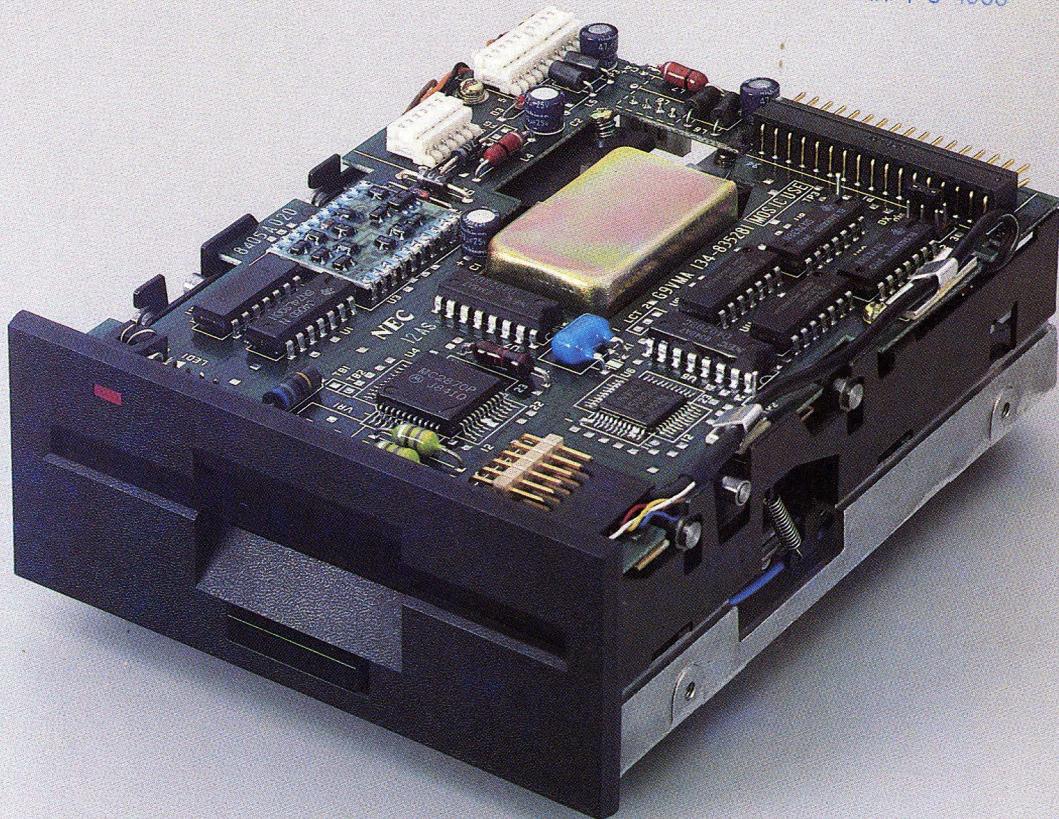


# NEC Model FD1035 3½-Inch Microfloppy Disk Drive

**NEC**

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## Features

- Compact design — one quarter the size and half the weight of standard 5¼-inch disk drives
- Large (1 MB) storage capacity — dual sided, double density
- Low power consumption — 3.4 watts
- Media pop-up for easy media removal
- Auto shutter — protects media
- Direct drive, brushless DC motor — no AC requirements
- Outstanding reliability and ease of maintenance — MTBF of 12,000 hours, MTTR of less than 30 minutes
- Fast head positioning time — only 3 ms track-to-track

## General Description

The NEC FD1035 3½-inch disk drive is designed for compact desktop and portable computer system applications. This highly reliable and low cost disk drive provides 1.0 MB of unformatted data in one quarter the space of conventional minifloppy drives. OEM systems compatibility eliminates the need for system redesign, permitting you to double your storage capacity at minimal cost.

The NEC FD1035 uses a direct drive, brushless DC motor with an economical power consumption of only 3.4 watts. This allows you to use an inexpensive power source, an essential feature for portable computer applications.

Other cost saving features include the auto shutter and the head load solenoid, both of which enhance the use of the 3½-inch diskette. The auto shutter opens upon insertion of the diskette and closes when it is removed, protecting the media from fingerprints and dust. The head load solenoid extends media life by removing the heads from the diskette after a read/write operation.

All these features, combined with a high mean time between failures (MTBF) of 12,000 power-on hours (POH) and a mean time to repair (MTTR) of less than 30 minutes, assure you that the NEC FD1035 is the most efficient and cost-effective disk drive available.

Product versatility, quality and reliability are aptly demonstrated in the NEC FD1035. NEC's commitment to meeting the needs of the OEM is backed by over 22 years of disk design and manufacturing experience.

# FD1035 Specifications

FEATURE	SPECIFICATION
Capacity (unformatted)	1 MB
Capacity (formatted)	640 KB
16 Sectors	
256 Bytes/Sector	
Data Transfer Rate	250 K bit/sec
Average Rotational Speed	300 rpm $\pm$ 1%
Seek Time (Track-to-Track)	3 ms
Motor Start Time	500 ms
Head Load Time	35 ms
Track Density	135 tpi
Maximum Bit Density	8717 bpi
Recording Method	FM/MFM
Power Requirements (DC)	+12 V $\pm$ 5%, +5 V $\pm$ 5%
Start Up Current	0.54 A, 0.27 A
Drive in Ready State Current	0.15 A, 0.34 A
Dimensions	
Height	1.6 in. (41 mm)
Width	4 in. (101.6 mm)
Length	5.1 in. (132 mm)
Weight	1.5 lb. (.68 kg)
Environmental	
Ambient Operating	+39°F to 115°F (4°C to 46°C)
Ambient Non-operating (Storage)	-4°F to 122°F (-20°C to 50°C)
Transportation	-40°F to 140°F (-40°C to 60°C)
Relative Humidity	
Operating	20% to 80%
Non-operating	10% to 90%
Transportation	5% to 95%
Maximum Wet Bulb Temperature	
Operating	84°F (29°C)
Non-operating	104°F (40°C)
Transportation	113°F (45°C)
Maximum Temperature Gradient	
Operating	27°F/hr. (15°C/hr.)
Non-operating	54°F/hr. (30°C/hr.)
Transportation	54°F/hr. (30°C/hr.)
Power Dissipation	3.4 W
Reliability	
MTBF	12,000 POH
MTTR	30 minutes
Device Life	15,000 POH or 5 years
Soft Error Rate	1 in 10 <sup>9</sup> bits read
Hard Error Rate	1 in 10 <sup>12</sup> bits read
Seek Error Rate	1 in 10 <sup>6</sup> seeks
Media Life	3.0 $\times$ 10 <sup>6</sup> passes
Media	3½-inch single/double sided diskette specified by NEC

# Interface

## SIGNAL INTERFACE

PIN		SIGNAL NAME
GROUND	SIGNAL	
1	2	Spare
3	4	In Use/Head Load
5	6	Drive Select 3
7	8	Index
9	10	Drive Select 0
11	12	Drive Select 1
13	14	Drive Select 2
15	16	Motor On
17	18	Direction Select
19	20	Step
21	22	Write Data
23	24	Write Gate
25	26	Track 00
27	28	Write Protect
29	30	Read Data
31	32	Side One Select
33	34	Ready/Disk Change

## INTERFACE FOR POWER SUPPLY

PIN	POWER SUPPLY
1	DC + 5 V
2	DC + 5 V Return
3	DC + 12 V Return
4	DC + 12 V

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