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® 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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