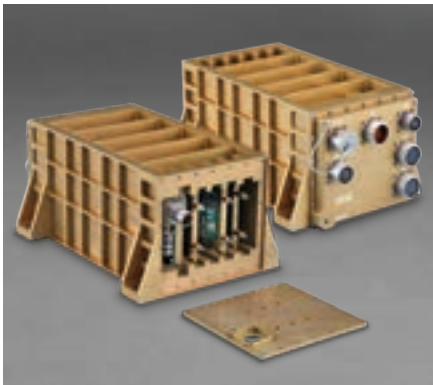


## MODULAR CONTROL ELECTRONICS UNIT



Based on heritage Moog controllers, the robust architecture of the Control Electronics Unit (CEU) is derived from flight hardware designs with common solutions for multiple applications.

Existing three-card or five-card slot enclosures can be used to accommodate and provide the following controller applications:

- Electromechanical (EM) Actuation
- Electrohydraulic (EH) Actuation
- Electrohydrostatic (EHA) Actuation
- Communication Converter
- Electric Power Subsystem Control
- Hydraulic Power Subsystem Control
- Power Distribution

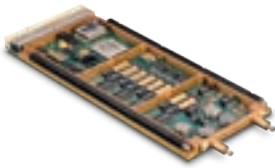
- Battery Management Control
- Main Engine Fluid Control
- Propellant Management System Control
- Roll Control System

The CEU is also extensible to the following with new circuit card assemblies (CCAs):

- Flight Computer
- Data Acquisition Package
- Stage Interface Unit
- Solid Motor Ignition



# MODULAR CONTROL ELECTRONICS UNIT



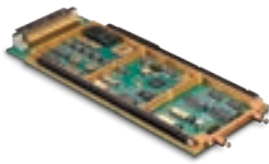
## LOGIC PROCESSING UNIT CARD

- Large FPGA for logic implementation
- 4 LVDT/RVDT/Resolver Interfaces
- RS-422 Comm. Interface



## FLUID SENSORS AND CONTROLS INTERFACE CARD

- 16 Pressure Sensor Interfaces
- 8 Temperature Sensor Interface
- 2 Solenoid Drivers
- 2 Servovalve Drivers



## COMMUNICATION CARD

- 4 RS-422 Comm. Interfaces
- 2 Analog Comm. Interface
- Telemetry Only RS-422
- 3 Cross Channel Data Links
- 1 MIL-STD-1553B Redundant Comm. Interface
- 16 Generic Digital Inputs
- 8 Generic Digital Outputs
- EEPROM for servo-gain storage and other uses



## LOW VOLTAGE POWER SUPPLY

- Filtered 28V Out
- Array of Low Level Voltages to Support other CCAs
- Isolated Voltages as needed to support grounding needs



## POWER STAGE INTERFACE CARD

- 2 Channels of 3-phase motor bridge gate drivers
- 2 Channels of 3-phase motor current sense interface
- Bus voltage and current sense interface
- Power Stage Built-in-Test Interface



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