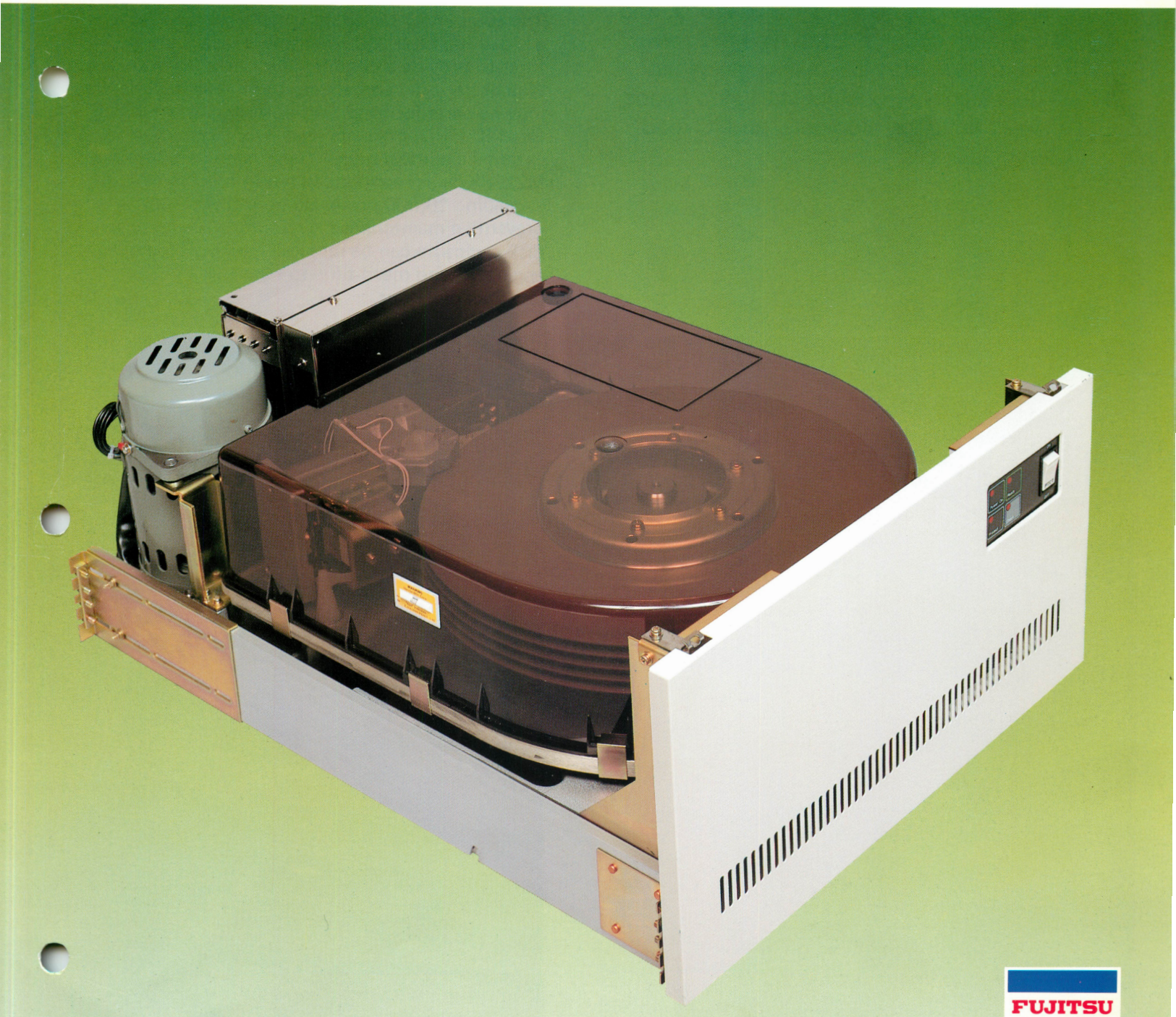
OEM DISK DRIVES

M2298K/N

Cost-effective 14-inch Winchester-type fixed disk drives with 671-megabyte storage capacity



FUJITSU

M2298K

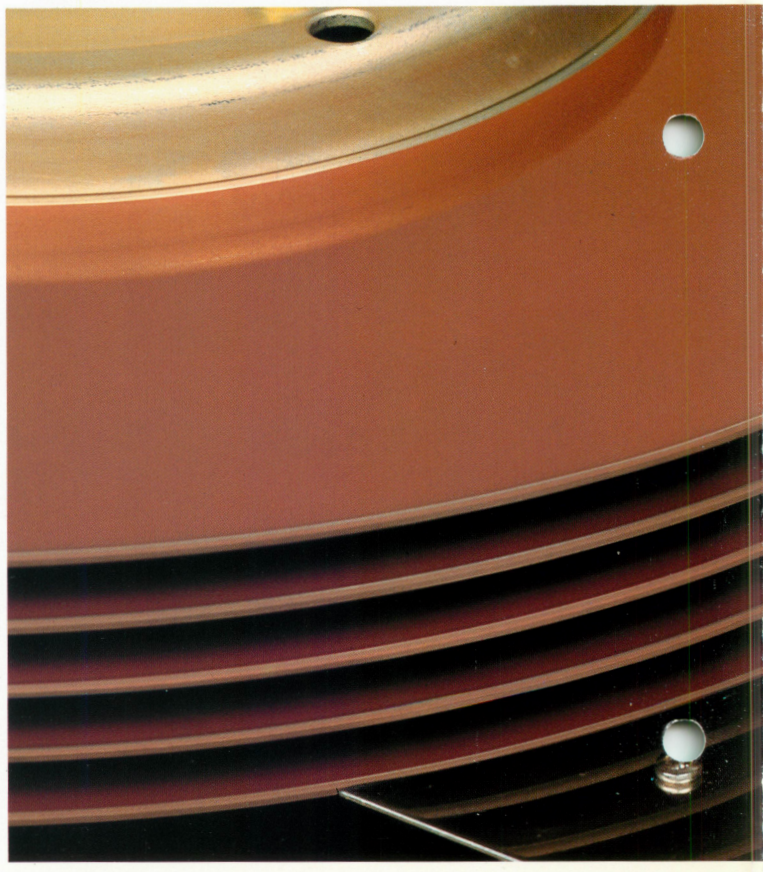
The M2298K and M2298N are 14-inch (356mm) Winchester-type fixed disk drives that provide superior cost performance and enhanced reliability. The M2298K requires a 100, 115, or 120 VAC power supply, and the M2298N requires either 220 or 240 VAC. These power supplies are available as options. Each model consists mainly of a disk enclosure, a spindle drive motor, and five printed circuit boards. The disk enclosure integrates five disks, seventeen Winchester-type contact start/stop heads, a rotary actuator, a spindle, and IC read preamplifiers.

New large capacity, high performance

The M2298K and M2298N each provide a very large unformatted storage capacity of 671 megabytes. Average positioning time is 27 milliseconds and the data transfer rate is 2 megabytes per second.

Reliable, maintenance free

The completely sealed disk enclosure incorporates a breathing filter and an absolute recirculation filter to provide a contamination-free environment. Winchester-type contact start/stop heads eliminate moving parts for head loading and unloading. The Head IC (HIC) prevents read errors caused by external electrical noise. These features assure the M2298K/N a mean-time-between-failures (MTBF) exceeding 10,000 power-on hours. Also no preventive maintenance is required. The compact disk enclosure can be replaced easily by customer engineers, and mean-time-to-repair (MTTR) is less than one hour.

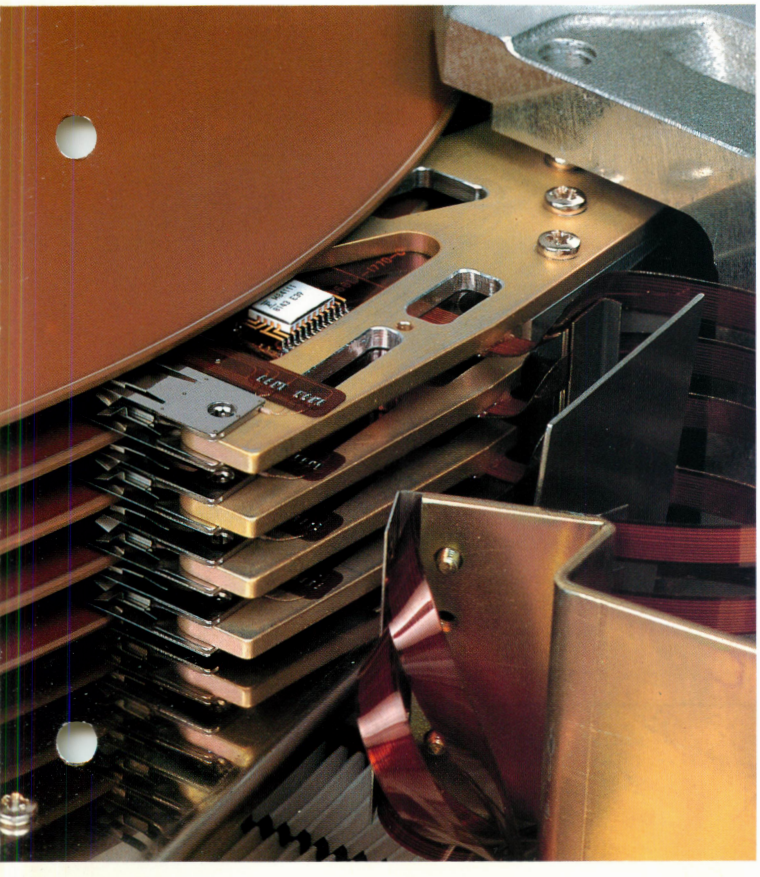


Compact, economical

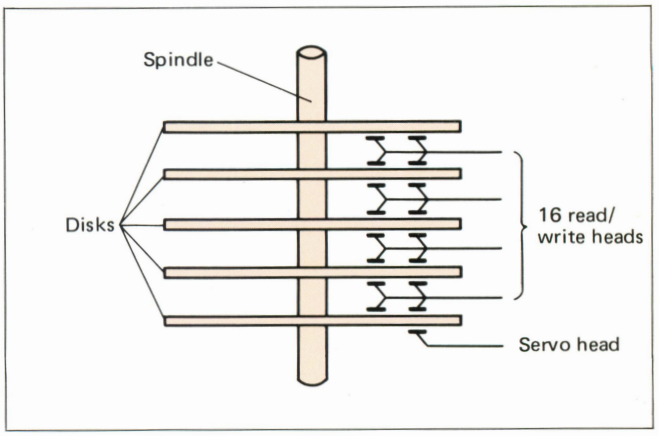
Use of field-proven coated media and the RLL recording code have made the M2298K/N high-performance yet economical machines. Despite their large capacities, M2298K/N disk drives can be mounted in a 19-inch rack in 6 pitches, saving installation space. Each model can also be mounted vertically in a system cabinet. And the rotary actuator greatly reduces power consumption and heat dissipation.

Dual channel option

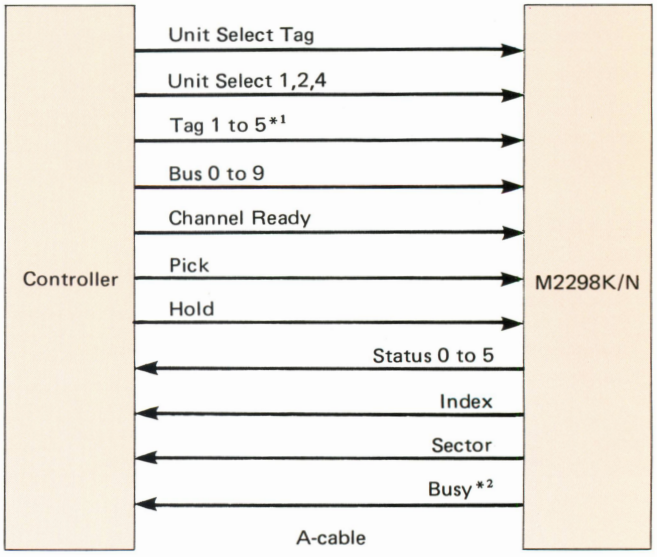
The M2298K/N can be accessed by two controllers when the dual channel option is provided.



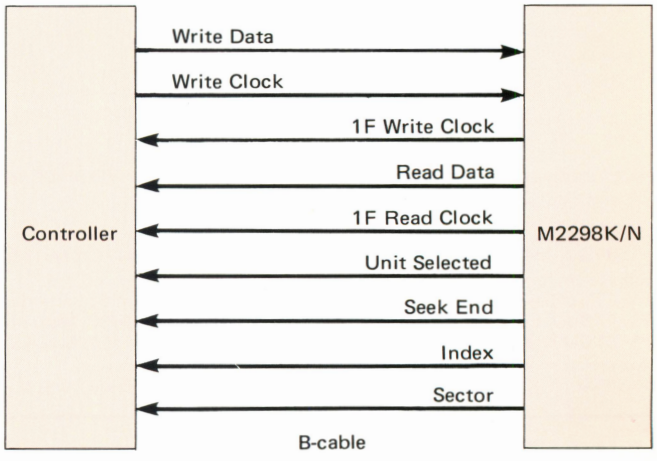
Head-disk structure



SMD interface



*1. Tag 4 and Tag 5 are switchable to each other.
*2. Busy signal is used with the dual channel option.



FUNCTIONAL SPECIFICATIONS

		M2298K/N
Storage capacity		671.08 megabytes (unformatted)
Disks		5
Heads	Read/write	16
	Servo	1
Track capacity		40,960 bytes (unformatted)
Tracks per cylinder		16
Cylinders		1,024 (including alternate cylinders)
Sectors	Fixed	2 or more
	Variable	Available
Positioning time	Track-to-track	6 milliseconds
	Average	27 milliseconds
	Maximum	55 milliseconds
Average latency time		11.02 milliseconds
Rotational speed		2,722 rotations/minute
Recording density		13,000 bits/inch (8,666 FRPI)
Track density		793 tracks/inch
Data transfer rate		1,859 kilobytes/second
Recording code		RLL (Run Length Limited)
Interface code		NRZ (Non-Return-to-Zero)
Interface		Modified SMD (Storage Module Drive)
Head positioning method		Servo-controlled track-following
Start time		Less than 40 seconds
Stop time		Less than 30 seconds

RELIABILITY SPECIFICATIONS

		M2298K/N
Mean-time-between-failures (MTBF)		More than10,000 power-on hours
Mean-time-to-repair (MTTR)		Less than 1 hour
Component life		5 years
Error rates	Recoverable errors	10 per 10^{11} bits read
	Unrecoverable errors	10 per 10^{14} bits read
	Seek errors	10 per 10^{8} seeks

PHYSICAL SPECIFICATIONS

		M2298K	M2298N
Power requirements	Operating	100VAC±10%, $50/60Hz^{+1}_{-3}$%, 2.5A 115/120VAC±10%, 60Hz±1%, 3A	220^{+22}_{-35}VAC, $50Hz^{+1}_{-2}$%, 2A 240^{+24}_{-27}VAC, $50Hz^{+1}_{-2}$%, 2A
	Start-up	100VAC±10%, $50/60Hz^{+1}_{-3}$%, 8A 115/120VAC±10%, 60Hz±1%, 9.5A	220^{+22}_{-35}VAC, $50Hz^{+1}_{-2}$%, 5A 240^{+24}_{-27}VAC, $50Hz^{+1}_{-2}$%, 5A
Dimensions	Height	250 mm (9.84 in)	
	Width	416 mm (16.38 in)	
	Depth	650 mm (25.59 in)	
Weight		45 kg (99.2 lb)	
Ambient temperature	Operating	5°C to 40°C (41°F to 104°F)	
	Not 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)	
	Not operating	5% to 95% (non condensing)	
Vibration	Operating	Max. 0.2G (5Hz to 50Hz) Max. 1G (50Hz to 500Hz) Shock: max. 2G (max. 10ms)	
	Not operating	Max. 0.4G (5Hz to 50Hz) Max. 1G (50Hz to 500Hz) Shock: max. 5G (max. 10 ms)	
	In storage or transport	Shock : max. 5G (max. 10 ms)	
Altitude	Operating	3,000 m (10,000 ft)	
	Not operating	12,000 m (40,000 ft)	

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

Second edition, April 1984

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Printed in Japan
0L1702-844S2