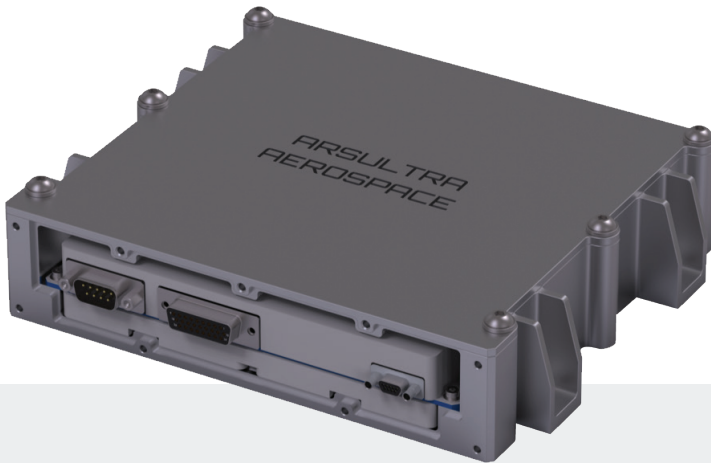


Lammar-HR-L3

High reliability rad-hard **LEON3 OBC**

High Performance RAD-HARD CPU Board for Space Applications

LAMMAR-HR-L3



APPLICATIONS

- > Mission management computer for LEO and MEO
- > Navigation computer for LEO and MEO
- > Payload computer for LEO, MEO and GEO

COMPLIANT WITH

- > NASA Standards
- > ECSS standards, including Q-ST-x and E-ST-x
- > MIL STD 810
- > MIL STD 4161E

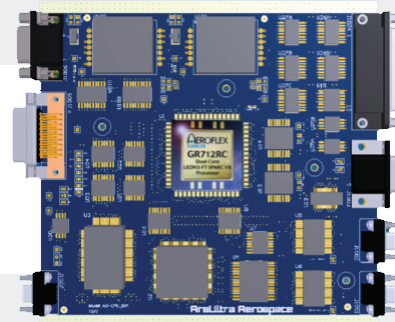


HIGHLIGHTS

Ready to fly. Customizable for any mission configuration.

Engineering Model (EM) for software development & Flight Model (FM) for qualification

SPACECORE's core OBC's are based on 32-bits LEON3-FT SPARC V8 Dual-Core Processor, SRAM, SDRAM, dual FLASH memory for executive allocation and a PROM device devoted to Bootloader allocation.



OVERVIEW

- › Single +5V external input voltage.
- › High Performance Rad-Hard components.
- › Board Size: 150 x 155 x 15 mm.
- › Three micro DB9 and three type D-Subminiature HD Connectors for external interfaces.

MAIN FEATURES

- › One dual core Leon3-FT SPARC V8 compliant 32-bit processor.
- › One 32K x 8-bits PROM Memory.
- › Two 8M x 8-bits FLASH Memories.
- › One 4M x 39-bits (32 bit data plus 7 bit for EDAC) SRAM Memory.
- › One 64M x 48-bits (32 bit data plus 16 bit for Reed Solomon EDAC) SDRAM Memory.
- › Power supervisory circuit to monitor supply voltages and protect the CPU.
- › Watchdog system to automatically reset in case of the software fails.
- › Triple Hardware Rescue under sw fail.

INTERFACES

Four RS-422 Full Duplex Ports	Total dose 300 krad(Si) (max) Single event upset LET 100MeV/mg/cm2 Single event latch-up immune
Two SpaceWire Ports	Compatible with IEEE 1596.3 SCI LVDS standard. Conforms to ANSI/TIA/EIA-644 LVDS standard. › TID: >100 Krad(Si) › SEL: >80 MeV-cm2/mg
Two CAN 2.0 Bus	Radiación tolerance: SEE immune to LET 86 MeV.cm2/mg High Dose Rate (50-300rad(Si)/s) 100krad(Si) Low Dose Rate (0.01rad(Si)/s) 100krad(Si)
User defined according to flight mission	› SPI / I2C. › Eight input and eight output general purpose ports. › One Telemetry / Telecommand (TM/TC) RS-422 interface port. › Pulse per second: two input and two output RS-422 interface ports. › One JTAG interface for programming/debugging.
Enclosure	ESA Standard - ECSS-Q-ST-70C Enclosure: Aluminum 6061 T6. Screw, Bolt & Washers: Titanium. Gear & shaft: Stainless Steel AISI 304, Bronze, PEEK. Surface Finished shielded to mitigate radiation effect on electronic.
Temperature range	-55°C to +125°C