EE Digital Electronics:

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Title:	VETAR2, preliminary specification

VETAR2 is a VME interface board, based on Altera Arria GXII FPGA.

Board features:
- ALTERA Aria GX II FPGA with 124K LEs, (EP2AGX125EF29C).
- SFP connector and cage for White-Rabbit interfacing.
- Two board-to-board connectors.
- 3 x Clock Oscillators 100 MHz, 2 x 125 MHz.
- White-Rabbit (WR) interface connector.
- Trigger connector (8 differential MLVDS).
- USB Interface[1] (USB micro connector).
- JTAG Interface (micro USB connector), auxiliary connector.
- SPI Flash Memory 128 Mb.
- Two LEMO connectors.
- Two one-wire ROMs/EEPROMs.
- 16 x user LEDs[1].
- LCD Graphic Display connector[1].
- Two logic analyzer connector (16 channels) [1].
- Two Rotary Switches for VME address offset.
- User Push Button[1].
- Power status LEDs.

[1] For debug purposes.

Figure 1. VETAR1 main components.
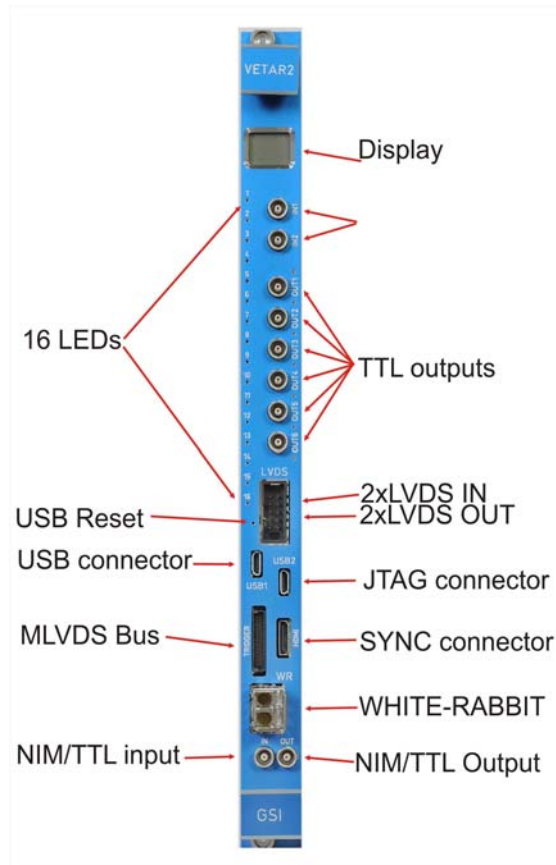
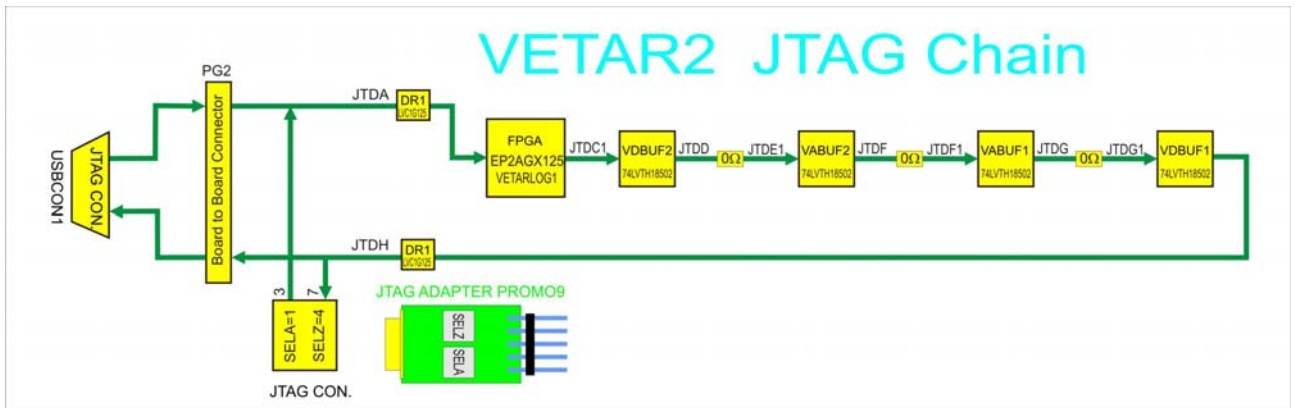Picture 1. Photograph of VETAR1 front panel.

Figure 2. Diagram of VETAR1 JTAG chain.

Specification Add - On Board

- micro-USB (USB2) to be used as front panel JTAG connector.
- 2 Lemo inputs, single ended, supports TTL and NIM levels.
- 6 Lemo output, single ended, supports TTL level.
- 16 pin connector for LVDS signals, 2 pairs input, 2 pairs output.
- Samtec MHDMR mini connector (for experiment time stamp).
- 7 x LEDs