

# **Specification for**

## **Model : DDA**

Revised : Apr 09, 2012  
Original Release Date : May. 16, 2008

# **OPHIT**

## Revision History

Version Number	Revision Date	Author	Description of Changes
1.0	May 16, 2008	J.H Lee	Initial Version
1.1	Apr 06, 2011	J.H Lee	Support Resolution Added & Electrical Specification Modified
1.2	Apr 09, 2012	J.H Lee	Ordering Information Removed

## **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

4.3 Connector Pin Assignment

### **5. Mechanical Specification**

5.1 Case Dimension

5.2 Outdoor Product

### **6. RoHS**

## 1. General Description

**DDA**, digital to analog converter, takes your PC's DVI signal and converts it to analog graphic signal so that analog display devices without DVI output can be connected to your PC and Laptop with digital output easily and conveniently.

- Input : DVI (single Link), Output : Analog VGA signal
- Compatible with DVI standard by DDWG
- External power adapter is available as an option.
- VGA, SVGA, XGA, SXGA, UXGA, WUXGA resolution support
- Supports HDCP complaint Device

## 2. General Specification

Parameter	Symbol	
	Transmitter (Input)	Receiver (Output)
Connector	DVI 24pin receptacle	15pin D-sub female
Input and Output Signal	Digital signal	Analog signal
Video Bandwidth	1.65Gbps (Single Link)	
Module Size	39.5x15.0x75.2 mm (W x H x D)	
Module Weight		--

### 3. Absolute Maximum Ratings

Parameter	Rating
Storage temperature	-20°C ~ +70°C
Operating temperature	0°C ~ +50°C
Power Supply	-0.3 ~ 5.5 V
Relative Humidity	10 ~ 80 %
Lead-free solder temperature	260°C, 10 seconds

#### **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
POWER	Supply Voltage	Vcc	+4.5	+5.0	+5.5	V	
	Supply Current (UXGA)	Icc		360		mA	
	Power Dissipation (UXGA)	Po		1.8		W	
TMS	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

State	Resolution	Current	Power Dissipation	Source
Supply Current (25°C Ambient)	VGA (640x480, 60Hz) Master Pattern	200	1	Video signal generator (Model : MIK21 K-8258p)
	SVGA (800x600, 60Hz) Master Pattern	210	1.05	
	XGA (1024x768, 60Hz) Master Pattern	250	1.25	
	SXGA (1280x1024, 60Hz) Master Pattern	290	1.45	
	UXGA (1600x1200, 60Hz) Master Pattern	360	1.8	
	WUXGA (1920x1200, 60Hz) Master Pattern	300	1.5	
			Units : [mA]	

## 4.3 Connector Pin Assignment

**Transmitter(Input)**

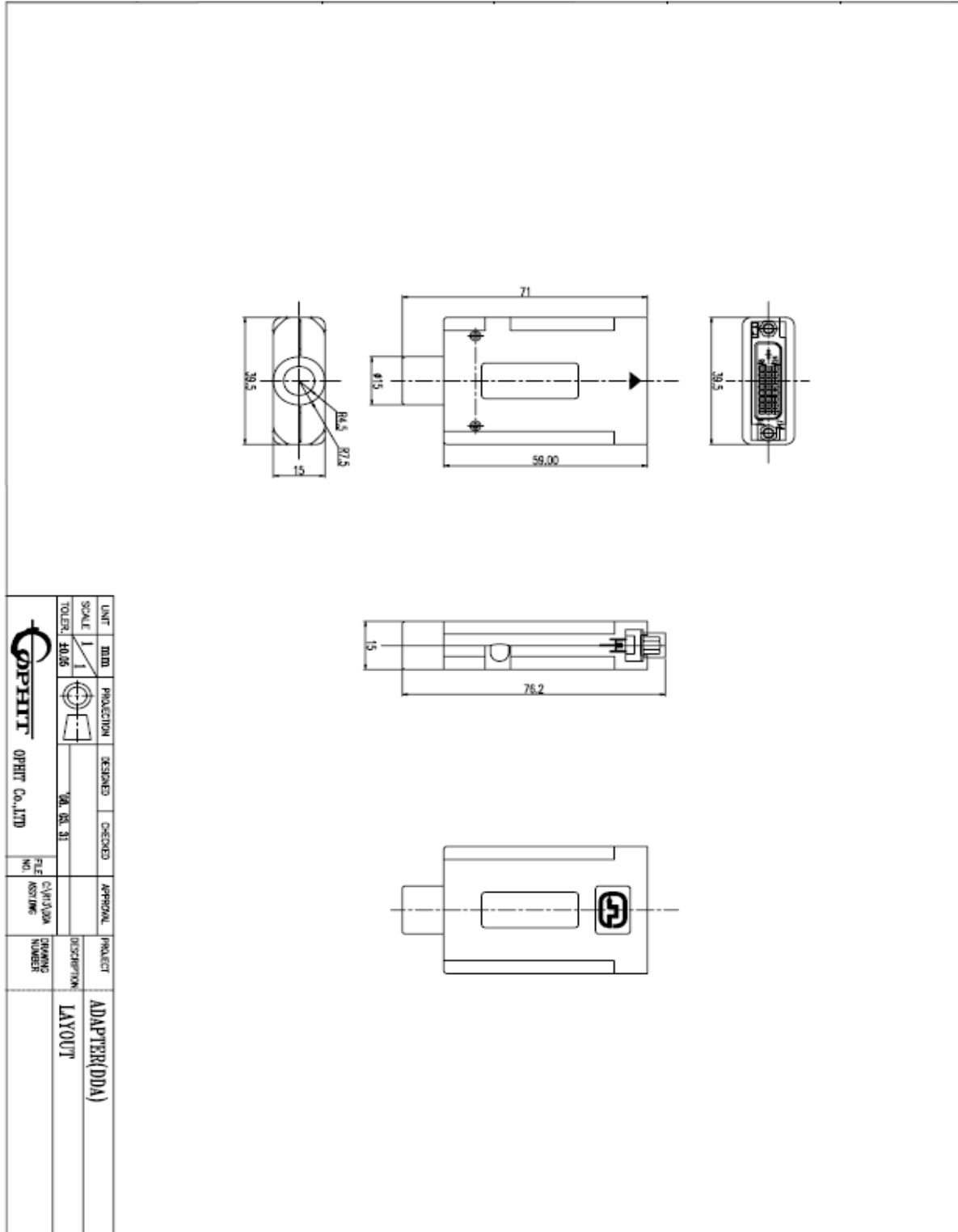
Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2 Shield	11	T.M.D.S. Data1 Shield	19	T.M.D.S. Data0 Shield
4	No Connect	12	No Connect	20	No Connect
5	No Connect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

**Receiver(Output)**

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	RED	6	RGND	11	Unused
2	GREEN	7	GGND	12	Unused
3	BLUE	8	BGND	13	Hsync
4	Unused	9	+5V	14	Vsync
5	GND	10	SGND	15	Unused

### 5. Mechanical Specification

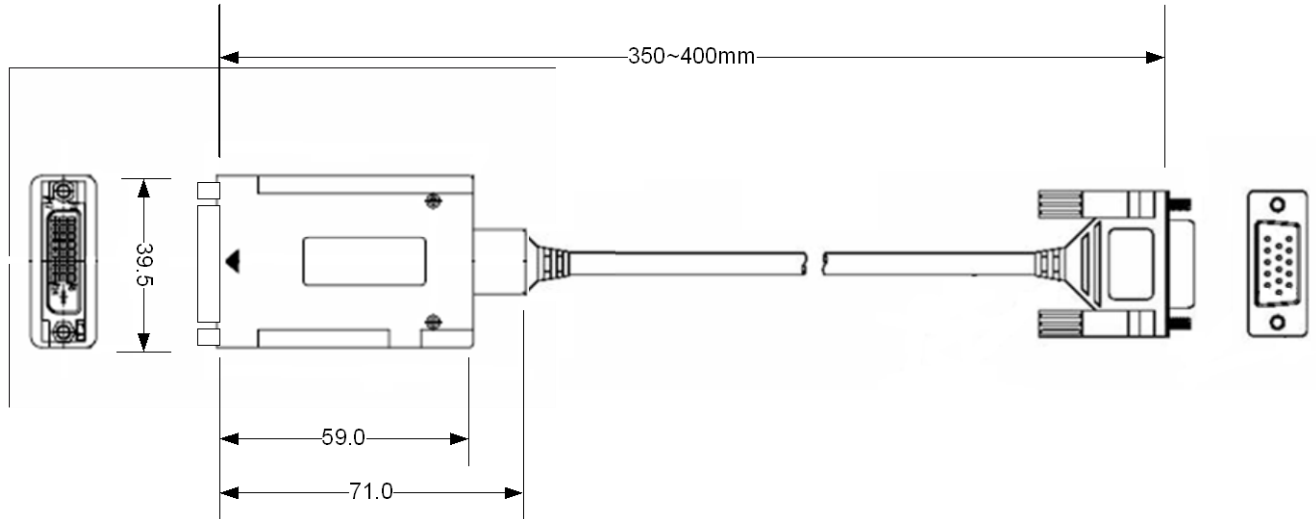
#### 5.1 Case Dimension





## 5.2 Outdoor Product & Ordering Information

- Outdoor Product



## 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 (Cr<sup>6+</sup>), 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:

- DDA

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](mailto:support@ophit.com).

Best regards,

JONG-KOOK MOON/CEO

OPHIT CO., LTD.