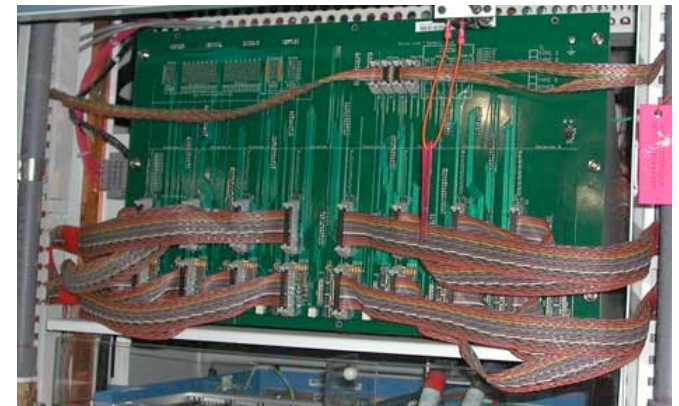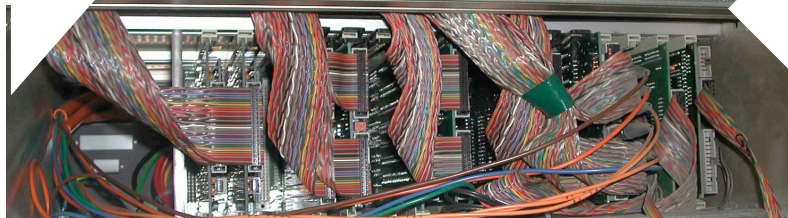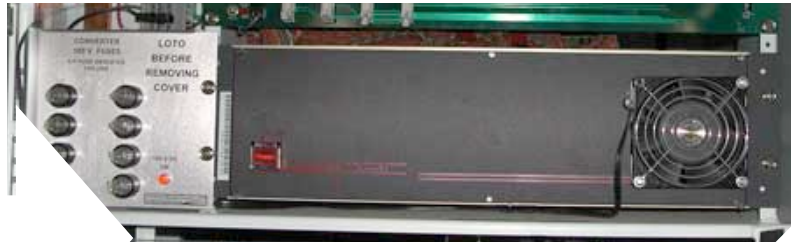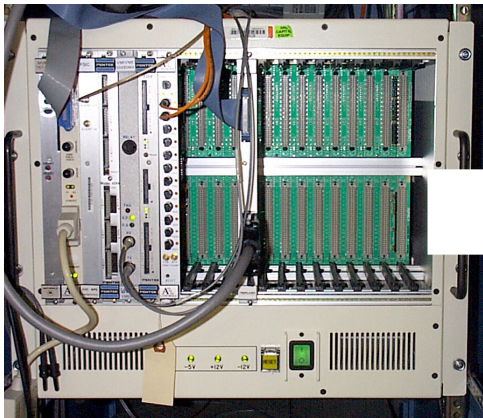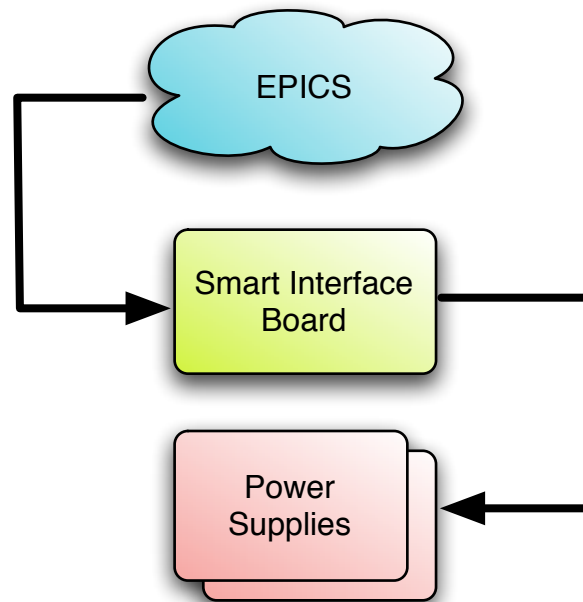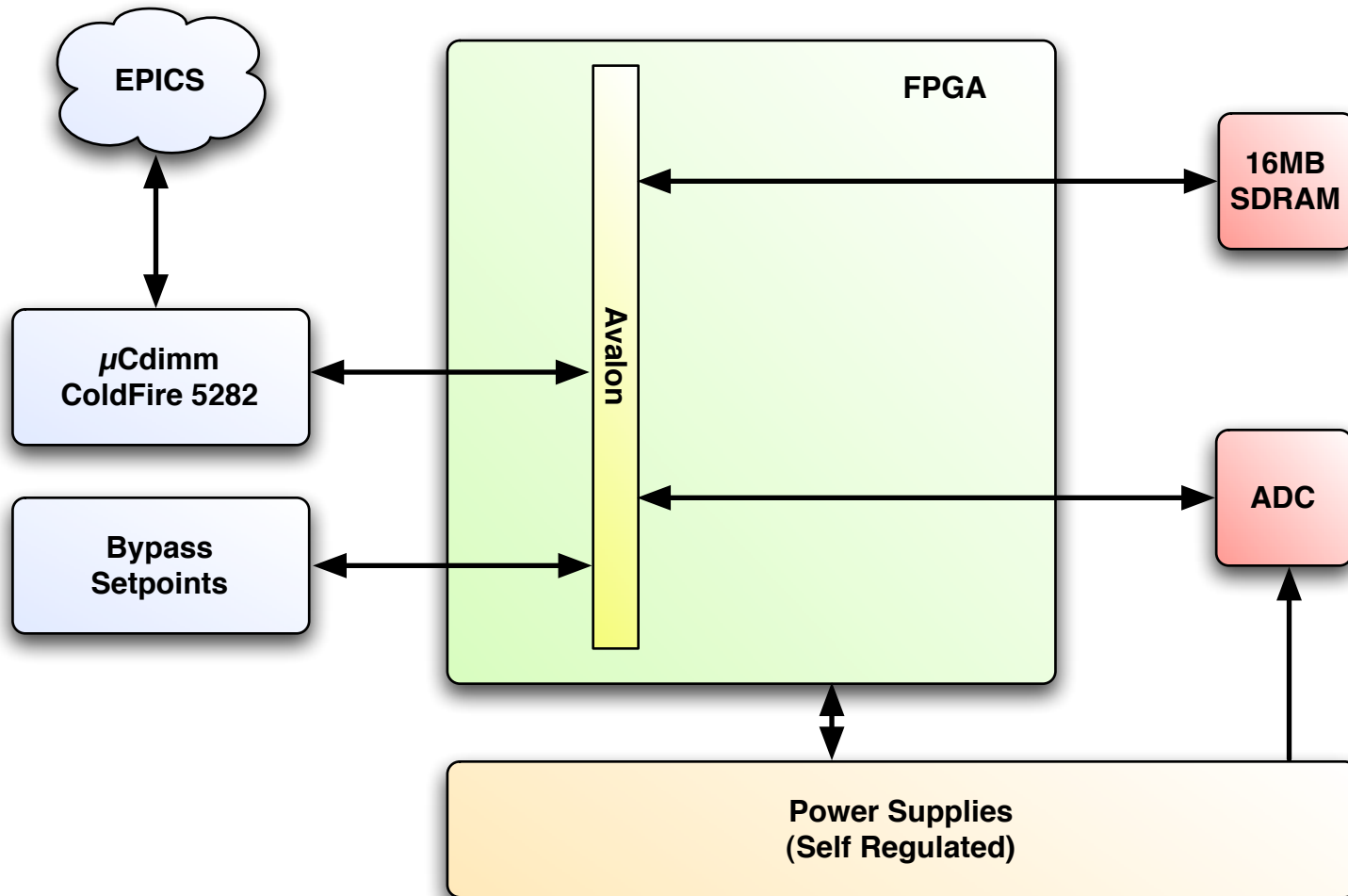# Power Supply Controller

Old Design
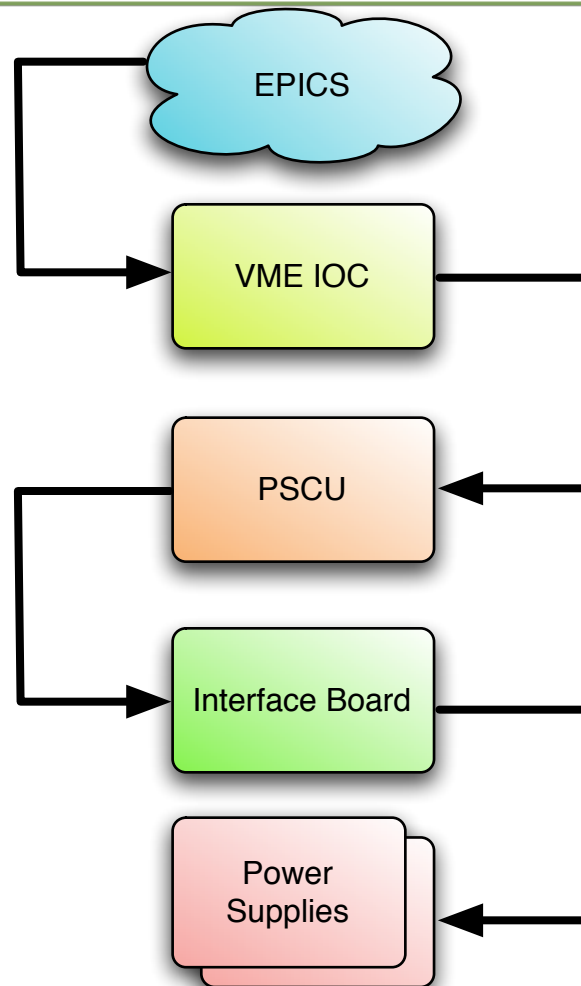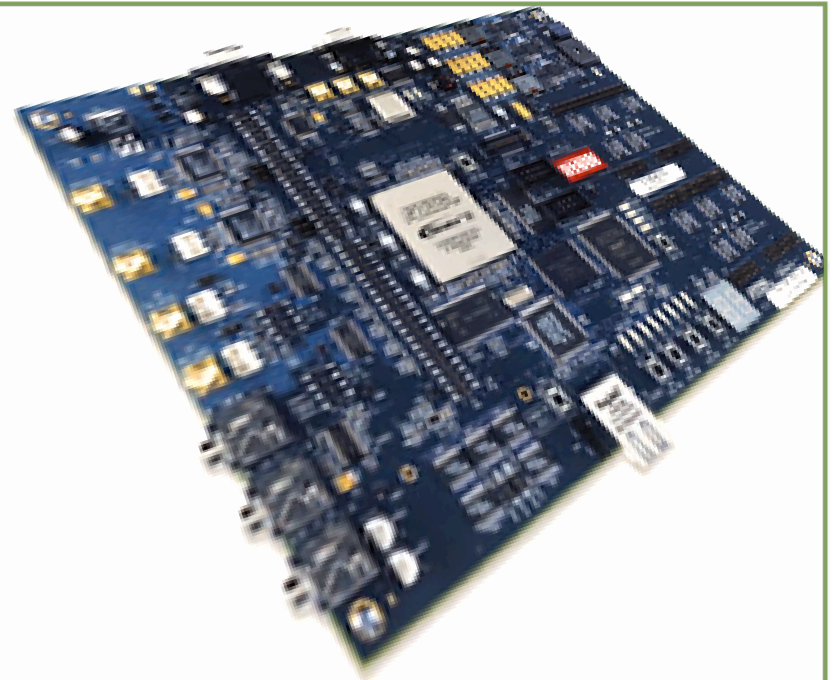
Old Design

New Design

New Design

Embedded Micro

- ▶ RTEMS

- ▶ EPICS

- ▶ Serial and Ethernet

- ▶ Serial Peripheral Interface

- ▶ I2C

- ▶ ADC

FPGA

- Altera

  - Stratix II

  - Cyclone II

- SOPC Builder in Quartus II

- Powerful!

  - 50x 100th order bandpass filters calculated in one microsecond

Micro/FPGA IOC

- Communication

    - EPICS/RTEMS support

    - Micro talks to FPGA via memory mapped IO

    - FPGA talks to Micro via Avalon Bus

- SOPC builder for drag and drop placement of modules

- FPGA has hundreds of pins for IO

EPICS/Micro Demo

▶ "Buttons and lights" demo with EPICS/ColdFire IOC