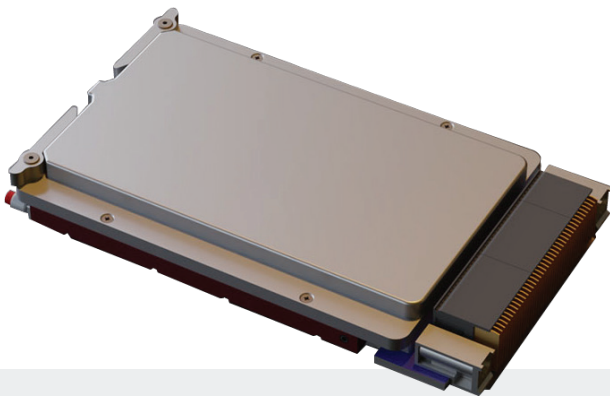


Odyssey-MOD-L3

OpenVPX rad-hard/tolerant modular CPU

Guidance and mission control OBC for MEO and GEO

ODYSSEY-MOD-L3



APPLICATIONS

- > Modular mission management On Board Computer for LEO and MEO
- > Modular navigation computer for LEO and MEO
- > Modular payload computer for LEO, MEO and GEO

COMPLIANT WITH

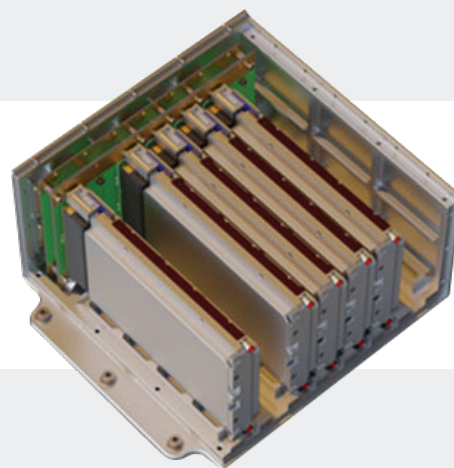
- > NASA Standards
 - > ECSS standards, including Q-ST-x and E-ST-x
 - > MIL STD 810
 - > MIL STD 4161E
- Based on VITA Standard for Critical Embedded Systems



HIGHLIGHTS

Ready to fly. Expandable capabilities with new daughter cards. Engineering Model (EM) available 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. ODYSSEY was specially developed under 3U OpenVPX form-factor focus on system reconfiguration based on specific ANSI VITA daughter-cards.



OVERVIEW

- > Single +5V external input voltage.
High Performance Rad-Hard components.
- > Board Size: 3U VPX (VITA 46) Form Factor | 3U VPX Architecture
- > MULTIGIG RT 2-R Ruggedized Connectors for VPX Applications.
MULTIGIG RT 2-R ruggedized, light weight, high speed board-to-board interconnect is compliant to VITA 46 standard.
This connector system features the modularity and flexibility of the MULTIGIG RT 2 connector, with a new quad-redundant contact structure designed for high vibration levels
- > MULTI-BEAM XLE Power Connectors (Compliant to VITA 62)

MAIN FEATURES

- > One dual core Leon3-FT SPARC V8 compliant 32-bit processor.
- > OpenVPX carrier boards for I/O, Mass Memory, Power Supply.
- > Power supervisory circuit to monitor supply voltages and protect the CPU.
- > Watchdog system to automatically reset in case of the software fails.

INTERFACES

I/O RS-422 Full Duplex Ports	Total dose 300 krad(Si) (max) Single event upset LET 100MeV/mg/cm2 Single event latch-up immune
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
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