Aft Power Board Datasheet

Description

The Aft Power Board draws power from the vehicle's battery pods, merges this power into battery voltage that is distributed throughout the vehicle. Signals from the battery pods are routed through the board to the Serial Board. Aft Power converts the battery voltage into an isolated 12V to directly power the CPU. The board measures current draw from the CPU, and provides these signals to the Sensor Power board. The 12V supply is also distributed to up to 4 fans. Temperature sensing is also performed, and this signal is provided to the Sensor Power board. The battery voltage is supplied directly to the Thruster Board and the Sensor Power Board.

Specifications

- 22V (28V Max) Battery Input Voltage
- Isolated 12V Supply provided to CPU and Fans
- Dimensions 4.25” x 5.25” x 1.0” (WxLxH)
- Wet Noodle Connections provide 22V Battery supply to Thruster and Sensor Power Boards
- Green LED on CPU port for Power
- Supports 4 battery pods, each with 2x5 Molex MicroFit
- 2 Serial Connectors, each 2x3 MicroFit.
  - Port Serial Connects to Fore Pods
  - Starboard Serial Connects to Aft Pods
- CPU Power Provided through 2x2 MicroFit
- 4 Fan Connections Through 2x1 MicroFit
- Signals to Sensor Power through 2x2 MicroFit
- On Signal received from Thruster Board through 2x1 MicroFit

Connector Pinouts

- **CPU**
  1. 12V
  2. CPU Ground
  3. 12V
  4. CPU Ground

- **Thruster Board (Power)**
  1. Vbatt
  2. Power Ground

- **Sensor Power (Power)**
  1. Vbatt
  2. Power Ground

- **Battery Pods**
  1. Tx to Pod
  2. Rx from Pod
  3. Power Ground
  4. Vbatt
  5. Vbatt
  6. On (Active Low)
  7. Power Ground
  8. Power Ground
  9. Power Ground
  10. Vbatt

- **LED Indication**
  - Green for CPU Power

- **Fans**
  1. CPU Ground
  2. 12V

- **Serial Connections**
  1. Tx to Starboard Pod
  2. Power Ground
  3. Rx from Starboard Pod
  4. Tx to Port Pod
  5. Power Ground
  6. Rx from Port Pod

- **Thruster Board (Signals)**
  1. On Signal
  2. Power Ground

- **Sensor Power (Signals)**
  1. CPU Ground
  2. Temp Sense
  3. Im meas CPU
  4. V meas CPU