

# Tandem S1000RM Server

## Key features

- SMP power for future growth
- High availability for Windows NT Server
- Easy system expansion and connectivity

## Specifications

### **A convenient rack-mounted system for the Windows NT Server-based platform**

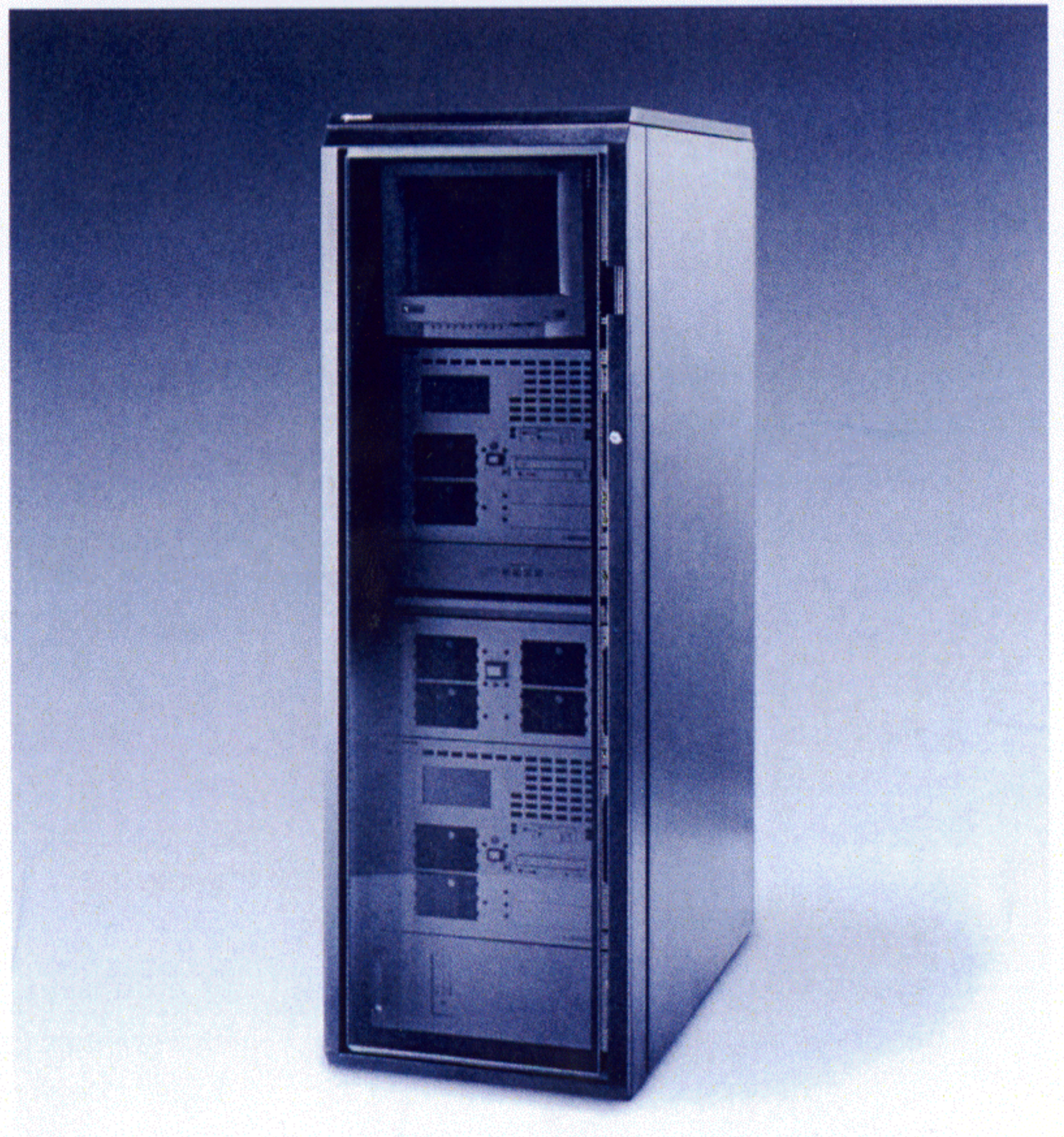
The S1000RM server is a rack-mounted, fault-resilient system designed to meet the exacting standards Tandem® sets as an industry leader in reliability, scalability, and manageability, and to satisfy the demanding requirements of business-critical applications running under the Microsoft® Windows NT® Server operating system.

Configurable in a cabinet with slide-in rails and optional lockable doors, the S1000RM server gives you the easy access for maintenance and upgradability that businesses look for in a rack-mounted system. An LCD touch-screen display on the server chassis gives you easy-to-read information for monitoring system status. Server-class disk drives provide ultrahigh mean time between failure (MTBF), and optional Microsoft clustering software,

code-named "Wolfpack," provides high availability and protection against application and server failure.

### **SMP power for future growth**

With its symmetrical multiprocessing (SMP) capability, the S1000RM server delivers the high performance and scalability businesses need to run database, transaction processing, messaging, and other business-critical applications.





The symmetric multiprocessing architecture distributes the server's processing power among as many as four Intel Pentium Pro processors for the scalability you need for today's—and tomorrow's—computing requirements. Processors can be easily upgraded using the Zero Insertion Force (ZIF) processor sockets on the server's motherboard.

### **High availability for Windows NT Server**

Tandem, the industry leader in highly available systems, brings new levels of availability to the Windows NT Server environment with the S1000RM server.

Tandem also provides optional Microsoft Wolfpack clustering software that allows you to extend high availability for critical applications in a multiserver environment by automatically detecting and recovering from faults in the server's applications, operating system, or hardware.

Hot-swappable hard disks let you replace drives without shutting down the system. The server automatically reconfigures itself to reflect changes. Working with the server's hot-swappable drives, Tandem's optional RAID controller provides online expansion of disk files, allowing you to add drives to the RAID group without backing up, initializing, and restoring data and without losing access to any data. You also can reconfigure from RAID levels 0, 1, 3, and 5 online to simplify tuning an application for best performance.

The S1000RM's LCD touch screen continuously monitors the performance, temperature, and voltage levels of devices installed in the server, including CPU, power, RAM, fan, and disk. If a system problem occurs, an alarm sounds and an icon on the display indicates the problem's location. The problem can be further isolated by pressing the blinking icon to access a more detailed display.

### **Easy system expansion and connectivity**

The S1000RM has room for 10 front-accessible data storage devices and hard drives. Mass storage capacities can be configured to meet each user's needs using 2- and 4-gigabyte hot-swappable Fast and Wide SCSI hard drives.

For system reliability, the manufacturing process adds to the S1000RM's ultra-high MTBF an extended burn-in time (more than 36 hours on some components). This further enhances the MTBF by eliminating failure-prone components. Out-of-box quality measurements put Tandem servers in the top tier of vendors.



## Specifications

### Processor

Microprocessor	Intel Pentium Pro
Clock rate	200 MHz
Cache	512-KB Level-2 cache per processor 16-KB Level-1 cache in each CPU
Processors supported	1, 2, 3, or 4; upgrades use ZIF socket on motherboard

### Main memory

Memory module	16-SIMM slot memory card with ECC functionality on board
Memory	Expandable to 1 GB on SIMM card Future DIMM memory card will allow expansion to 2-GB or 4-GB memory using DIMMs
Memory bus	4-way interleaved high bandwidth
Upgrades supported	64-, 128-, 256-, and 512-MB memory kits available

### Video

Video controller	PCI local bus video card with 2-MB video memory
Maximum resolution	1280 x 1024, with 256 colors; 800 x 600, with 16.7 million colors

### Data storage

Drive bays, normal	10 externally accessible <ul style="list-style-type: none"><li>▪ Three 5.25-in half-height bays</li><li>▪ Six hot-swap capable Fast SCSI 3.5-in third-height drive bays, with two drive cages</li><li>▪ One 3.5-in third-height bay containing floppy drive</li></ul>
Diskette drive	1.44 MB, 3.5 in
RAID option	PCI bus mastering 3-channel RAID controller with 4, 8, or 16 MB of cache memory <ul style="list-style-type: none"><li>▪ RAID management with auto/dynamic configuration</li><li>▪ Failure notification</li><li>▪ Hot key configuration through BIOS</li></ul>

### Data input

Keyboard	101-key, 12-function PS/2 (international versions available)
Mouse	2-button PS/2

### I/O and connectivity

Bus architecture	PCI/EISA local bus
PCI bus slots	2
EISA bus slots	1
Shared PCI/EISA	5
Ports	2 16550AF serial 1 EPP/ECP parallel 1 PS/2 keyboard 1 PS/2 mouse 1 SVGA video

### Power

Power supplies	Two 575 W: 100–120 V AC/200–240 V AC, redundant power supplies with dual power cords for fault tolerance
Fans	Multiple cooling fans
Regulatory compliance	FCC Class A; 47 CFR Part 15; UL standard 1950; CSA to CSA C22.2 No. 950-89; TUV/GS to EN60950; VDE 0871 Class A; VCCI Class I

### Software

Operating system	Supports Windows NT Server versions 3.51 and 4.0
Utilities	FlashBIOS update utility

### Physical

Height	35 cm (13.8 in)
Width	48.2 cm (19 in)
Depth	71.6 cm (28.2 in)
Weight	36.8 kg (81.2 lb) without peripherals

### System management

Controls	LCD touch screen provides voltage, fan, temperature, and system information
Software	Optional LANDesk Server Management Solution Optional out-of-band system management
Security	System administrator/supervisor/user passwords; interface controls; EISA configuration lock



## Specifications *(continued)*

### Options

Secondary processor	Pentium Pro 200-MHz CPU
Main memory	64-, 128-, 256-, and 512-MB memory kits available
Hard drives	2- and 4-GB Wide SCSI-2, 3.5-in hard disks for hot-swap bays
CD-ROM drive	12X-speed SCSI
RAID controller	3-channel PCI RAID controller with 4-, 8-, or 16-MB cache
Internal tape drive	4/8-GB DAT
Ethernet card	32-bit PCI with 10/100 Mb/s data rate
Token ring card	32-bit PCI with 16/4 Mb/s data rate
Monitor	14-, 15-, and 17-in SVGA high-resolution color
Software	Windows NT Server versions 3.51 and 4.0
Server management	LANDesk Server Management Solution (bundle containing LANDesk Server Manager software/Hobbes card, and 28.8 PCMCIA modem)

### Rack-mount cabinet option

Physical	36U (1.7 meter) (63 in) high, 116 kg (255 lb)
Hard disk drawer	Up to 12 drives supported per drawer (3.5-in, 2-GB, 4-GB hot-pluggable SCSI drives) Optional intelligent PCI caching RAID controller Two 68-pin external Fast and Wide SCSI connector ports Supports RAID levels 0, 1, 3, and 5 Hot-swappable redundant power supply Keylock for all drives Operates from 50° to 90° F (10° to 34° C) Dimensions and weight: <ul style="list-style-type: none"> <li>▪ 5U</li> <li>▪ 22 cm (8.7 in) high, 48 cm (19 in) wide, 53 cm (21 in) deep</li> <li>▪ 22.7 kg (50 lb) maximum</li> </ul>
Disk expansion cabinet	Rack-mountable disk expansion cabinet supporting up to seven additional 2-GB or 4-GB hard drives

### For more information

For additional information, please contact your Tandem representative or access Tandem's home page on the World Wide Web at <http://www.tandem.com/>. Send Internet e-mail messages to [info@tandem.com](mailto:info@tandem.com).

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### UPS drawer

6-ft input line

Six output receptacles (NEMA 5-15R)  
230 V AC 50-60 Hz @ 2200 VA, 950 W  
Operates from 32 to 115 F (0 to 45 C)

Dimensions and weight:

- 4U
- 22 cm (8.7 in) high, 48 cm (19 in) wide, 53 cm (21 in) deep
- 25.85 kg (57 lb) maximum

### DAT data tape drawer

One standard carousel; second carousel optional  
4 GB per tape (up to 8 GB with compression)  
12 tapes per carousel provided up to 192 GB online storage

Dimensions and weight:

- 3U
- 12.95 cm (5.1 in) high, 48.2 cm (19 in) wide, 71.6 cm (28.2 in) deep
- 19.1 kg (42 lb) maximum

### Warranty

Tandem S1000RM servers include a 3-year, limited, on-site warranty.

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