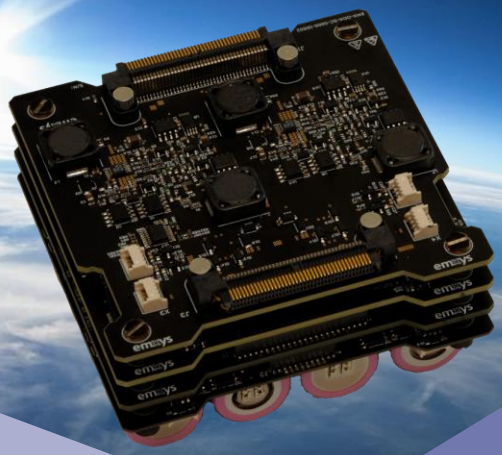
ODALISS PDCU

Power Distribution and Control Unit



ODALISS PDCU is a highly efficient electric power unit designed to be seamlessly integrated in ODALISS avionics.

SAR AND MPPT TECHNOLOGY

REDUNDANT BATTERY PROTECTIONS

I2C

I2C LOGIC CONTROL

SCALABLE BATTERY CONFIGURATION

The **ODALISS PDCU** includes redundant Solar Array Regulators with Maximum Power Point Tracking and redundant battery pack with full protection stages to optimize energy performance and reliability with minimum hardware footprint.

Main features:

- Four solar array input power channels.
- Modular Li-Ion battery packs.
- 8W nominal power, 36W peak power (per pack for 3U).
- Fully configurable power profile.
- Both unregulated and regulated buses.
- Safety regulated bus for critical power application.
- Battery overvoltage and undervoltage protections.

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SPECIFICATIONS

BATTERY PACK CONFIGURATION

- Dual 2s1p Li-Ion battery.
- Nominal voltage per battery: +7.6V.
- Fully charged voltage per battery: +8.2V.
- Fully charged current per battery: 1A.
- Maximum discharge current per battery: 8A.
- Capacity per battery: 3450mAh.

OUTPUT BUSES

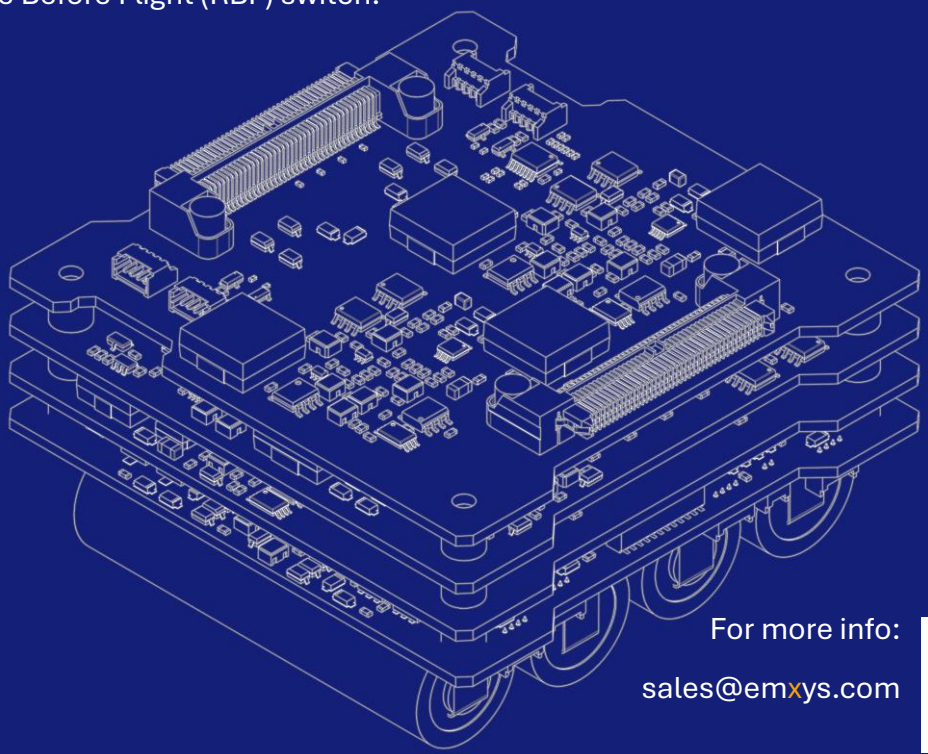
- Main and redundant independent unregulated buses +7.6V nominal (+8.2V Max.).
- Bus operation in independent or parallel configurations.
- Safety dual battery-powered regulated +3.3V bus (1.5A max.).
- Regulated +5.0V and +3.3V buses (1.5A max. each).

INTEGRATION

- Mechanical interface compatible with ODALISS avionics buses and payloads.
- Operating temperature: -45ºC to +85ºC.
- Dimensions: 870mm x 870mm x 55mm.
- Weight: 360 grams.

POWER MANAGEMENT

- Built-in protection: overvoltage, undervoltage, overcurrent and short-circuit.
- Batteries housekeeping signals including voltage, current and temperature, as well as solar panel current generation.
- Control via I2C bus.
- One kill/deployment switch per battery with redundant circuitry.
- One Remove Before Flight (RBF) switch.



For more info:

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