BAE SYSTEMS

RAD750® 3U CompactPCI

Single-board computer

The 3U CompactPCI® single-board computer (SBC) employs the RAD750® 200M microprocessor, the latest radiation-hardened version of the IBM PowerPC® 750 microprocessor. This is teamed with an enhanced-power PCI bridge ASIC and 1 GB of EDAC protected SDRAM to provide a high performance PCI version 2.2 backplane bus-compatible SBC.

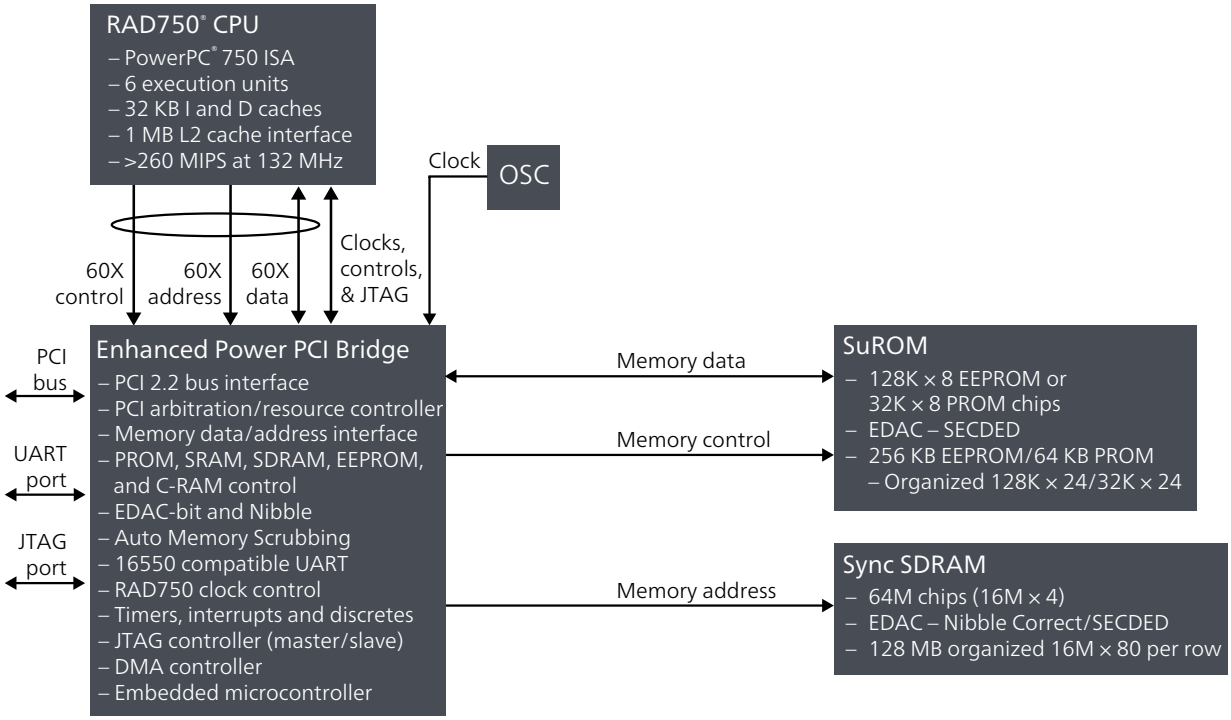
Key features

- Example startup ROM and Wind River VxWorks board support 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
- All compilers currently available for the commercial RAD750® PowerPC 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 are available
- WindRiver offers a RAD750® SIMICS simulator
- C compiler, assembler, linker, and simulator are available for embedded microcontroller in the Power PCI Bridge ASIC
- SBC qualification complete and TRL 9

Specifications

Form factor	CompactPCI 3U (100 mm x 160 mm) Weight: approximately 550 grams
Memory	1 GB SDRAM, 256 KB EEPROM or 64 KB PROM for SUROM, EDAC on all memories
Radiation-hardness	Total dose: 50 Krad (Si) SEU 3.62E-4 errors/card-day (90% worst case GEO) varies with orbit Latch-up immune
Performance	435 DMIPS, 6.4 SPECint95, or 6.9 SPECfp95 @ 198 MHz 290 DMIPS, 4.3 SPECint95, or 4.6 SPECfp95 @ 132 MHz
Power supply	3.3V ±5% 2.5V and 1.8V generated via onboard regulator
Power dissipation	11 W @ 132 MHz 12.2 W @ 198 MHz

RAD750® 3U flexible architecture



RAD750® family of products:

RAD750® radiation-hardened PowerPC microprocessor
RAD750® 3U CompactPCI single-board computers
RAD750® 6U CompactPCI single-board computers
RAD750® space computers SIMICS virtual platform
RAD750® 6U custom single-board computers
EMC 3U CompactPCI standalone I/O controllers

For more information contact:
Sean O'Brien
9300 Wellington Road
Manassas, Virginia 20110-4122
T: 571 364 7777
E: sean.obrien2@baesystems.us
W: baesystems.com/spaceelectronics

Cleared for open publication on 02/21