



TECHBRIEF

Ultra High-Speed Acquisition Board

1.7 GHz two channel ADC and two channel 1.2GSPS DAC with real-time signal processing



The UHAB has both analog to digital and digital to analog converters on board as well as large Virtex-4 SX FPGAs. The two channel ADC has a bandwidth of 1.7 GHz and up to 1.5 GS/s with an 8-bit resolution (ENOB 7,0-7,4 bits). This makes it capable of continuous acquisition at up to 3.0 GS/s.

Also, there are two 14-bit DACs as well as both optical and copper Gbit Ethernet connection. It also provides other interfaces like RS232, synchronous serial interfaces, a level configurable trigger input and two MMCX connectors.

Memory should not be a problem, since it has SDRAM, Flash memory, an SD-card slot and optional DDR2 memories.

Two Xilinx Virtex-4 SX35 (on board) and one Virtex-4 FX12 (on mini module) FPGAs make the board extremely versatile. These FPGAs are connected with a High-Speed link to make data transfer as fast as possible. Two boards may also be interconnected using a 12-differential-pair connector.

The board requires only 5VDC power, and incorporates temperature monitoring of ADC, DACs and FPGAs.

Typical applications include radar, sonar, microwave and general data acquisition systems.