ARGOTEC PRODUCTS
DATA SHEET

FERMI OBC&DH

Miniaturized Rad-Hard On-Board Computer & Data Handling Unit

FERMI enables the execution of complex, highly autonomous missions using microsatellite platforms. It is used not only for spacecraft management, but also for implementing computationally intensive algorithms and data handling, all in the smallest form factor and with best-in-class radiation hardening assurance.



ENABLES DEEP SPACE OPERATION WITH CUBESAT-CLASS PLATFORM

FERMI OBC&DH enables deep-space robotic exploration missions using CubeSat-class platforms, offering the same technology previously limited to flagship probes but in volume and mass envelopes compatible with very small spacecrafts (starting from 6U).

ALLOWS THE INTEGRATION OF COMPUTING-INTENSIVE APPLICATIONS & EDGE COMPUTING

FERMI OBC&DH can be used not only for spacecraft management but also to implement computing-intensive algorithms.

Whether related to advanced payload data processing or autonomous operations, FERMI can accelerate edge-computing applications.

EMBEDS MASS MEMORY FUNCTIONALITIES AND FLEXIBLE, HIGH PERFORMANCE I/O

FERMI OBC&DH also integrates mass memory unit functionalities and is designed to operate as a high-speed interface hub.

Equipped with up to 32 GB of rad-hard NAND flash memory and two SpaceWire links, FERMI can store information and distribute it reliably.

VERSION 2 - 2025



ARGOTEC PRODUCTS | DATA SHEET

FERMI OBC&DH

Miniaturized Rad-Hard On-Board Computer & Data Handling Unit

TECHNICAL SPECIFICATION

PROCESSING UNIT(S)	Dual-Core LEON3FT SPARC V8 Processor Radiation Hardened Microchip RTG4 FPGA
ON BOARD MEMORIES	256 MB CPU SDRAM 256 MB FPGA SDRAM 8 GB NAND 20 MB MRAM
TID RATING & SEL ON-SET THRESHOLD	TID_{th} 50 krad SEL immune up to 62.5 MeV*cm^2/mg
POWER SUPPLY	5 V input power supply with typical power consumption of 5 W
DIGITAL I/F	2× SPI 5× RS422 1× RS422 DEBUG only 3× UART 2× SPWR 1× CAN 6× GPIO 1× JTAG Programming
ANALOG I/F	6× Thermistors
MASS	510 g
VOLUME	102 × 100 × 45 mm 0.4 U
CONNECTORS TYPE	Space Grade MicroD Connectors
QUALIFICATION	TRL 9
CAPABILITIES	Spacecraft management Computing intensive algorithms Payload data processing Autonomous operations Edge computing applications
AVAILABLE IP-CORES	SDRAM Controller NAND Controller SPW Interfaces UART Interfaces Memory Mapped access point for microprocessor interfacing Customizable image processing pipeline

VERSION 2 - 2025

argotec
SPACE FOR AMBITIONS