

Specification for
Model : DMD-H102,H105

Revised : Feb. 28. 2012
Original Release Date : July 1, 2008

OPHIT

Revision History

Version Number	Revision Date	Author	Description of Changes
1.0	July 1, 2008	H.S Yang	Initial Version
1.1	Feb. 28. 2012	J.H LEE	Support resolution modified

TABLE OF CONTENTS

1. General Description

2. General Specification

3. Absolute Maximum Ratings

4. Electrical Specification

4.1 Electrical Specification

4.2 Current Test Report

4.2.1 DMD-H102 Current Test

4.2.2 DMD-H105 Current Test

4.3 Connector Pin Assignment

5. Mechanical Specification

5.1 Case Dimension

5.1.1 DMD-H102 Case

5.1.2 DMD-H105 Case

6. RoHS

1. General Description

DMD Series, OPHIT's DVI distributor system, take one digital video signal(Set-Top boxes, DVD Players and PC) through DVI input port and send it to 2 or more DVI output ports with which you can connect remote digital displays such as PC monitor, HDTV(LCD,PDP) and Projector using any DVI cables.

- DVI Specification 1.0 Compliant
- Supports for both PC monitor and HDTV display by function switch
- Supports HDCP Compliant Device
- Compatible with DVI standard by DDWG
- The use of standard DVI-D Plug
- Connects two or more digital display at the same time from the same digital video source
- Support resolution

480P	59.94Hz, 60Hz
576P	50Hz
720P	29.3Hz, 30Hz, 50Hz, 59.94Hz, 60Hz
1080i	25Hz, 29Hz, 30Hz
1080P	29.94Hz, 30Hz, 50Hz, 59.94Hz, 60Hz
VGA	60Hz, 72Hz, 75Hz, 80Hz
SVGA	56Hz, 60Hz, 72Hz, 75Hz, 85Hz
XGA	60Hz, 70Hz, 75Hz, 85Hz
XGA+	75Hz
SXGA	60Hz, 75Hz, 85Hz
UXGA	60Hz
SXGA+	59.94Hz, 60Hz
WSXGA+	60Hz
WUXGA(RD)	59.61Hz

- Waiting Mode for Low Power(50mW)

2. General Specification

Specifications		
DVI Input and Output		
Input / Output Channels	1 Input / 2 Output, 1 Input / 5 Output	
Clock Frequency	25Mhz - 225Mhz	
DVI Version	1.0	
Input / Output Signal	TMDS	
HDCP	Compliant with HDCP Rev 1.1	
DVI Connector	29 Pin Female	
Support resolution	Max1080P(HD)/ Max 1920x1200(PC)	
General Specifications		
Voltage(Adaptor)	5V DC(110-220V 60HZ)	
Power Consumption	3 watts(2 Output) / 5 watts(5 Output)	
Operating Temperature Range	0 to 50°C	
Operating Humidity Range	30 to 80% RH (no condensation)	
Size	DMD-H102	176(W) x 25(H) x 95(D) mm (6.9" x 1" x 3.7") inch
	DMD-H105	300(W) x 25(H) x 113(D) mm (11.8" x 1" x 4.4") inch
Weight		DMD-H102 : 472 g (1 lbs)
		DMD-H105 : 882 g(1.9 lbs)

3. Absolute Maximum Ratings

Parameter		Rating
Storage temperature		-20°C to +70°C
Operating temperature		0°C to +50C
Supply Voltage		DC 5 V
Current	DMD-H102	0.6 A
	DMD-H105	1 A
Power Dissipation	DMD-H102	3 W
	DMD-H105	5 W

NOTICE

Stresses greater than those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions above those indicated in the operations section for extended periods of time may affect reliability.

4. Electrical Specification

4.1 Electrical Specification

	Parameter	Symbol	Min	Typ	Max	Units	Condition	
P O W E R	Supply Voltage (Option External Power)	Vcc	+4.5	+5.0	+5.5	V		
	Supply Current	DMD-H102	Icc		0.5	0.6	A	UXGA 2 Out
		DMD-H105	Icc		0.9	1.0	A	UXGA 5 Out
	Power Dissipation	DMD-H102	Po		2.5	3	W	UXGA 2 Out
DMD-H105		Po		4.5	5	W	UXGA 5 Out	
T M D S	Reference voltage for graphic signal	Vref	+3.1	+3.3	+3.5	V		
	Single-ended high level input voltage	VH	Vref-0.01		Vref+0.01	V		
	Single-ended low level input voltage	VL	Vref-0.6		Vref-0.4	V		
	Single-ended input swing voltage	Vswing	0.4		0.6	V		
	Single-ended standby input voltage		Vref-0.01		Vref+0.01	V		
	Data Output Load	RLD		50		Ohms		

4.2 Current Test Report

4.2.1 DMD-H102 Current Test

State	Resolution	Current		Out Port	e. t. c.
Supply Current (25°C Ambient)	Not Connect (Power On)	10	mA	DVI Out (2 Out)	
	640 x 480, 60Hz Typical Case Pattern	270	mA		
	640 x 480, 60Hz Worst Case Pattern	280	mA		
	800 x 600, 60Hz Typical Case Pattern	300	mA		
	800 x 600, 60Hz Worst Case Pattern	310	mA		
	1024 x 768, 60Hz Typical Case Pattern	350	mA		
	1024 x 768, 60Hz Worst Case Pattern	360	mA		
	1280 x 1024, 60Hz Typical Case Pattern	430	mA		
	1280 x 1024, 60Hz Worst Case Pattern	450	mA		
	1600 x 1200, 60Hz Typical Case Pattern	540	mA		
	1600 x 1200, 60Hz Worst Case Pattern	550	mA		
	1920 x 1200, 60Hz Typical Case Pattern	530	mA		
	1920 x 1200, 60Hz Worst Case Pattern	550	mA		

Typical Case Pattern : Quantum Data 882 VTG -- Pattern master.

Worst Case Pattern : Quantum Data 882 VTG -- Pattern check_11

4.2.2 DMD-H105 Current Test

State	Resolution	Current		Out Port	e. t. c.
Supply Current (25°C Ambient)	Not Connect (Power On)	10	mA	DVI Out (5 Out)	
	640 x 480, 60Hz Typical Case Pattern	460	mA		
	640 x 480, 60Hz Worst Case Pattern	460	mA		
	800 x 600, 60Hz Typical Case Pattern	510	mA		
	800 x 600, 60Hz Worst Case Pattern	510	mA		
	1024 x 768, 60Hz Typical Case Pattern	590	mA		
	1024 x 768, 60Hz Worst Case Pattern	600	mA		
	1280 x 1024, 60Hz Typical Case Pattern	740	mA		
	1280 x 1024, 60Hz Worst Case Pattern	750	mA		
	1600 x 1200, 60Hz Typical Case Pattern	910	mA		
	1600 x 1200, 60Hz Worst Case Pattern	940	mA		
	1920 x 1200, 60Hz Typical Case Pattern	910	mA		
1920 x 1200, 60Hz Worst Case Pattern	940	mA			

Typical Case Pattern : Quantum Data 882 VTG -- Pattern master.

Worst Case Pattern : Quantum Data 882 VTG -- Pattern check_11

4.3 Connector Pin Assignment

Receiver (Input)

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2 Shield	11	T.M.D.S. Data1 Shield	19	T.M.D.S. Data0 Shield
4	No Connect	12	No Connect	20	Ground
5	No Connect	13	No Connect	21	No Connect
6	SCL	14	No Connect	22	T.M.D.S Clock Shield
7	SDA	15	Ground	23	T.M.D.S Clock+
8	No Connect	16	HPD	24	T.M.D.S Clock-

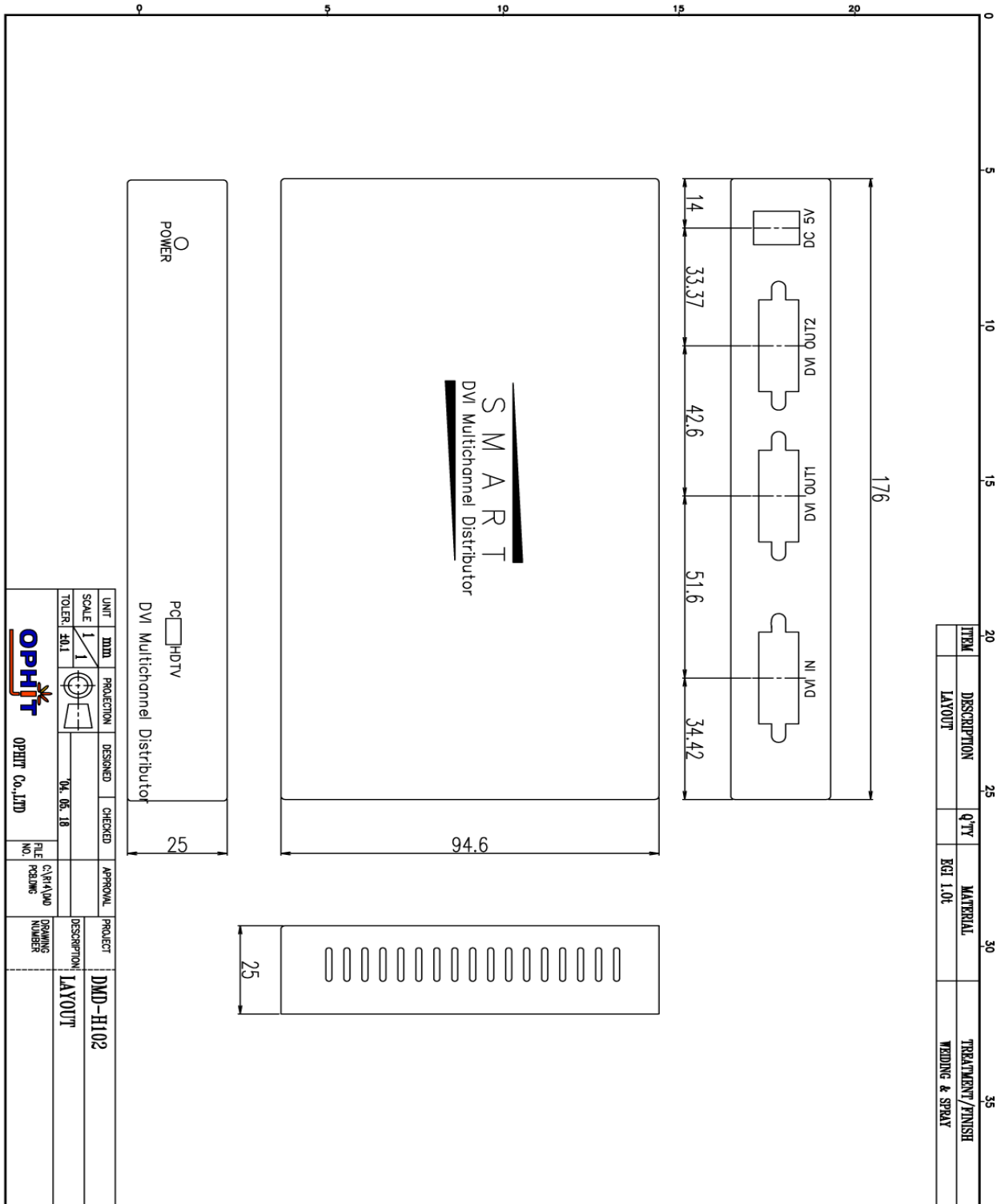
Transmitter (Output)

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2 Shield	11	T.M.D.S. Data1 Shield	19	T.M.D.S. Data0 Shield
4	No Connect	12	No Connect	20	No Connect
5	No Connect	13	No Connect	21	No Connect
6	No Connect	14	+5V Power	22	T.M.D.S Clock Shield
7	No Connect	15	Ground (for +5V)	23	T.M.D.S Clock+
8	No Connect	16	No Connect	24	T.M.D.S Clock-

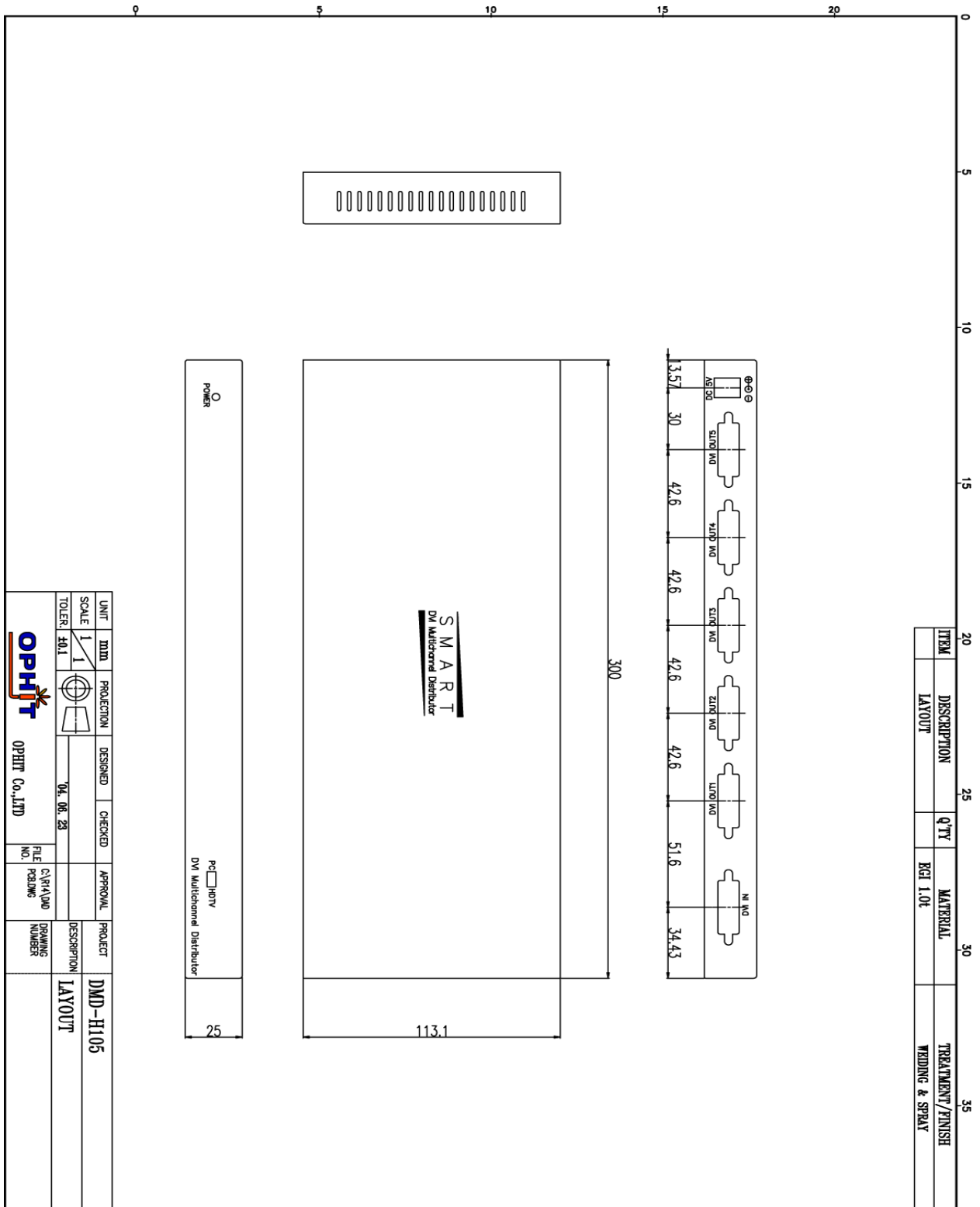
5. Mechanical Specification

5.1 Case Dimension

5.1.1 DMD-H102 Case



5.1.2 DMD-H105 Case



6. RoHS**Certificate of Conformance RoHS**

Dear Customer,

On January 27, 2003, the European Parliament and the Administrative Council adopted Directive 2002/95/EC (RoHS) that concerns the "Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment".

The parts currently delivered by **OPHIT CO., LTD.** are already free of lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr⁶⁺), polybrominated biphenyl (PBB) and polybrominated diphenyl (PBDE).

This Certification of Conformance is to certify that the products listed below comply with RoHS Directive mentioned above:

- DMD-H102
- DMD-H105

If you have any further questions regarding the RoHS compliance of parts delivered by **OPHIT CO., LTD.**, please do not hesitate to contact us at support@ophit.com.

Best regards,

JONG-KOOK MOON/CEO

OPHIT CO., LTD.