SYNCHRO DISCRETE I/O BOARD

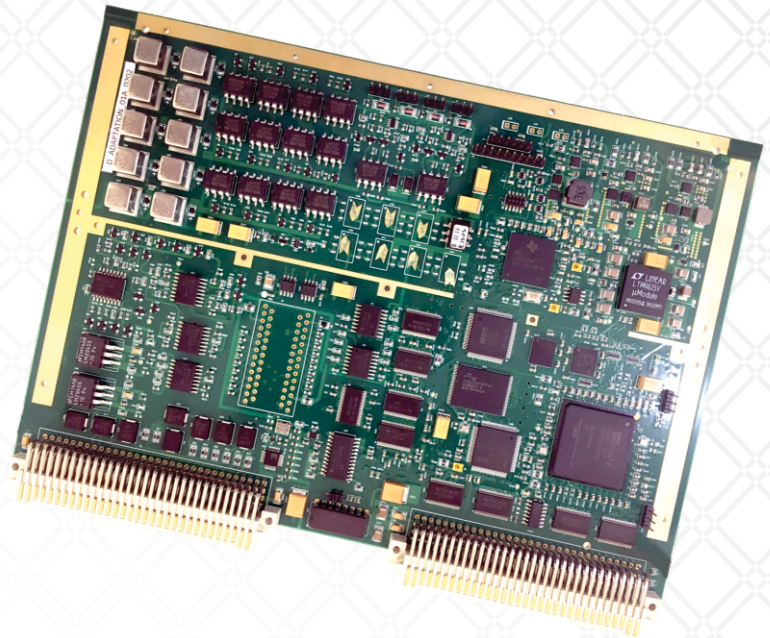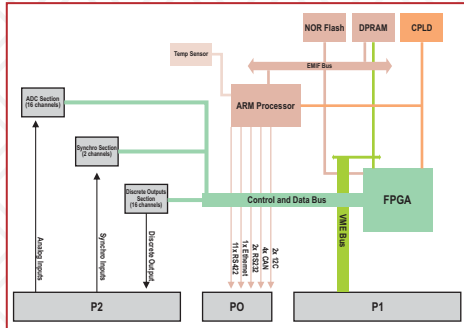**TERESOL**
Technological Research Solutions

BLOCK DIAGRAM

Synchro Discrete I/O Board in 6U Form Factor with VME Interface

Specifications

Integrated Host Processor
- ARM ® Cortex®- R5F 32-Bit RISC CPU with 32K instruction and 32K data caches with ECC.
- 4MB of Program Flash with ECC.
- System core microprocessor supporting frequencies of 330MHz

SDRAM
- Up to 512 MB SDRAM with ECC Single Bank

Flash Memory
- 512KB NOR Boot Flash memory
- 64MB NOR Boot Flash
- 256MB NOR Application Flash

Backplane
- Fully VME64 Host/slave capable with 2eSSTsupport

Analog Inputs
- 16 channels with 12-bit ADC.
- Software programmable sample rates, gains, filters, and high voltage and current ranges.

Synchro Inputs
- 2 Synchrochannels of(11.8V, 400Hz)Input.
- Programmable input thresholds and de-bounce times.

Discrete Outputs
- 16 channels with high voltage and current drives.
- Outputs are protected for short circuit, over current, and over temperature conditions.

Temperature Sensors
- On-board ambient temperature and processor core temperature sensors

Power Requirements
- Operates from+5V

Features

- 6U VME, ARM based single board computer
- High Performance Processor having FPU with Single and Double Precision.
- Onboard Xilinx 6 Series high-end FPGA for ASIC's design
- Xilinx CPLD for power sequencing and reset management
- High-speed 3.3V 16K x 16 dual-port SRAM
- Up to 512 MB SDRAM with ECC Single Bank
- Self-Calibration and Built-in-Test (BIT) with Visual Indication.
- 1,000V peak field to VME Bus Isolation.
- Host/slave, VME64-compliant + 2eSSTsupport
- ROHS, CE, UL, 60950 complaint
- 1x 10/100 BASE-T Ethernet
- 4x CAN Controller.
- 11x RS-422 Channels.
- 2x RS-232/RS422 UART ports
- 2x Inter-Integrated (I2C) Modules.

Optional Accessories
- 6U Standard backplane
- Temperature management
- Wedge Locks

Standards
- MIL-STD-454G
- ANSI/VITA/1994 VME64
- MIL-STD-801D
- MIL-STD-461B