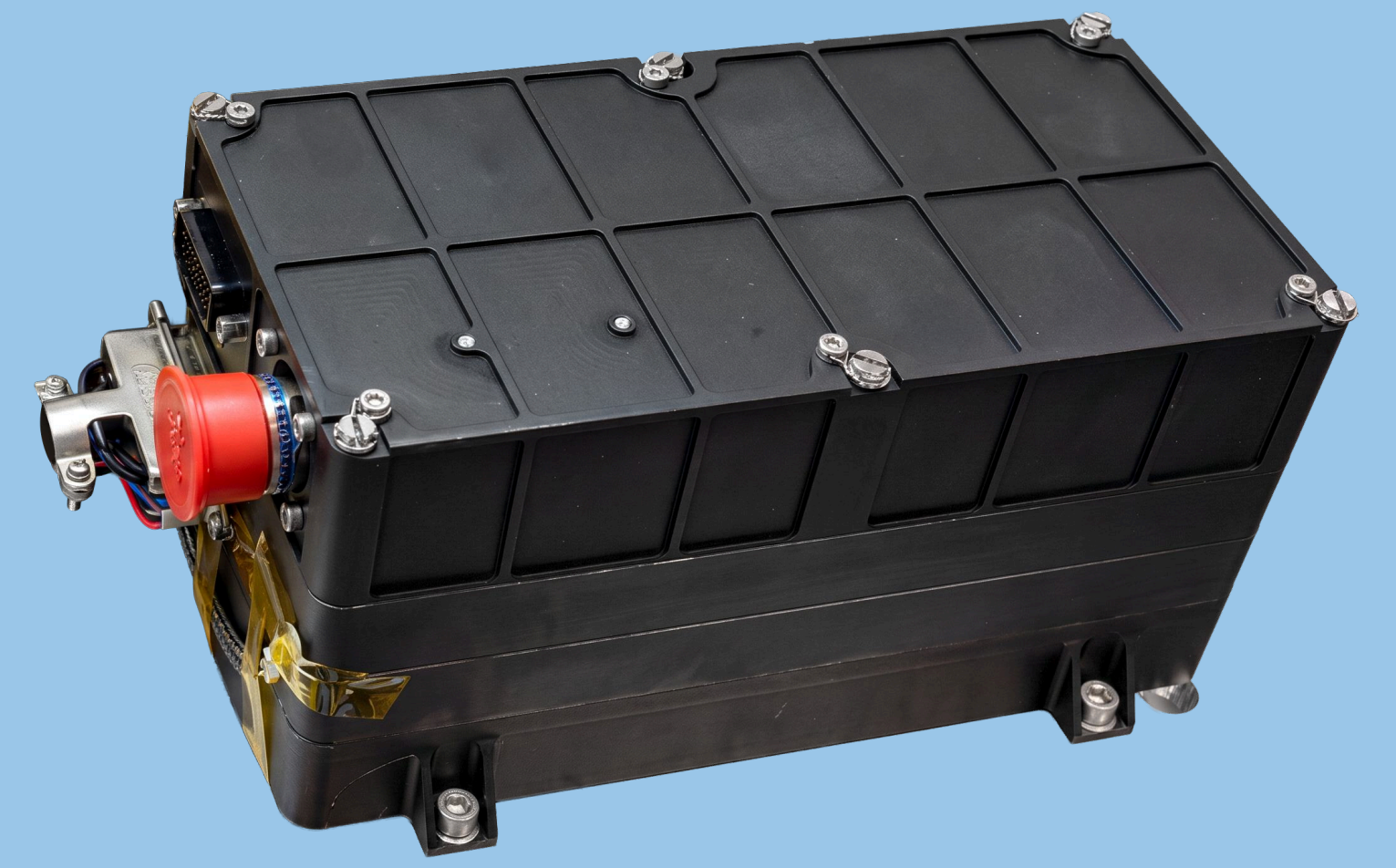


PPU-200 PRODUCT SHEET



The Power Processing Unit (PPU-200) is a power management unit designed for LEO satellite applications and developed in accordance with space industry standards. It converts onboard electrical power to supply Hall-effect thrusters in the 80–230 W range and provides control of the Xenon Feed System (XFS), forming a key element of the electric propulsion system.

The unit has flight heritage, demonstrating reliable performance in orbit. It also incorporates a patented anode power supply architecture, ensuring stable and efficient operation of the thruster while optimizing overall system performance. Designed with a focus on mass manufacturing, the PPU-200 is optimized for scalable production and integration into satellite constellations. Its architecture supports reliable and efficient operation while maintaining low system cost and complexity.

The unit consists of three main subsystems: the thruster power module, the XFS power module, and the main controller. The thruster power module manages power conversion and

stabilization for the anode and cathodes. The XFS power module controls low-voltage power supplies, heaters, and valves, and interfaces with the XFS measurement unit via RS-485.

The main controller enables fully autonomous operation across all operational modes, executing control algorithms, managing power converters, processing measurements, and handling communication with the onboard computer. The software architecture allows updates and modifications in orbit, providing flexibility to adapt to mission needs and optimize performance over time. The system is designed to be fault-tolerant, ensuring high reliability throughout the mission.

As part of the SPS-25 electric propulsion system, the PPU-200 works in conjunction with the ST-25 Hall thruster and xenon feed system. SETS provides flexible and high-reliability PPU solutions adaptable to a wide range of mission requirements, from institutional spacecraft to commercial satellite constellations.

PPU-200 PRODUCT SHEET



FUNCTION BLOCK	ITEM	SPECIFICATION
Inverter	Input Voltage	28V Unregulated (26-36V)
Communication	Control Interface	RS-485, CAN
¹ Discharge Power Supply	Type	Power stabilization
	Power, W	Up to 230
	Output Voltage, V	Up to 400
	Output Voltage, A	Up to 1.5
Cathode Heater Power Supply	Type	Current stabilization
	Output Voltage, V	Up to 20
	Output Voltage, A	Up to 5
Solenoids Power Supply Unit	Type	Current stabilization
	Output Voltage, V	Up to 10
	Output Voltage, A	Up to 2
Function Block	Heater (Xenon)	1 channel 12V (Up to 2 A)
	Solenoid Valve	Up to 6 channels
	Temperature Transducers	Up to 4 channels
	Pressure Transducers	Up to 6 channels
TRL		9
Radiation tolerance		Up to 30 kRad
Dimensions (with connectors), mm		218 x 124 x 102

1 – The system incorporates a patented anode source.