

# Fujitsu Quality Storage Products

3.5-inch magnetic disk drives

**M2617T**

**M2618T**



# 3.5-inch hard d

## M2617/M2618

**A**s computer system units become compact, slimmer hard disk drives that don't sacrifice performance are essential. Fujitsu's M2617T and M2618T are half-height 3.5-inch hard disk drives available with an embedded PC-AT interface. These drives combine the benefits of high performance and compactness in order to provide ideal features for laptops and other portable environments. Achieving among the industry's fastest average positioning time of 16 milliseconds, the M2617T and M2618T also provide 105 megabytes and 210 megabytes of formatted storage capacity, respectively. These low profile M2617T and M2618T disk drives offer performance, quality, and reliability which we put into every one of our products from components to mainframes.

### High performance

The M2617T and M2618T feature fast positioning times — 5.0 milliseconds track-to-track, 16 milliseconds average, and 36 milliseconds maximum, including settling time. The M2617T and M2618T have a 64 kilobyte data buffer and a high data transfer rate of 3.15 megawords per second, the equivalent of 6.3 megabytes per second. The fast positioning time and data transfer rate combine to ensure the M2617T and M2618T deliver the high-end performance necessary in today's data intensive environments.



### PC-AT controller

The M2617T and M2618T are available with an embedded PC-AT interface controller, which supports basic PC-AT commands, as well as additional commands.

### Compact yet large capacity

The M2617T and M2618T have a half-height profile which could make them suitable for desktop and high-end laptop computer applications. The compact M2617T and M2618T feature a large storage capacity of 105 megabytes and 210 megabytes, respectively.

### Drive Features

- Low profile half height
- Large storage capacities — 105 MB (M2617T)/ 210 MB (M2618T)
- Fast positioning time — 16 ms average
- High-speed data transfer rate — 3.15 MB/s or 6.30 MB/s
- MTBF of 150,000 power-on hours

### Reliable and maintenance-free

Built with Fujitsu's precise manufacturing process, the M2617T and M2618T assure reliable operation which is represented by their mean time between failure (MTBF) rating of 150,000 power-on hours. The completely sealed disk enclosure contains a breathing filter and a recirculation filter to provide a contamination-free environment. Whitney heads eliminate moving parts for head loading and unloading.

### Internationally compatible

The M2617T and M2618T disk drives use low-voltage DC supplies of +12V and +5V, permitting applications worldwide and freedom from the limits imposed by the wide range of voltages used in different countries.

### AT Features

- Emulates IBM task file
- Supports concurrent transfers
- Two drives can be daisy-chained through a single interface cable
- Automatic retry and branch for defect management
- Host transfer rates up to 6.3 MB/s
- Read prefetch cache
- 64K buffer with odd parity generation and verification

## FUNCTIONAL SPECIFICATIONS

Model	M2617T	M2618T
Storage capacity (Formatted) <sup>1</sup>	105MB	210MB
Disks (3.5-inch)	1	2
Heads (Read/write) <sup>2</sup>	2	4
Track capacity (Formatted)	20,480 Bytes – 32,768 Bytes	
Bytes/Sector	512	
Cylinders <sup>2</sup>	2,010	
Sectors	40 to 64	
Positioning time (Including settling time)	Track-to-track	5 ms
	Average	16 ms
	Maximum	36 ms
Average latency time	8.6 ms	
Rotational speed	3,490 rpm	
Data transfer rate	To/from media	1.56 – 2.50 MB/s
	To/from host (PC-AT)	6.30 MB/s
Recording code	RLL (1/7)	
Interface	PC-AT	
Start time	Typical 7 seconds (Less than 15 seconds)	
Stop time	Typical 17 seconds (Less than 25 seconds)	

<sup>1</sup> Typical sparing: for S/SA/SB/T type

<sup>2</sup> Including alternate tracks

## PHYSICAL SPECIFICATIONS

Model	M2617T	M2618T
Power requirements	+12VDC±5%	0.35A (max. 1.5A)
	+5VDC±5%	0.5A
Dimensions	Height	25.4 mm (1 in.)
	Width	101.6 mm (4.0 in.)
	Depth	146 mm (5.7 in.)
Weight	0.7 kg (1.5 lbs.)	
Ambient temperature	Operating	5°C to 50°C (41°F to 122°F)
	Non-operating	-45°C to 60°C (-49°F to 140°F)
	Gradient	15°C (27°F)/hour gradient
Relative humidity	Operating	20% to 80% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
Vibration	Operating	0.3G (5Hz to 150Hz), 0.5G (150Hz to 250Hz)
	Non-operating	1.0G (5Hz to 250Hz)
Shock resistance	Operating	5G (max. 10 ms)
	Non-operating	50G (max. 10 ms)
Altitude	Operating	3,000 m (10,000 ft.)
	Non-operating	12,000 m (40,000 ft.)

## RELIABILITY SPECIFICATIONS

Model	M2617T	M2618T
Mean time between failures (MTBF)	150,000 power-on hours	
Mean time to repair (MTTR)	Less than 30 minutes	
Component life	5 years	
Error rates	Unrecoverable errors	10 per 10 <sup>15</sup> bits read
	Seek errors	10 per 10 <sup>7</sup> seeks

PC-AT is a trademark of International Business Machines Corporation.

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

Second edition, December 1992

### North American contact:

**FUJITSU COMPUTER PRODUCTS OF AMERICA, INC.**  
2904 Orchard Parkway,  
San Jose, CA 95134-2022, U.S.A.  
Phone: 1-800-626-4686; (408) 432-6333  
Fax: 894-1709

### FUJITSU CANADA, INC.

2800 Matheson Boulevard East,  
Mississauga, Ontario L4W 4X5, Canada  
Phone: (1-416) 602-5454 Fax: 602-5457

### European contact:

**FUJITSU EUROPE LTD.**  
2, Longwalk Road, Stockley Park,  
Uxbridge, Middlesex UB11 1AB, England  
Phone: (44-81) 573-4444 Fax: 573-2643

### FUJITSU DEUTSCHLAND GMBH.

Frankfurter Ring 211,  
8000 München 40, F.R. Germany  
Phone: (49-89) 32378-0  
Fax: 32378-100

### FUJITSU ITALIA S.p.A.

Via Melchiorre, Gioia 8,  
20124 Milano, Italy  
Phone: (39-2) 657-2741  
Fax: 657-2257

### FUJITSU NORDIC AB

Torggatan 8, S-171 54 Solna, Sweden  
Phone: (46-8) 764-7690  
Fax: 28-0345

### FUJITSU ESPAÑA S.A.

Edificio Torre Europe 5ª, Paseo de la Castellana, 95, 28046 Madrid, Spain  
Phone: (34-1) 581-8000  
Fax: 581-8300

### FUJITSU FRANCE S.A.

Bâtiment Aristote, 17, Rue Olof  
Palme 94006, Créteil Cedex, France  
Phone: (33-1) 43-99-4000  
Fax: 43-99-0700

### Australasian contact:

**FUJITSU AUSTRALIA LTD.**  
475 Victoria Avenue,  
Chatswood, N.S.W. 2067, Australia  
Phone: (61-2) 410-4555 Fax: 411-8603

### Asian contact:

**FUJITSU HONG KONG LTD.**  
Room 2521, Sun Hung Kai Centre,  
30 Harbour Road, Hong Kong  
Phone: (852) 8275780  
Fax: 8274724

### FUJITSU (SINGAPORE) PTE. LTD.

75 Science Park Drive  
#02-06 CINTECH II, Singapore 0511  
Phone: (65) 777-6577  
Fax: 777-8794

### TATUNG-FUJITSU CO., LTD.

5F Tatung Bldg., 225 Nanking East  
Road, 3rd Sec. Taipei, Taiwan  
Phone: (886-2) 713-5396  
Fax: 717-4644

## FUJITSU LIMITED

Computer Products Business Group  
Sea Fort Square Center Bldg., 3-12, Higashi-shinagawa 2-chome,  
Shinagawa-ku, Tokyo 140, Japan  
Phone: (81-3) 5460-7181 Fax: (81-3) 5460-7384

Corporate Headquarters  
6-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100, Japan  
Phone: (81-3) 3216-3211

©1992 FUJITSU LIMITED  
Printed in Japan  
BS0014-2S