

# FlashServer™ COTS Rugged 1U Server RS-1000

## Rugged Intel Quad Core Xeon 1U Server Perfect for Demanding Environments at COTS Prices

### Rugged FlashServer

FlashServer is a rugged 1U Dual-Processor server with robust design with quad core 64-bit processing power. The rugged 1U server delivers high performance in demanding environments. This new system combines Intel Quad Core Xeon processors and the Intel 5000P

(Blackford) chipset, with advanced thermal and mechanical design techniques. The rugged FlashServer provides high reliability in shock & vibration environments of up to 20G. The door features a dust and raindrop seal. FlashServer can be configured with one or two quad core Intel Xeon 5400 Series Processors. Featuring two flexible expansion slots, extensive high speed I/O, and multiple storage options FlashServer allows users versatile configurability and system expansion. FlashServer is easily expanded through the addition of commercially available, off the shelf networking cards, I/O, peripherals and other value-added options to meet current and future system requirements.

### Expandability and Outstanding Performance In a Small Space

FlashServer's 20 inch deep, 1U high chassis packs up to eight cores of processor power into a compact footprint. Three 2.5" disk drive bays support mirrored boot devices and nominal storage. Two expansion slots enable I/O configurability. FlashServer brings state-of-the-art server technology to demanding environments with its small size, rugged construction, and multi-core processors. The Intel 5000P chipset provides the highest possible performance and scalability. The 5000P is the central hub for all data passing through the core system elements such as the two Multiple-Core Xeon processors, and supports a 1333 MHz system bus and up to 32 GB DDR2-667 SDRAM.

### Rugged FlashDisk External Data Storage

Significant external storage can be added from 1 TB to 80 TB per RAID array. The companion product line of Rugged FlashDisk RAID Disk Arrays offer 1U, 2U and 3U families of high capacity, high performance rugged storage meant to accompany FlashServer into demanding environments. The 1U product offers 2.5" disk drives for compact size and exceptional performance and low power. The 2U and 3U systems offer 3.5" SAS and SATA disk drives with 12 and 16 drives per shelf, expandable to 5 shelves total with a maximum capacity per system of 80 TB. Multiple systems can be attached to a single server providing up to 160 TB of storage per FlashServer. Best of all, acquiring rugged servers and storage designed to work together from one vendor provides a single point of service and great peace of mind.



**Rugged 1U FlashServer offers up to 8 Xeon processors for high performance and external FlashDisk 1U, 2U or 3U Rugged data storage expandable to 160 TB - featuring RAID 6 dual**

### Rugged 1U FlashServer

*Designed for High Reliability  
in harsh operating environments*

#### Rugged Features

- Sturdy milled aluminum door with hinges
- Easy to operate thumbscrew door locks
- Dust/moisture seals - door top and bottom
- Heavy-duty dust filters - easy to replace
- Rugged strain reliefs for host cables

#### Server Capabilities

- Specially Coated Light-Weight Aluminum
- Excellent Corrosion Resistance & Durability
- Modular I/O design
- Easy upgrade and service
- Optional Rack-Mount Slides
- Three 2.5" removable SAS or SATA disks
- One CD-RW/DVD-RW
- Two optional USB 2.0 Ports
- Suspend to RAM
- Wake-on-LAN system management
- Zero-Channel RAID Support
- Linux, Windows and Solaris Support
- IPMI v2.0 support

[www.winsys.com](http://www.winsys.com)



### Rugged 1U FlashServer

*With One or Two Quad-Core 5400 Series Intel Xeon processors*

#### Specifications

- Up to 32 GB ECC registered DDRII-667 FB-DIMM SDRAM memory
- Intel 5000P (Blackford) Chipset
- ATI ES1000 16MByte PCI Color Graphics Controller
- Rear panel access and I/O:
- (2) Gigabit Ethernet Ports (RJ45)
- (1) RS-232 Serial Port (DB9)
- (1) VGA port
- PS/2 Keyboard and Mouse Ports
- (2) USB 2.0 Ports
- Power connector and switch
- (1) Full and (1) Half Height Expansion:
- (2) x8 PCI-E or (2) PCI-X or
- (1) x8 PCI-E and (1) PCI-X
- (3) 2.5" removable SAS or SATA-2 disks
- CD-RW/DVD-RW Drive (optional)
- Status LEDs, reset switch

#### Environmental

- Airflow direction: Front to Rear
- Operating Shock:  
Up to 20 G @ 20 ms (MIL-901D)
- Operating Vibration:  
0.9G (rms) from 10 – 2000Hz
- Operating Temperature:  
0° - 55°C sea level
- Humidity:  
Up to 90% non-condensing
- Power Supply Options Single or redundant  
110/220 VAC, 650 Watt (50/60Hz, 400Hz)  
18-36 VDC, 400 Watt, 32 Amp  
36-72 VDC, 400 Watt, 18 Amp
- Safety: UL 1950, CSA 950
- RFI/EMI: FCC class B
- Dimensions 1U (HWD):  
1.75" x 17" x 20"  
(44.45 mm) x (431.8 mm) x (508 mm)