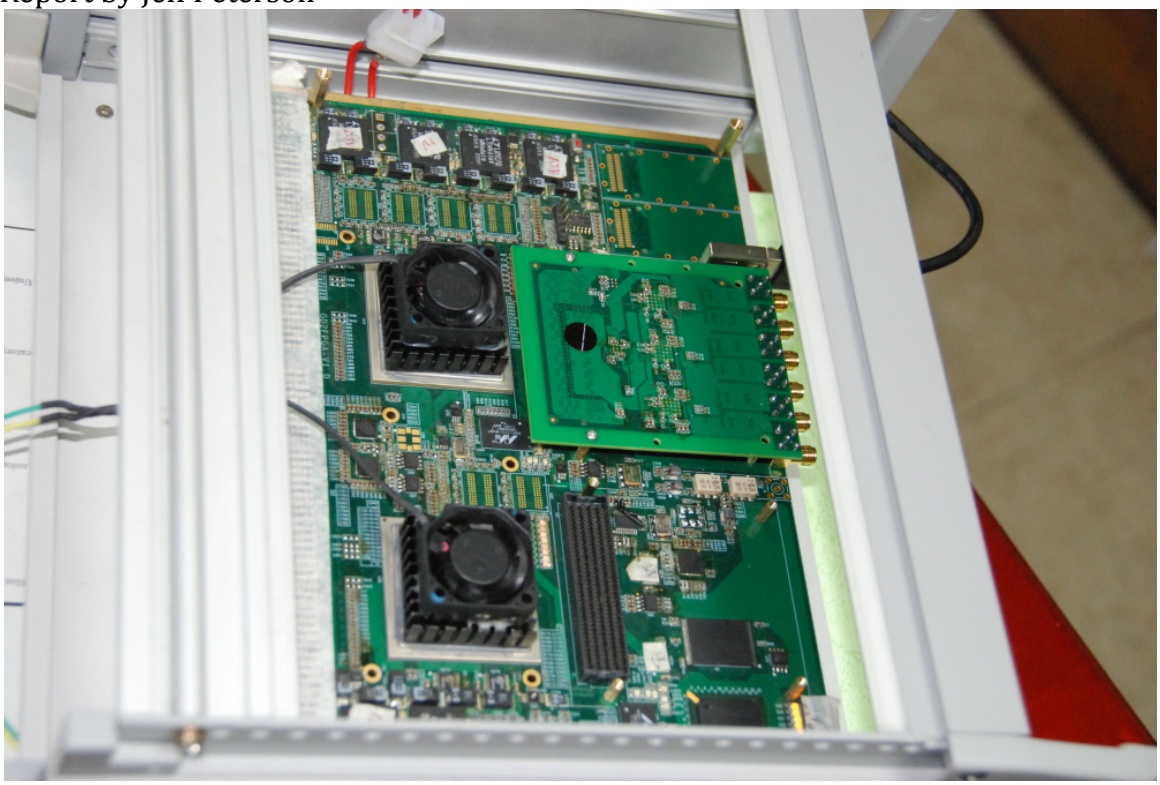
Institute of Automation FPGA Correlator.

Report by Jeff Peterson



The board includes two Spartan Vertex 6 LX FPGAs, each with power supply set and FMC connector. Two unpopulated transceiver connectors are laid out ont eh upper right. These can be used for 10GBe. Looks like the transceivers connect to just one of the FPGAs. Is this enough bandwidth? Do we want two more on the other side? A USB port is provided. So far, the USB has been used for data transfers, and the Inst. has not built 10GBe data packets for this project.

One FMC daughter board with three dual-input ADCs is shown. No provisions appear to have been made to synchronize clocks or sample intervals. There are no SMAs for these signals.

The cooling of the unit proved inadequate and several ICs were damaged.

The hardware provided is pretty much identical to that provided by Xilinx on their standard demonstration board, for which schematics are published. This board has two FPGAs while there is only one on the Demo board.