

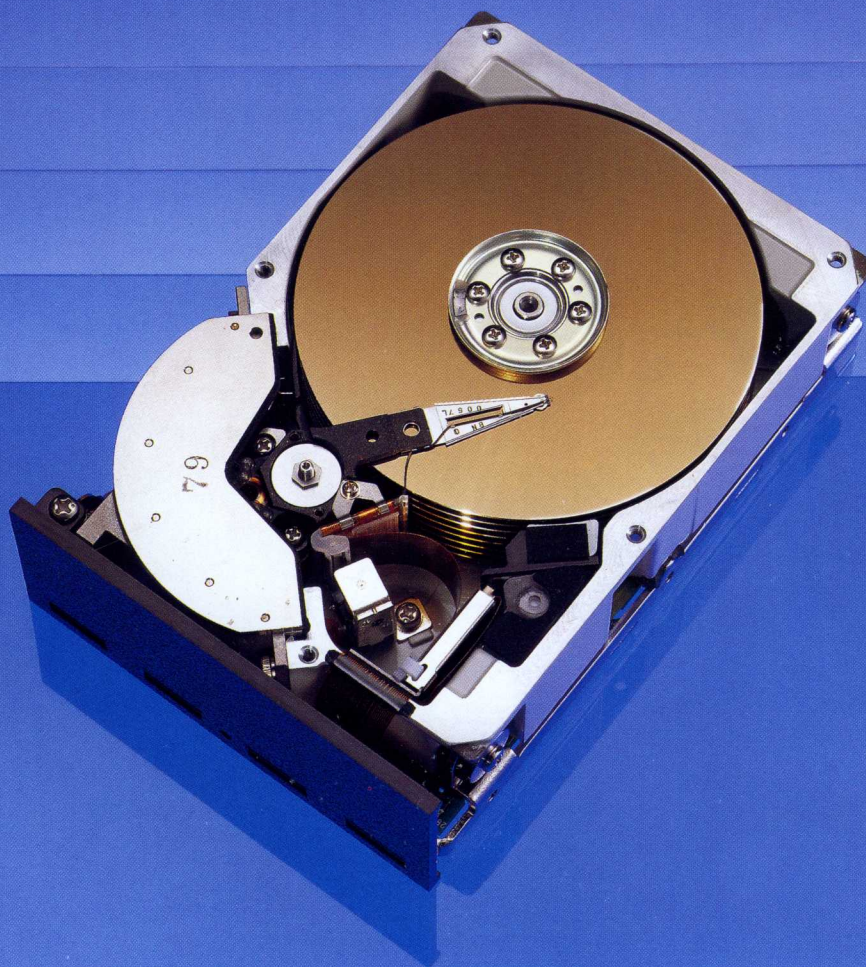
MAR 25 1993

FUJITSU

Fujitsu Quality Storage Products

3.5-inch magnetic disk drives

M2691S/H
M2692S/H
M2693S/H
M2694S/H



3.5-inch hard d

M2691/M2692/M2693/M2694

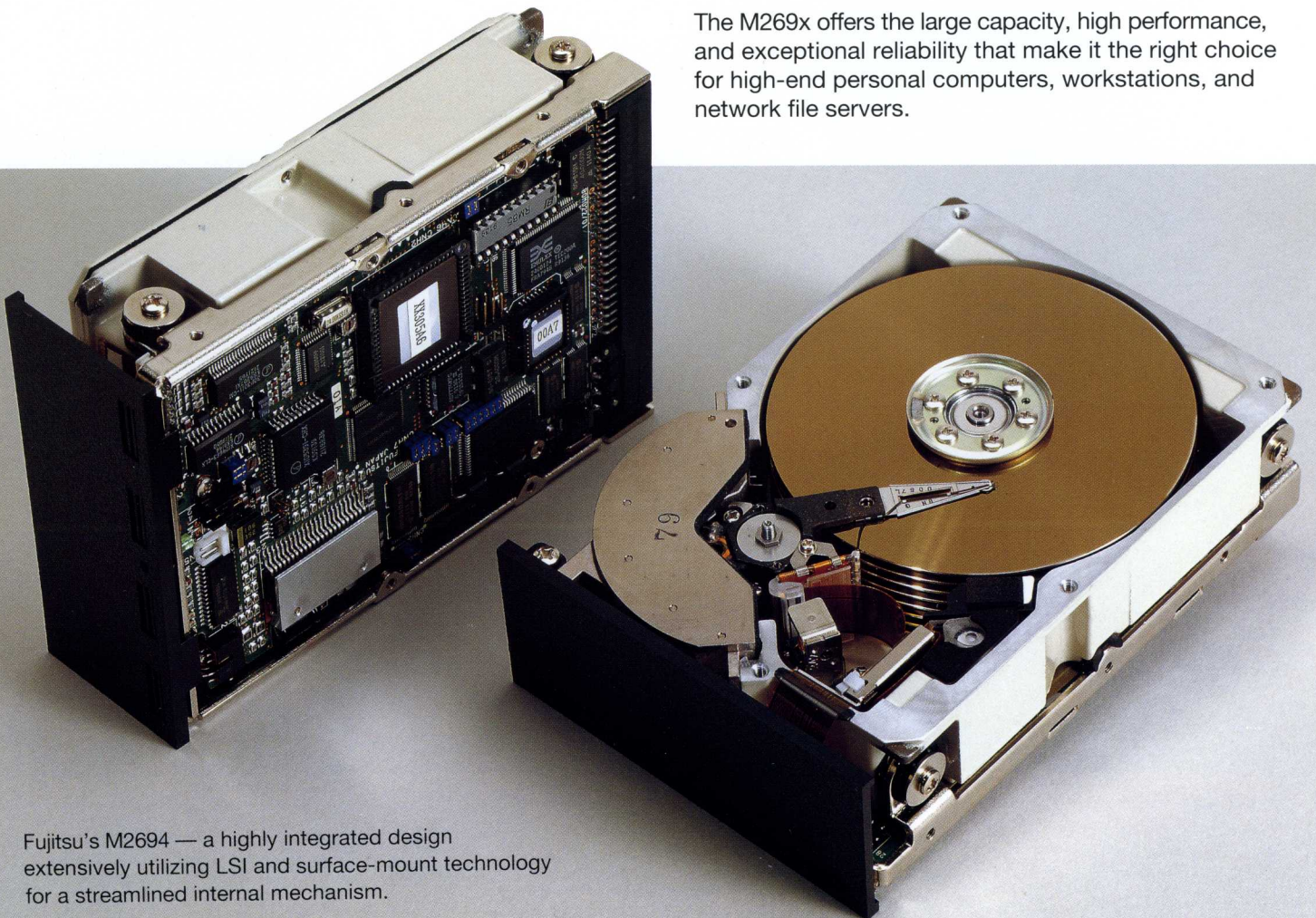
The pursuit of higher storage capacity and faster speed has resulted in one of the industry's foremost 3.5-inch disk drives — the Fujitsu M269x series. Featuring up to 1.08 gigabytes of formatted storage capacity (512 bytes per block), the M269x series delivers a remarkably fast 10 millisecond average positioning time and 10 megabytes per second data transfer rate on the SCSI bus (synchronous).

The M269x series provides fast positioning time — 2.5 milliseconds track-to-track, 10 milliseconds average, and 22 milliseconds maximum, including settling time. The M269x series' fast positioning time is due to a streamlined internal mechanism, attaining minimum access time to data. The M269x series has a programmable 256 kilobyte multi-segmented buffer which enables the drive to achieve a maximum transfer rate of 10 megabytes per second and optimize performance.

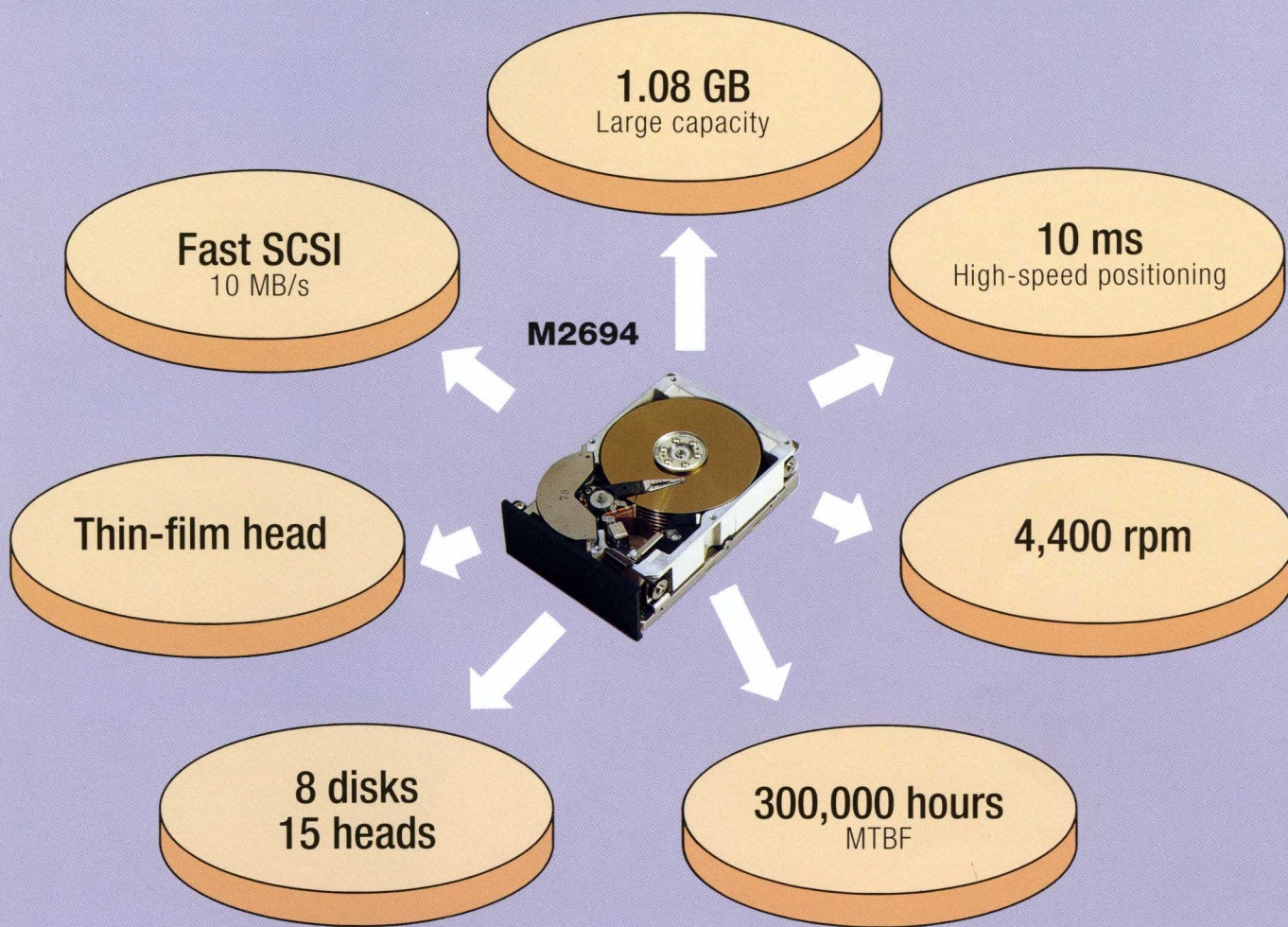
The M269x series disk drives are built to the highest reliability standards and carries a 300,000 power-on hour mean time between failures (MTBF) rating. This means long-term savings in maintenance and increased productivity for your business.

The M269x series S, SA, and SB models each have an embedded single-ended fast SCSI-2 controller, while the H, HA, and HB models each have a differential fast SCSI-2 controller.

The M269x offers the large capacity, high performance, and exceptional reliability that make it the right choice for high-end personal computers, workstations, and network file servers.



Fujitsu's M2694 — a highly integrated design extensively utilizing LSI and surface-mount technology for a streamlined internal mechanism.



Drive features

- ◆ Up to 1,082 MB storage capacity (formatted)
- ◆ Light-weight rotary actuator
- ◆ Advanced thin-film head
- ◆ Sputtered media
- ◆ Fast positioning time — 10 ms. (average)
- ◆ 300,000 power-on hour MTBF

SCSI features

- ◆ SCSI-2 command set
- ◆ 10 MB/s fast SCSI
- ◆ Programmable 256 KB multi-segmented buffer
- ◆ Downloadable firmware
- ◆ Read-ahead cache
- ◆ Defective block slipping
- ◆ 64-bit ECC
- ◆ ANSI X3.131-1986, CCS 4B, and X3T9.2/86-109 Rev. 10.C compatibility

FUNCTIONAL SPECIFICATIONS

Model	M2691S/H	M2692S/H	M2693S/H	M2694S/H
Storage capacity (Formatted)*1	648.48 MB	793.63 MB	938.77 MB	1,083.91 MB
Disks (3.5-inch)	5	6	7	8
Heads (Read/write)	9	11	13	15
Track capacity (Formatted)*1	29,696 – 49,152 bytes (8 zones)			
Tracks per cylinder	15			
Cylinders	1818 + 12 (SA) +1 (CE) +1 (ALT)			
Sectors per track	58/64/69/75/80/85/91/96			
Positioning time (Including settling time)	Track-to-track	2.5 ms		
	Average	10 ms		
	Maximum	22 ms		
Average latency time	6.82 ms			
Rotational speed	4,400 rpm			
Data transfer rate	To/from media	2.54 – 4.17 MB/s		
	To/from host	10 MB/s (synchronous) max./4 MB/s (asynchronous) max.		
Recording code	RLL (1/7)			
Interface	S type: Single-ended SCSI-2/H type: Differential SCSI-2			
Start time	≤ 15 seconds			
Stop time	≤ 30 seconds			

*1 512 B/block

PHYSICAL SPECIFICATIONS

Model	M269XS/H	
Power requirements	+5VDC±5%	1.1A (typical)
	+12VDC±5%	0.5A (typical), 2.0A (typical)
Dimensions	Height	41.3 mm (1.6 in.)
	Width	101.6 mm (4.0 in.)
	Depth	146.0 mm (5.7 in.)
Weight	1.2 kg (2.6 lbs.)	
Ambient temperature	Operating	5°C to 45°C (41°F to 113°F)
	Non-operating	-40°C to 60°C (-40°F to 140°F)
	Gradient	Less than 15°C (27°F)/hour
Relative humidity	Operating	20% to 80% (non-condensing)
	Non-operating	5% to 90% (non-condensing)
Vibration	Operating	Max. 1.0G (5Hz to 250Hz)
	Non-operating	Max. 5.0G (5Hz to 250Hz)
Shock resistance	Operating	Max. 5G (10 ms)
	Non-operating	Max. 50G (10 ms)
Altitude	Operating	3,000 m (10,000 ft.)
	Non-operating	12,000 m (40,000 ft.)
Acoustic noise	43dB (A) at 1 m (3.3 ft.)	

RELIABILITY SPECIFICATIONS

Model	M269XS/H	
Mean time between failures (MTBF)	300,000 power-on hours	
Mean time to repair (MTTR)	Less than 30 minutes	
Component life	5 years	
Error rates	Unrecoverable errors	≤ 10 per 10 ¹⁵ bits read
	Seek errors	≤ 10 per 10 ⁷ seeks

Specifications are subject to change without notice. For the latest information, contact your local Fujitsu representative.
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