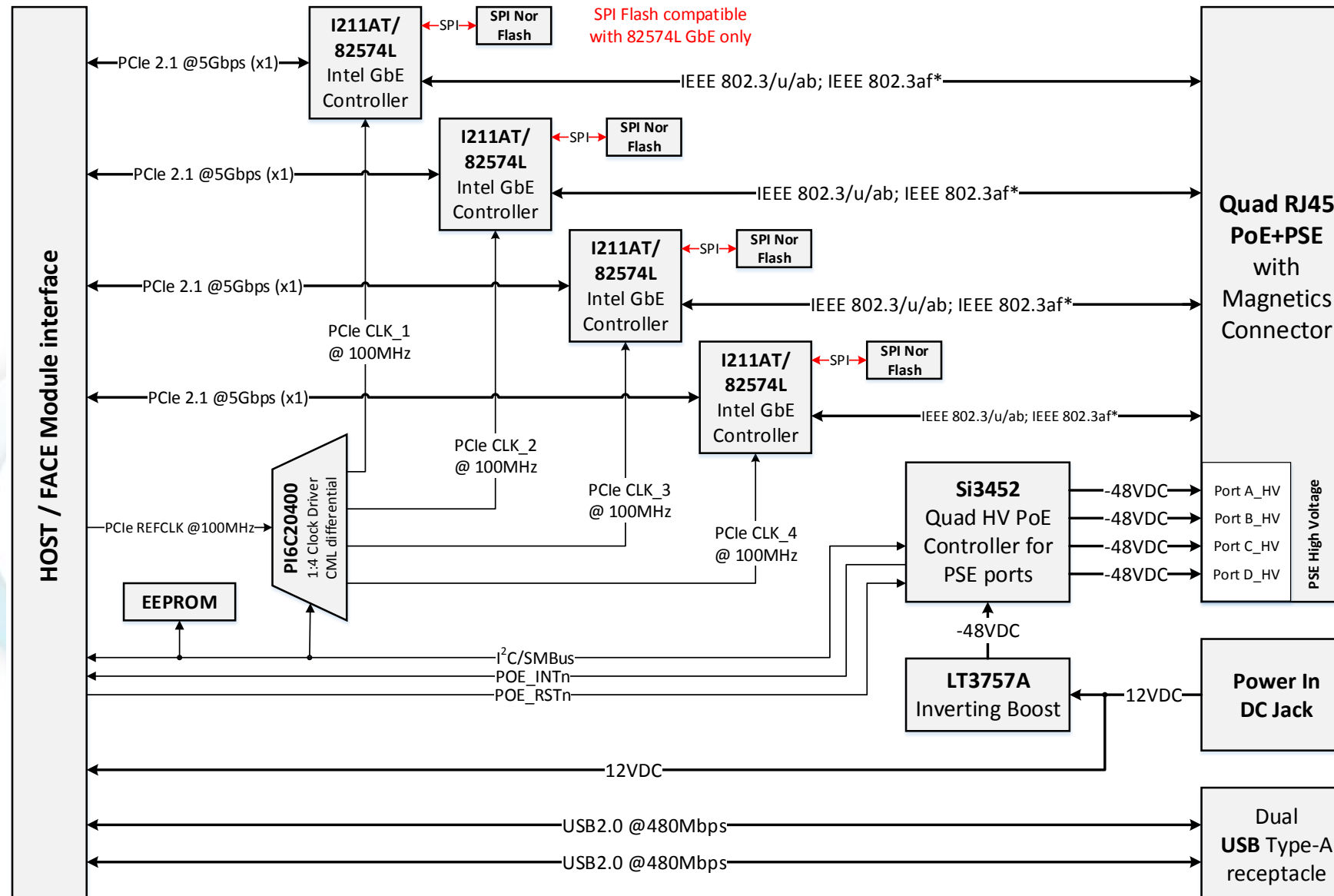
Features

- 4x GbE LAN 10/100/1000BASE-T compliant with IEEE 802.3/u/ab
- 4x PSE ports compliant with IEEE 802.3af*
- 2x USB2.0 downstream ports, up to 480Mbps half-duplex

Applications

- Applications require Power over Ethernet capabilities (IP Telephony, IP Cameras, WLAN access points)
- Networking
- Telecom

FM-POE – Block Diagram



Reference Material

- For FACE Modules HW specifications document please visit:
<http://fit-pc.com/download/face-modules/documents/face-modules-hw-specifications.pdf>
- For CompuLab website please visit:
www.compulab.co.il
- For fit-PC product line website please visit:
www.fit-pc.com

Thank you

