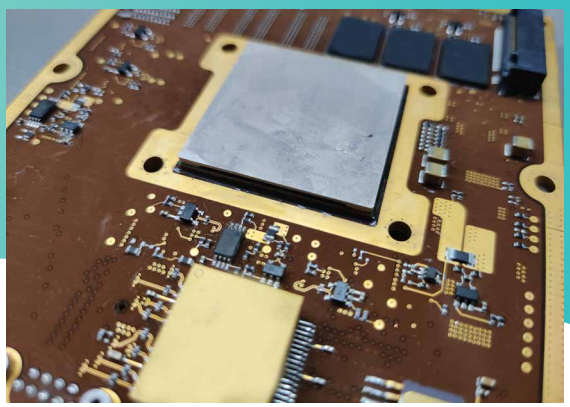
PRODUCT SHEET

NS MASS MEMORY



OVERVIEW

- ZynQ 7045 SoC with Dual Core ARM Cortex-A9 and Kintex-7 FPGA
- 1 TBytes of data storage with 5 Gbps data throughput
- Integrates radiation effects design mitigation technics
- Versatile connector for custom interface implementation

TECHNICAL CHARACTERISTICS

HARDWARE

- 1TBytes (or more) On-board mass memory unit offering Rad-Tolerant Technology memory cells (SLC technology) for data storage.
- 5 Gbps data throughput over the mass memory
- Single housing
- Cold Redundancy as an option
- Compact and modular design

INTERFACE

- Versatile mezzanine connector for custom interface implementation (ie Spacewire, Spacefiber, LVDS, Ethernet, …)
- RS422 interface for TM/TC link with platform computer (control and housekeeping).
- PPS input for on-board time synchronization and time stamping

RADIATION EFFECTS MITIGATION

- Design based on a hybrid approach (COTS components + Military Components + Rad Tolerant components + Radiation Hardened supervisor circuitry).
- On-board monitoring, detection, and mitigation of SEL (Single Event Latch-up).
- Continuous monitoring of processing parts by the Rad-Hard supervisor.
- Implementation of ECC for all memory peripherals (Flashes, DDR3, SDRAM and Mass Memory).
- SoC implements CRAM (Configuration memory) scrubbing mechanisms.
- Processing firmware upgradable in-flight over TM/TC link.

INTERNAL PROCESSING

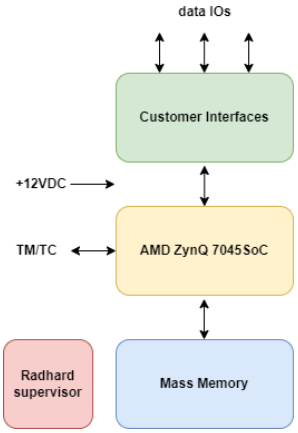
- Unused resources on the ZynQ SoC allow for custom internal processing implementations, such as compression, encryption, and packetization.

SIZE AND MASS

- Dimensions: 150x150x80mm (Cold redundant implementation)
- Mass: < 2kg
- Housing material: Al6061-T6
- Surface finish: Surtec 650

POWER SUPPLY

- 12VDC single power supply
- From 15W to 35W, depending on internal processing



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