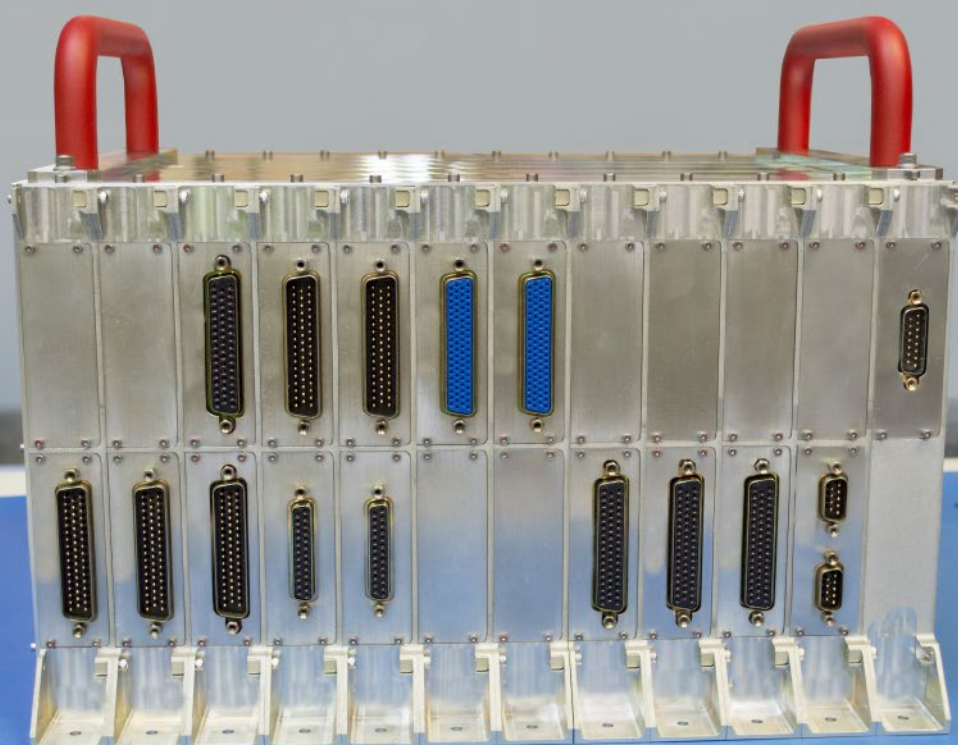


# INVAP

## PDU

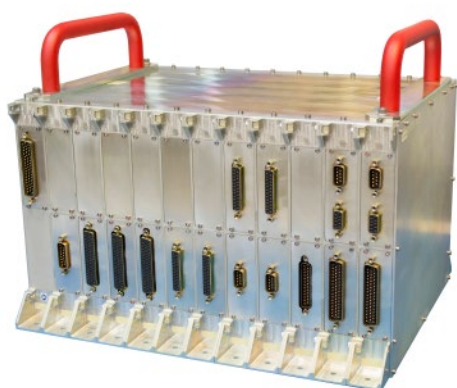
### Power Distribution Unit



PDU design evolves from the long-term heritage of more than 20 years in orbit of different power systems for Earth Observation satellites built by INVAP. PDU can meet customer needs by configuring the amount and type of used modules.

## Main functions

- Distribute power to Service Platform, Loads and Heaters.
- Distribute power to Service Platform and Payload heaters.
- Control Different type of motors and informs their position.
- Actuate the release mechanism devices
- Acquire telemetry of the subsystem and send it to the OBC upon request.



## Key Features

- The PDU subsystem Works in conjunction with PMU to manage and supply power to service platform and payloads Units.
- Single Point Failure Free architecture.

## Design Evolution

- The PDU subsystem has been developed as part of the New Generation, state of the art Integrated Avionics for SMALL-GEO satellites.
- The PDU, PMU and OBC subsystems share the same modular architecture.
- Modular configurable design to attend specific mission requirements.

### Features

Number of modules	14 (5 different types)
Power Buses Distribution	100 V Main Bus
Control and Coms Protocol	CAN Bus 18V to 40V
Input Power Supply	

### Interfaces

28V Distribution per PDM module	8 Non-Switched (4 A) 8 Switched Lines (4 A) 16 Switched groups of 4 (8A per group; 3A per line)
100V Distribution per PDM module	8 Non-Switched (3 A) 8 Switched Lines (3 A) 16 Switched groups of 4 (4A per group; 1A per line)
Heater Outputs	128 line
Motor Driving capability	6 Bi-phase motors 30 Tri-phase motors
Pyro Firing Actuators	72 (Tripled Protected)

### Environment

Application fields	GEO Telecom missions
Lifetime	15 Years
Radiation	SEL immune / SEU tolerant
Temperature range	-15 / 50 °C Operation -25 / 60 °C Non-Operative
EMI/EMC	MIL-STD-461
Vibration	23 g peak, 14 grms

### Budget

Mass	18 kg
Dimensions (L x W x H)	288,5 x 408 x 209,5 mm
Power Consumption @ Typical Configuration	66 W



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DEFENSE,  
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