



ZIN Technologies

Spacecraft Power Distribution Units Model: PDUFA1000

ZIN Spacecraft Power Distribution Units (PDUs)

DESIGN HIGHLIGHTS

Wide range of Voltage and Current
Distribution
Class A/B Design
Flexible Distribution Voltages from
28V to 270V
Currents up to 500A
Wide Range of Switch Options

FLEXIBLE POWER INPUTS

Interfaces with Batteries, Solar
Arrays
Manages Multiple Power Inputs
Source Prioritization
Active MOSFET OR-ing, Load Sharing

FLEXIBLE POWER OUTPUTS

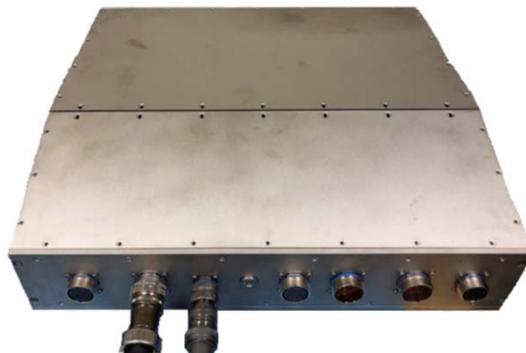
Multiple Power Output Options:
Time Delay Overcurrent Trip
Constant Current Limiting
Foldback Current Limiting

COMMUNICATION & TELEMETRY

MIL-STD-1553 Command/Control
Voltage, Current & Temperature
Current Telemetry on all Output
Feeds

MISSION CRITICAL DESIGN

EEE Parts Selection per:
EEE-INST-002 / MSFC-STD-3012
Radiation-Hardened: 50kRAD
MIL-STD-461 EMC Tests



ZIN Technologies has extensive experience creating power distribution solutions tailored to our customers' need.

Power Distribution is a key challenge for spacecraft designers. ZIN answers this challenge with innovative Power Distribution Units (PDUs) that provide our customers with the ability to control and manage spacecraft power with ease.

ZIN's Power Distribution Units are Space-Grade, radiation hardened designs that power critical missions, most recently as part of NASA's Commercial Crew program.

ZIN has developed PDUs that power both high voltage systems (flight actuators, thrust vector controllers, satellite power busses) as well as low voltage systems (avionics, flight computers, and communications).

The PDUs accept switching commands from a Flight computer, and then communicate back switch status and telemetry. ZIN offers high-speed current telemetry on each output switch that is ideal for load diagnostics and fault detection. The PDUs are designed for mission critical applications, and therefore feature internal redundancy.

- ZIN's PDUs connect to common spacecraft power sources such as batteries, solar panels, and ground power.
- The PDUs control the flow of power from multiple sources, with features such as on/off switching, source prioritization, active MOSFET OR-ing, and load sharing.
- ZIN offers a wide variety of output switch options to meet the needs of diverse loads, including time-delay overcurrent switches, constant current limiting switches, and foldback limited switches.
- ZIN has developed a library of power switch, telemetry, control, and communication options that allow us to exceed customer expectations quickly and economically.
- Space-Rated architecture.
- EEE parts controls to Level 2 available.



ZIN Technologies Inc.

6745 Engle Road | Middleburg Heights, Oh 44130
Phone: 440.625-2223 | johansonm@zin-tech.com | www.ZIN-Tech.com

Founded in 1957, ZIN provides engineering services and products to NASA and the aerospace industry. ZIN has managed the development of Mission Critical Class A/B space flight hardware (aerospace/space systems) from formulation, design, and development through to fabrication, integration, testing, verification, and mission operations.

Our experience includes the development and validation of new technologies (sensors, inertial navigational measurement units (IMUs), composites, advanced acoustic resonant attenuation, optics, power, additive manufacturing and wireless/RF).

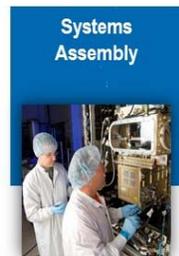
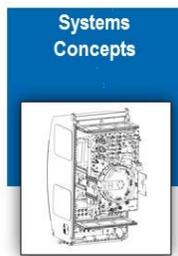
ZIN provides hardware and service for ISS research investigations, space launch systems, satellite systems, and space based human research projects enabling future space and science missions.



Focus on Quality - Certified and Compliant with Industry and Government Quality Standards



OUR PRODUCTS & SERVICES



- ❑ **Minority Owned-SDB**
- ❑ **AS9100 certified**
- ❑ **DCAA Approved Forward Pricing**
- ❑ **Headquartered Cleveland Ohio**
- ❑ **Award Winning Capabilities**

