



Hard Drive

**Enterprise 10K
36LP Series**
3.5-inch Disk Drives

High-performance low-profile hard drives with up to 36.4 GB of formatted capacity.

- Fifth generation Giant Magneto-Resistive Head (GMR) technology achieves 7.4 Gb/sq. in. areal density
- 10,025 RPM rotational speed
- 3.0-inch diameter media for reduced power consumption
- Ultra3 SCSI interface with host transfer rates up to 160 MB/s
- Peak internal transfer rate up to 62.5 MB/s
- Average seek time of 4.7 ms
- 1,000,000 Mean-Time-Between-Failure (MTBF)
- Five-year limited warranty, including No Excuses® End User Replacement Program

Fujitsu's Enterprise 10K series delivers industry leading performance and sets uncompromising standards with capacity points up to 36.4GB and average seek time of 4.7 ms. Through technology ownership, Fujitsu is able to control every aspect of the product, including initial design, key components, critical processes, final assembly and test. Fujitsu's expertise in key components and strong commitment to excellence work together to produce products that deliver not only outstanding performance and reliability, but also low overall cost of ownership.

Industry-Leading Performance with Ultra3 SCSI Interface

Ultra3 is the fastest disk technology available today providing 160 MB/s data transfers. It includes advanced management features such as domain validation and Cyclic Redundancy Check (CRC) data protection. Domain validation negotiates the highest possible data rate, verifies correct operation and guarantees drive availability. CRC data protection ensures superior error detection and reliability needed for high availability applications.

Enterprise 10K disk drives provide outstanding storage performance for computing platforms such as workstations, network file servers and enterprise servers. A rotation speed of 10,000 RPM reduces the average rotational latency to 2.99 ms, a 28% improvement over a 7,200-RPM drive. Minimizing rotational latency and seek time are the most important factors that improve system response time in demanding transaction processing applications such as banking or reservation systems.

Mobile

Desktop

Enterprise

Enterprise 10K disk drives achieve an industry-best 62.5 MB/s peak internal data transfer rate, providing a superior solution for the most demanding digital Audio/Video applications such as non-linear editing and playback systems. Advanced interfaces such as Ultra3 provides up to 160 MB/s external, host data transfer rate. The Enterprise 10K series pack up to a phenomenal 36.4 GB in a 1-inch high form factor.

Innovative Technology

Through its commitment in research and development, Fujitsu has gained critical insights and expertise on the core components required for next-generation drive technology. The Enterprise 10K series provides a number of innovative features including

average seek times of 4.7 ms, acceleration feedback aided positioning system to increase tolerance to rational vibration and temperature variations, an expanded 4-MB data cache, reduced acoustic levels, and a high-performance, dual-processor design that greatly improves response time in high-load applications.

No Excuses® End User Replacement Program

Fujitsu products are designed to give our end users the highest performance and reliability with the least amount of hassle. To prove this, we include with our five-year limited warranty on the Enterprise 10K series, our No Excuses End User

Replacement Program. In the unlikely event of a product defect, we will replace that product within two business days. The No Excuses End User Replacement Program is only available to United States end-users. For complete warranty and program information and restrictions, please call Fujitsu Computer Products of America toll-free at 1-800-626-4686 or visit our web site at <http://www.fcpa.com>.

About Fujitsu Computer Products of America

Fujitsu Computer Products of America is a wholly owned subsidiary of Fujitsu Limited, one of the world's largest computer companies with \$49.6 billion in worldwide revenue in fiscal year ended March 2000. Benefiting from Fujitsu Limited's \$3 billion annual investment in research and development, Fujitsu Computer Products provides innovative solutions for the U.S. marketplace. Current product offerings include: high performance hard disk drives, tape drives, magneto-optical drives and high volume scanners.

Enterprise 10K 36LP Series Disk Drive Specifications				
Description	MAJ3364	MAJ3182	MAJ3091	
Functional Specifications				
Capacity (formatted)	36.4 GB	18.2 GB	9.1 GB	
Disks/heads	5/10	3/5	2/3	
Disk media diameter	3.0 in.			
Bytes/sector	512			
Cylinders	15,000			
Logical blocks	71,475,600	35,708,400	17,868,600	
Recording density	390,000 BPI			
Track density	19,000 TPI			
Buffer size	4096 KB			
Interface	Ultra3 Wide SCSI (68 or 80 pin)			
Seek time	Track to track	Read: 0.6 ms (typ) / Write: 0.8 ms (typ)		
	Average	Read: 4.7 ms (typ) / Write: 5.2 ms (typ)		
	Full stroke	Read: 11.0 ms (typ) / Write: 12.0 ms (typ)		
Data transfer rate	To/from media	41.8 to 62.5 MB/s		
	To/from host	Ultra3 SCSI: up to 160 MB/s		
Start time	30 s			
Stop time	30 s			
Rotational speed (RPM)	10,025			
Average latency	2.99 ms			
Physical Specifications				
Power requirements	Idle (ready)	11.0 W (typ)	9.0 W (typ)	8.0 W (typ)
	Seeking	16.0 W (typ)	14.0 W (typ)	13.0 W (typ)
	Spin-up	12V @ 2.5 A 5V @ 0.7 A		
Dimensions	Height	25.4 mm (1.0 in.)		
	Width	101.6 mm (4.0 in.)		
	Depth	146.0 mm (5.7 in.)		
Weight	0.7 kg (1.54 lb.)			
Drive temperature	Operating	5°C to 55°C		
	Non-operating	-40°C to 60°C		
	Gradient	15°C/H Max		
Relative humidity	Operating	20% to 80%		
	Non-operating	20% to 80% (non-condensing)		
Vibration	Operating	1.5 G (5 to 300 Hz)		
	Non-operating	5.0 G (5 to 300 Hz)		
Shock	Operating	20 G (half-sin pulse, 2 ms duration)		
	Non-operating	200 G (half-sin pulse, 2 ms duration)		
Altitude	Operating	-60 to 3,000 m (10,000 ft.) Max		
	Non-operating	12,000 m (40,000 ft.) Max		
Acoustic noise	Idle/Seek	39/44 dBA		
Reliability Specifications				
MTBF	1,000,000 hours			
MTTR	No field repairable parts, return to factory for repair			
Start/stop cycles	20,000 cycles			
Error rates	Seek error	10 per 10 ⁸ seeks		
	Non-recoverable read error	1 per 10 ¹⁴ bits read		
Limited warranty	5 years (from date of purchase) / includes No Excuses End User Replacement Program			
Technologies				
Read head element	Giant MR, Single Spin Valve			
Encoding/decoding	32/34 MEPR4			
Head positioning method	Rotary VCM with fully embedded digital servo			



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FUJITSU COMPUTER PRODUCTS OF AMERICA, INC.
2904 Orchard Parkway
San Jose, CA 95134-2009
(800) 626-4686
(408) 432-6333
Web site: <http://www.fcpa.com>
Email: info@fcpa.fujitsu.com