



CVBXB-DVI

Conversion Box – DVI to TMDS DVI/Fiber BOX Type

Customer :

Specification for
Model : CVBXB-DVI

Revised : Apr. 03. 2012
Original Release Date : Feb. 11. 2011

OPHIT



Revision History

Version Number	Revision Date	Author	Description of Changes
1.0	Feb. 11. 2011	J.H LEE	Initial Version
1.1	Apr. 03. 2012	J.H LEE	Supports resolution and optical specification modify



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1. General Description

CVBXB-DVI is a media converter to convert DVI electrical signal to optical signal without any signal degradation, specially 1 fiber output to support maximum DVI-D resolutions up to 1920x1200 and 1080p.

This unit is enclosed by box type.

- 1 DVI Single Link input, 1 fiber and DVI output to deliver TMDS signal
- 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

- Automatically detects the input signal and transmit TMDS output signal
- No input signal is automatically Power-down mode(LD Turn-off)
- High Speed and long distance transmission by 1 channel SC type Multi-Mode Fiber
- DVI Specification 1.0 Compliant
- Product state define : Power ON : Green color LED ON
Input signal detect : Yellow color LED ON
- Include +12V DC adapter

2. General Specification

Input Format	DVI
Input Signal	PC : Max 1920x1200@60Hz(162 MHz)
Optical Output	SC type optical connector, DVI
Fiber	Multi-mode 50/125 or 62.5/125 μm SC fiber
Transmission distance	1,650 ft(500M)
Connector	
Input	DVI-I
Output	SC Type Optical, DVI-I
Power	DC-JACK 2.1 pie
General	
Dimensions	99.2 x 116.5 x 21.2mm (W x D x H)
Weight	--
Enclosure Color	Silver
Power	DC +12V, 1.5A

3. Absolute Maximum Ratings

Parameter	Rating
Storage temperature	-20°C ~ +70°C
Operating temperature	0°C ~ +50°C
Power Supply	-0.3 ~ +12 V
Relative Humidity	10 ~ 80 %
Lead solder temperature	380°C +/-30°C, 10 seconds

NOTICE

Stresses greater than those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. This is a stress rating 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 & Optical Specification

4.1 Electrical Specification

Parameter		Symbol	Min	Typ	Max	Units	Condition
POWER	Supply Voltage	Vcc		+ 12		V	
	Supply Current	Icc		180		mA	Standby
				320			Working
	Power Dissipation	Po		2.16		W	Standby
				3.84			Working

4.2 Optical Specification

Parameter (per Channel)	Symbol	Min	Typ	Max	Units
Average Optical Power, Per Lane ¹	Pout	-3.0	0.0		dBm
Optical Modulation Amplitude		-6.25			dBm
Center Wavelength – Lane 0			778		nm
Center Wavelength – Lane 1			800		nm
Center Wavelength – Lane 2			825		nm
Center Wavelength – Lane 3			850		nm
Optical Rise/Fall Time ²			200		Ps

Notes:

Transmitter module of Model CVBXB-DVI includes VCSEL (Vertical Surface Emitting Laser Diode) with 850 nm invisible laser radiation.

Do not view directly laser module of transmitter or the end of the other side of optical cable connected to transmitter with optical instrument.

Transmitter module of CVBXB-DVI is Class 1M Laser Product.

¹ I= 5mA, T=25C. Measured at the end of a 2m section of 62.5μ fiber.

² Rise and fall times measured from 20 - 80%

4.3 Connector Pin Assignment

4.3.1 Input Connector

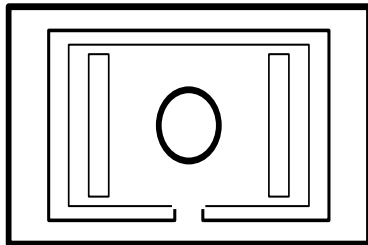


Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	CH 2-	9	CH 1-	17	CH 0-
2	CH 2+	10	CH 1+	18	CH 0+
3	CH2 Ground	11	CH1 Ground	19	CH0 Ground
4	N/C	12	N/C	20	N/C
5	N/C	13	N/C	21	N/C
6	SCL	14	+5V	22	CLK Ground
7	SDA	15	Ground	23	CLK+
8	N/C	16	Hot plug	24	CLK-
C1	Ground	C2	Ground	C3	Ground
C4	Ground	C5	Ground		

Female Connector

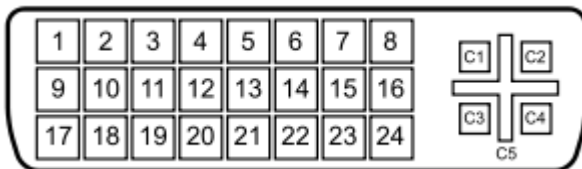
<DVI -I TYPE>

4.3.2 Output Connector



Pin	Signal Assignment
1	T.M.D.S. optical output

Female Connector
<SC Connector type>

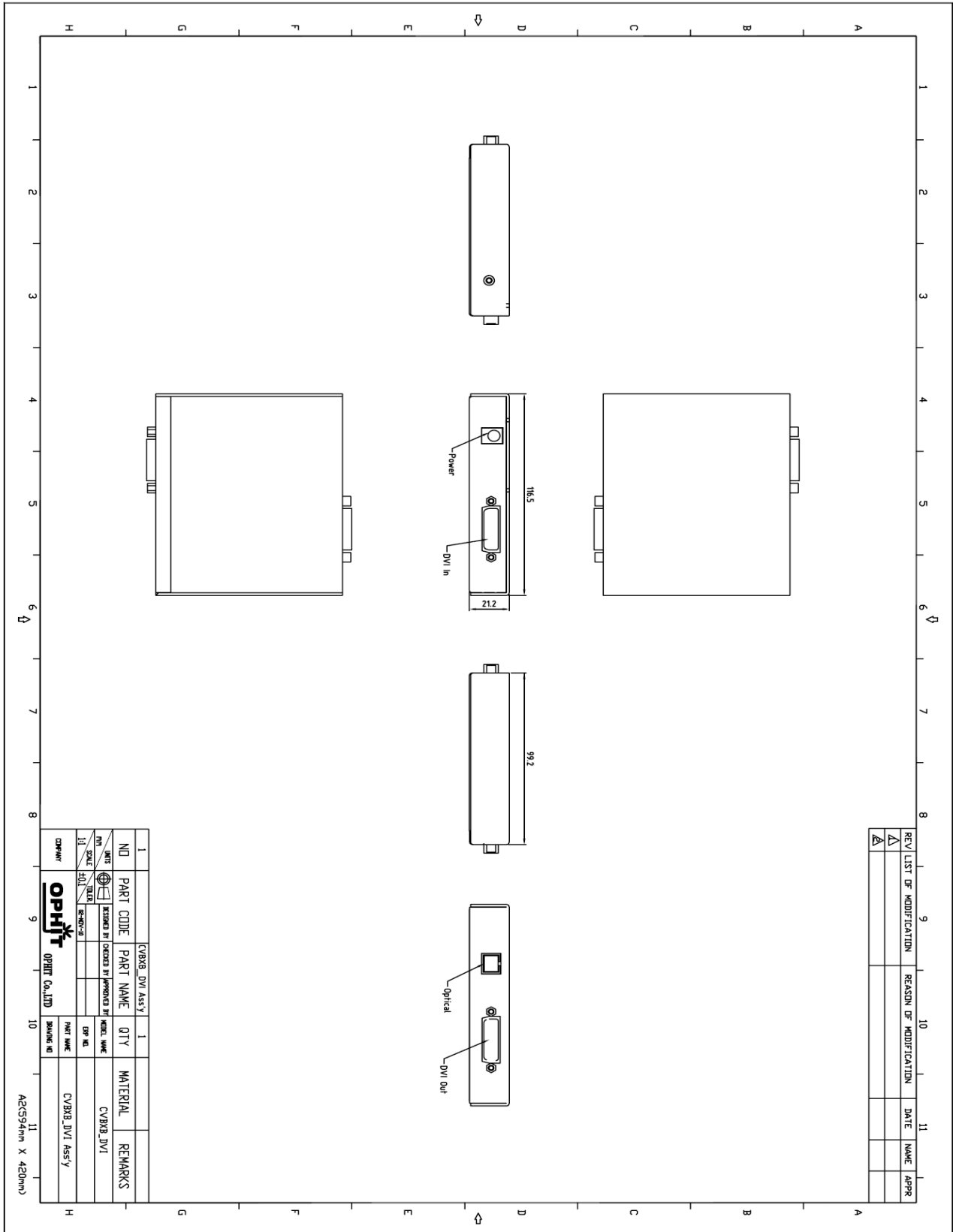


Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	CH 2-	9	CH 1-	17	CH 0-
2	CH 2+	10	CH 1+	18	CH 0+
3	CH2 Ground	11	CH1 Ground	19	CH0 Ground
4	N/C	12	N/C	20	N/C
5	N/C	13	N/C	21	N/C
6	N/C	14	+5V	22	CLK Ground
7	N/C	15	Ground	23	CLK+
8	N/C	16	N/C	24	CLK-
C1	Ground	C2	Ground	C3	Ground
C4	Ground	C5	Ground		

Female Connector
<DVI -I TYPE>

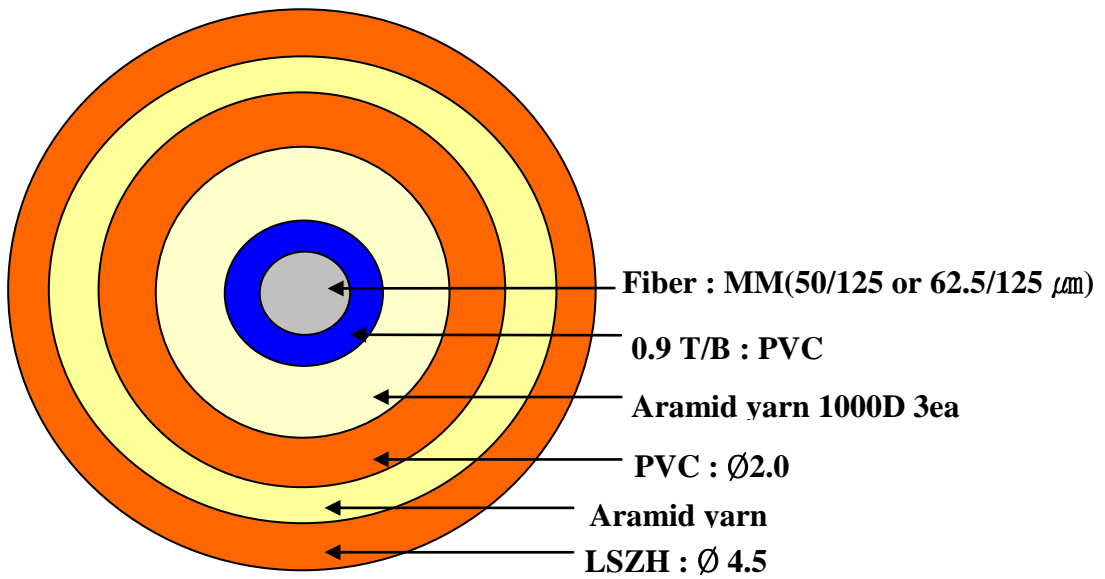
5. Mechanical Specification

5.1 Case Dimension



5.2 Optical Cable Information

- Outdoor Type Cable



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 6), polybrominated biphenyl (PBB) and poly brominated diphenyl (PBDE).

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

- CVBXB-DVI

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.