PCD-1230
IDE Flash Disk Module

Introduction

The PCD-1230 is an IDE compatible Solid State Disk (SSD). The SSD uses a flash memory chip to store data instead of magnetic mechanical disks. You can read and write to the solid state disk just as you read and write to a hard disk drive. However, solid state disks are designed to be much more reliable in harsh industrial environments, especially in cases such as:

- Power failures
- Shock
- Vibration
- Diverse operating temperatures
- Magnetic protection

The PCD-1230 is designed for extreme space limitations. It uses CMOS components for very low power consumption and high reliability. Since the PCD-1230 contains no mechanical components, reading from the solid state disk is much faster than from a regular magnetic hard disk.

The PCD-1230 provides a 44-pin, 2.0-mm standard IDE hard disk connector.

Features

- Fully compatible with standard IDE interface
- On board flash memory chips 2/4 MB option.
- Supports True IDE mode
- SanDisk chipset
- Low power consumption and automatic power saving mode
- Defect management and error correction technology
- Wear-leveling and free space management
- High performance SanDisk 16-Mbit flash memory technology
- +5V±10% operating voltage
- 0 to 70° C operating temperature
- 44-pin header, pitch=2.0 mm connector
- Supports PIO mode 4
- Power Consumption: Standby 12-13 mA
  Read 16~18 mA
  Write 58~62 mA

Initial inspection

The PCD-1230 has been inspected for both mechanical and electrical quality before shipping. It should be free of marks and scratches and in perfect electrical order upon receipt.

Handle the board only by its edges. The static charge on your body may damage its integrated circuits. Keep the card in its anti-static package whenever it is not installed. You can use this package to return the card if it should need repair.
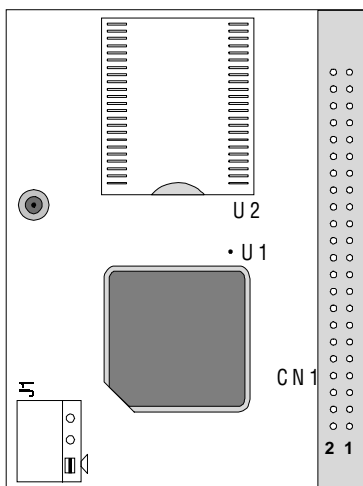
Jumper settings

J1: Master/Slave disk drive selection

1 2 3   Master drive setting (default)
Δ

1 2 3   Slave drive setting
Δ

Installation

1. Set jumper switch J1 as described above.

2. Connect this module to the main board. Insert the PCD-1230 connector onto the mainboard as the pins can easily be damaged if not properly installed.

3. Use the DOS format command to format the PCD-1230 if it is not allready formatted.

4. After formatting, you may use the PCD-1230 as any ordinary hard disk.

IDE hard drive connector (CN1)

| PCD-1230 IDE hard drive connector | | | |
Pin	Signal	Pin	Signal
1	IDE RESET*	2	GND
3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA 10
9	DATA 4	10	DATA 11
11	DATA 3	12	DATA 12
13	DATA 2	14	DATA 13
15	DATA 1	16	DATA 14
17	DATA 0	18	DATA 15
19	SIGNAL GND	20	N/C
21	N/C	22	GND
23	IO WRITE*	24	GND
25	IO READ*	26	GND
27	N/C	28	N/C
29	N/C	30	GND
31	IRQ14	32	IOCS16*
33	ADDR 1	34	PDIAG
35	ADDR 0	36	ADDR 2
37	HDD SELECT 0*	38	HDD SELECT 1*
39	IDE ACTIVE*	40	GND
41	VCC	42	VCC
43	GND	44	N/C

* active low