



CVBXB-HDSDI

Conversion Box – SDI to TMDS DVI/Fiber BOX Type

Customer :

Specification for
Model : CVBXB-HDSDI

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-HSDI, is signal converter from SDI to TMDS optical and DVI signal, specially 1 fiber output to support maximum resolutions up to 1080p/60Hz.

This unit is enclosed by box type.

- 1 SD/HD-SDI video input, 1 fiber and DVI output to deliver TMDS signal
- Supports resolution to
 - 480i @ 60Hz, 720p @ 50, 59.94/60Hz,
 - 1080i @ 50, 59.94/60Hz, 1080p @ 23.98/24, 25, 29.97/30, 50 and 59.94/60Hz
- 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	SD/HD-SDI
Input Signal	SMPTE 259M-C (270Mbps) SMPTE 292M (1.485, 1.485/1.001Gbps) SMPTE 424M (2.970, 2.970/1.001Gbps)
Optical Output	SC type optical connector, DVI
Fiber	Multi-mode 50/125 or 62.5/125 μ m SC fiber
Transmission distance	1,650 ft(500M)
Connector	
Input	BNC
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
P O W E R	Supply Voltage (Option External Power)	Vcc		+ 12		V	
	Supply Current	Icc		300		mA	Standby
				360			Working
	Power Dissipation	Po		3.6		W	Standby
				4.32			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-HSDI 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.

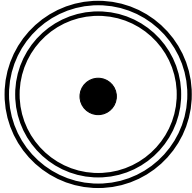
Transmitter module of CVBXB-HSDI is Class 1M Laser Product.

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

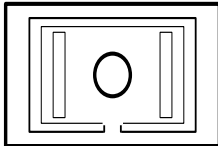
4.3.1 Input Connector



Female Connector
<SDI BNC type>

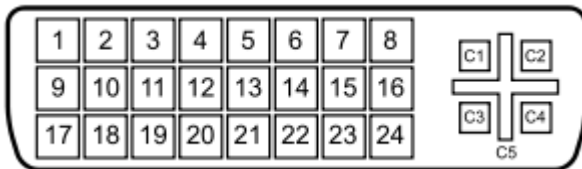
Pin	Signal Assignment
1	1 plus screen

4.3.2 Output Connector



Female Connector
<SC Connector type>

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

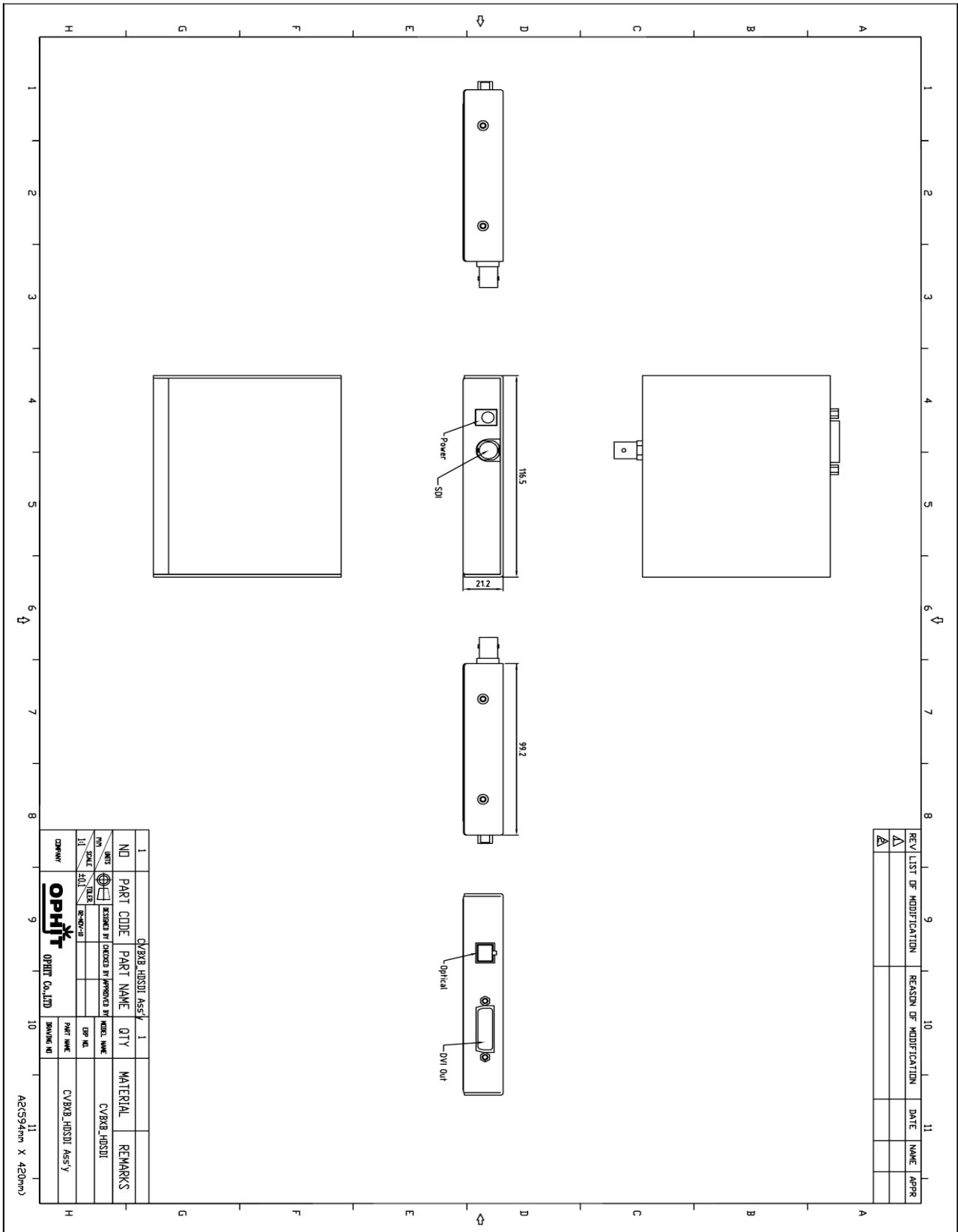


Female Connector
<DVI -I TYPE>

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		

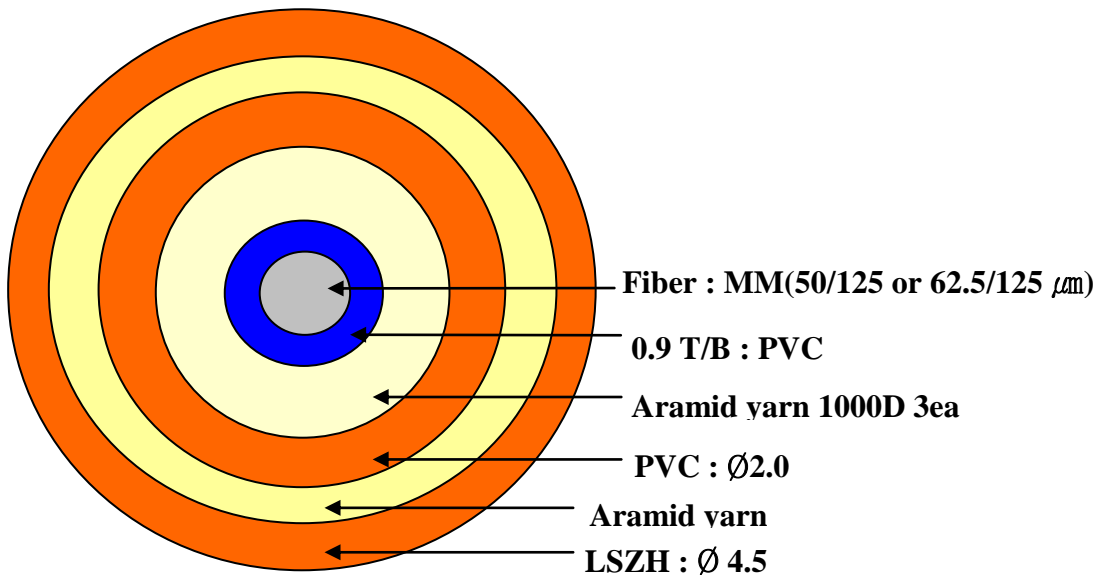
5. Mechanical Specification

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-HSDI

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.