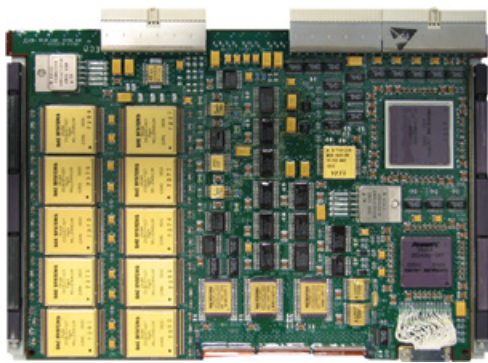# RAD750® 6U CompactPCI
single–board computer

The **6U CompactPCI singleboard computer**, available in seven configurations, employs the PowerPC RAD750® microprocessor, the radiationhardened version of the IBM PowerPC 750 microprocessor. The companion Power PCI Bridge ASIC provides access to the memory and the PCI version 2.2 backplane bus.

Key features

- Example startup ROM and VxWorks boardsupport package provided for all hardware configurations

- Green Hills Software's INTEGRITY real-time operating system can serve as an alternate board support package

- Hardware reference manuals and software user guide provided

- Software developed for the RAD6000® processor is easily ported to RAD750® computers

- All compilers currently available for the commercial PowerPC 750 microprocessor are fully compatible with the RAD750®

- Operating systems for PowerPC 750-based computers are easily ported to RAD750® computers- VXWorks and INTEGRITY operating systems available
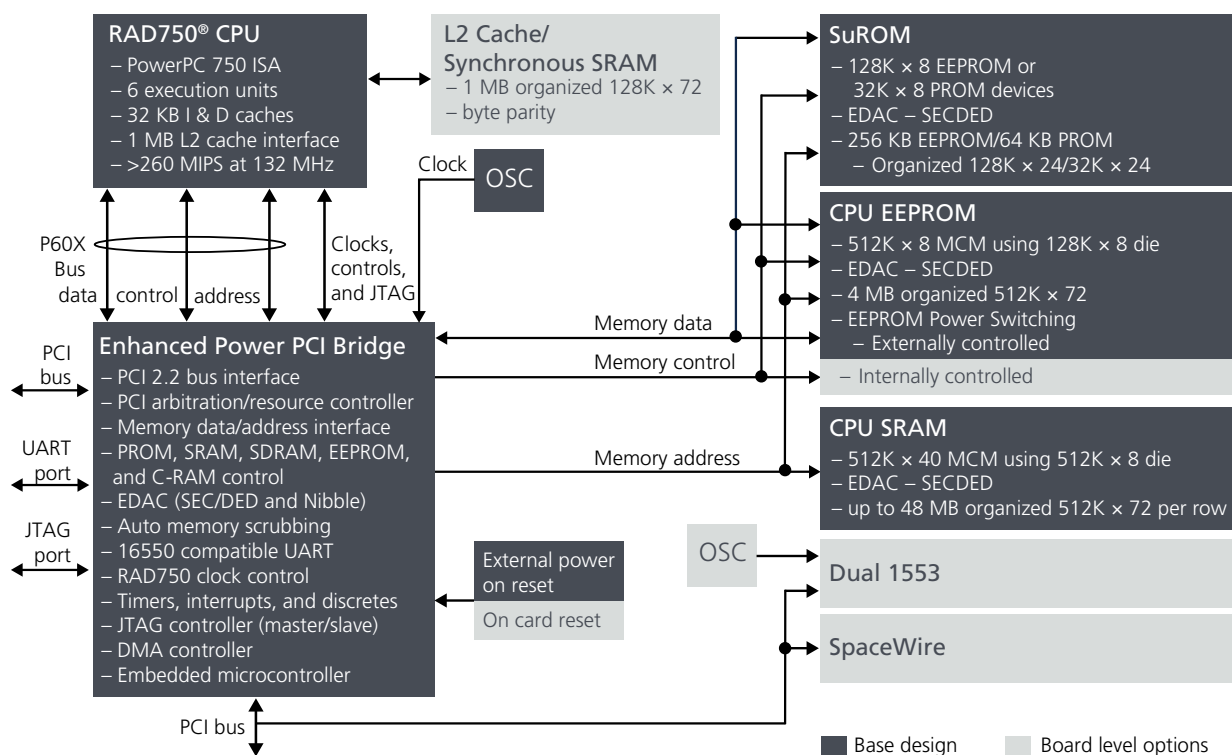
- Virtutech offers a RAD750® simulator

Supports variable memory configurations:

- SRAM:
  – 16-MB standard
  – Options from 4 MB to 48 MB and ECC
  – Device-sparing

- SUROM:
  – 64 kB and ECC
  – EEPROM for engineering units (256 kB to 1 MB)
  – PROM for flight units (64 kB to 256 kB)

- EEPROM:
  – 4 MB and ECC

Specifications

Form factor	CompactPCI 6U (233 mm x 160 mm) CompactPCI 6U-220 (233mm x 220mm) Weight: 1000 to 1220 grams, varies with memory
Memory	SRAM: 4 to 48 MB EEPROM: 4 MB
Radiation-hardness	Total dose: >100 Krad (Si) SEU: 1.9 E-4 errors/card-day (90 percent W. C. GEO) varies with orbit Latchup-immune
Performance	>260 Dhrystone 2.1 MIPS at 132 MHz 4.3 SPECint95 4.6 SPECfp95 at 132 MHz
Power supply	– 5 volts ± 10 percent and 3.3 volts ± 5 percent (2.5 volts generated via onboard regulator)
Power dissipation	11 to 14 watts
Rail temperature range	-28 degrees celsius to +70 degrees celsius

RAD750 6U flexible architecture

RAD750® family of products

RAD750® radiation-hardened PowerPC microprocessor
RAD750® 6U CompactPCI single-board computer
RAD750® 6U CompactPCI extended single-board computer

RAD750® 3U CompactPCI single-board computer
RAD750® space computers Virtutech Simics virtual platform
RAD750® custom single-board computers

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