

PRODUCT DATA SHEET

SHC

SDI to HDMI Converter



Revision History

Version Number	Revision Date	Page	Description of Changes
1.0	May 25 2011	ALL	Initial Version
1.1	Dec.13.2011	4	Support resolution modified
1.2	Mar.15.2012	4	Support resolution added
1.3	Apr.20 2012	8	Ordering Information Removed
1.4	Nov.11.2019	ALL	Renewal Specification

PROPRIETARY NOTE

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TABLE OF CONTENTS

1. General Description	4
2. General Specification	4
3. Absolute Maximum Ratings	5
4. Electrical Specification	6
4.1 Electrical Specification	
4.2 Connector Pin Assignment	
4.2.1 Input Port	
4.2.2 Output Port	
5. Mechanical Specification	8
5.1 Case Dimension	
5.2 Connection	
6. Regulatory	9
6.1 EMC & Safety Agency approval	
6.1.1 CE-EMC compliance	
6.1.2 FCC compliance	
7. Packing Information	9
8. RoHS	10
9.REACH	11

1. General Description

OPHIT 's **SHC** is perfect solution for converting SDI signal to HDMI signal.

It enables SDI compliant device to be connected to digital display with HDMI input.

- Converts SDI signal to HDMI signal
- Input : 1 x SDI / Output : 1 x HDMI, 1 SDI
- Compliant with HDMI1.3
- Support one SDI output for cascade function
- Input signal detection monitoring function (LED)

2. General Specification

Input port	SD/HD/3G-SDI
SDI Input Signal	525i, 625i,
Resolution	720p @ 50, 59.94/60Hz, 1080i @ 50, 59.94/60Hz, 1080p @ 23.98/24, 25, 29.97/30, 50 and 59.94/60Hz
Output port	TMDS, SD/HD/3G-SDI
HDMI Output Signal	480i @ 60Hz,
Resolution	720p @ 50, 59.94/60Hz, 1080i @ 50, 59.94/60Hz, 1080p @ 23.98/24, 25, 29.97/30, 50 and 59.94/60Hz
SDI Output Signal	525i, 625i,
Resolution	720p @ 50, 59.94/60Hz, 1080i @ 50, 59.94/60Hz, 1080p @ 23.98/24, 25, 29.97/30, 50 and 59.94/60Hz
Connector	
Input	BNC
Output	HDMI, BNC
Power	DC-JACK 2.1 pie
General	
Dimensions	85x100x25mm (W x D x H)
Weight	250g
Enclosure Color	Navy
Power	DC +12V, 1.0 A

3. Absolute Maximum Ratings

Parameter	Rating
Storage temperature	-20°C ~ +70°C Non-Condensing
Operating temperature	0°C ~ +50°C Non-Condensing
Transportation temperature	-20°C ~ +70°C Non-Condensing
Power Supply	-0.3 ~ 12 V
Relative Humidity	10 ~ 80 %
Lead solder temperature	260°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.

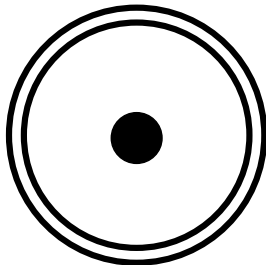
4. Electrical Specification

4.1 Electrical Specification

	Parameter	Symbol	Min	Typ	Max	Units	Condition
P O W E R	Supply Voltage	Vcc		+12.0		V	
	Supply Current	Icc		0.2		A	1080p/60Hz
	Power Dissipation	Po		2.4		W	1080p/60Hz
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 Connector Pin Assignment

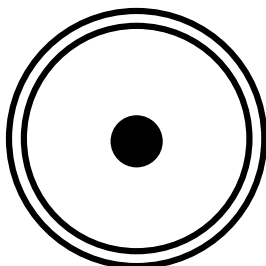
4.2.1 Input port



Female Connector
< BNC type >

Pin	Signal Assignment
1	SMPTE Signal Input

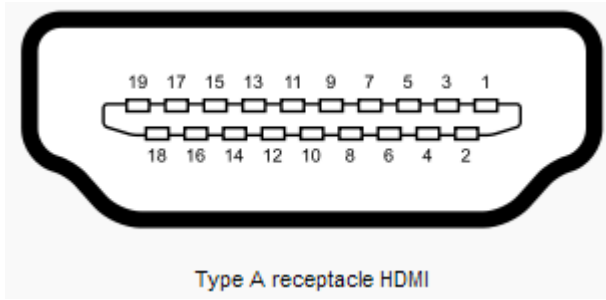
4.2.2 Output port



Female Connector
< BNC type >

Pin	Signal Assignment
1	SMPTE Signal Output

GENERAL SPECIFICATION V1.4
SHC

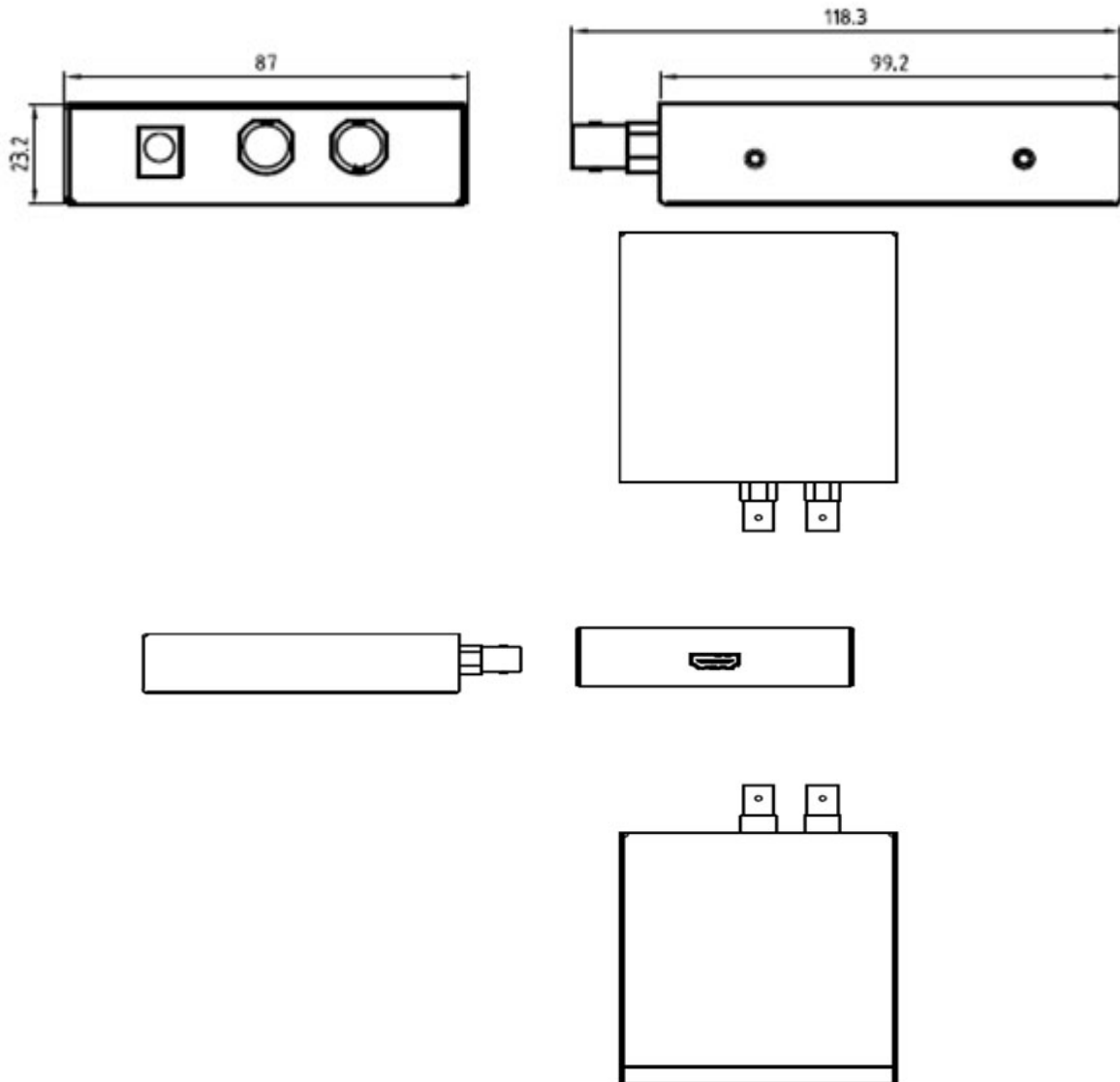


Type A receptacle HDMI

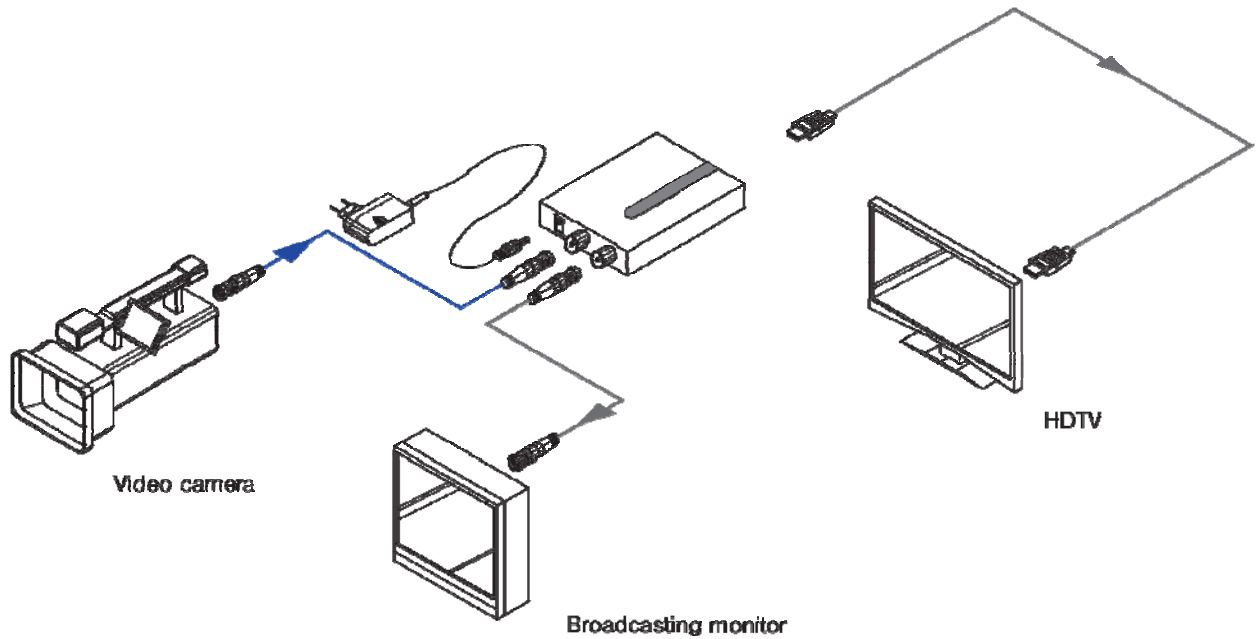
Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data 2+	2	T.M.D.S. Data 2 Shield
3	T.M.D.S. Data 2-	4	T.M.D.S. Data 1+
5	T.M.D.S. Data 1 Shield	6	T.M.D.S. Data 1-
7	T.M.D.S. Data 0+	8	T.M.D.S. Data 0 Shield
9	T.M.D.S. Data 0-	10	T.M.D.S. Clock+
11	T.M.D.S. Clock Shield	12	T.M.D.S. Clock-
13	CEC	14	Reserved (N. C on device)
15	SCL	16	SDA
17	DDC/CEC Ground	18	+5V Power
19	Hot Plug Detect		

5. Mechanical Specification

5.1 Case Dimension



5.2 Connection



6. Regulatory

6.1 EMC & Safety Agency approval

6.1.1 CE-EMC compliance:

This Product is investigated to EN55022:2006/A1:2007, EN55024:1998/A2/2003, EN 61000-3-2:2006 and EN61000-3-3:2008

6.1.2 FCC compliance:

This Product is investigated to FCC 47CFR part 2 and part 15

7. Packing Information

Set(Unpacking, SHC Only)	87mm*118.3mm*23.2mm	193.0g
Package(1Set, Inner Box Packing)	242.0mm*185.0mm*70.0mm	465.0g
Package(Multi, 15PCS Packing)	595.0mm*305.0mm*345.0mm	9.0Kg

8. RoHS

OPHIT is fully aware of the requirement under the **Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive EU 2015/863(RoHS3)**, which adds four new restricted substances to the previous Directive 2011/65/EU(RoHS2).

Hereby we guarantee that we do not intentionally use the substances described below and based on third party chemical analysis the thresholds of the substances as indicated are not exceeded for our all products.

Substance	CAS #	RoHS Limity by % (PPM)
Lead (PB)	7439-92-1	0.1% (1000 PPM)
Mercury (Hg)	7439-97-6	0.1% (1000 PPM)
Hexavalent Chromium (CrVI)	15840-29-9	0.1% (1000 PPM)
Polybrominated Biphenyls (PBB)	-	0.1% (1000 PPM)
Polybrominated Diphenyl Ethers (PBDE)	-	0.1% (1000 PPM)
Cadmium (Cd)	7440-43-9	0.01% (100 PPM)
Bis(2-Ethylhexyl) phthalate(DEHP)	117-81-7	0.1% (1000 PPM)
Benzyl butyl phthalate(BBP)	85-68-7	0.1% (1000 PPM)
Dibutyl Phthalate(DBP)	84-74-2	0.1% (1000 PPM)
Diisobutyl Phthalate(DIBP)	84-69-5	0.1% (1000 PPM)

Banned Substances by RoHS Directive 2011/65/EU+2015/863/EU, EN50581:2012

OPHIT will continue to monitor any new amendments/changes to Directive and subsequently review our all products with regards to compliance. OPHIT will also ensure that any new information is communicated to its customers, suppliers and stakeholders as required.

Signature : Jong-Kook, Moon

Jong-kook, Moon

Title/Issue date : President/July.22.2019

9. REACH

The European REACH Regulation 1907/2006 on Registration, Evaluation, Authorization, and Restriction of Chemicals(REACH), Annex XV II entered into Force in June 2009, and affects all companies producing, Importing, using, or placing Products on the European market. The aim of the REACH regulation is to ensure a high Level of protection of human health and the environment from chemical substances.

OPHIT Co., Ltd substances management system follow and complies with the current revision of the REACH Regulation on the substances as identified by ECHA(European Chemical Agency).

OPHIT Co., Ltd products are considered articles as defined in REACH Article 3(3). These products/articles under normal and reasonable conditions of use do not have intended release of substances. Therefore the requirement in REACH Article 7(1)(b) for registration of substances contained in these products/articles does not apply.

OPHIT Co., Ltd products/articles, do not contain **Substances of very High Concern** or if there **SVHC** in the product/article, the content is less than the 0.1%(wt/wt) as defined by REACH Article 57, Annex XIV, Directive 67/548/EEC. Therefore the requirement in REACH Article 7(2) to notify ECHA if a product/article contains more than 0.1% wt/wt of an SVHC and tonnage exceeding 1 tone per importer per year is not applicable.

OPHIT's European operations do not manufacture or import chemicals, therefore OPHIT Co., Ltd has no obligation to register substances.



Jong-Kook, Moon
President

OPHIT Co., Ltd ACCEPTS NO DUTY TO NOTIFY USERS OF THIS OF DECLARATION OF UPDATES OR CHANGES TO THIS DECLARATION.