



MicroFlash Duplicator

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Features

- One-to-Seven, IDE interface, platform type duplicator.
- Sector to sector hard copy.
- Supports any operating system.
- High duplicate speed.

Description

The MicroFlash Duplicator provides you the easiest, fastest way to duplicate your Flash Disk.

The MicroFlash Duplicator supports 7 IDE targets. All targets can be used at the same time.

The MicroFlash Duplicator can duplicate any operating system easily. The Duplicator uses sector to sector duplicate, upon completion the contents of the target will be exactly the same as the source.

The MicroFlash Duplicator is a stand-alone design, do not require PC to operate.

Accessories

- MicroFlash duplicator x 1
- Adapter x 8
- AC power cord x 1

Specifications

- Interface: IDE
- Data transfer rate: 16.6 MB/sec (max.) (PIO Mode 4)
- Dimensions: Housing-----W29 x H8 x D23.2 cm

Operating Conditions

- Operating Temperature 0 +70 °C
- AC input voltage:
115V~ / 2A
230V~ / 1A

C. Pin Assignments and Descriptions

C.1 Pin Assignments

40-pin I/O connector interface

Signal name	Pin #	Pin #	Signal name
RESET-	1	2	Ground
DD7	3	4	DD8
DD6	5	6	DD9
DD5	7	8	DD10
DD4	9	10	DD11
DD3	11	12	DD12
DD2	13	14	DD13
DD1	15	16	DD14
DD0	17	18	DD15
Ground	19	20	+5 V
DMARQ	21	22	Ground
DIOW-	23	24	Ground
DIOR-	25	26	Ground
IORDY	27	28	Ground
DMACK-	29	30	Ground
INTRQ	31	32	Obsolete
DA1	33	34	CBLID-
DA0	35	36	DA2
CS0-	37	38	CS1-
DASP-	39	40	Ground

44-pin I/O connector interface

Signal name	Pin #	Pin #	Signal name
RESET-	1	2	Ground
DD7	3	4	DD8
DD6	5	6	DD9
DD5	7	8	DD10
DD4	9	10	DD11
DD3	11	12	DD12
DD2	13	14	DD13
DD1	15	16	DD14
DD0	17	18	DD15
Ground	19	20	(Key Pin)
DMARQ	21	22	Ground
DIOW-	23	24	Ground
DIOR-	25	26	Ground
IORDY	27	28	Ground
DMACK-	29	30	Ground
INTRQ	31	32	Obsolete
DA1	33	34	CBLID-
DA0	35	36	DA2
CS0-	37	38	CS1-
DASP-	39	40	Ground
+5 V	41	42	+5 V
Ground	43	44	Reserved - no connection

C.2 Signal Descriptions

C.2.1 CS (1:0)- (Chip select)

CS0- is the Drive Chip Select for Command Block Register.

CS1- is the Drive Chip Select for Control Block Register.

C.2.2 DA (2:0) (Device address)

Disk Address bits 0 through 2 are normally outputs to the ATA connector selecting the register in the drive's Command Block register.

C.2.3 DASP- (Device active, device 1 present)

This is a time-multiplexed signal that indicates that a device is active, or that Device 1 is present.

NOTE .The indication that the device is active may be unsynchronized with the execution of the command.

C.2.4 DD (15:0) (Device data)

Disk Data bits 0 through 15 are the 16-bit bi-directional data bus which connects to the IDE/ATA drive(s).

C.2.5 DIOR- (Device I/O read)

Disk I/O Read is an active low output which enables data to be read from the drive.

C.2.6 DIOW- (Device I/O write)

Disk I/O Write is an active low output that enables data to be written to the drive.

C.2.7 DMACK- (DMA acknowledge)

This signal is normally used to response to DMARQ to either acknowledge.

C.2.8 DMARQ (DMA request)

This signal is used in a handshake manner with DMACK-

C.2.9 INTRQ (Device interrupt)

This signal is used by the selected device to interrupt the host system when interrupt pending is set.

C.2.10 IORDY (I/O channel ready)

Drive I/O ready is an active high input. It indicates that the IDE/ATA disk drive has completed the current command cycle.

C.2.11 CBLID- (Cable assembly type identifier)

CBLID- (Cable Detect) determines the type of cable attached to the primary channel.

C.2.12 RESET- (Hardware reset)

Disk Reset is an active low output which signals the IDE/ATA drive to initialize its control register.

G. DC Specifications

G.1. DC Characteristics (0 to +70 °C)

Symbol	Parameter	Min	Max	Units
V _{IL}	Input Voltage Low	-0.3	0.8	Volts
V _{IH}	Input Voltage High	2.0	5.5	Volts
V _{OL}	Output Voltage Low	-	0.40	Volts
V _{OH}	Output Voltage High I _{OH} = -2mA	2.4	-	Volts
I _{LO}	Output Leakage Current	-10	10	μA
I _{LI}	Input High Current V _{in} = V _{DD}	-10	10	μA
I _{IL}	Input Low Current V _{in} = V _{SS}	-10	10	μA
C _{IN}	Input or I/O Capacitance	-	10	pF

H. A.C. Characters

Timing Table

Mode	PIO 0	PIO 1	PIO 2	PIO 3	PIO4
Cycle Time	600	390	240	180	120
Address setup for DIOR/DIOW	90	60	60	60	60
8-bit DIOR/DIOW active time	300	300	300	90	90
8-bit DIOR/DIOW recovery time	-	-	-	90	30
16-bit DIOR/DIOW active time	180	150	120	90	90
16-bit DIOR/DIOW recovery time	-	-	-	90	30