



Crystalspace P1U "Vasik" Power Supply

Overview

Crystalspace P1U power supply is the smallest and the most advanced power supply in the market. It suits well for densely packed 1 and 2 unit CubeSats. It uses fast maximum power point tracking boost converters to charge integrated doubled battery pack. Battery output is fed through duplicated converters that can provide 3.3 V, 5 V, 12 V. Unregulated 3.7 V battery and regulated buses are available through individually selectable current limited and latch-up protected switches. Pinouts, output voltages and channels are changeable to user needs. Each sold unit has gone through acceptance testing.

Features

- 7 mm thick and weighs only 80 g
- All critical components are doubled (all regulators and batteries)
- Radiation hardened by design
- Architecture flight tested on successful ESTCube-1 satellite
- Up 10 W continuous solar input
- 3 Ah / 11 Wh of battery with double under- and overvoltage protection
- 3 voltage rails + unregulated 3.7 V battery rail
- 6 outputs with separate current limits, protection and controllable switching
- All voltages are monitored
- Remove-Before-Flight pin connection
- RS485, RS422, UART or SPI controlled
- Compatible with CubeSat Kit and other standard components
- System can be easily tested, controlled and calibrated with Crystalspace control application

Available options

- Doubled battery pack: 6 Ah / 22 Wh, with 13 mm thickness and 140 g weight

Performance

- 90% input converter efficiency
- Power consumption: 15 mW
- Regulated voltage rails with 4 W guaranteed output

Product Properties

- Dimensions: 96 mm x 90 mm x (7 or 13) mm
- Temperature range (excluding batteries) -40°C to 85°C
- Mass without connector: 80 g
- IPC-A-610 Class 3 assembly
- Vibration and shock tested
- Thermal vacuum tested

