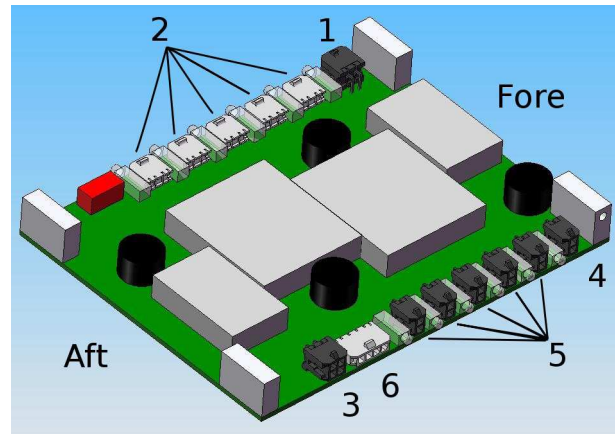


# Sensor Power Board

## Datasheet

### Description-

The Sensor Power board takes 24V from the batteries and uses DCDCs to convert it to the necessary voltage for the sensors. It reports power draw to the CPU via the Serial board, and it has the ability to shut off power flow to the sensors. It also acts as a circuit breaker for the sensors, stopping power flow to them if their current draw exceeds a specified level. The secondary functions of the Sensor Power board are to measure the local temperature and report it, and to digitize analog data from the Aft Power board to be sent to the CPU.

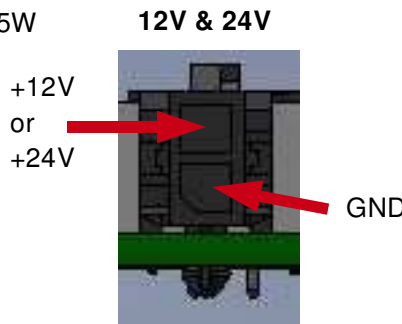


### Specifications

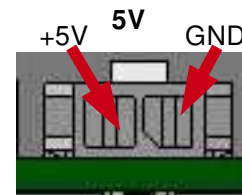
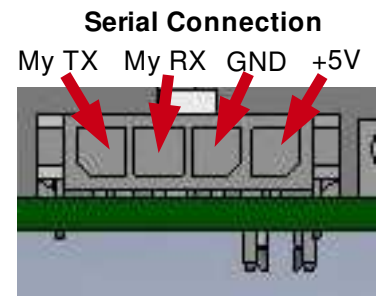
- 5V outputs x 5, 12V outputs x 5, 24V output, special high-power hydrophone output
- Green LED on each port for power, red LED for unpowered
- Blue Heartbeat LED
- Power Limits:
  - 12V – 20 W
  - 5V – 10 W
  - Hydrophone 5V – 15W
  - 24V – 20W

### Board Layout

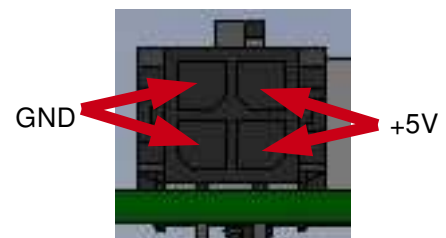
1	5V Hydrophone Power
2	5V Power Ports
3	Aft Power Board Data Connection
4	24V DVL Power
5	12V Power Ports
6	Serial Board Data Connection



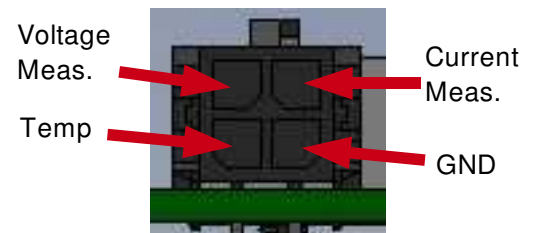
### Pinout



### Hydrophones



### Aft Power Connection



### Important Parts

Name	Function	Quantity
CC15-2405SF-E	5V DCDC converter(hydrophones)	1
CC10-2412DF-E	24V DCDC converter	1
CC10-2405SF-E	5V DCDC converter	1
PT4143	12V DCDC converter	1
ADS7960/61	12/16 Channel ADC	2 (1/1)
LT1161CN	FET Driver	3