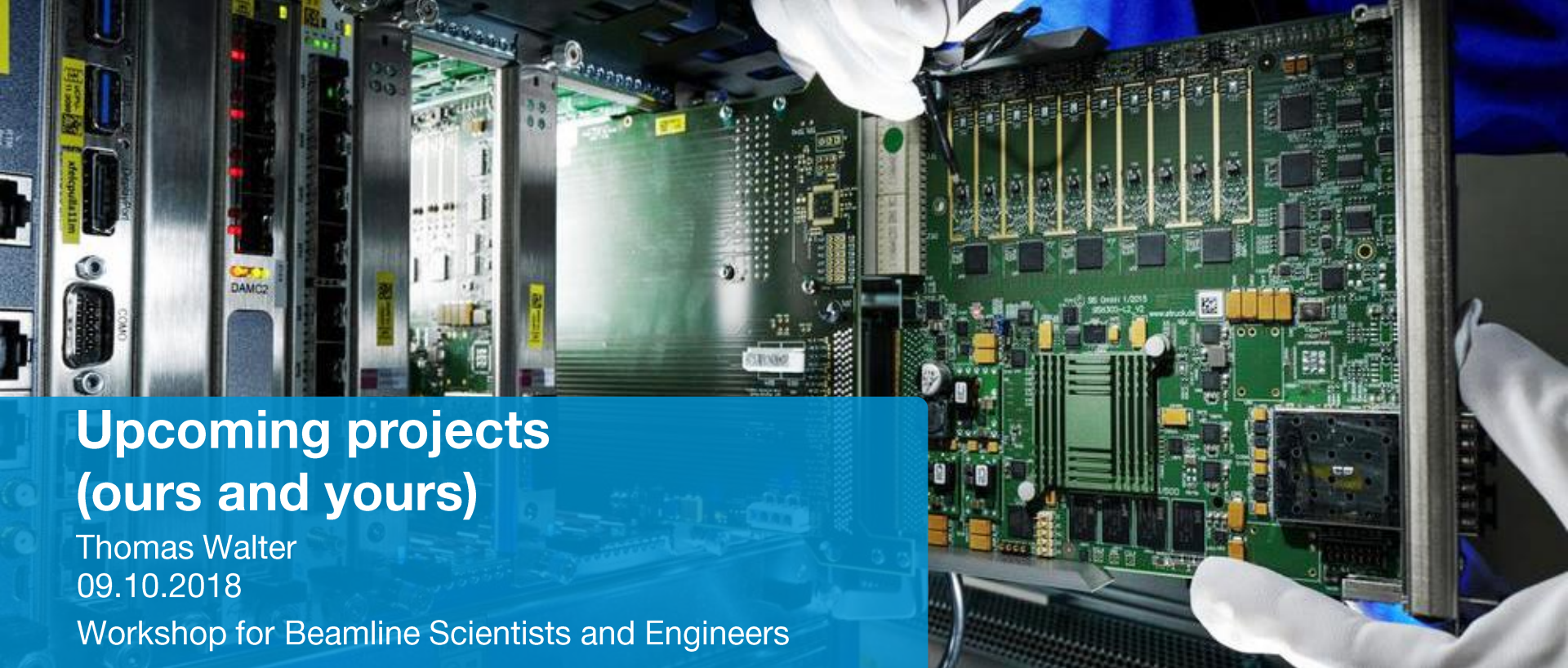
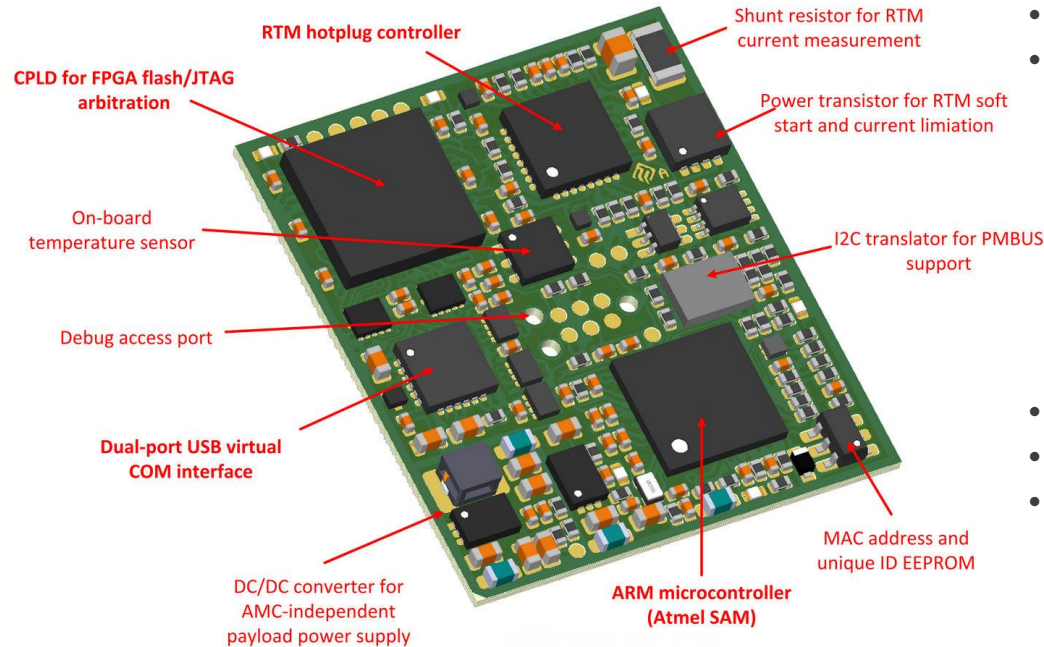




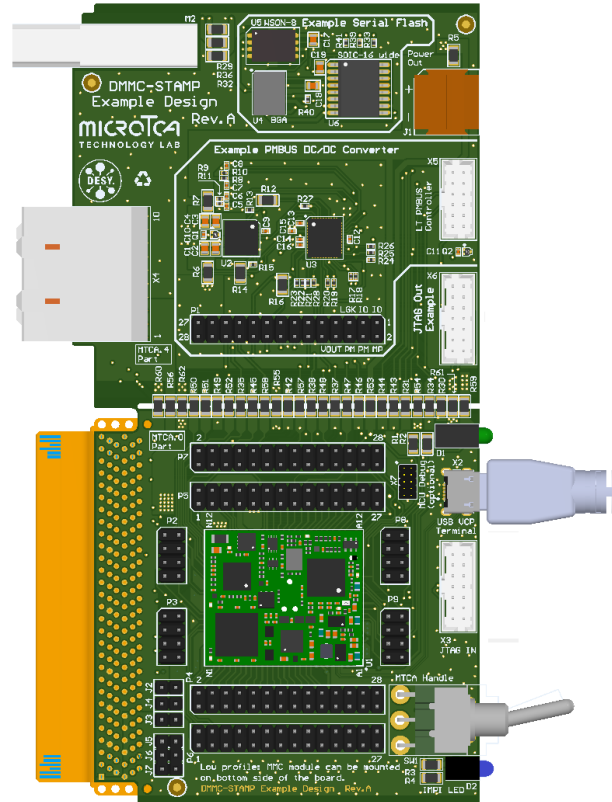
Upcoming projects (ours and yours)

Thomas Walter
09.10.2018

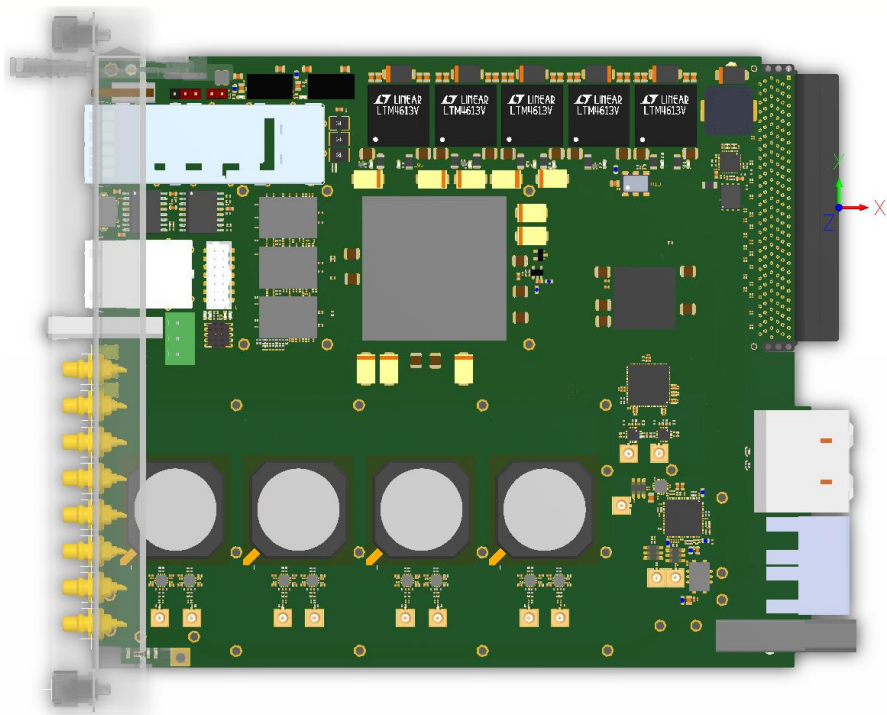
Workshop for Beamline Scientists and Engineers



- MTCA management on a single board
- ready to use, no additional parts:
 - ARM Cortex-M4 Processor
 - Power Management (PMBUS)
 - JTAG Mux (FPGAs, FMCs, RTM)
 - FPGA Flash Update oder IPMI
 - AMC LEDs/ handle
 - RTM I2C and current limitation
 - Virtual COM port
- Supports AMC, RTM, FMCs
- MMC firmware included
- Solder-in component (LGA)

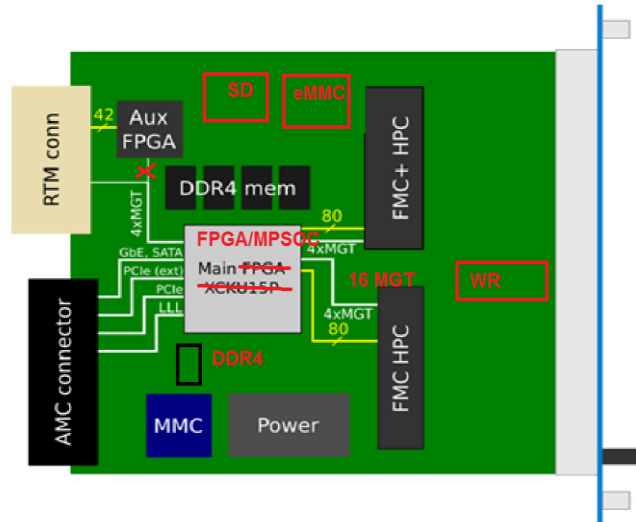


- Ultra-low-cost test board for MMC stamp in AMC format, incl. RTM support
- Adaptable to single width format (MTCA.0)
- RTM support (Power and Management)
- Hot swap handle/ LEDs implemented
- Full JTAG support
- Example PMBUS DC/DC Converter
- Example Serial Flash (image for payload FPGA, programming via IPMI)
- USB serial terminal (Status information from MMC and FPGA)
- breakout section – all pins brought out



- 4/8 channel direct sampling digitizer board
- Beam diagnostics and protection
- Zynq UltraScale+ FPGA
- 12 Bit sampling resolution
- 800 MSPS (8- channel mode)
- 1600 MSPS (4-channel mode)
- Input selection: frontpanel or RTM
- Input bandwidth 2,8 GHz
- QSFP output for up to 40 GSPS
- Work in progress: improved Zone 3 RF connector, ~3 GHz BW – new analog class
- White Rabbit support

DAMC-
DFMC25



- Dual FMC/FMC+ carrier
- Successor of DAMC-DFMC25
- Zynq UltraScale+ ZU11EG MPSoC FPGA
- QuadCore ARM Cortex-A53
- Fast 16 and 32 GBPs MGTs
- 64 bit + 16 bit DDR4 SDRAM
- Full RTM support (LVDS and MGTs)
- Incl. MMC Stamp
- Zone 3 Class D1

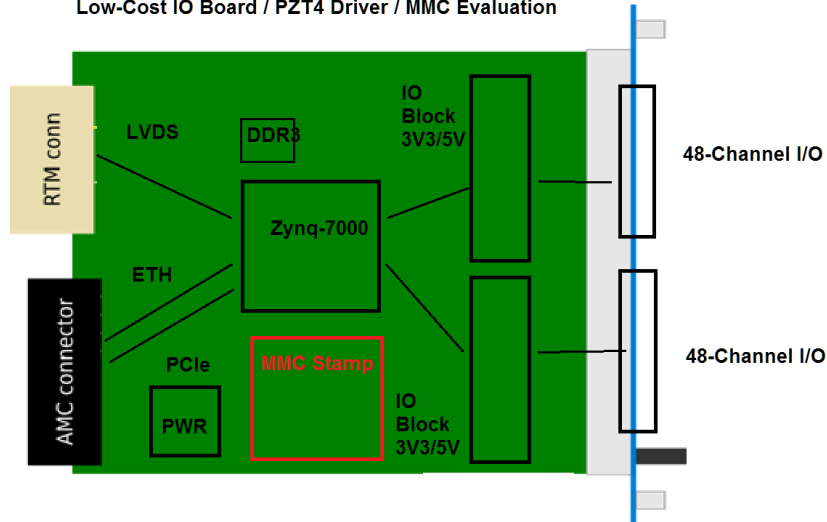


Starter Kit



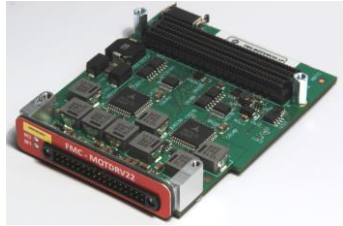
DRTM-PZT4

Low-Cost IO Board / PZT4 Driver / MMC Evaluation

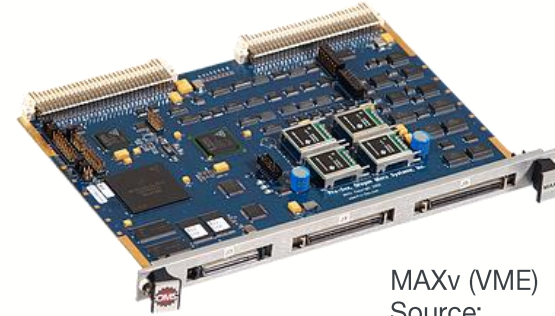


- Low-Cost IO board
- Successor of MMC Evaluation Board („Starter Kit“)
- Simple 3V3/5V0 Interface board
- Vivado Support
- Supports Control of DRTM-PZT4
- Reference Design for MMC Stamp
- Zone 3 Class D1

- Ideas?
- Work in Progress?
- Questions?
- Change/Feature Requests?
- ...



DFMC-MD22



MAXv (VME)

Source:

<http://www.omsinmotion.com/maxv>

MicroTCA.4 (AMC)

- 8 channels ... 16 channels?
- Stepper motor vs. servo-motor?
- topology: distributed or central?
- Encoder inputs?
- Closed loop operation?
- ...