

HyperDisk FLASH DISK MODULE

NAND Flash-based Disk Module

Standard Type

DMV240 Series

DMV340 Series

Product Data sheet

Preliminary
Mar 2005

INFORMATION IN THIS DOCUMENT IS PROVIDED IN RELATION TO HyperDisk PRODUCTS, AND IS SUBJECT TO CHANGE WITHOUT NOTICE.

NOTHING IN THIS DOCUMENT SHALL BE CONSTRUED AS GRANTING ANY LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE,

TO ANY INTELLECTUAL PROPERTY RIGHTS IN HyperDisk PRODUCTS OR TECHNOLOGY. ALL INFORMATION IN THIS DOCUMENT IS PROVIDED

ON AS "AS IS" BASIS WITHOUT GUARANTEE OR WARRANTY OF ANY KIND.

1. For updates or additional information about HyperDisk products, contact your nearest HyperDisk agent.
2. HyperDisk products are not intended for use in life support, critical care, medical, safety equipment, or similar applications where Product failure could result in loss of life or personal or physical harm, or any military or defense application, or any governmental procurement to which special terms or provisions may apply.

HyperDisk is a registered trademark of HypeDisk Storage Technologies.

For further information please contact:

HyperDisk Storage Technologies

18/C Wing A Yuehai Building
Nanhai Road Shenzhen
China

Phone 86-0755-26072456
Fax 86-0755-26471087
E-Mail HyperDisk@exproduct.com

URL [Http://www.hyperdisk.com.cn](http://www.hyperdisk.com.cn)

©Copyright 2005, 2017 HyperDisk Storage Technologies

Revision 07/01 FU3

TABLE OF CONTENTS

1	GENERAL DESCRIPTION	3
1.1	DESCRIPTION	3
1.2	FEATURES	3
1.3	SPECIFICATION	4
1.4	FLASH MODULE BLOCK DIAGRAM	5
2	PHYSICAL SPECIFICATIONS	6
2.1	DMV240 SERIES PHYSICAL OUTLINE AND DIMENSIONS	6
2.2	DMV340 SERIES DIMENSIONS	8
3	PRODUCT SPECIFICATIONS	10
3.1	SYSTEM INTERFACE AND CONFIGURATION	10
3.2	SYSTEM PERFORMANCE	10
3.3	SYSTEM POWER CONSUMPTION	10
3.4	SYSTEM RELIABILITY	10
3.5	ENVIRONMENTAL SPECIFICATIONS	11
3.6	CAPACITY SPECIFICATIONS	11
4	ELECTRICAL SPECIFICATIONS	12
4.1	IDE PIN LOCATIONS	12
4.2	PIN ASSIGNMENTS	12
4.3	INTERFACE SIGNAL DESCRIPTIONS	13
4.3.1	SIGNAL SUMMARY	13
4.3.2	SIGNAL DESCRIPTIONS	14
4.4	DC CHARACTERISTICS	16
4.4.1	ABSOLUTE MAXIMUM RATINGS	16
4.4.2	RECOMMENDED OPERATING CONDITIONS	16
4.4.3	ELECTRICAL CHARACTERISTICS - NORMAL I/O	17
4.5	AC CHARACTERISTICS	18
4.5.1	ATTRIBUTE MEMORY READ AND WRITE AC CHARACTERISTICS	18
4.5.2	COMMON MEMORY READ AND WRITE AC CHARACTERISTICS	19

4.5.3	I/O ACCESS READ AND WRITE AC CHARACTERISTICS	20
4.5.4	TRUE-IDE MODE I/O ACCESS READ AND WRITE AC CHARACTERISTICS	21
4.5.5	SAMSUNG TYPE FLASH MEMORY INTERFACE AC CHARACTERISTICS,	21
4.5.6	FLASH MEMORY INTERFACE AC CHARACTERISTICS, HITACHI TYPE	22

5 ORDERING INFORMATION **23**

6 PRODUCT LINE-UP **24**

1 General Description

1.1 Description

The Flash-based Disk Module of HyperDisk Storage Technologies is fully consist of semiconductor device and using NAND Flash Memory which has a high reliability and a high technology for a storage media.

As the DOM doesn't have a moving parts such as platter(disk) and head media, it gives a good solution in a sub. note PC and Tablet PC for a storage device with a high performance and a power consumption and a small form factor.

Also it gives rugged features in industrial PC with an extreme environment and an increased MTBF.

For an easy adoption, the DOM has a same host interface with HDD.

1.2 Features

- High Performance
- Compatible with IDE interface
- 100% True Mode IDE HDD Compatible
- No seek error & no noise
- Low power consumption
- No latency delay
- shock resistant & anti-vibration
- Secure Function (DMV240 Series)
- Non-volatile Flash Memory

The DOM is implemented by using NAND type flash memory, which is a high density, non-volatile read/write device. Flash data retention is guaranteed for at least 10 years, with no battery or other power source required.

- Broad Operating System and Processors Supports
- Capacities 32M~8GBbytes
- Robust Error Correction
- High Reliability

1.3 Specification

- Density
 - 32M to 8GB are available(DMV240 Series)
 - 32M to 2GB are available(DMV340 Series)
- Power consumption :
 - Active : Typical 35mA
 - Idle : Typical 1mA
 - Standby : Typical 1mA
- Form Factor
 - 32.5±0.25mm * 55.8±0.25mm * 8.0±0.25mm(DMV340 Series)
 - 28.3±0.25mm * 60.5±0.25mm * 6.5±0.25mm(DMV340 Series)
- Temperature
 - Operating : -10 ~ 75
 - Operating : -45 ~ 85 (wide temperature type)
- Shock
 - Operating : 1000G, duration 0.5ms, Half Sine Wave
 - Vibration : 15G Peak, 10~2000Hz,(12Cycle/Axis)x3 Axis
- Host interface
 - PIO Mode 0 to 4.
- MTBF
 - 2,000,000 Hours
- Performance
 - Host Interface : Standard type Max 16.6MB/s, Turbo type Max 60MB/s
 - Sustained Data Read : Standard type Max 8.5MB/s, Turbo type Max 38MB/s
 - Sustained Data Write : Standard type Max 6.5MB/s, Turbo type Max 22MB/s
- Maxium Weight
 - Max 23g , include powersupply cable.

1.4 Flash Module block diagram

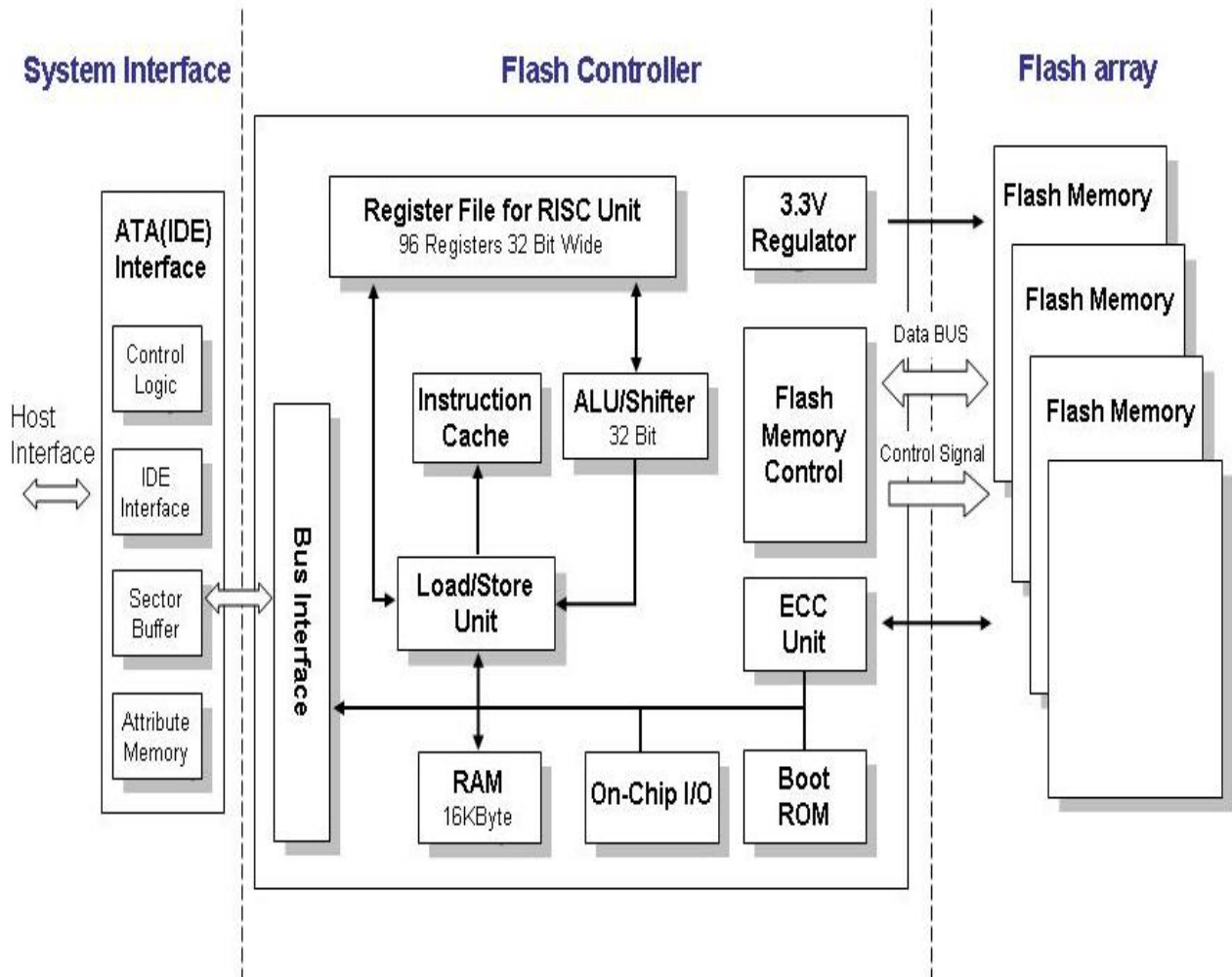
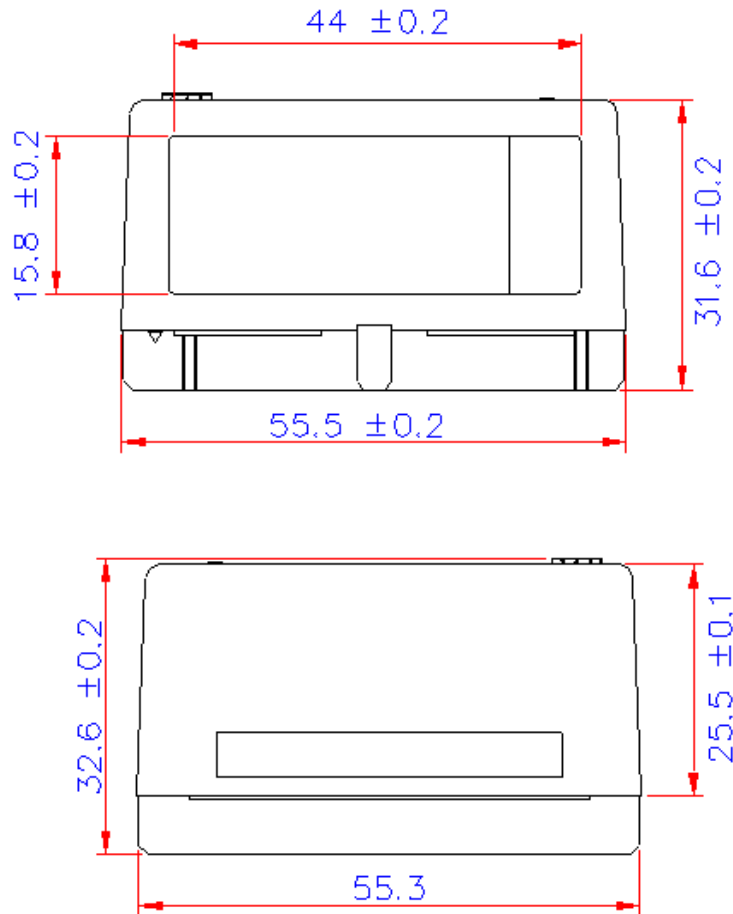


Figure1: Flash Module block diagram

2 Physical Specifications

2.1 DMV240 Series physical outline and Dimensions

Front / Rear Diagram



Side / Top Diagram

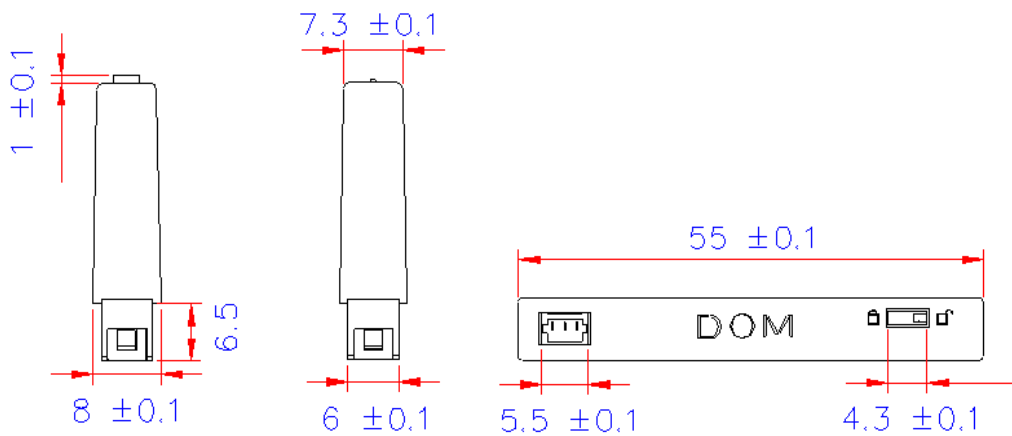


Figure 2: DMV240 Series Physical Outline and Dimensions

Cable Diagram

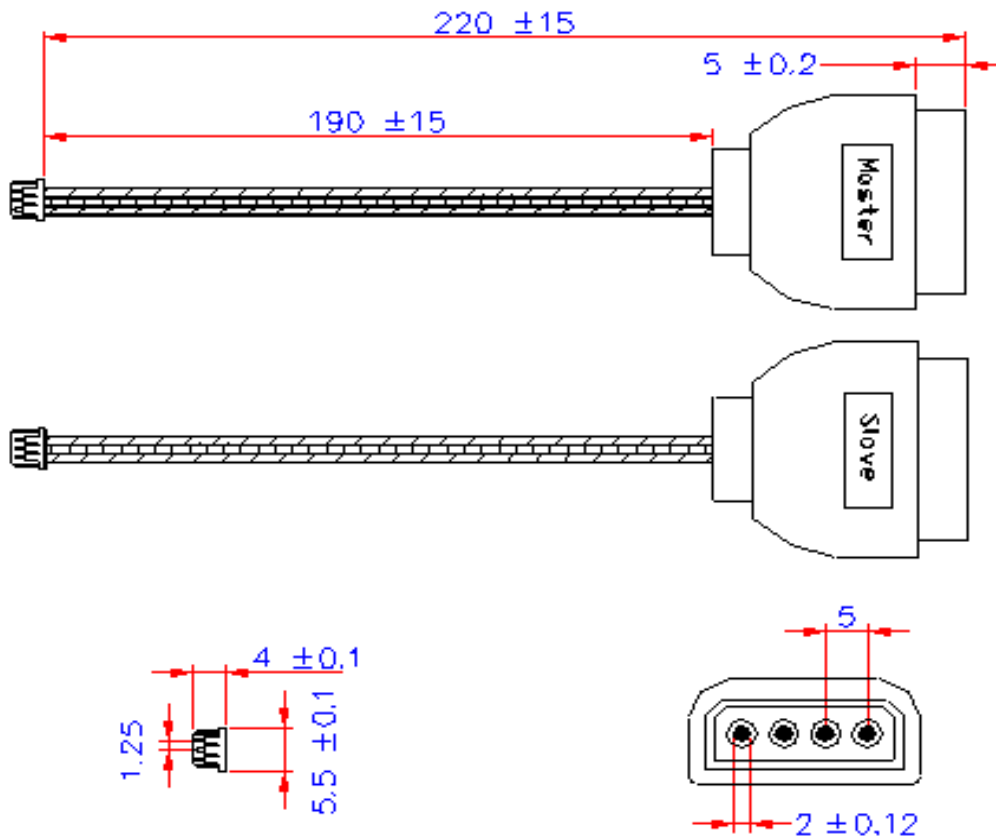


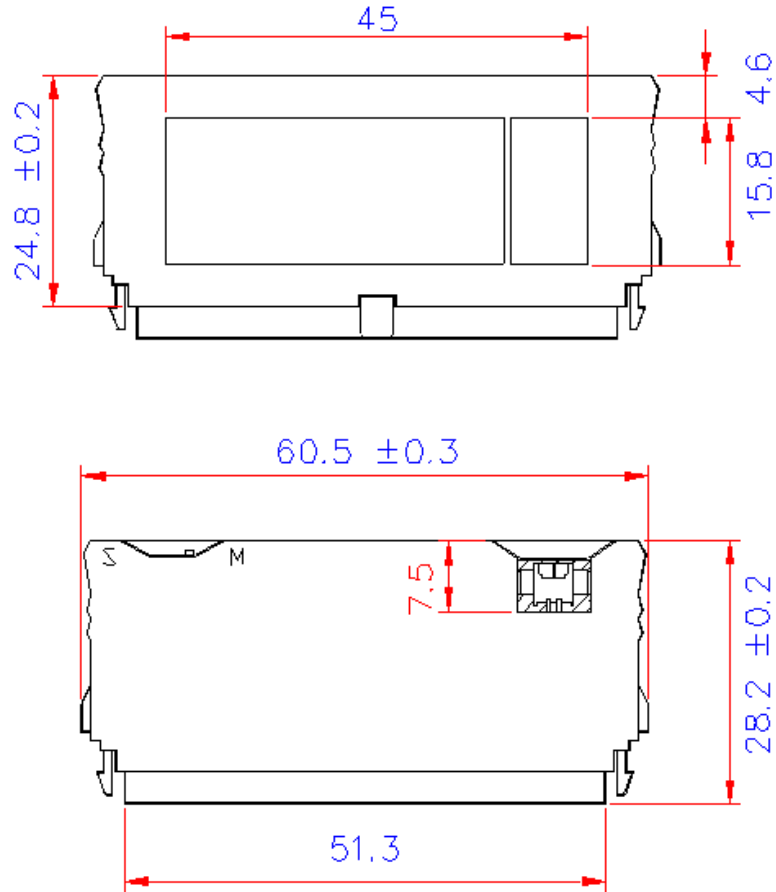
Figure 3: DMV240 Series Cable Physical Outline and Dimensions

DMV240 Physical Dimensions

Flash Module	
Length	55.5 ± 0.2mm
Width	32.6 ± 0.2mm
Thickness	8 ± 0.2mm
Cable	
Length	220 ± 15mm

2.2 DMV340 Series Dimensions

Front / Rear Diagram



Top / Side Diagram

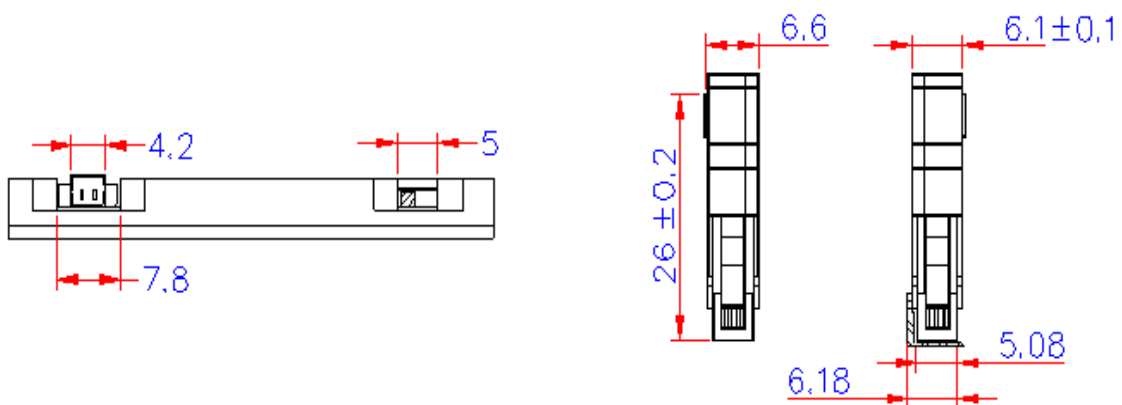


Figure 4: DMV340 Series Physical Outline and Dimensions

Cable Diagram

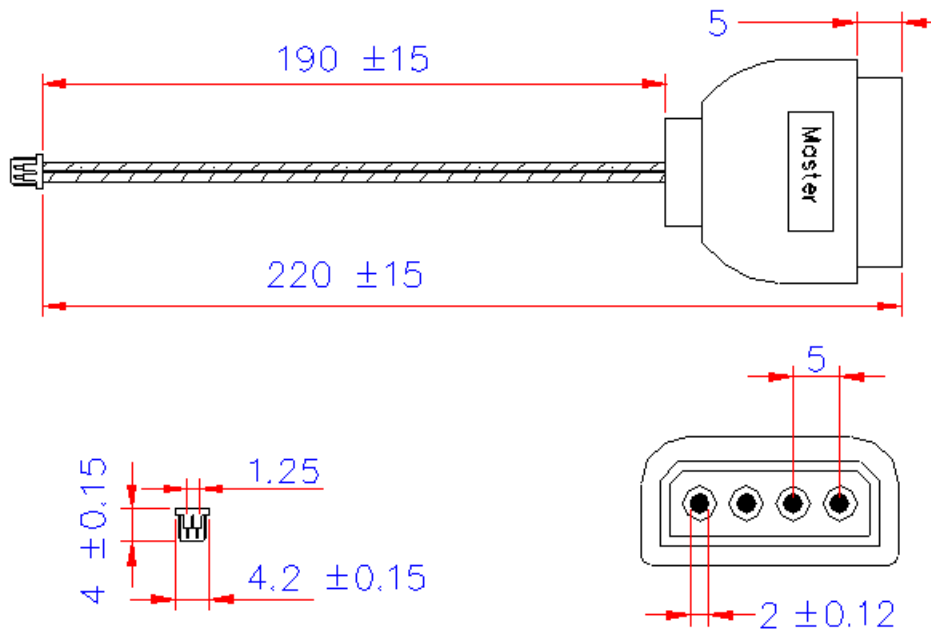


Figure 5: DMV340 Series Cable Physical Outline and Dimensions

DMV340 Physical Dimensions

Flash Module	
Length	60.5 ± 0.3mm
Width	28.2 ± 0.2mm
Thickness	6.6 ± 0.2mm
Cable	
Length	220 ± 15mm

3 Product Specifications

3.1 System Interface and Configuration

- PIO mode 4
- Multi-Word DMA2
- Multi-Word DMA4(Only Turbo type)

3.2 System Performance

Read / Write	Performance(MB/s)
Random Read Sector	Standard:Max 8.5 Turbo:Max 33
Random Write Sector	Standard:Max 5.3 Turbo:Max 18
Sequential Read Sector	Standard:Max 8.5 Turbo:Max 38
Sequential Write Sector	Standard:Max 6.5 Turbo:Max 22

3.3 System Power Consumption

Current	Typical(mA)
Active	<20 (typ.)
Idle	<1 (typ.)
Standby	<1 (typ.)

3.4 System Reliability

MTBF(@25)	2,000,000 Hours
Read/Write Cyle	2,000,000 times
Ecc	Two bytes per 256bytes

3.5 Environmental Specifications

Features	Operating	Non-Operating
Temperature	Standard -10 ~ 75 Wide-Temperature -45 ~ 85	-45 ~ 85
Humidity	0°C to 55°C / 90~98% RH, 10cycles	
Vibration	15G Peak, 10 ~ 2000Hz, (12cycle / Axis) x3 Axis	
Shock	1000G, duration 0.5ms, Half Sine Wave	

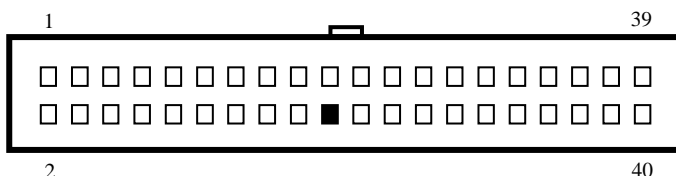
3.6 Capacity Specifications

Capacity	No. of Cylinders	No. of Heads	No. of Sectors/Track	Unformatted Capacity (Bytes)
32MB	498	4	32	63744
64MB	1000	4	32	128000
128MB	991	8	32	253696
256MB	998	16	32	510976
512MB	1016	16	63	1024128
1GB	2036	16	63	2052288
2GB	4074	16	63	4106592
3GB	6112	16	63	6160896
4GB	8150	16	63	8215200
6GB	/	/	/	/
8GB	/	/	/	/

4 Electrical Specifications

4.1 IDE Pin Locations

The following diagram identifies the Pin Locations of the HyperDisk DMV240/DMV340 Series DOM.



4.2 Pin Assignments

PIN	NAME	PIN	NAME	PIN	NAME
1	RESET	16	D14	31	INTRQ
2	GND	17	D0	32	IOCS16B
3	D7	18	D15	33	A1
4	D8	19	GND	34	PDIAG
5	D6	20	NC	35	A0
6	D9	21	DMARQ	36	A2
7	D5	22	GND	37	CS0
8	D10	23	DIOW	38	CS1
9	D4	24	GND	39	DASP
10	D11	25	DIOR	40	GND
11	D3	26	GND		
12	D12	27	IORDY		
13	D2	28	CSEL		
14	D13	29	DMACK		
15	D1	30	GND		

NOTE: NC is Reserved, don't connect it to anywhere, just leave it

4.3 Interface Signal Descriptions

4.3.1 Signal summary

Signal Acronym	Signal Type		IDE Interface Pin No.
A0~A2	I		35,33,36
$\overline{CS0}, \overline{CS1}$	I		37,38
\overline{CSEL}	I		28
\overline{DMACK}	I		29
IORDY	I		27
\overline{IORD}	I		25
\overline{IOWR}	I		23
\overline{RESET}	I		1
D0~D15	I/O		17,15,13,11,9,7,5,3,4,6,8,10,12,14,16,18
DASP	I/O		39
\overline{PDIAG}	I/O		34
DMARQ	O		21
INTRQ	O		31
$\overline{IOCS16}$	O		32
NC	-	-	20
VCC	-	-	41,42
GND	-	-	2,19,22,24,26,30,40,43

4.3.2 Signal Descriptions

A0 ~ A2	ADDRESS INPUTS: The Address signal are asserted by the host to access the task register in the device.
CS0, CS1	CHIP SELECTS: These are the chip select signals used to select the control block registers.
CSEL	CABLE SELECT: This internally pulled up signal is used to configure this device as a Master or a Slave when the jumper configuration is in CSEL mode. When this pin is grounded by the host, this device is configured as a Master. When this pin is open, this device is configured as a slave.
DMACK	DMA ACKNOWLEDGE: This signal is used by the host in response to DMARQ to initiate DMA transfers. The DMARQ/DMACK handshake is used to provide flow control during the transfer. When DMACK is asserted, CS0 and CS1 shall not be asserted and transfers shall be 16bits wide.
IORDY	I/O CHANNEL READY: The signal is negated to extend the host transfer cycle of any host register access.
IORD	DEVICE I/O READ: This is the read strobe signal from the host. The falling edge of IORD enables data from the device onto the data bus. The rising edge of IORD latches data at the host. The host shall not act on the data until it is latched.
IOWR	DEVICE I/O WRITE: This is the write strobe signal from the host. The rising edge of IOWR# latches data from the data bit signals. The device will not act on the data until it is latched.
RESET	DEVICE RESET: Active Low. When Active, this sets all internal registers to their default state. This signal shall be held asserted until at least 25us after power has been stabilized during the device power on.
D0~D15	DATA INPUTS/OUTPUTS: This is 8 or 16 bit bi-directional interface between the host and device. The lower 8 bits are used for 8 bit register transfers

DASP	DISK ACTIVE/SLAVE PRESENT: This open drain output signal is asserted low any time the drive is active. In a master/slave to inform the master a slave is present.
PDIAG	PASS DIAGNOSTIC: This open drain signal is asserted by the Slave to indicate to the Master that it has passed its diagnostics.
DMARQ	DMA REQUEST: This signal is used for DMA transfers between the host and device. DMARQ shall be asserted by the device when the device is ready to transfer data to/from the host. The direction of data transfer is controller by IORD and IOWR. This signal is used in a handshake manner with DMACK, i.e the device shall wait until the host asserts DMACK before negating DMARQ, and re-assert DMARQ if there is more data to transfer. The DMARQ/ DMACK handshake is used to provide flow control during the transfer.
INTRQ	INTERRUPT REQUEST: This signal is an active high interrupt request to the host.
IOCS16	Write Protect / 16-bit I/O Transfer.
NC	NC is Reserved, don't connect it to anywhere, just leave it
VCC	DEVICE POWER SUPPLY: Device Power 3.3/5V
GND	GROUND: Device Ground.

4.4 DC Characteristics

4.4.1 Absolute Maximum Ratings

Characteristics	Symbol		Rating	Unit
DC Supply Voltage	VDD	5.0V	-0.3 to 5.5	V
Input/Output Voltage	VIN/VOUT		5.5	V
DC Input Current	IIN		+/- 100	mA
Storage Temperature	TSTG		-40 to 85	

4.4.2 Recommended Operating Conditions

Characteristics	Symbol		Rating	Unit
DC Supply Voltage	VDD	5.0V	4.5 to 5.5	V
Input/Output Voltage	VIN/VOUT		5	V
Operating Temperature	TOPR		0 to 70	

4.4.3 Electrical Characteristics - Normal I/O

Vdd = 4.5 to 5.5(V), Ta = 25 , Vext = 5V ± 0.25V

Characteristics	Symbol	Test Condition		Min	Typ	Max	Unit
Input High Current	I _{IH}	V _{IN} = VDD Pull - Down	Normal Down	-10 - 10	--	10 -60	uA uA
Input Low Current	I _{IL}	V _{IN} = VSS Pull - Up	Normal Up	-10 -60	--	10 -10	uA uA
Input High Voltage	V _{IH}	CMOS		2.0	-	-	V
Input Low Voltage	V _{IL}	CMOS		-	-	0.8	V
Output High Voltage	V _{OH}	6mA Buffer, I _{OH} = -6mA		2.4	-	-	V
Output Low Voltage	V _{OL}	6mA Buffer, I _{OL} = 6mA		-	-	0.4	V
Tri-state Output Leakage Current	I _{OZ}	V _{OUT} = VDD or VSS		-10	-	10	uA

NOTE: Schmitt Trigger test condition : VDD = 4.5 to 5.5(V), Ta = 25

Characteristic: These DC parameters guarantee the I/O cell characteristic at the static state only, not at the dynamic state.

4.5 AC Characteristics

The AC Characteristics reference the timing diagrams of the PCMCIA PC Card Standard and the symbols in these timing diagrams. The AC characteristics are valid for a supply voltage VCC of 5V \pm 10% or 3.3V \pm 5%.

4.5.1 Attribute Memory Read and Write AC Characteristics

Symbol	Parameter	Min	Max	Units
tcR	Read cycle time	250	/	ns
ta(A)	Address access time	/	250	ns
ta(CE)	Card Enable access time	/	250	ns
ta(OE)	Output Enable access time	/	125	ns
tdis(CE)	Output disable time from CE	/	100	ns
tdis(OE)	Output disable time from OE	/	100	ns
ten(CE)	Output enable time from CE	5	/	ns
ten(OE)	Output enable time from OE	5	/	ns
tv(A)	Data valid time from address change	0	/	ns
tsu(A)	Address setup time	30	/	ns
th(A)	Address hold time	20	/	ns
tsu(CE)	Card Enable setup time	0	/	ns
th(CE)	Card Enable hold time	20	/	ns
tcW	Write cycle time	250		ns
tw(WE)	Write pulse time	150	/	ns
tsu(A-WEH)	Address setup time for WE	180	/	ns
tsu(CE-WEH)	Card Enable setup time for WE	180	/	ns
tsu(D-WEH)	Data setup time for WE	80	/	ns
th(D)	Data hold time	30	/	ns
tdis(WE)	Output disable time from WE	/	100	ns
ten(WE)	Output enable time from WE	5	/	ns
tsu(OE-WE)	Output Enable setup time for WE	10	/	ns
th(OE-WE)	Output Enable hold time from WE	10	/	ns

4.5.2 Common Memory Read and Write AC Characteristics

Symbol	Parameter	Min	Max	Units
tcR	Read cycle time	150	/	ns
ta(A)	Address access time	/	150	ns
ta(CE)	Card Enable access time	/	150	ns
ta(OE)	Output Enable access time	/	75	ns
tdis(CE)	Output disable time from CE	/	75	ns
tdis(OE)	Output disable time from OE	/	75	ns
ten(CE)	Output enable time from CE	5	/	ns
ten(OE)	Output enable time from OE	5	/	ns
tv(A)	Data valid time from address change	0	/	ns
tsu(A)	Address setup time	20	/	ns
th(A)	Address hold time	20	/	ns
tsu(CE)	Card Enable setup time	0	/	ns
th(CE)	Card Enable hold time	20	/	ns
tcW	Write cycle time	150	/	ns
tw(WE)	Write pulse time	80	/	ns
tsu(A-WEH)	Address setup time for WE	100	/	ns
tsu(CE-WEH)	Card Enable setup time for WE	100	/	ns
tsu(D-WEH)	Data setup time for WE	50	/	ns
th(D)	Data hold time	20	/	ns
trec(WE)	Write recover time	20	/	ns
tdis(WE)	Output disable time from WE	/	75	ns
ten(WE)	Output enable time from WE	5	/	ns
tsu(OE-WE)	Output Enable setup time for WE	10	/	ns
th(OE-WE)	Output Enable hold time from WE	10	/	ns

4.5.3 I/O Access Read and Write AC Characteristics

Symbol	Parameter	Min	Max	Units
td(IORD)	Data delay after IORD	/	100	ns
th(IORD)	Data hold following IORD	0	/	ns
tw(IORD)	IORD pulse width	165	/	ns
tsuA(IORD)	Address setup time for IORD	70	/	ns
thA(IORD)	Address hold time from IORD	20	/	ns
tsuCE(IORD)	Card Enable setup time for IORD	5	/	ns
thCE(IORD)	Card Enable hold time from IORD	20	/	ns
tsuREG(IORD)	REG setup time for IORD	5	/	ns
thREG(IORD)	REG hold time from IORD	0	/	ns
tdfINP(IORD)	INPACK delay falling from IORD	0	45	ns
tdrINP(IORD)	INPACK delay rising from IORD	/	45	ns
tdfIO16(IORD)	IOIS16 delay falling from address	/	35	ns
tdrIO16(IORD)	IOIS16 delay rising from address	/	35	ns
tsu(IOWR)	Data setup time for IOWR	60	/	ns
th(IOWR)	Data hold time from IOWR	30	/	ns
tw(IOWR)	IOWR pulse width	165	/	ns
tsuA(IOWR)	Address setup time for IOWR	70	/	ns
thA(IOWR)	Address hold time from IOWR	20	/	ns
tsuCE(IOWR)	Card Enable setup time for IOWR	5	/	ns
thCE(IOWR)	Card Enable hold time from IOWR	20	/	ns
tsuREG(IOWR)	REG setup time for IOWR	5	/	ns
thREG(IOWR)	REG hold time from IOWR	0	/	ns

4.5.4 True-IDE Mode I/O Access Read and Write AC Characteristics

Symbol	Parameter	Min	Max	Units
tcR	Cycle time	120	/	ns
tsuA	Address setup time for IORD/IOWR	25	/	ns
thA	Address hold time from IORD/IOWR	10	/	ns
tw	IORD/IOWR pulse width	70	/	ns
trec	IORD/IOWR recovery time	25	/	ns
tsuD(IORD)	Data setup time for IORD	20	/	ns
thD(IORD)	Data hold following IORD	5	/	ns
tDis(IORD)	Output disable time from IORD	/	30	ns
tsuD(IOWR)	Data setup time for IOWR	20	/	ns
thD(IOWR)	Data hold following IOWR	10	/	ns

4.5.5 Samsung Type Flash Memory Interface AC Characteristics,

The AC Characteristics for the flash memory interface are based on a F2-16X processor clock speed of 20 MHz.

Symbol	Parameter	Min	Max	Units
tCLS	CLE setup time	50	/	ns
tCLH	CLE hold time	20	/	ns
tCS	CE setup time	50	/	ns
tCH	CE hold time	50	/	ns
tWP	WE pulse width	25	/	ns
tALS	ALE setup time	50	/	ns
tALH	ALE hold time	20	/	ns
tDS	Data Setup time	25	/	ns
tDH	Data hold time	20	/	ns
tWC	Write cycle time	50	/	ns
tWH	WE high hold time	20	/	ns
tRP	RE pulse width	30	/	ns
tRC	Read cycle time	50	/	ns
tREA	RE access time	35	/	ns
tREH	RE high hold time	15	/	ns
tCEH	CE high hold time	200	/	ns
tWHR	WE high to RE low	100	/	ns

4.5.6 Flash Memory Interface AC Characteristics, Hitachi Type

The AC Characteristics for the flash memory interface are based on a F2-16X processor clock

speed of 18 MHz.

Symbol	Parameter	Min	Max	Units
tCWC	Write cycle time	150	/	Ns
tSCC	Serial clock cycle time	50	/	Ns
tWP	Write pulse time	90	/	Ns
tWPH	Write pulse high time	50	/	Ns
tAS	Address setup time	120	/	Ns
tAH	Address hold time	20		Ns
tDS	Data setup time for WE	120	/	Ns
tDH	Data hold time from WE	20	/	Ns
tSP	SC pulse width	20	/	Ns
tSPL	SC pulse low time	20	/	Ns
tCDS	CDE setup time for WE	20	/	Ns
tCDH	CDE hold time for WE	20	/	Ns
tCPH	CE pulse high time	200	/	Ns
tDS	Data setup time for SC	20	/	Ns
tDH	Data hold time from SC	30	/	ns

5 Ordering Information

The Dom Products Ordering Information

D	M	V	X	X	X	X	X	X	X	X	X
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
DM	Construction Type	Module Type	Interface Type	Specification	Component Generation	Disk Density	Memory Type				
Flash Disk Module	V=Vertical type	1 = Type1	40=IDE 40Pin	I = Standard Industrial type	1 = 1st Generation	032=32M Byte	S = SLC Nand Flash				
	L = Horizontal type	2 = Type2	44=IDE 44Pin	W = Wide-Temperature Flash Module	2 = 2st Generation	064=64M Byte	M = MLC Nand Flash				
		3 = Type3			3 = 3st Generation	128=128M Byte					
					T = Special Flash Module	3 = 3st Generation	256=256M Byte				
						4 = 4st Generation	512=512M Byte				
							01G=1G Byte				
							02G=2G Byte				
							03G=3G Byte				
							04G=4G Byte				
							06G=6G Byte				
						08G=8G Byte					

6 Product Line-up

Part Number	Density	Type	Remark
DMV240I2 – 032-S	32MB	Vertical IDE-40Pin	Standard Type
DMV240I2 – 064-S	64MB	Vertical IDE-40Pin	Standard Type
DMV240I2 – 128-S	128 MB	Vertical IDE-40Pin	Standard Type
DMV240I2 – 256-S	256 MB	Vertical IDE-40Pin	Standard Type
DMV240I2 - 512-S	512MB	Vertical IDE-40Pin	Standard Type
DMV240I2 – 001-S	1GB	Vertical IDE-40Pin	Standard Type
DMV240I2 - 002-S	2GB	Vertical IDE-40Pin	Standard Type
DMV240I2 - 004-S	4GB	Vertical IDE-40Pin	Standard Type
DMV240I2 - 006-S	6GB	Vertical IDE-40Pin	Standard Type
DMV240I2 - 008-S	8GB	Vertical IDE-40Pin	Standard Type
DMV240I3 – 001-S	1GB	Vertical IDE-40Pin	Turbo Type
DMV240I3 - 002-S	2GB	Vertical IDE-40Pin	Turbo Type
DMV240I3 - 004-S	4GB	Vertical IDE-40Pin	Turbo Type
DMV240I3 - 006-S	6GB	Vertical IDE-40Pin	Turbo Type
DMV240I3 - 008-S	8GB	Vertical IDE-40Pin	Turbo Type
DMV340I2 – 032-S	32MB	Vertical IDE-40Pin	Standard Type
DMV340I2 – 064-S	64MB	Vertical IDE-40Pin	Standard Type
DMV340I2 – 128-S	128 MB	Vertical IDE-40Pin	Standard Type
DMV340I2 – 256-S	256 MB	Vertical IDE-40Pin	Standard Type
DMV340I2 - 512-S	512MB	Vertical IDE-40Pin	Standard Type
DMV340I2 – 001-S	1GB	Vertical IDE-40Pin	Standard Type
DMV340I2 - 002-S	2GB	Vertical IDE-40Pin	Standard Type
DMV240W2 – 032-S	32MB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 – 064-S	64MB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 – 128-S	128 MB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 – 256-S	256 MB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 - 512-S	512MB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 – 001-S	1GB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 - 002-S	2GB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 - 004-S	4GB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 - 006-S	6GB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W2 - 008-S	8GB	Vertical IDE-40Pin	Standard W-Temperature
DMV240W3 – 001-S	1GB	Vertical IDE-40Pin	Turbo W-Temperature
DMV240W3 - 002-S	2GB	Vertical IDE-40Pin	Turbo W-Temperature
DMV240W3 - 004-S	4GB	Vertical IDE-40Pin	Turbo W-Temperature
DMV240W3 - 006-S	6GB	Vertical IDE-40Pin	Turbo W-Temperature
DMV240W3 - 008-S	8GB	Vertical IDE-40Pin	Turbo W-Temperature

For further information please contact:

HyperDisk Storage Technologies

18/C Wing A Yuehai Building
Nanhai Road Shenzhen
China

Phone 86-0755-26072456

Fax 86-0755-26471087

E-Mail HyperDisk@exproduct.com

URL [Http://www.hyperdisk.com.cn](http://www.hyperdisk.com.cn)