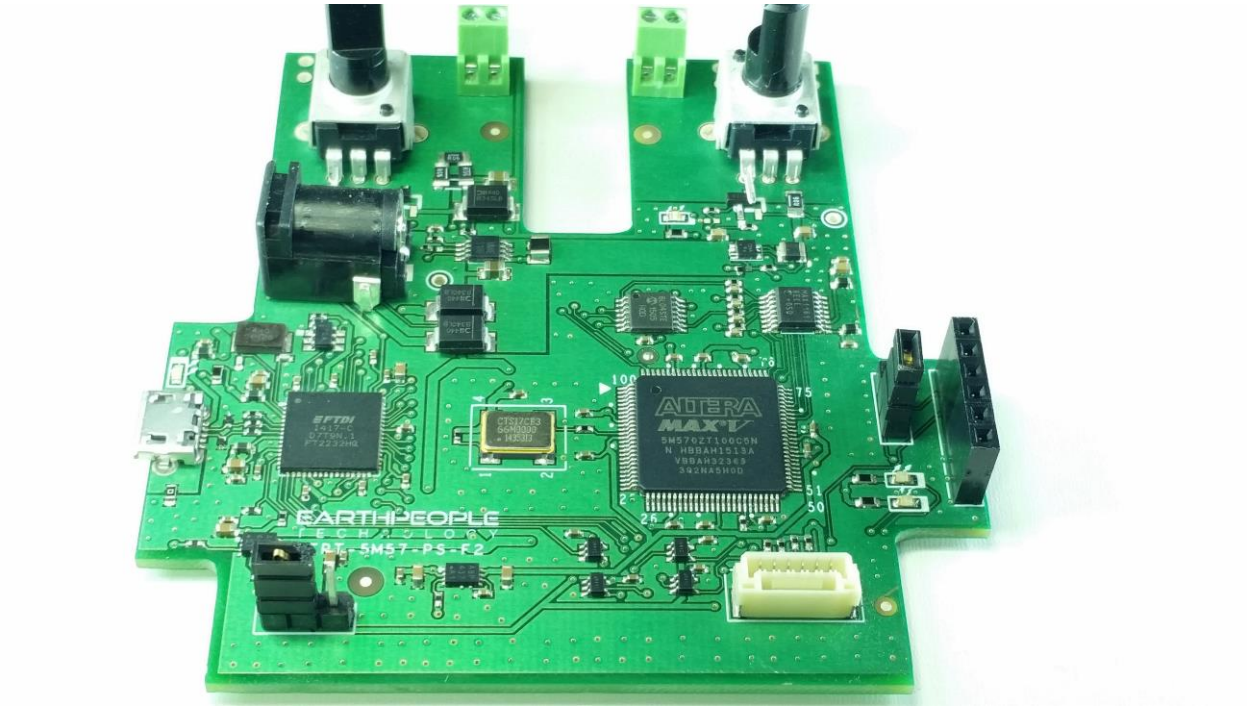
EPT-5M57-PS-F2 POWERG DUAL POWER SUPPLY

Data Sheet



The PowerG Arduino Bench Top Dual Power Supply is designed for the Do It Yourself community. It provides an easy mechanism to power your Arduino along with sensors, actuators, LEDs, and any other electronics. It contains two supplies that are completely independent, however they share the input power. Each supply is controlled by its own potentiometer. There is also a selectable current limit for each supply. The output voltage and current are independently displayed on a Windows PC.

http://www.earthpeopletechnology.com/

The PowerG Dual Power Supply consists of:

Hardware	Software
EPT-5M57-PS-F2	PowerG Application

1. Hardware

The EPT-5M57-PS-F2 board is equipped with an Altera 5M570 CPLD. The CPLD provides a high speed data transfer mechanism between Analog to Digital Conversion and Host PC. Each power supply has both the voltage and current sampled by a 10 bit ADC. These samples are transferred to the Windows PC for display. The EPT-Active-Transfer-Library provides control communication between the objective device and the PLD. Data transfer during the objective device checkout between the PC and the PLD program is available via the Hyper Serial Port. The board also includes the following parts.

- One Boost Switching Power Supply (PSA)
- One Buck Switching Power Supply (PSB)
- Altera EPM570 in the TQFP 100 pin package
- FT2232H USB to Dual Serial
- 4 Channel 10 Bit Analog to Digital Converter (ADC)
- Two Current Sense circuits
- Two Terminal Block connectors for Power Supply Outputs
- Two Green LED’s indicate Power Supply On/Off status
- Six pin Arduino Mini/Pro compatible connector
- Two Amber LED’s to indicate TXD and RXD activity
- Jumper to allow selection between DTR and RTS for reset signal to Arduino for bootloader access

Figure 2 EPT-570-AP Block Diagram

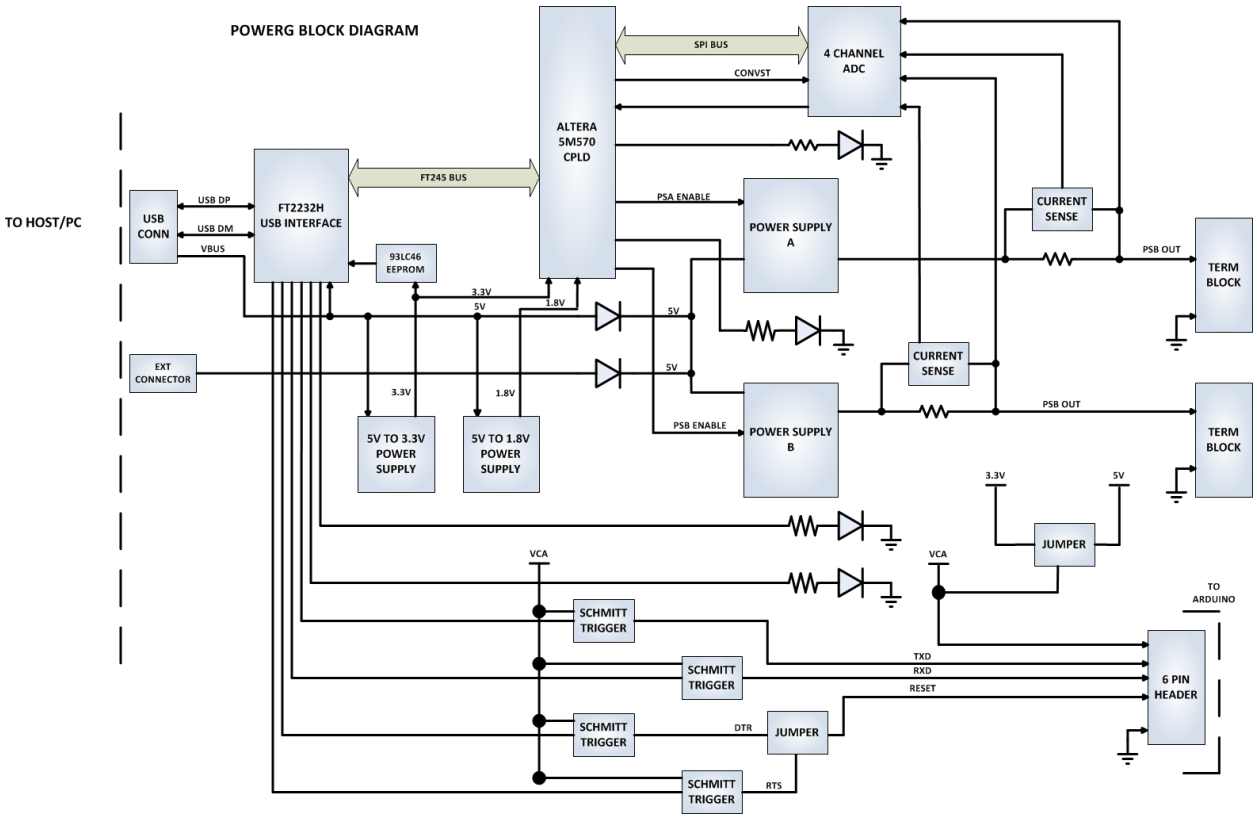
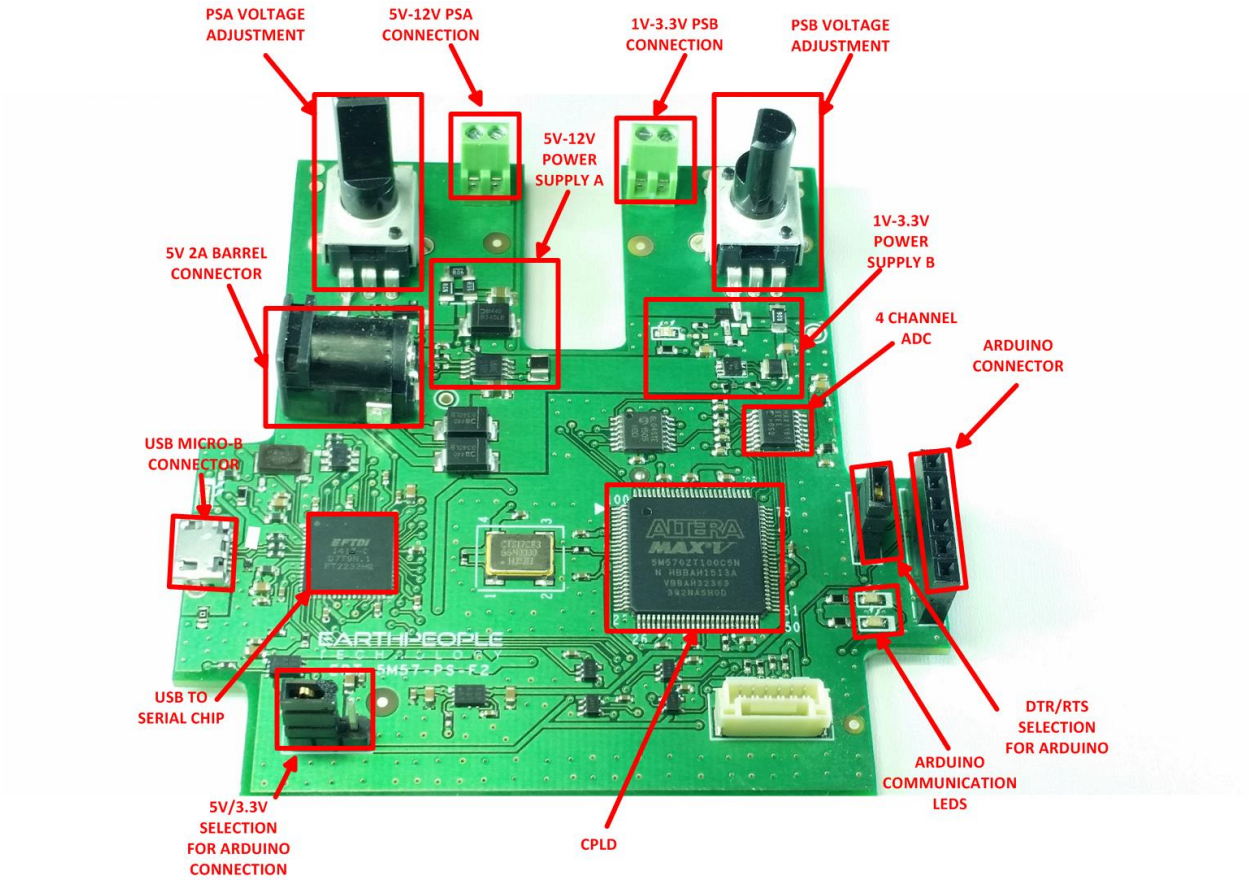
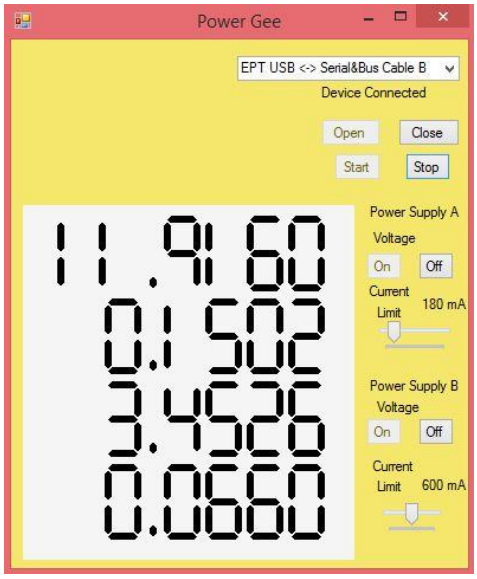


Figure 3 EPT USB/PLD System Communicating with the ARDUINO UNO



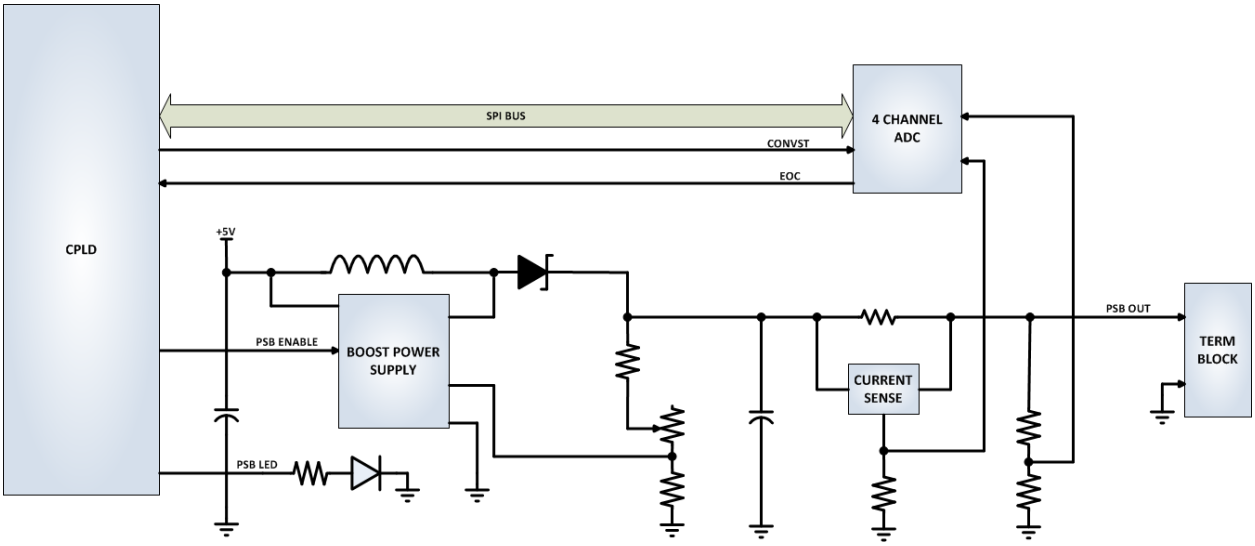


2. Specifications

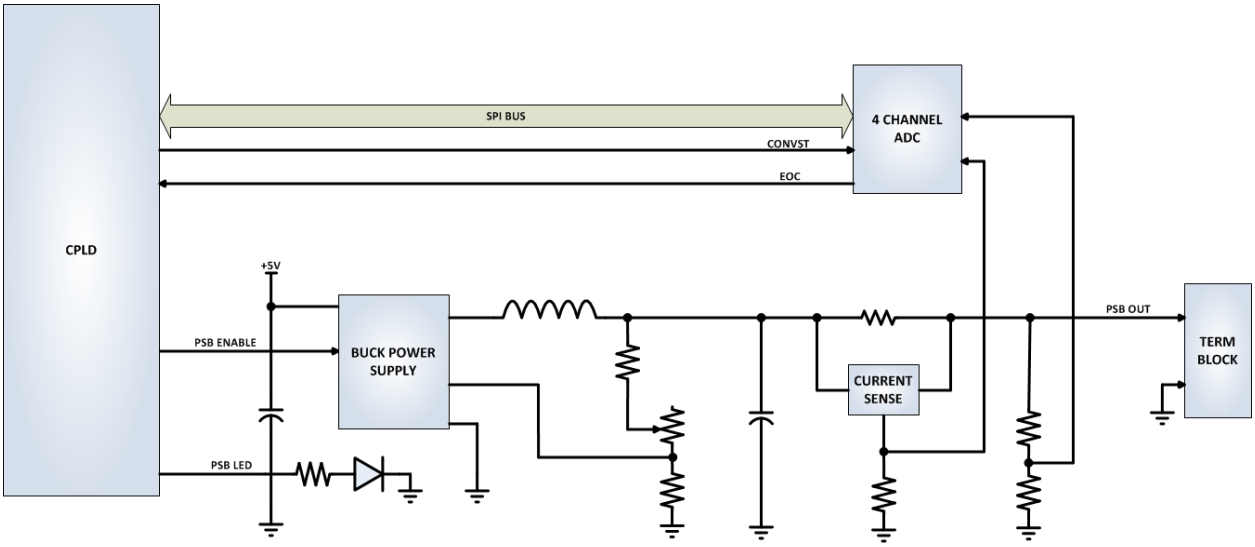
POWER SOURCE	PSA VOLTAGE OUTPUT	PSA CURRENT OUTPUT	PSB VOLTAGE OUTPUT	PSB CURRENT OUTPUT
USB PORT	+5V to +12V	Up To 160mA	+1V to +3.3V	Up To 600mA
		Shared with PSB		Shared with PSA
+5V @ 4A EXTERNAL BARREL CONNECTOR	+5V to +12V	1.2A	+1V to +3.3V	1.2A
		Dedicated to PSA		Dedicated to PSB

3. Power Requirements

The PSA is a Boost Switching Power Supply. It has a capability of providing up to 1.2A over the +5.5V to +12V output range.

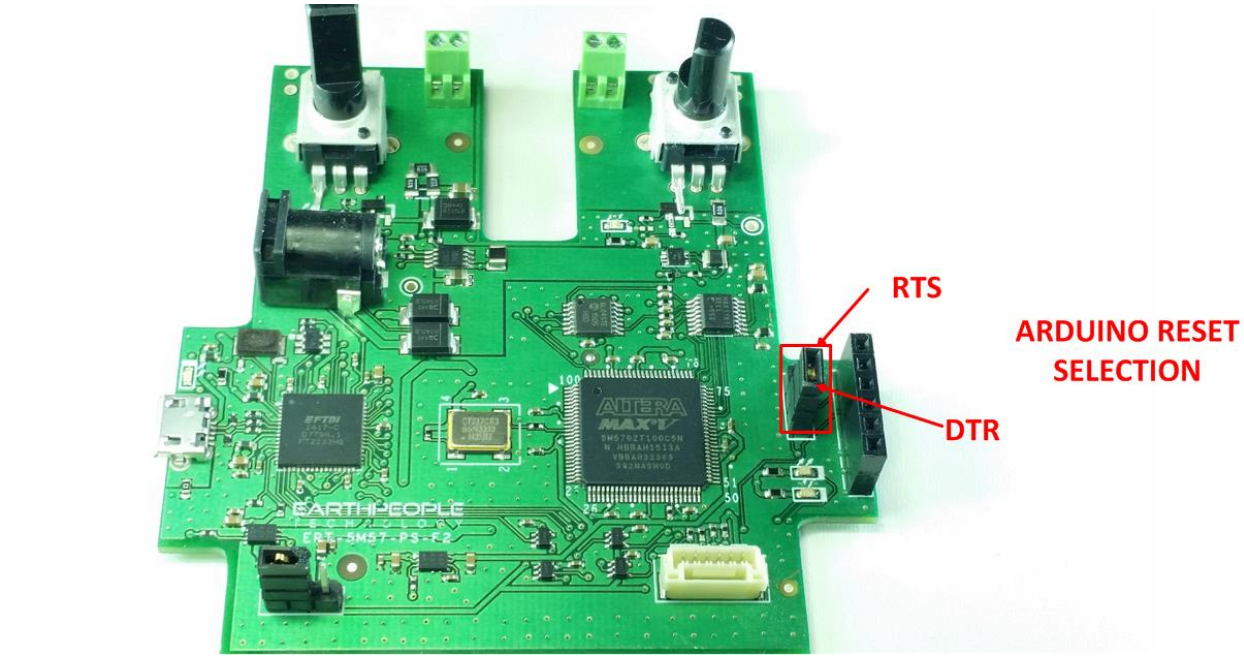


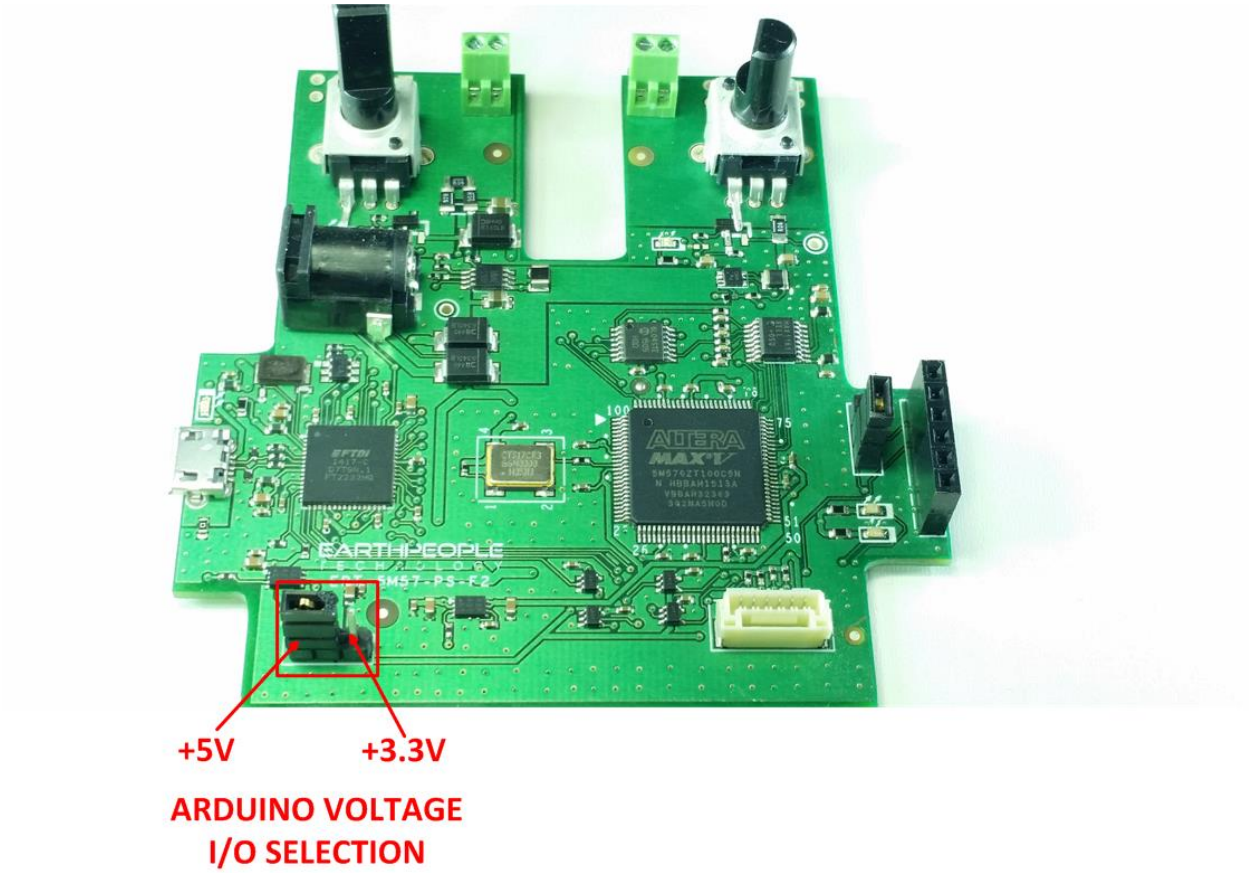
The PSB is a Buck Switching Power Supply. It is capable of providing up to 1.2A over the +1V to +3.3V output range.



TBD

4. Connectors





TBD

5. Dimensions

TBD