Release Version 1.2





# HDMI to HD-SDI Scale Converter with HDMI Looped Output **SC-HDT0801S**

## **User's Manual**





#### **Precaution and Safety Guidelines**

# Please read this user's manual thoroughly prior to use the unit for its easy and convenient use.

- Do not install the product in the following places: extremely low or high temperature conditions; places exposed to rain, snow, or high humidity; places containing or exposed to oil and gas; places exposed to vibration and shock; places under direct sunlight or exposed to outdoor weather conditions; places exposed to radio waves (RF) or near to power lines. It may cause low performance or malfunction of the unit.
- Do not disassemble the product or insert foreign objects.
- The unit is subject to electric shock hazard. Be careful not to get an electric shock while using the device.
- Please use only electrical safety approved power supply unit with electromagnetic compatibility.
- Do not use and/or connect any devices inappropriate to the unit. It may cause malfunction of the unit or fire.
- Use this product under temperature conditions only between 10°C and +50°C.
- Should be careful not to have the lines changed when connecting them.
- Prior to turn on the device, check the cable insulation condition of the data cable, connected with external devices.
- Before installing the product, check its voltage rate and then turn on the power.
- Make sure to turn off the product prior to installation.
- Do not subject the product to physical shock or exert excessive force to operate the product.
- Do not use the device when any smoke or smell is produced from the unit. It may be subject to fire or electric shock. If any smoke or smell is produced, please turn off the unit and remove the power cable immediately, and contact your distributor to check the device properly.
- If the power does not turn ON, please check whether the power cable is connected correctly or not.
- Please note the transmission distance may vary depending on the cable quality and its loop resistance. Please refer to the transmission distance reference table per type of coaxial cable.
- Please use only coaxial cable when installing this device.
- If the device does not work properly, please contact your distributor.
- When thunder or lightning, please unplug the power cord for your safety.

## **1. Introduction**

#### 1.1 Overview

This device, HDMI to HD-SDI converter, basically receives HDMI signal and converts into HD-SDI and also using built-in scale converter, this device supports the various output resolution regardless of the input resolution. Using the Rotary switch, it is possible to set the output resolution as selected easily and using the HDMI Looped output port, it is possible to display the same image locally.

#### 1.2 Features

- Support HDMI 1.3 input
- converter HDMI signal into HD-SDI signal (2 outputs)
- HD-SDI + Power transmission over single Coax cable
- Possible to select the output resolution using built-in scale converter
- Support embedded Audio
- Power over Coax function with SeeEyes HD-SDI transmission devices
- Support HDMI Looped through output
- Long distance transmission (Full HD: 1.5G, Max.200m with RG-6/U)
- No need of power wiring saving infrastructure cost under 30~50%
- Built-in surge protection circuit
- Effective and economical cabling solutions compared with Fiber-optic, HDMI cabling

#### **1.3 Supportive resolution (Input / Output)**



\* Factory default resolution: 1920 \* 1080p 60(S/W NO: 6)

#### <Tip> If there's no Video input, the Color bar pattern will be outputted.

-. When there is no HDMI input source, the device outputs Color bar pattern through the HD-SDI output port (2 outputs)

### 2. Components 2.1 SC-HDT0801S

Model	Tx.	Power Supply Unit	Design	User's Manual
SC- HDT0801S	0	DC12V Adaptor (Optional) or PoC from SC- HDR0801S		$\sim$

#### 2.2 Sub-brand products

Model	Power Supply	Design	Features
SC-HDR0801(S)	Power over COAX : DC48V	Society on the second s	. Convert HD-SDI to HDMI signal. . Supply power from SDI INPUT port to the camera.
SC-HLR01	Power over COAX : IN/OUT_DC48V		. Extending the distance (repeater) . Receiving power from SDI INPUT port and supplying power to the camera through SDI OUTPUT port
SC-HLR02	Power over COAX : IN/OUT_DC48V	÷	. Extending the distance (repeater) 1 IN 2OUT . Receiving power from SDI INPUT port and supplying power to the camera through SDI OUTPUT port
SC-HDS0801	Power over COAX : OUT_DC48V		. Supplying power over coax through SDI INPUT port to the products which have a VP function by by-passing the HD-SDI signal.
SC-HRP0604(D) SC-HRP0608(D)	Power over COAX : OUT_DC48V	Adda	. Receive HD-SDI signal and output HD-SDI signal . Supplying power to the camera through SDI INPUT port and outputting HD-SDI signal through SDI OUTPUT port. . Composed of 4ch, 8ch rack type(1U-Type. 19")
SC-HTP0601D	OUT: DC12V/0.5A Power over COAX : IN_DC48V		<ul> <li>Receive HD-SDI signal and output HD-SDI signal</li> <li>Supplying power to the camera and sending the RS-485 signal over single Coaxial cable.</li> </ul>
SC-HLR01D	Power over COAX : IN/OUT_DC48V		. Extending the distance (repeater) . Transmitting the RS-485 Data over single coaxial cable. . Receiving power from SDI INPUT port and supplying power to the camera through SDI OUTPUT port.
SC-HRP0601D	Power over COAX : OUT_DC48V		. Receive HD-SDI signal and output HD-SDI signal . Supplying power to the camera and sending the RS-485 signal over single Coaxial cable.
SC-SDHD94Q	Power over COAX : IN_DC48V		<ul> <li>Receiving the 4 of Analog signal and outputing 1 of HD-SDI signal in Quad.</li> <li>Various Output resolution selectable.</li> <li>Supplied power over Coax from SeeEyes SC-HDR0801S through HD-SDI port.</li> </ul>

## **3. Product Parts & Peripheral Device Connection**



- 1 HDMI INPUT: HDMI-A Type
- ② HDMI OUTPUT: HDMI-A Type
- ③ LED Indicator

LED Color	STATUS
Yellow	On: POWER INPUT
Green	On: HDMI INPUT

④ HD-SDI OUTPUT: HD-SDI Signal output (Selected resolution), Power input (in case of using Power over coax feature)

- (5) HD-SDI OUTPUT: HD-SDI Signal output (Selected resolution)
- 6 Rotary switch for HD-SDI output resolutions
- Possible to select the output resolution

Image	S/W NO	Output resolutions	S/W NO	Output resolutions
	0	1280 * 720p 60	4	1920 * 1080p 30
	1	1280 * 720p 50	5	1920 * 1080p 25
	2	1920 * 1080i 59.94	6	1920 * 1080p 60
	3	1920 * 1080i 50	7	1920 * 1080p 50

% Factory default resolution: 1920 \* 1080p 60 (S/W NO: 6)

% After setting the resolution, please remove the switch cap to prevent an unexpected change of the setting.

- ⑦ **POWER INPUT:** 2PIN Terminal Block
  - -. Input power: DC12V ~ DC48V

Table 1-17

						LIAD	ie 4-1]
CABLE Type		1.5G	3G	LOOP Resistance		_ SDI Max.	
	M.F	dB/100m				Trans. distance	
		750MHz	1.5GHz	R/200m	R/m	1.5G	3G
5C-HFBT	U-JIN	17.8	26.3	8.32	0.0416	200	100
ЭС-ПГВТ	KUMKANG	17.8	26.3	10	0.05	200	100
L-5CFB	CANARE	17.7	26.1	6.2	0.031	200	100
S-5C-FB	TACHII	18.1	29.2	7.4	0.037	200	100
S-5C-FV	TACHII	19.7	31.5	10.4	0.052	180	80
L-5C-2V	CANARE	25.7	-	8.8	0.044	120	70
L-3C-2V	CANARE	40.0	-	21	0.105	90	50
RG6/U(1694A)	BELDEN	16.4	24.1	6.1	0.0305	200	100
RG59/U(1505A)	BELDEN	21.3	30.5	9.1	0.0455	150	85

# 4. Transmission Distance between two HD-SDI transmission solutions per coaxial cable type

• Please note the distance may reduce in the actual field due to any possible video loss. Therefore, we recommend you to connect the cable under 70% of the maximum distance stated above.

- We recommend you to use BNC connectors with low connection resistance when connecting the coaxial cables.
- Please be careful not to make deformation of the cable when wiring the cable.
- Please avoid pulling the cable by force when wiring the cable.
- Please avoid bending the coaxial cable too tightly when wiring the cable. It may make deformation of the cable.

## 5. FAQ

#### A. What is advice for using HD-SDI transmission devices?

As HD-SDI signal is a high transmission Frequency signal, the transmission distance vary depending on the cable specifications. Please be advised from the expert on selecting Coaxial cable, the existing cable and the connector for HD-SDI.

#### B. Power LED is not ON.

- ☞ Check the polarity of the Power connection port in the device.
- Check the Power cord is connected properly.
- When using Power over coax feature, please check the receiver (DVR side) is working properly.

#### C. After the proper connection, Green LED is not on.

- Check to use the proper HDMI Cable and check the transmission distance is not exceeded the recommended distance. The transmission distance varies depending on the type of Coaxial cable. [Refer "Table 4-1"]
- Check the connection of the Coaxial cable is properly clipped.
  - -. In case of extending the cable, connect the cable as below.

The order of BNC connector connection: BNC-M - BNC-JJ - BNC-M: (For HD-SDI)



• Do not use RCA cable for the connection.

#### D. All LED on the device is ON but the video is not displayed

Check if HDMI cable is connected properly.

Check if HDMI cable is working in other device.

Check the HDMI output resolution is complied with the resolution that the monitor supports.

How to check the supportive resolution between the device and the monitor. Without the HDMI input source, the Color Bar pattern signal is displayed through HD-SDI output port.

-. Supply power to the device  $(DC12V \sim 48V) \rightarrow Connect$  the device with a DVR or HD-SDI device over HD-SDI cable  $\rightarrow$  Control the Rotary switch on the device.

-. Possible to check if the end device supports the resolutions by checking the Color Bar pattern is displayed using the Rotary switch.

## E. The value on the Rotary switch might be changed by touching incidentally.

☞ Refer the pictures below in case of connecting HDMI cable with the device.



[Factory default image]

[Remove the Switch cap]

-. Cautious: When reassembling, make sure the direction of " $\mathbb{T}$ " is set correctly. Otherwise, the value of Rotary switch is not matched with the displayed output resolution from the device.

#### F. what is the input/output Video resolution?

- How to check the input video resolution
- -. When the HD-SDI signal goes to the device, the screen will be displayed as below. And the input video resolution will be displayed on the left-top side of the monitor for 10 seconds.
- -. When you change the resolution with Rotary switch and change back to the previous resolution, the screen will be displayed as below.



Version v1.00.00 INPUT – 1920 x 1080p 30Hz OUTPUT – 1920 x 1080p 30Hz

How to check the input video resolution when there is no HD-SDI input signal.

- -. The selected value by the Rotary Switch will be displayed on the left-top side on the Color bar screen for 10 seconds as shown on the below.
- -. Check the number shown on the Rotary Switch and check the Resolution specs

printed on SC-HDT0801S.



Version v1.00.00	
	Version v1
INPUT – [ NO SIGNAL ]	INPUT - [
OUTPUT - 1920 x 1080p 30Hz	OUTPUT -

## 6. Connection Diagram

# **6.1** Transmitting the same video signal from DVR to the monitor of the remote side.

It is possible to transmit the HDMI output signal from DVR to monitor which is located far from the DVR by using HD-SDI to HDMI converter

. Refer the connection diagram below.



#### 6.2 Long transmission distance of video signal from HD Splitter

Connecting SC-HDT0801S with HD Splitter, it's possible to monitor/record the video signal in a different place using SC-HDR0801S.

-. Possible to extend the transmission distance by using SC-HDT0801S without power cable by supplying power over Coax from SC-HDR0801S.

-. Possible to extend the transmission distance by using HD-SDI repeater (HLR01/02, HLR01D) without power cable. (PoC function)

. Refer the connection diagram below.



## 7. SPECIFICATION

Model			SC-HDT0801S				
Video Input			HDMI 1.3				
HDMI Output			II, DVI Compliant				
HD-SDI Output		HD-SDI(SMPTE292/1.5G, SMPTE424/3G) 1920*1080p 60/50, 1920*1080p 30/25, 1920*1080i 59.94/50, 1280*720p 60/50					
		SW NO	OUTPUT	SW NO	OUTPUT		
HD-SDI Resolution setting (with Rotary Switch)		0	1280*720p 60	4	1920*1080p 30		
		1	1280*720p 50	5	1920*1080p 25		
		2	1920*1080i 59.94	6	1920*1080p 60		
		3	1920*1080i 50	7	1920*1080p 50		
HDMI In / Out Port		HDMI 1EA / HDMI 1EA					
HD-SDI Output Port		HD-SDI 2EA					
HDMI In/Out		HDMI-А Туре					
<b>Connection Port</b>	HD-SDI Out	BNC-	F_75Ω				
	Power In	2PIN Terminal Block					
	Green	ON: HDMI Input					
LED Yellow		ON: POWER Input					
Power Input		DC12V ~ 48V					
Power Consumption		MAX 2.3W					
Working Temperature / Humidity		-10°C ~ +50°C / 0 ~ 80%					
Case body / Weight		Aluminum / 220g					
Dimensions(mm)		93(W) X 92.5(H) X 35(D)mm					

## 8. Warranty Certificate

This product has passed thorough quality control and test, and if this gets broken during normal use, we provide 24 months warranty service.

Model No.		
Serial No.		
Distributor		
Date you purchased		
Place you purchased		
Warranty Period		Two (2) years from the date of purchase
Purchaser	Name	
Fulcidsel	Address	

- Please check this warranty indication first.
- Please contact your distributor after checking out any defect in the products.
- The standard for repairing, replacement or reimbursement follows Customer.
- Warranty content any defect under normal use within the warranty service period we give you free repair service according to the warranty certificate.
- We charge you with the fee of parts and service despite of free warranty service period. Any breakage made without care such as:
  - Breakage or trouble made by natural disaster.
  - Breakage or trouble made by breaking the product guide or manual.
  - Breakage or trouble made by wrong power voltage or frequency.
  - When you want to reassemble for full system or replace parts within warranty service period.
  - When unauthorized person modified or made damage on the product trying to repair it.
- Please note that we don't support the breakage after warranty service period is expired. If the customer wants to get it repaired, we charge them with the fee.
- The specification is subject to change without prior notice for quality improvement.

Release Version 1.2

[Memo]

SeeEyes Co.,Ltd is the New Corporate Name of Samsung CCTV Service Co.,Ltd



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