Customer :

General Specification

Model : UVC-S300

(Universal Video Converter)

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1. Product Overview

1.1 Introduction

This Universal Video Converter (Model: UVC-S300) is powerful Multi-Format Video Converter which is able to convert video signal format (HDMI to DVI/VGA/S-Video/Composite) and type (Digital to Analog). This unit has digital HDMI port as input format and Composite (RCA & BNC) / S-Video / D-SUB / DVI as output formats.

The input video signal (HDMI) is converted 3(three) output formats as analog Composite / S-Video / D-SUB and DVI output. The unit has a unique function as cropping which is available in the S-Video / Composite / D-SUB / DVI output formats. The unit is designed with a stringent safety requirements such as the medical environment and other similarly restriction location.

1.2 Function Description

- Convert HDMI digital video signal to DVI digital signal and analog video signal (VGA, S-Video, Composite).
- Input format : HDMI
- Each types of output video signals resolution can be defined by pre-detected input video signal's resolution.
- Output of DVI / D-SUB outputs to the same size screen when HDMI Inputs (NO Crop)
- Output of S-video / Composite outputs to down scaling when HDMI Inputs available for any cropping position in S-VIDEO / Composite output using by communication commands from system's I2C signal line
- In/Out Ports definition.
  - ✓ DVI 1.0 Compliant
  - ✓ All output signals shall be complied with its each video signal standard
  - ✓ 5 Output ports : DVI, VGA, S-Video, Composite (RCA and BNC)
    - DVI, VGA, S-video and Composite outputs shall be generated simultaneously
    - Out video signal's status(scaled/cropped) and resolution selected by detected input video signal's resolution and pre-defined DIP switch
    - Available for RCA and BNC port output simultaneously as composite output
    - S-Video, Composite output signal resolution selected by pre-defined DIP switch

2. Specification

2.1 Power Specification

Items	Values / Description
AC/DC Adaptor (Accessary Item)	■ Input : 100VAC~240VAC, 50/60Hz ■ Output : 12V DC, 2.5A
Total Power consumption - HDMI Input resolution ✓ On XGA operation ✓ On SXGA operation ✓ On 1080p operation (Max. Resolution)	Max 9W ■ Power : 12V DC, Max. 0.70A ■ Power : 12V DC, Max. 0.75A ■ Power : 12V DC, Max. 0.75A

< Table 1 > Power Specification

2.2 Video Input Specification

■ The Video Converter BOX shall be able to receive DVI Digital Video Signal (TMDS signal) with XGA, SXGA and HD 1080p resolution, 50/60 Hz refresh and I2C signal to control cropping data by system

Items	Values / Description
Port Type	■ Input Port ● HDMI : 19pin A type Female
Resolutions	■ XGA (1024 x 768) at 50/60Hz ■ SXGA (1280 x 1024) at 50/60Hz ■ HD 1080p (1920 x 1080) at 50/60Hz
Signal Formats	■ HDMI : TMDS

< Table 2 > Video Input Specification

2.3 Video Output Specification

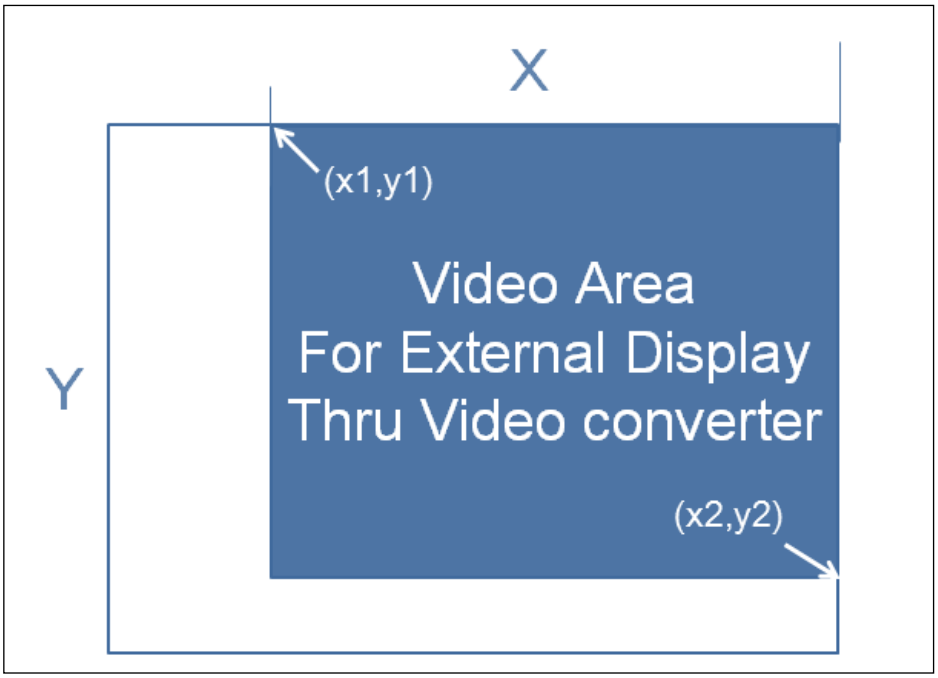
- DVI signal shall be bypassed without cropping and VGA signal shall be converted without cropping.
- DVI signal shall be scaled and cropped, and converted to S-Video and Composite (BNC X 1 and RCA X 1) video
- Adjusted Cropping area for S-video/Composite shall be changed within 1 second of receiving I2C data.
- Input resolution and the resolution of dip switch setting defined in the video cropping area table should be matched. Unless, UVC will not output
- All output videos shall complied its standard video signal specification

Items	Values / Description
Port Types	■ 5 Output Ports ● DVI : 29pin I type Female ● D-SUB : 15pin Female (3 Row) ● S-Video : 4pin Mini-DIN Female ● Composite : RCA1 & BNC
Resolutions	■ NTSC 720 x 485 at 15.7kHz/60Hz ■ PAL 720 x 575 at 15.6kHz/50Hz → S-Video and composite outputs shall be converted video format by using piano switch to NTSC or PAL format.
Signal Formats	■ DVI : TMDS ■ D-SUB : Analog Video ■ S-Video : Analog Video ■ Composite (RCA & BNC) : Analog Video

< Table 3 > Video Output Specification

2.4 Video Cropping

■ User shall be selected one of 3types cropping area.



< Figure 1 > Video Cropping

Coordinate #	(x1,y1).start	(x2,y2).end	Video Area	(X,Y)	Resolution
Coordinate 1	(305, 15)	(1264, 734)	960 x 720	(1280, 1024)	SXGA
Coordinate 2	(256, 1)	(1279, 768)	1024 x 768	(1280, 1024)	SXGA
Coordinate 3	(316.0, 0)	(1771, 818)	1456 x 819	(1920, 1080)	HD 1080
Coordinate 4	(224, 0)	(1023, 599)	800 x 600	(1024, 768)	XGA
Coordinate 5	(315,0)	(1919,919)	1605 x 920	(1920, 1080)	HD 1080
Coordinate 6	(355,0)	(1494,919)	1140 x 920	(1920, 1080)	HD 1080
Coordinate 7	(390,0)	(1634,932)	1245 x 933	(1920, 1080)	HD 1080

< Table 4 > Video Cropping Area

■ Cropping image shall be fit into full display size

2.5 Adjustable Cropping area function

Cropping position data shall be adjusted through SW commands by system. Last updated value of cropping area should be kept even power is off.

■ Initial Cropping area value when Adjustable Cropping area is enable

SW #	Product	(x1,y1).start	(x2,y2).end	Video Area	(X, Y)	Resolution
SW8	Adjustable	(390,0)	(1634,932)	1245 x 933	(1920, 1080)	HD 1080
		(305, 15)	(1264, 734)	960 x 720	(1280, 1024)	SXGA

< Table 5 > Adjustable Video Cropping Area

* SW8 on mode allows input resolution both 1080p and SXGA

2.6 Switch Function

■ The output video setting could be set by the user.

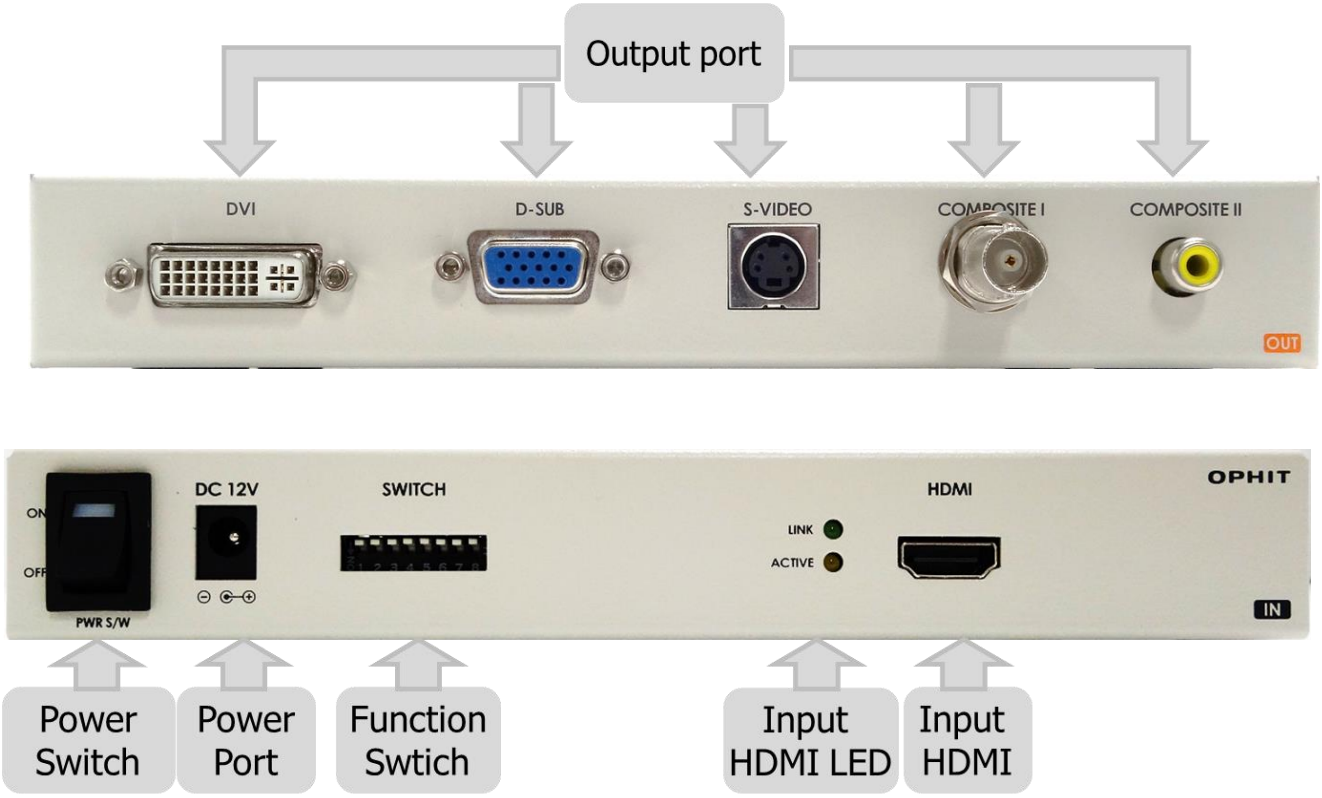
No	1	2	3	4	5	6	7	8
Function	Coordinate	Coordinate	Coordinate	Coordinate	NTSC / PAL Selection	Reserved	Reserved	Video Function

< Table 6 > 8Pin Selection DIP Switch Signal Assignment

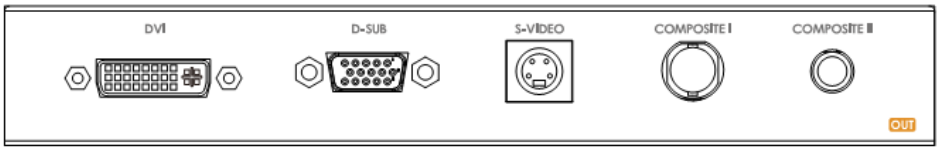
3. Mechanical Specification

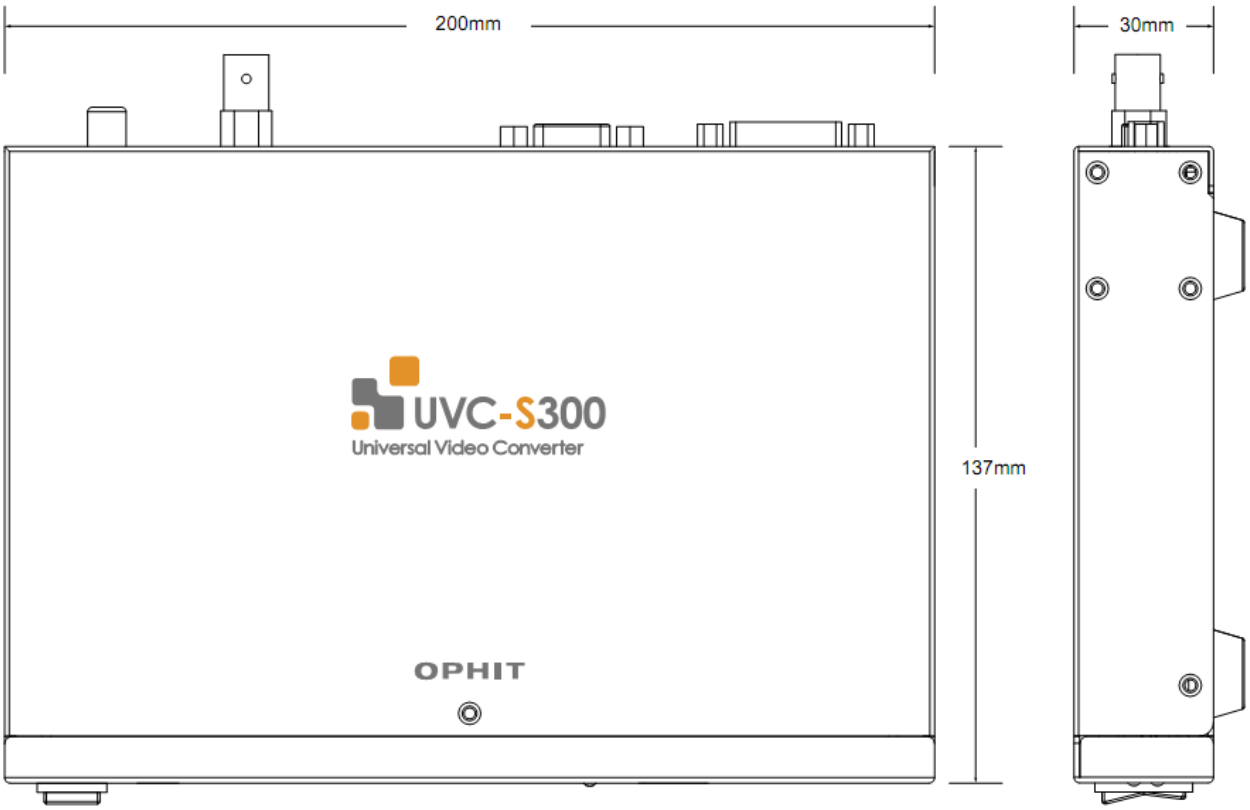
3.1 BOX Dimension

- Universal Video Converter Case Construction Features
  - LED Indicator
    - Power : Indicate Power ON/OFF Status (Lighting : Power ON / Green)
    - Input Video : HDMI LED Lighting (Yellow Blinking)
  - Switch
    - Power ON/OFF
    - 8Pin Function Selection DIP Switch
  - JACK & Connector
    - Power Jack : AC/DC Adaptor Input
    - Input Port : HDMI(Female)
    - Output Port : D-SUB, DVI, S-Video, RCA, BNC (Female)
  - Box Size : 200mm(W) x 137mm(D) x 30mm(H), Tolerance: ± 0.1mm
  - Weight : 850g (Main product only)

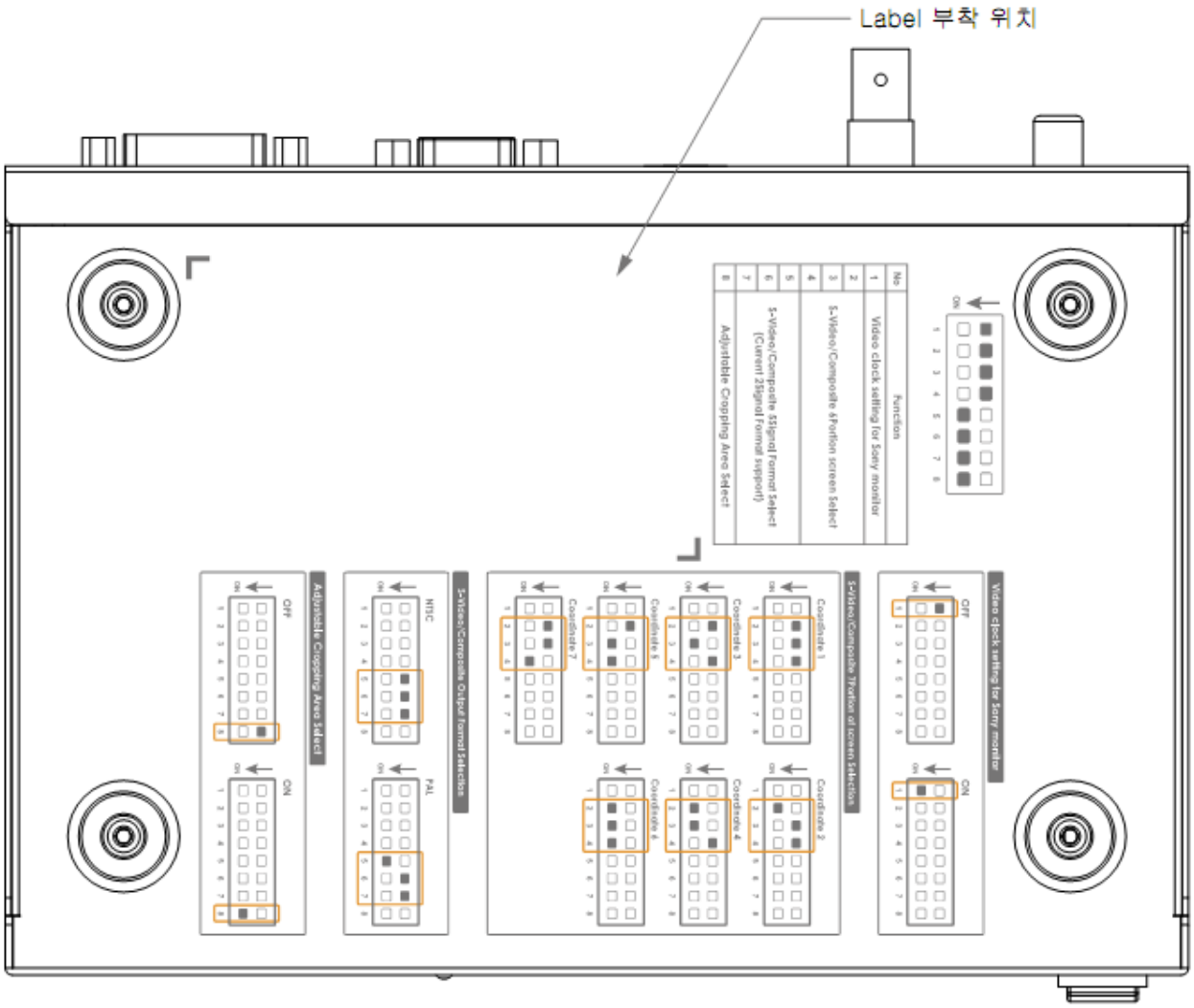


< Figure 2 > UVC Input/output side configuration


DVI
D-SUB
S-VIDEO
COMPOSITE I
COMPOSITE II
OUT


200mm
30mm
137mm
UVC-S300
Universal Video Converter
OPHIT


ON
OFF
PWR S/W
DC 12V
SWITCH
LINK
ACTIVE
HDMI
OPHIT
IN



< Figure 3 > UVC-S300 Box Dimension and Printing

4. Certifications

Universal Video Converter shall be kept all requirements of

- UL (UL60950-1)
- CE (EN55022/24)
- FCC (Part 15, Class B Digital Device)
- CISPR11(Class B)
- KC(KN61000-4)
- CB

5. Environment Requirement

5.1 Operating

Temperature: +0°C ~ +45°C

Humidity: 10 ~ 80 %, Non-Condensing

Altitude: max. 4000m

5.2 Storage and Transportation

Temperature: -10°C ~ +70°C

Humidity: 10 ~ 80 %, Non-Condensing

6. ROHS

Declaration of RoHS Compliance

Company Name : OPHIT CO LTD
301,302,501,502Ho,77,Deogyeong-daero 1471beon-gil,
Yeongtong-gu,Suwon-si, Gyeonggi-do,KOREA
Contact Person : Eui-Seok, Kang/Q.A Manager/82-31-205-4191
Contact E-mail : onlyqa@ophit.com

DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 08. June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Product Name : UVC-S300

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 products.

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

Substance	RoHS Limity by Weight	RoHS Limity by % (PPM)
Lead (PB)	1000mg/kg	0.1% (1000 PPM)
Mercury (Hg)	1000mg/kg	0.1% (1000 PPM)
Hexavalent Chromium (CR VI)	1000mg/kg	0.1% (1000 PPM)
Polybrominated Biphenyls (PBB)	1000mg/kg	0.1% (1000 PPM)
Polybrominated Diphenyl Ethers (PBDE)	1000mg/kg	0.1% (1000 PPM)
Cadmium (CD)	100mg/kg	0.01% (100 PPM)

Signature : Jong-kook, Moon Jong-kook, Moon

Title/Date: CEO

7. REACH

RoHS COMPLIANT

Declaration of RoHS Compliance

Company Name : OPHIT.,CO LTD.
301,302,501,502Ho,77,Deogyeong-daero 1471beon-
Yeongtong-gu,Suwon-si, Gyeonggi-do,KOREA
Contact Person : Eui-Seok, Kang/Q.A Manager/82-31-205-
Contact E-mail : onlyqa@ophit.com

DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 27. January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Product Name : UVC-S300(Universal Converter)
Customer Part Number : 5750263

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 products.

Substance	RoHS Limity by Weight	RoHS Limity by % (PPM)
Lead (PB)	1000mg/kg	0.1% (1000 PPM)
Mercury (Hg)	1000mg/kg	0.1% (1000 PPM)
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Polybrominated Diphenyl Ethers (PBDE)	1000mg/kg	0.1% (1000 PPM)
Cadmium (CD)	100mg/kg	0.01% (100 PPM)

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

Signature : Jong-kook, Moon Jong-kook, Moon

Title/Date: President/Jun.01.2016