



CSLUX-300I

Digital Video Scaler



Operation Manual



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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE DD/MM/YY	SUMMARY OF CHANGE
VR0	13/11/12	Preliminary Release
VR1	18/12/12	Add D-Sub to RCA adaptor
VR2	09/01/13	Add Support Timing Chart



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1. INTRODUCTION

The Digital Video Scaler is designed to do scaling and source-switching from CV, SV, Component, PC, HDMI and SDI input signals, to HDMI and VGA output ports. Each analog video input comes with an external audio input, and the set of both video and audio signal can be digitized and output to the HDMI output at the same time. The VGA output can send mirror image of the HDMI output to an analog display, while the SDI output is a loop out for the SDI input, providing SDI signal extension and comparison. The device provides full range of output resolutions, up to 1080p for HDTV timing, and WUXGA(RB) for PC timing. The control can be done through on-panel buttons, IR remote, or RS-232, and there is OSD (On Screen Menu) providing selection and system information.

2. APPLICATIONS

- Lecture hall
- Meeting room
- Conference hall

3. PACKAGE CONTENTS

- Digital Video Scaler
- Remote Control (CR-117)
- D-Sub to RCA adaptor cable
- Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

Input source equipments such as Blu-ray/DVD players or SDI camera, output display and amplifier or speaker and connection cables.



5. FEATURES

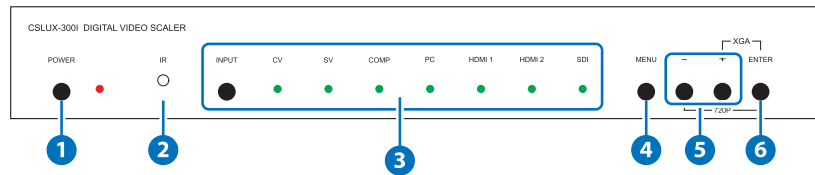
- Supports multiple formats of video and audio input to be converted to HDMI or PC/HD outputs
- Supports EDID and HDCP
- Supports 3D de-interlace, noise reduction and 3D Comb filter
- Supports frame rate conversion
- Supports SDI loop out
- SDI operation at 2.970Gb/s, 2.970/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270 Mb/s
- Supports SMPTE 425M (Level A and Level B), SMPTE 424M, SMPTE 292M, SMPTE 259M-C
- Supports signal input and output distances of up to 300m for SD signals, 200m for HD signals and 100m for 3G signals

Note: 1. SDI cable distance tested with belden 1694A. Operating distances may be very if used with cables of different specifications.



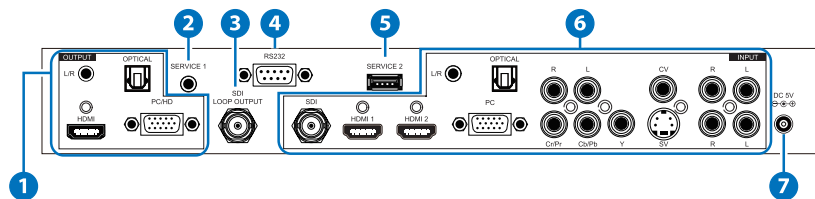
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



- 1 POWER & LED:** Press this button to switch ON or set the device to standby mode. Once the device is connected with power supply the LED will illuminate and the device will switch to ON automatically.
- 2 IR:** This IR window receives only the IR signal from the remote control included in the package.
- 3 INPUT button and LEDs:** Press this button sequentially to switch in between the input sources rotationally. LED will illuminate accordingly to the selected input source.
- 4 MENU:** Press this button to enter into the OSD menu.
- 5 -/+:** Press these buttons to scroll down and up in the OSD selection.
- 6 ENTER:** Press this button to confirm the selection. Press this button together with + button to switch output to XGA instantly or with - button to switch output to 720p instantly.

6.2 Rear Panel



- 1 OUTPUT:**
L/R: Connect to speaker or amplifier for audio output in stereo format.



HDMI: Connect to HDMI display or amplifier for video or video and audio display.

OPTICAL: Connect to speaker or amplifier for audio output in digital format.

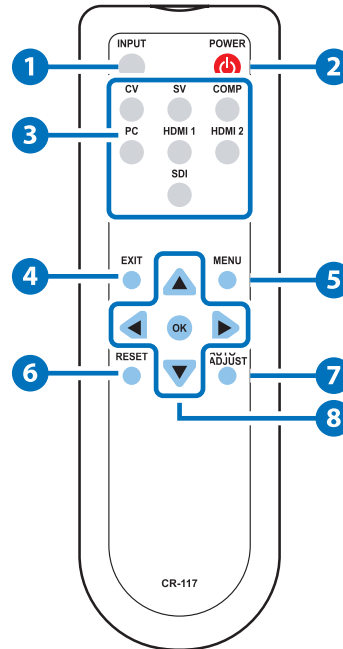
PC/HD: Connect to monitor/display for video output display. For HD output, use D-Sub 9pin to 3 RCA adaptor cable for output HD timing from 480p~1080p.

- 2 **SERVICE 1:** Reserved for factory use only.
- 3 **SDI LOOP OUTPUT:** Connect to SDI display or SDI extender for instant SDI input signal display or extending the SDI signal to further area.
- 4 **RS-232:** Connect with PC/NB and use RS-232 command to control the device.
- 5 **SERVICE 2:** Reserved for factory use only.
- 6 **INPUT:**
 - SDI:** Connect to SDI camera or other SDI source equipment for both video and audio signal sending.
 - HDMI 1:** Connect to HDMI source equipment such as Blu-ray/DVD player for both video and audio signal sending.
 - HDMI 2:** Connect to HDMI source equipment such as Blu-ray/DVD player for both video and audio signal sending.
 - L/R:** Connect to source equipment's L/R output with 3.5Ø phone jack for audio signal sending.
 - PC/HD:** Connect with PC/NB source equipment for video signal input with D-Sub 15pin cable.
 - OPTICAL:** Connect to source equipment's optical output for audio signal sending.
 - YCbCr/HDPbPr + L/R:** Connect to source equipment such as video/DVD player for both video and audio signal sending.
 - CV + L/R:** Connect to source equipment such as video/DVD player for both video and audio signal sending.
 - SV + L/R:** Connect to source equipment such as video/DVD player for both video and audio signal sending.
- 7 **DC 5V:** Plug the power adaptor included in the package and connect it to the AC wall outlet for power supply.



6.3 Remote Control

- 1 **INPUT:** Press this button sequentially to switch in between the input sources rotationally. LED will illuminate accordingly to the selected input source.
- 2 **POWER:** Press this button to switch ON or set the device to standby mode. Once the device is connected with power supply.
- 3 **CV/SV/COMP/PC/HDMI1/HDMI2/SDI:** Press these hot keys to switch input source instantly.
- 4 **EXIT:** Press this button to exit the menu or the current selection under OSD.
- 5 **MENU:** Press this button to enter into the OSD menu.
- 6 **RESET:** Press this button to set the device back into the factory default setting.
- 7 **AUTO ADJUST:** Press this button when output image is not fitting the display's screen perfectly. The device will auto adjust the image to full screen.
- 8 **OK & ▲▼◀▶:** Press OK to confirm the selection or press the arrow buttons to scrolled in the OSD selections.





6.4 RS-232 Protocols

CSLUX-300I			Remote Control	
PIN	Assignment		PIN	Assignment
1	NC		1	NC
2	Tx		2	Rx
3	Rx	▶	3	Tx
4	NC	◀	4	NC
5	GND		5	GND
6	NC		6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Baud Rate: 9600bps
Data bit: 8 bits
Parity: None
Flow Control: None
Stop Bit: 1



6.5 RS-232 Commands

Command	Description	Contents
iJL	Start RS-232	
S SOURCE 0~6	Select input source	SDI(0) / HDMI1(1) / HDMI2(2) / YPBPR(3) / VIDEO(4) / SVIDEO(5)/ PC(6)
R SOURCE	Inquire input source	
S OUTPUT 1~25	Select output timing	640*480(1)/800*600(2)/ 1024*768(3)/1280*768(4)/ 1360*768(5)/1280*720(6)/ 1280*800(7)/1280*1024(8)/ 1440*900(9)/1400*1050(10) /1680*1050(11)/ 1600*1200(12)1920*1080(13) /1920*1200(16)/ 480p(17)/720p 60(18)/ 1080p 60(19)/ 1080i 60(20)/ 576p(22)/720p 50(23)/ 1080p 50(24)/ 1080i 50(25)
R OUTPUT	Inquire output timing	
S SIZE 0~6	Select output size	OVERSCAN(0) / FULL(1) / BEST FIT(2) / PAN SCAN(3)/ LETTER BOX(4) /UNSER 2(5) / UNDER 1(6)
R SIZE	Inquire output size	
S CONTRAST 0~60	Contrast Setting	
R CONTRAST	Inquire contrast setting	
S BRIGHTNESS 0~60	Brightness setting	
R BRIGHTNESS	Inquire brightness setting	
S HUE 0~60	Hue setting	
R HUE	Inquire hue setting	
S SATURATION 0~60	Saturation setting	
R SATURATION	Inquire saturation setting	
S SHARPNESS 0~30	Sharpness setting	
R SHARPNESS	Inquire sharpness setting	



S NR 0~3	Noise reduction setting	OFF(0) / LOW (1) / MIDDLE(2) / HIGH(3)
R NR	Inquire noise reduction setting	
S AUDIODELAY 0~3	Audio delay setting	OFF(0) / 40ms (1) / 110ms(2) / 150ms(3)
R AUDIODELAY	Inquire audio delay setting	
S AUDIOMUTE 0/1	Audio mute setting	ON(0) / MUTE(1)
R AUDIOMUTE	Inquire audio mute setting	
S SDIAUDIO 0~3	SDI Audio channel setting	CH1CH2(0), CH3CH4(1) CH5CH6(2), CH7CH8(3)
R SDIAUDIO	Inquire SDI Audio channel setting	
S AUDIOSELECT 0/1	Audio Input setting	ANALOG(0) / SPDIF(1)
R AUDIOSELECT	Inquire audio Input setting	
S KEY LOCK 0/1	Key lock setting	ENABLE(0) / DISABLE(1)
R KEY LOCK	Inquire key lock setting	
FW	Firmware checking	
S RESET 1	Pre-reset	
S POWER 0/1	Power Setting	OFF (0) / ON (1)
R POWER	Inquire Power Setting	
EXIT	Exit	

Note:

1. *iJL command must first be insert before starting using RS-232 command to control the device. This command is CASE-SENSITIVE. Other RS-232 command will be not executed unless followed with a carriage return and LF(Line Feed), commands are case-insensitive.*
2. *Audio delay supports only on analog L/R output.*
3. *When HDMI input is with HDCP, PC/HD will output no image.*
4. *Digital Audio supports LPCM 2CH only therefore, please ensure source input audio is sending LPCM 2CH's audio signal in order to avoid unnecessary audio noise.*



6.6 OSD MENU

1 st Layer	2 nd Layer	3 rd Layer	4 th Layer
DISPLAY	OUTPUT	640x480 60	
		800x600 60	
		1024x768 60	
		1280x768 60	
		1360x768 60	
		1280x720 60	
		1280x800 60	
		1280x1024 60	
		1440x900 60	
		1400x1050 60	
		1680x1050 60	
		1600x1200 60	
		1920x1080 60	
		1920x1200 60	
		720X480P 60	
		1280X720P 60	
		1920X1080I 60	
		1920X1080P 60	
		720X576P 50	
		1280X720P 50	
		1920X1080I 50	
		1920X1080P 50	
		OVER SCAN	
		FULL	
		BEST FIT	
		PAN SCAN	
	LETTER BOX		
	UNDER 2		
	UNDER 1		
	OFF		
	INFO		
	ON		
AUTO SETUP			
H_POSITION			
V_POSITION			
PHASE			
CLOCK			
WXGA/XGA		XGA	
		WXGA	
RESET			

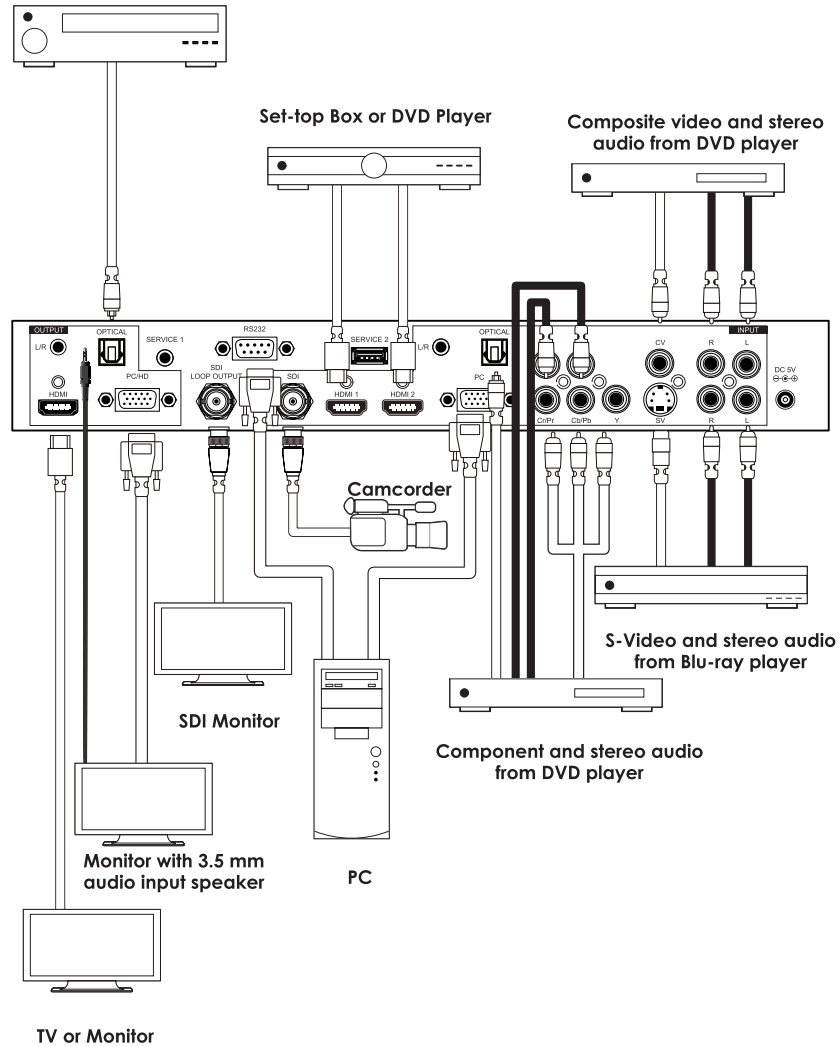
COLOR	COLOR	R
		G
		B
		R OFFSET
		G OFFSET
		B OFFSET
	CONTRAST	0~60
	BRIGHTNESS	0~60
	HUE	0~60
	SATURATION	0~60
SHARPNESS	0~30	
NR.	OFF	
	LOW	
	MIDDLE	
	HIGH	
AUDIO	VOLUME	0~100
	DELAY	OFF
		40mS
		110mS
	SOUND	150mS
		ON
	SDI AUDIO	MUTE
		CH1 – CH2
		CH3 – CH4
		CH5 – CH6
AUDIO SELECT (AV/SV/YPbPr/VGA only)	CH7 – CH8	
	ANALOG	
SETUP	SPDIF	
	FACTORY RESET	
	KEY LOCK	OFF
		ON
POWER SAVE	OFF	
	ON	
INFORMATION	INPUT	
	OUTPUT	
	REVISION	

Factory default setting.



7. CONNECTION AND INSTALLATION

AVR with Optical Input





8. SPECIFICATIONS

Input Port	1 x Composite, 1 x S-Video, 1 x Component, 1 x PC/HD, 2 x HDMI, 1 x SDI, 1 x Optical, 4 x LR , 1 x USB (service only), 1 x HP Jack (service only), 1 x RS-232 (Control Only)
Output Port	1 x HDMI, 1 x PC/HD, 1 x SDI (Loop out), 1 x Optical, 1 x L/R
Supports Input Resolution	Up to UXGA & 1080p
Supports Output Resolution	Up to WUXGA & 1080p
Power Supply	5V/3A DC (US/EU standards, CE/FCC/ UL certified)
Dimensions (mm)	320mm(W) x 182mm(D) x 44mm(H)
Weight(g)	1600
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	0°C ~ 40°C / 32 °F ~ 104 °F
Storage Temperature	-20°C ~ 60°C / -4 °F ~ 140 °F
Relative Humidity	20 ~ 90% RH (non-condensing)
Power Consumption(W)	10.5



8.2 Support I/O Resolution

Resolution \ Input	CV/SV	Component	PC	HDMI
NTSC/PAL	V			
480i/576i		V		V
480p/576p		V		V
720p@50/60Hz		V		V
1080i@50/60Hz		V		V
1080p@50/60Hz		V		V
VGA@60/72/75Hz			V	V
SVGA@56/60/72/75Hz			V	V
XGA@60/70/75Hz			V	V
SXGA@60/75Hz			V	V
UXGA@60Hz			V	V
1280x800@60Hz			V	V
1680x1050RB@60Hz			V	V
1920x1080@60Hz			V	V

Resolution \ Output	PC/HD	HDMI
480p/576p	V (HD)	V
720p@50/60Hz	V (HD)	V
1080i@50/60Hz	V (HD)	V
1080p@50/60Hz	V (HD)	V
VGA@60Hz	V	V
SVGA@60Hz	V	V
XGA@60Hz	V	V
SXGA@60Hz	V	V
UXGA@60Hz	V	V
1280x768@60Hz	V	V



1280x800@60Hz	V	V
1360x768@60Hz	V	V
1400x1050@60Hz	V	V
1440x900@60Hz	V	V
1680x1050@60Hz	V	V
1920x1200@60Hz	V	V



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