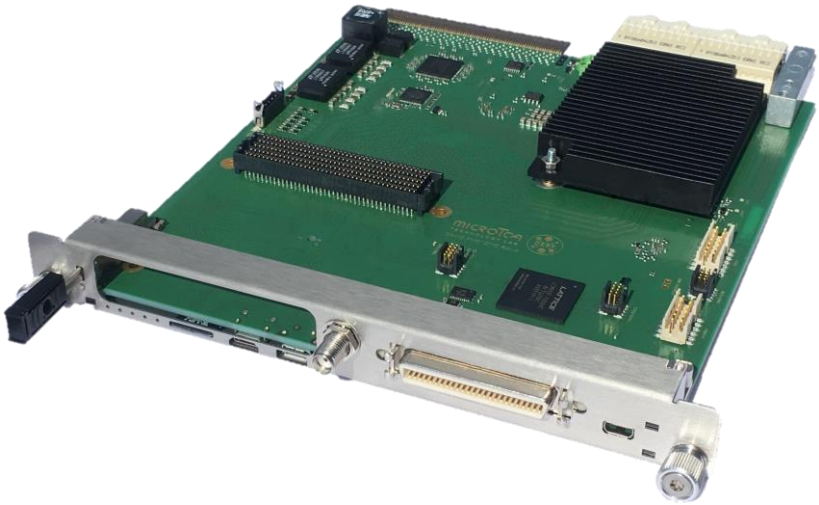
Cost-Optimized IO Controller Board

DAMC-FMC1Z7IO

HIGHLIGHTS

- Xilinx® Zynq®-7000 SoC: XC7Z030, XC7Z035 or XC7Z045
- Full Backplane and RTM connectivity
- FMC socket with up to four MGTs
- 48 bidirectional IOs: 3.3V and true 5V
- Dual-Core ARM® Cortex-A9 Processor
- Front Micro-HDMI and USB Ports
- Linux Support (eMMC and MicroSD)



FEATURES

- Based on Xilinx® Zynq®-7000 System-on-Chip
- RTM Class D1.0 Interface
- Managed by feature-rich DMMC-STAMP controller
- Dual-core Cortex-A9 ARM® CPU with up to 1GHz
- PCIe x4/x2 Gen.2 supported
- Front panel SMA connector for external clock input
- Flexible clocking system
- GNU/Linux can be run from MicroSD card or eMMC
- Vivado BSP, Yocto Linux and SDK are available
- Standalone mode (runs without CPU Module)
- Supported by all Xilinx® development tools

The DAMC-Z7IO is a Xilinx® Zynq®-7000 based IO Controller Board with one FMC socket in MTCA.4 form factor.

The carrier can be populated with the Xilinx XC7Z030, XC7Z035 or XC7Z045 SoC. The programmable logic features 125k/275k/350k logic cells, 400/900/900 DSP slices and 4x/8x Multi-Gigabit Transceivers running at up to 12.5Gbps.

All MTCA.4 backplane ports are connected to the FPGA. Gigabit Ethernet (Port 0) is connected to Processing System (ARM®) and provides convenient access for development and for running application servers. Eight M-LVDS Timing/Trigger signals and three TCLK lines are connected as well. The board features a DDR3 memory block with 1GB (32bits) connected to PS, operating at 1066 MHz.

The board has one FMC LPC socket that has 2/4 transceivers connected (HPC connector).

The RTM interface is designed according to class D1.0 and carries full 48 LVDS lines. The board can support class compatible digital RTMs from DESY, such as DRTM-AD84 and DRTM-PZT4.

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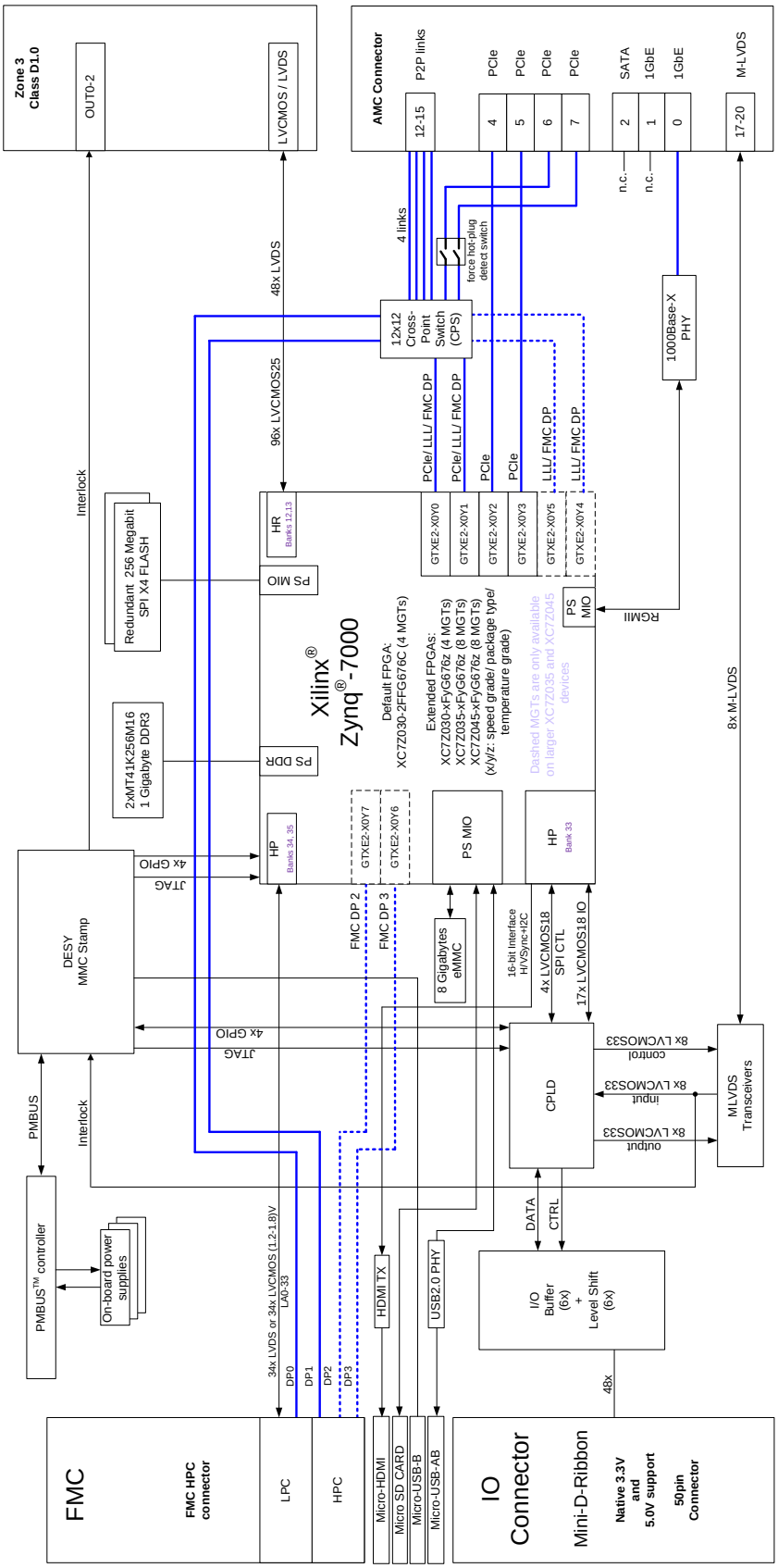
A HELMHOLTZ INNOVATION LAB

DESY

Low-Cost IO Controller Board DAMC-FMC1Z7IO

DAMC-FMC1Z7IO

MTCA.4-based Xilinx® Zynq®-7000 AMC with FMC and I/O Support



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