

Specification for

Model : DAD-U100

Revised : May 14, 2010
Original Release Date : June 30, 2008

OPHIT

Revision History

Version Number	Revision Date	Author	Description of Changes
1.0	June 30, 2008	H.S. Yang	Initial Version
1.1	May 14, 2010	B.H. Lee	Supported Resolutions Added (WSXGA+, 1080P, WUXGA)

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1. General Description

DAD-U100 take an analog VGA signal and convert it to DVI signal so that your PC and notebook without DVI output can be connected to digital display devices such as LCD monitor or projector with DVI input easily and conveniently.

- Input : Analog VGA signal
- Output : Analog VGA signal, DVI (Single Link)
- DVI Specification 1.0 Compliant
- Compatible with DVI Standard by DDWG
- WUXGA, 1080P, UXGA, WSXGA+, SXGA,XGA, SVGA, VGA

2. General Specification

Specifications	
DVI Input and Output	
Input / Output Channels	1 Output
Clock Frequency	25Mhz - 165Mhz
DVI Version	1.0
Output Signal	TMDS
DVI Connector	Type A 24 Pin Female
Support Resolution	VGA,SVGA,XGA,SXGA,WSXGA+,UXGA,1080P,WUXGA
Analog Output	
Input / Output Channels	1 Input / 1 Output
Clock Frequency	25Mhz – 165Mhz
Support Resolution	VGA,SVGA,XGA,SXGA,WSXGA+,UXGA,1080P,WUXGA
VGA Connector	15 Pin Female
General Specifications	
Voltage(Adaptor)	5V DC(110-220V 60HZ)
Power Consumption	2.3 watts(UXGA 1 Output)
Operating Temperature Range	0 to 50°C
Operating Humidity Range	30 to 80% RH (no condensation)
Size	162(W) x 26.7(H) x 104(D) mm (6.4" x 1.1" x 4.1") inch
Weight	500 g (1.1 lbs)

3. Absolute Maximum Ratings

Parameter	Rating
Storage temperature	-20°C to +70°C
Operating temperature	0°C to +50°C,
Supply Voltage	DC 5V
Current(MAX) / Resolution(PC)	460mA / UXGA
Power Dissipation	2.3W

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	Icc		0.46		A	UXGA 1 Out
	Power Dissipation	Po		2.3		W	UXGA 1 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

State	Resolution	Current		Out Port	e. t. c.
Supply Current (25°C Ambient)	Not Connect (Power On)	127	mA	DVI Out	
	640 x 480, 60Hz Typical Case Pattern	329	mA		
	640 x 480, 60Hz Worst Case Pattern	339	mA		
	800 x 600, 60Hz Typical Case Pattern	352	mA		
	800 x 600, 60Hz Worst Case Pattern	362	mA		
	1024 x 768, 60Hz Typical Case Pattern	376	mA		
	1024 x 768, 60Hz Worst Case Pattern	390	mA		
	1280 x 1024, 60Hz Typical Case Pattern	422	mA		
	1280 x 1024, 60Hz Worst Case Pattern	440	mA		
	1600 x 1200, 60Hz Typical Case Pattern	473	mA		
	1600 x 1200, 60Hz Worst Case Pattern	504	mA		
	1680 x 1050, 60Hz Typical Case Pattern	455	mA		
	1680 x 1050, 60Hz Worst Case Pattern	478	mA		
	1920x1080, 60Hz Typical Case Pattern	471	mA		
	1920x1080, 60Hz Worst Case Pattern	493	mA		
	1920x1200, 60Hz Typical Case Pattern	472	mA		
1920x1200, 60Hz Worst Case Pattern	533	mA			

Typical Case Pattern : MIK21 K-8258P-- Pattern master.

Worst Case Pattern : MIK21 K-8258P-- Pattern dot on/off

4.3 Connector Pin Assignment

Receiver (Input) – D-Sub

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	RED	6	RGND	11	GND
2	GREEN	7	GGND	12	No Connect
3	BLUE	8	BGND	13	H Sync
4	GND	9	No Connect	14	V Sync
5	GND	10	SGND	15	No Connect

Transmitter (Output) - DVI

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	Hot Plug Detect	24	T.M.D.S Clock-
C1	No Connect	C2	No Connect	C3	No Connect
C4	No Connect	C5	No Connect		

Transmitter (Output) – D-Sub

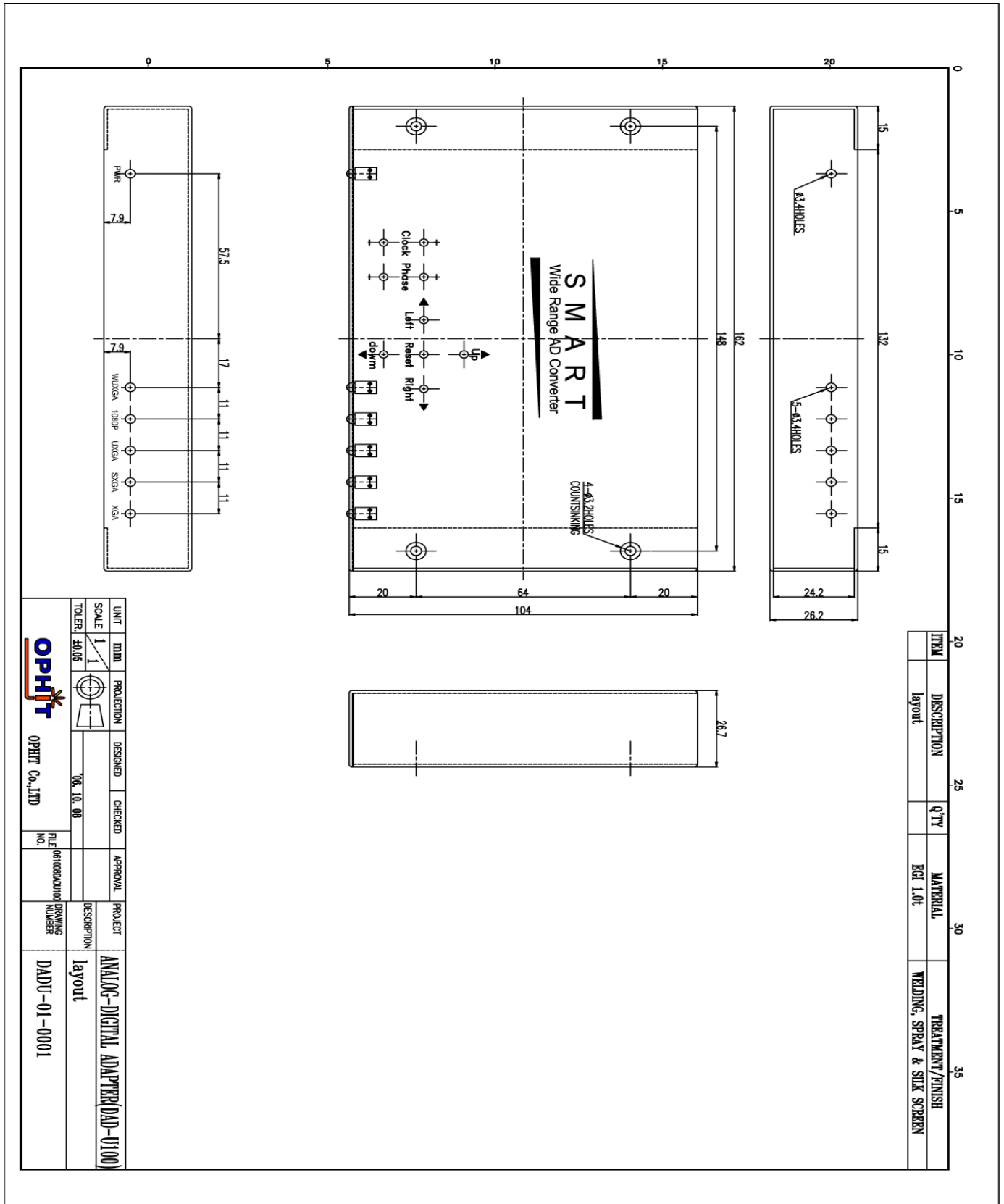
Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	RED	6	RGND	11	GND
2	GREEN	7	GGND	12	No Connect
3	BLUE	8	BGND	13	H Sync
4	GND	9	No Connect	14	V Sync
5	GND	10	SGND	15	No Connect

4.4 Support Resolution

PC Graphic Resolution			
640 x 350	85Hz	Progressive	
720 x 400	85Hz	Progressive	
640 x 480	60Hz, 75Hz	Progressive	VGA
800 x 600	56Hz, 60Hz, 75Hz	Progressive	SVGA
1024 x 768	60Hz and 75Hz	Progressive	XGA
1280 x 768	60Hz	Progressive	
1280 x 720	60Hz	Progressive	720P
1280 x 960	60Hz	Progressive	
1280 x 1024	60Hz and 75Hz	Progressive	SXGA
1440 x 900	60Hz	Progressive	WXGA+
1600 x 1200	60Hz	Progressive	UXGA
1680 x 1050	60Hz	Progressive	WSXGA+
1920 x 1080	60Hz	Progressive	1080P
1920 x 1200	60Hz	Progressive	WUXGA

5. Mechanical Specification

5.1 Case Dimension



ITEM	DESCRIPTION	Q'TY	MATERIAL	TREATMENT/FINISH
	layout		ECR 1.0t	WELDING, SPRAY & SILK SCREEN

UNIT	MM	PROJECTION	DESIGNED	CHECKED	APPROVAL	PROJECT
SCALE	1:1					ANALOG-DIGITAL ADAPTER(DAD-U100)
TOLER.	±0.05		06.10.08			layout
FILE NO.	061008001001					DADU-01-0001
OPHIT Co.,LTD						

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:

- DAD-U100

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.