MOAB Series of Boards

The MOAB Series of Boards provide a single 3U cPCI card solution for interfacing to a large number and variety of commonly found subsystems, payloads, and sensors. The MOAB boards handle complex and common C&DH functions. The MOAB series of boards includes versions for general purpose I/O (SMOAB), high speed I/O and mass memory (CMOAB/DMOAB), and analog I/O (AMOAB). All MOAB series boards support a large mix of commonly found interfaces.
## MOAB Series of Boards

### Standard MOAB Features

- **2 Million Gate FPGA (Actel RTAX2000S)**
- 32-bit/33MHz cPCI target interface with P2 custom local interface bus
- 12 Gbytes Flash / 4 Gbytes Flash with TMR
- 2 Mbytes of Asynchronous SRAM with EDAC
- 32 Kbyte of FPGA Block RAM for buffering
- 24 Discrete Outputs (Configurable to 3.3V or 5V)
- 23 Discrete Inputs (Configurable to 3.3V or 5V)
- 20 Differential RS422/LVDS Transmitters
- 20 Differential RS422/LVDS Receivers

**Mass, Power Dimensions**

- < 0.4 kg
- < 8.0 Watts Peak, Worst-Case
- 100 mm x 175 mm x 30 mm (3U cPCI)

### Analog MOAB Features

- **2 Million Gate FPGA (Actel RTAX2000S)**
- 32-bit/33MHz cPCI target interface with P2 custom local interface bus
- 12 AD590 Temperature Sensor Channels
- 47 AD590 Excitations
- 24 General Purpose Analog Channels +/-10V

**Mass, Power Dimensions**

- < 0.4 kg
- < 7.0 Watts Peak, Worst-Case
- 100 mm x 175 mm x 30 mm (3U cPCI)

### Digital MOAB Features

- **2 Million Gate FPGA (Actel RTAX2000S)**
- 32-bit/33MHz cPCI target interface with P2 custom local interface bus
- 2 Gbyte of Synchronous DRAM (Independent Set #1)
- 2 Gbyte of Synchronous DRAM (Independent Set #2)
- 32 Kbyte of FPGA Block RAM for buffering
- 32 Discrete Inputs with Cold-Sparing (Configurable to 3.3V or 5V)
- 40 Differential RS422/LVDS TX Outputs
- 31 Differential RS422/LVDS RX Inputs
- 4 LVDS DeSerializers (3:21 Aeroflex or 4:28 CameraLink)
- 3 SpaceWire PHYs

**Mass, Power, Dimensions**

- < 0.4 kg
- < 6.0 Watts Peak, Worst-Case
- 100 mm x 175 mm x 30 mm (3U cPCI)

### Solid State Memory

- The memory on the MOAB boards may include up to a total of 768 MBytes of Flash memory which can be used as-is or configured as 256 MBytes of Triple-Modular-Redundant Flash with voting logic implemented in the MOAB FPGA. Boards may provide 2 MBytes of shared SRAM for general purpose use by the MOAB board or any devices on the cPCI bus.

---

Pat Stroh, Business Development Manager  
Tel +1 480 377 0400 x362  
pstroh@moog.com