IDE CONTROLLER CARD

(AT BUS CARD)
MODEL: CA8390

*** USER'S MANUAL ***

CONTENTS

1. INTRODUCTION

The CA8390 is an advanced interface adapter for IBM PC/AT and compatible system. The adapter supports up to two floppy disk drives with any combination of 360K, 720K, 1.2M and 1.44MB density.

The CA8390 can supports up to two "AT bus" hard disk drives with 16 bits data transfer interface.

Both FDD and HDD controller interface can be disabled according to your system requirements.

2. FEATURE

- 16 bit data transfer which is fully compatible with IBM PC/AT interface.
- Supports two floppy disk drives of any combination of 360K, 1.2MB - 5.25" and 720K, 1.44M - 3.5".
- Controls two "AT bus" hard disk drives.
- High bandwidth host interface works up to 16MHZ host I/O clock. FDD and HDD controller ports can be disabled.

3. INSTALLATION PROCEDURE

(I) Switch off all power of your system including any connected peripherals.

(II) Removes the cover of your system and the screw of a bracket from any empty expansion slot.

(III) Sets jumpers of the CA8390 according to the FDD & HDD to be connected.

(IV) Plugs the CA8390 into the empty slot as mentioned in (II) and line up the adapter with the screw hole in the rear plate of your system.

(V) Screws the bracket to fix the CA8390 and connect the signal cables with the adapter and your FDD/HDD interface connectors.

(VI) Replaces your system cover carefully and the installation procedure is now completed.

4. JUMPER SETTING

J3 : AT "BUS" hard disk drive controller

J3	Function
OPEN	Disable HDC
SHORT	Enable HDC

J4 : floppy disk drive controller

J4	Function
OPEN	Disable FDC
SHORT	Enable FDC

5. CONNECTOR DESCRIPTION

Connector No.	Function
J1	40-pin AT bus hard disk drive cable connector
J2	2-pin hard disk drive led connector
J5	34-pin floppy disk drive cable connector

6. FDD INTERFACE

The FDD have two types of interface: control and DC power, the following figure shows the signal and pin assignments for the control interface.

FLOPPY DISK DRIVE INTERFACE - J5

Pin	Signal	Pin	Signal
1	Signal ground	2	- Reduced write
3	Reserved	4	Unused
5	Signal ground	6	Unused
7	Signal ground	8	- INdex
9	Signal ground	10	- Motor enable 1
11	Signal ground	12	- Drive select 0
13	Signal ground	14	- Drive select 1
15	Signal ground	16	- Motor enable 0
17	Signal ground	18	- Direction Select
19	Signal ground	20	- Step
21	Signal ground	22	- Write data
23	Signal ground	24	- Write enable
25	Signal ground	26	- Track 0
27	Signal ground	28	- Write protect
29	Signal ground	30	- Read data
31	Signal ground	32	- Head 1 select
33	Signal ground	34	- Disk change

7. HDD INTERFACE

The CA8390 provides the interface between the system and the "AT bus" hard disk drive through a 40 pin connector cable.

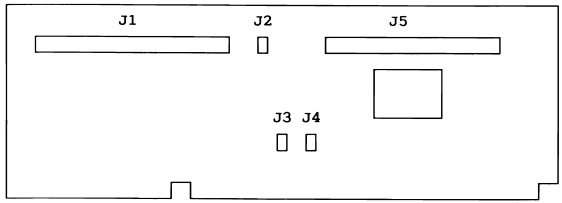
AT BUS HARD DISK DRIVE INTERFACE - J 1

Pin	Signal	Pin	Signal
1	Reset	2	Ground
3	HD7	4	HD8
5	HD6	6	HD9
7	HD5	8	HD10
9	HD4	10	HD11
11	HD3	12	HD12
13	HD2	14	HD13
15	HD1	16	HD14
17	HD0	18	HD15
19	Ground	20	Unused
21	Ground	22	Ground
23	- HIOW	24	Ground
25	- HIOR	26	Ground
27	IOCHRDY	28	HALE
29	Unused	30	Ground
31	IRQBUS	32	- IOCS16
33	HAI	34	Unused
35	HAO	36	HA2
37	- HCSO	38	- HCSI
39	SLV ACT	40	Ground

The hard disk drive interface has two different configuration - (i) ST412/506 interface & (ii) AT bus interface.

"ST412/506 interface" has the hard disk drive controller built-in the interface card. While the "AT bus interface" does not have the hard disk drive controller embedded in the interface card.

The "AT bus interface" hard disk drive has its own embedded controller and does not require an external controller. Connecting the "ST412/506" hard disk drive to the "AT bus interface" could result in damage to the hard disk drive and/or system. Check your system manual to ensure the system has an "AT bus interface" hard disk drive before using the "AT bus" hard disk drive interface.



BLOCK DIAGRAM OF CA8390

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The above information represents the best of our knowledge. We may have erroneous information and we reserve the right to change the specifications without prior notice.