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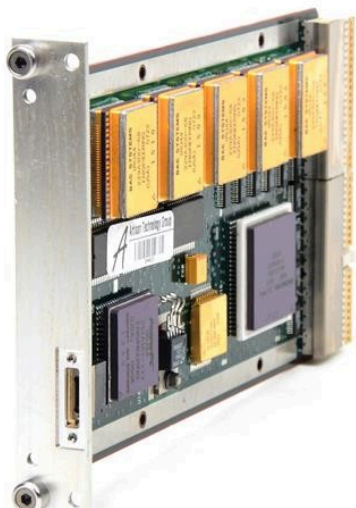
Data Sheet

August 15, 2026

BAE SYSTEMS

BAE Systems RAD750 3U cPCI Single Board Computer

BAE Systems RAD750 3U CompactPCI Radiation Hardened SBC The RAD750 3U CompactPCI single-board computer uses the radiation-hardened PowerPC 750 (RAD750) with a PCI 2.2 bridge. OEM 3U cPCI datasheet rows list 100 mm x 160 mm 3U, about 550 g, 1 GB EDAC SDRAM on the 200 MHz class board (128 MB SDRAM plus 256 KB SUROM on 132 MHz prototype 251A219-1), 256 KB EEPROM or 64 KB PROM SUROM, 3.3 V plus or minus 5 percent with on-board 2.5 V and 1.8 V regulators, 11 W at 132 MHz and 12.2 W at 198 MHz, 290 DMIPS / 4.3 SPECint95 / 4.6 SPECfp95 at 132 MHz and 435 DMIPS / 6.4 SPECint95 / 6.9 SPECfp95 at 198 MHz. CPU 110 to 200 MHz, 32 KB I + 32 KBDL1, 10.4 million transistors, 250/150 nm, 130 mm² die, 5 W CPU / 10 W board class, minus 55 to 125 C CPU and minus 55 to 70 C board, 200 krad to 1 Mrad CPU and 100 krad board, latch-up immune. VxWorks and INTEGRITY BSPs. TRL-9 since 2005 on 3U. The RAD750 3U CompactPCI single-board computer uses the radiation-hardened PowerPC 750 (RAD750) with a PCI 2.2 bridge. OEM 3U cPCI datasheet rows list 100 mm x 160 mm 3U, about 550 g, 1 GB EDAC SDRAM on the 200 MHz class board (128 MB SDRAM plus 256 KB SUROM on 132 MHz prototype 251A219-1), 256 KB EEPROM or 64 KB PROM SUROM, 3.3 V plus or minus 5 percent with on-board 2.5 V and 1.8 V regulators, 11 W at 132 MHz and 12.2 W at 198 MHz, 290 DMIPS / 4.3 SPECint95 / 4.6 SPECfp95 at 132 MHz and 435 DMIPS / 6.4 SPECint95



MODEL

**BAE Systems
RAD750**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

RAD750

LISTING

<https://aumictechlabs.com/products/rad750-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The BAE Systems RAD750 3U cPCI Single Board Computer is a radiation-hardened computing platform engineered for space and hostile environments. Built on the RAD750® processor - a radiation-hardened PowerPC 750 ISA superscalar RISC architecture - this SBC delivers computing with proven reliability in spaceborne applications including satellite operations and spacecraft control systems. Technical Specifications Processor: RAD750® radiation-hardened PowerPC 750 ISA, superscalar RISC architecture. Clock speeds range from 110 MHz to 200 MHz depending on technology node. Performance reaches >400 MIPS at 200 MHz, with 435 DMIPS and 6.9 SPECfp95 achievable at 198 MHz. On-die cache includes 32 KB instruction cache, 32 KB data cache, and 1 MB L2 cache interface with extended options available. Approximately 10.4 million transistors implemented in 0.15 µm to 0.25 µm radiation-hardened bulk CMOS. Radiation Tolerance: Total ionizing dose (TID) hardness reaches 1 Mrad (Si) for 0.15 µm technology and 200 Krad (Si) for 0.25 µm variants. Single event upset (SEU) performance is <1.6 E-10 errors/bit-day at 90 percent worst-case GEO. Latchup-immune design eliminates single event latch-up (SEL) failures. Memory Architecture: 1 GB SDRAM with EDAC protection, 36 MB radiation-hardened SRAM, plus 8 MB SRAM dedicated to SpaceWire ASIC. SUROM capacity is 256 KB with selectable 256 KB EEPROM or 64 KB PROM. Additional 4 MB non-volatile memory. Legacy DRAM option: 128 MB with SECDED and Nibble ECC. Power: CPU dissipation approximately 5 W at 133 MHz. Full SBC power consumption ranges from 10 W to 12.2 W at 198 MHz. Supply voltage 3.3 V ±5%, with onboard regulators generating 2.5 V and 1.8 V rails. Interfaces: PCI version 2.2 backplane bus via Enhanced Power PCI Bridge ASIC. Onboard embedded microcontroller handles housekeeping functions and I/O/memory assistance. Key Features Single-board form factor in 3U cPCI packaging Proven flight-heritage radiation-hardened processor core Dual-voltage SDRAM and SRAM support with error correction SpaceWire ASIC integration for spacecraft interfaces Low power envelope suitable for power-constrained missions Typical Applications LEO, GEO, and deep-space satellite platforms Spacecraft attitude determination and control systems On-board data processing and payload management High-reliability command and telemetry processing Compatibility & Integration PCI version 2.2 compliant backplane integration. Embedded microcontroller coordinates system functions. Compatible with standard 3U cPCI card cages and power distributions.

RAD750 Characteristics / Specifications

PARAMETER	VALUE
Model	RAD750
Instrument Type	Radiation-hardened 3U CompactPCI single-board computer
Form Factor	CompactPCI 3U 100 mm x 160 mm
Mass	approximately 550 g
Cpu	RAD750 PowerPC 750 radiation-hardened
Cpu Clock	110 MHz to 200 MHz
L1 Cache	32 KB instruction plus 32 KB data
Dmips 1	290 DMIPS at 132 MHz
Specint 1	4.3 SPECint95 at 132 MHz
Specfp 1	6.9 SPECfp95 at 198 MHz
Board Power 1	12.2 W at 198 MHz
Supply	3.3 V plus or minus 5 percent; 2.5 V and 1.8 V on-board
Memory 200 Mhz Class	1 GB EDAC SDRAM
Prototype Memory	128 MB SDRAM and 256 KB SUROM on 251A219-1 132 MHz
Pci	PCI 2.2 backplane
Total Dose Board	50 krad (Si) on the 3U cPCI datasheet row; 100 krad class on standard board
Temperature Board	minus 55 C to 70 C
Latchup	immune Os: VxWorks and Green Hills INTEGRITY
Trl	TRL-9 since 2005 on 3U
Manufacturer	BAE Systems
Literature	BAE RAD750 3U CompactPCI datasheet
Transistors	10.4 million on the CPU

RAD750 Specifications

PARAMETER	VALUE
BAE Systems RAD750 3U CompactPCI Radiation Hardened SBC	Overview
Key Features	RAD750 PowerPC 110 to 200 MHz
Technical Specifications	Model: RAD750

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Model	RAD750
Instrument Type	Radiation-hardened 3U CompactPCI single-board computer
Form Factor	CompactPCI 3U 100 mm x 160 mm
Mass	approximately 550 g
Cpu	RAD750 PowerPC 750 radiation-hardened
Cpu Clock	110 MHz to 200 MHz
L1 Cache	32 KB instruction plus 32 KB data
Dmips 132	290 DMIPS at 132 MHz
Dmips 198	435 DMIPS at 198 MHz
Specint 132	4.3 SPECint95 at 132 MHz
Specint 198	6.4 SPECint95 at 198 MHz
Specfp 198	6.9 SPECfp95 at 198 MHz
Board Power 132	11 W at 132 MHz
Board Power 198	12.2 W at 198 MHz
Supply	3.3 V plus or minus 5 percent; 2.5 V and 1.8 V on-board
Memory 200 Mhz Class	1 GB EDAC SDRAM
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PARAMETER	VALUE
Transistors	10.4 million on the CPU

Notes
From BAE RAD750 3U CompactPCI datasheet and RAD750 CPU literature (100x160 mm, ~550 g, 132/198 MHz DMIPS and watts, 1 GB EDAC class, 3.3 V, VxWorks/INTEGRITY, TRL-9 2005). Confirm DRAM size and clock on the installed 251A dash number.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 15, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.