

## PRIMEPOWER 250 Pedestal 2-way Floorstand Server – Serving your applications with improved uptime

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PRIMEPOWER servers are proven Unix computers based on the latest high performance processor architecture (SPARC64™V) and running the worldwide number 1 Solaris™ Operating Environment. PRIMEPOWER gives you the confidence that your IT business processes are always up and running. PRIMEPOWER servers make sure that dynamic IT production loads will always finish in time, by using all of the system resources with no resources wasted and with unique flexibility to adopt changing priorities.

PRIMEPOWER Pedestal servers ensure continuous operation based on proven datacenter technology. As your business grows, so do our PRIMEPOWER servers, and by providing plenty of headroom for expansion they let you benefit longer from your investments. The PRIMEPOWER ServerView Suite management functions system care for less troubleshooting efforts and access from anywhere at any time, to provide a stable and reliable system performance.

### PRIMEPOWER 250 Pedestal

The PRIMEPOWER 250 Pedestal is a stand-alone Solaris server which provides flexible expansion options to keep pace with your growing demands for expansion. In addition, its design pedigree from the datacenter proven PRIMEPOWER eXtended architecture makes sure that your applications are productive with improved uptime. As independently usable system for workgroups or small enterprises the PW 250 can handle almost every business application and gets the job done in time, making use of up to two SPARC64™ V processors, up to 16 GB main memory and plenty of expansion options in a convenient housing. The simple handling of hot-plug components makes upgrades or replacement easy without requiring that the server be powered down. Intelligent system control features provided by an independent service processor (XSCF) improve continuous operation through early recognition and preventive diagnostics. Remote Management Control using secure LAN connections cut operational costs with remote central services, whenever specialists are not at hand.



Key Features	Benefits
<ul style="list-style-type: none"> <li>Redundant components (power supply/fan) and disk-mirroring features allow vital components (power supply/fan/disk drive/built-in tape drive) to have hot-swap capability</li> </ul>	<ul style="list-style-type: none"> <li>Improved uptime for business applications</li> </ul>
<ul style="list-style-type: none"> <li>Up to 13.2 TB on storage capacities in external disk boxes, up to 16 GB main memory and 6 PCI slots</li> </ul>	<ul style="list-style-type: none"> <li>Expansion capabilities and long lifecycle for usage</li> </ul>
<ul style="list-style-type: none"> <li>High level of manageability by single and comprehensive system management tool PRIMEPOWER ServerView</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of the complexity and increased productivity</li> </ul>

## PRIMEPOWER 250 Technical characteristics

- XA system architecture with up to 2 SPARC64™V processors with 1,65GHz or 1.98 GHz and 3MB level-2 cache on-chip
- Up to 16 GB DDR-SDRAM main memory conditioned to system versions, 2-way
- Up to 6 PCI controllers
- High-speed interconnect (crossbar) with 2 processors.
- Redundant hard disks (optional), fans (standard), power supply units (optional) and/or power phases (optional)
- Hot-swap components: hard disks, power supply units fans and DAT drive.
- Monitoring of operating status of system units in real time on system management console.
- New eXtended System Control Facility, XSCF, with:
  - Controlling and diagnostic when power is on.
  - Diagnostics when Power is off.
  - Power on/off per command.
  - LAN console connection through LAN direct to XSCF LAN port.
  - Serial port (tty-a) for use with console attached via RCA4.

## SPARC64™ V – Processor Functions

- Super-scalar processing
- VIS™ – Visual Instruction Set
- 64-bit virtual address space
- 7 Execution Units (2 Load Store, 2 Fixed Point, 2 Floating Point, 1 Branch)
- Up to 4 instructions can be ended with each CPU-Clock cycle
- SMP – cache coherency support (MOESI-Protokoll)
- 2x128 KB on-chip Level1 low latency cache
- 4 way 16K entries branch history table
- optimized Branch Prediction method
- Concurrent out-of-order execution
- ECC (Error Correction Code) for
  - Level-1 data cache
  - Level-2 cache
  - High speed interconnect
  - Memory
- Parity for
  - CPU register
  - CPU core (data pathes and all ALU's)
  - TLB (Translation Look-aside Buffer)
  - Level-1 instruction cache
- Duplication of tags for level-1 instruction- and data- cache
- Automatic, in hardware implemented instruction recovery in case sporadic one-bit error of the CPU-core (AIR = Automatic Instruction Retry)
- Automatic degradation of parts of individual CPU subcomponents (ways) of level-1, level-2cache and TLB in the event of sporadic single-bit errors during operation
- Instruction TLB:
  - 1024 entry, 2 way, 8KB pages
  - + 1024 entry, 2 way, 4MB pages
  - + 32 entry, full associative 64KB, 512KB and locked page
- Data TLB:
  - 1024 entry, 2 way, 8KB pages
  - + 1024 entry, 2 way, 4MB pages
  - + 32 entry, full associative 64KB, 512KB and locked page
- 3 MB 3-way joint low latency on-chip level-2 Cache
- 400 Mio. Transistors, 90nm copper technology
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# Technical specifications PRIMEPOWER 250 Pedestal

Server	GP250-GF3x[E]y (with 1,65GHz/3MB SLC)	GP250-GF3x[F]y (with 1,98GHz/3MB SLC)
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## Processor

Type	SPARC64™V (equivalent to SPARC V9)	
CPUs	1-2 per Server	
Level-1 Cache, (I/D)	128KB / 128KB	
Level-2 Cache	3MB / CPU	
Clock Speed	1,65 GHz	1,98 GHz
SPECint_rate2000	27,8	32,5
SPECfp_rate2000	36,9	40,7

## Main memory configuration

Type	Synchronous DDR SDRAM with ECC (even single-chip failure will be corrected)	
min. capacity	1 GB / server	
max. capacity	16 GB / server	
Expansion unit	1 GB or 2 GB or 4 GB	

## I/O ports (Standard)

LAN	1 x Ethernet (10baseT / 100baseTX) 1 x Ethernet (10baseT / 100baseTX / 1000base TX)	
V.24 (RS232C)	1 x	
console port	2 x RS232C (1x on XSCF) 1 x Ethernet (10baseT / 100baseTX on XSCF)	
SCSI (for int. disks)	1 per Server (LVD U320)	
RCI	1 port (RJ45 6-pin)	
UPS	1 port / Server (D-sub 9-pin)	

## PCI slots

PCI (64 bit)	6 slots (4x33 MHz, 2x33/66 MHz)
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## PCI-controller

Ultra Dual SCSI	Ultra SCSI, 16 bit, D, 2 channels
LVD U320 Dual SCSI	U320 SCSI, 16bit, 2 channels
Fibre Channel	2 Gbit/s, Non-OFC
Fast Ethernet	10base-T/100base-TX, 1 or 4 channels
Gigabit Ethernet	1000 base-SX, 1 channel
Gigabit Ethernet	10baseT/100baseTX/1000 base-TX, 1 channel
Token Ring	100 / 16 / 4 Mbit/s
WAN	V.24, X.21, V.35, 2 Mbps
ISDN	S <sub>0</sub> , S <sub>2m</sub>

## Mass storage (hard disks)

Type	LVD U320
Data rate	320 MB/s (sync, max)
Min. capacity	73 GB (U320) <sup>1)</sup>
Expansion unit	73 GB / 147 GB (U320) <sup>1)</sup>
Total capacity	882 GB (internal) / 13.2 TB (incl. 6 DN4x disk boxes) <sup>1)</sup>

## DN4x disk box (1 per PCI adapter)

Hard disk bays	14 bays ( 2 x 7 )
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## Console

LAN-Console	1 x per server / mandatory in a network or a SMC from an Enterprise system
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## Software

Operating system	Solaris™ 8 02/02, 9 und 10
Networking	ONC/NFS, TCP/IP, OSI, X.25
Compiler	C/C++, Fortran-90, COBOL, Java
System management	PRIMEPOWER ServerView Suite
Storage management	VERITAS Volume Manager & File System, PRIMECLUSTER

<sup>1)</sup> 1 MB = 10<sup>6</sup> Byte, 1 GB = 10<sup>9</sup> Byte

# Installation specifications PRIMEPOWER 250 Pedestal

		<b>PW250 floor-standing version</b> Up to 2-way
Width		350 mm
Depth		600 mm
Height		520 mm
Maintenance area		Maintenance area is specified in rack description
front		800mm
back		1000mm
left		800mm
right		800mm
Weight		55 kg
Rated voltage		200-240 VAC +/-10%
Mains connections		max. 3 x Schuko (IEC884-1 (CEE7-7))
Frequency		50/60Hz +2%/-4%
Power consumption, max.		900VA (850 Watt)
Heat output, max.		3060 kJ/h
Operating temperature / Operating altitude		from 5 to 35 ° C / 0 – 1.500 m from 5 to 31° C / 1.501 – 3.000 m
Relative humidity		20 % - 80 %, no condensation
Electrical standards:	Safety	IEC60950 ; C22.2 No.60950 ; ICES003 (CSA 108.8) ; UL60950
	EMC	EN55022 / CISPR22 Class B ; EN61000-3-2 / EN61000-3-3
	Immunity	EN55024 / CISPR24
Environmental conditions:	Operation	EN60721-3-3, 3K2, 3M2, 3C2, 3S2
	Storage	EN60721-3-1, 1K2, 1M3, 1C2, 1S2
	Transport	EN60721-3-2, 2K2, 2M2, 2C2, 2S1
Ecology		ECO ; FSC 03230