



# CS-802D

HD High Resolution 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	03/09/13	Preliminary Release
VS1	06/02/14	Updated text/Diagrams

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## 1. INTRODUCTION

This HD High Resolution Scaler can switch and convert Dual-Link DVI, Mini-DisplayPort and PC/Component inputs to a HDMI output , along with their associated audio signals. With the ability to scale a wide range of resolutions, the operation of all features can be easily handled through on-panel controls, IR remote control, or by RS-232 protocol.

## 2. APPLICATIONS

- Scale Dual-Link DVI, Mini-DisplayPort and PC/Component inputs to HDMI output
- Convert VGA, Component, Mini-DisplayPort and Dual-Link DVI signals to HDMI
- Commercial presentation switcher/scaler

## 3. PACKAGE CONTENTS

- HD High Resolution Scaler
- D-sub 15-pin to 3 RCA Phono adaptor
- 5V/2.6A DC Power Adaptor
- Operation Manual

## 4. SYSTEM REQUIREMENTS

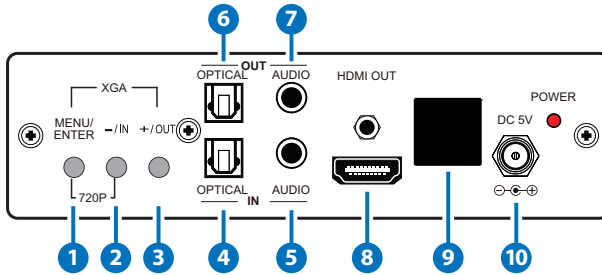
Dual-Link DVI/Mini-DisplayPort/PC sources and output to a HDMI display.

## 5. FEATURES

- Supports Component Video input resolutions up to 1080p@50/60Hz, Dual-Link DVI and Mini-DisplayPort up to 2560×1600@60Hz (RB) and PC up to 1920×1200@60/75Hz
- Supports digital and analog audio bi-directional conversion, extraction and insertion for the audio signals from individual inputs
- Supports Component Video input with supplied D-sub 15-pin to 3 RCA phono adaptor

## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel



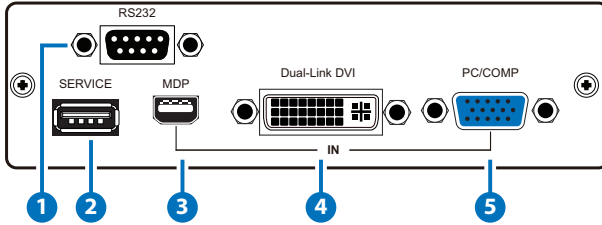
- 1 MENU/ENTER Button:** Press this button to ENTER the OSD menu. Press again to confirm the selection.

*Note: Pressing '-' (MINUS) and 'ENTER' simultaneously will immediately switch the output resolution of the device to 720p@60Hz. Pressing '+' (PLUS) and 'ENTER' simultaneously will immediately switch the output resolution of the device to XGA.*

- 2 MINUS (-)/IN Button:** When in the OSD menu, press this button repeatedly to move down through the menu. When not in the OSD menu, press this button to quickly select the required input.
- 3 PLUS (+)/OUT Button:** When in the OSD menu, press this button repeatedly to move up through the menu. When not in the OSD menu, press this button to quickly select the required output resolution.
- 4 OPTICAL IN:** Digital audio Toslink input. Use this input to connect to a source with an OPTICAL cable.
- 5 AUDIO IN:** Analog audio 3.5mm mini-jack input. Use this input to connect to analog source with RCA cable.
- 6 OPTICAL OUT:** Digital audio TOSlink output. Use this output to connect to an amplifier or active speakers to an optical digital input with an OPTICAL cable.
- 7 AUDIO OUT:** Analog audio 3.5mm mini-jack output. Use this output to connect to active speakers or an amplifier with an RCA cable.
- 8 HDMI OUT:** Connect to a HDMI equipped TV/monitor for display of the source signal.

- 9 **IR Window:** Receives the IR signal from the supplied IR Remote only.
- 10 **DC 5V and POWER LED:** Connect the 5V DC power supply into the unit and plug the adaptor to AC wall outlet. Once the system turns on the LED will turn RED.

## 6.2 Rear Panel

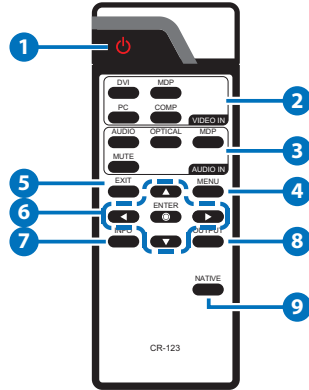


- 1 **RS232:** Connect to a PC or RS-232 control system with a D-Sub 9-pin cable for RS-232 control.
- 2 **SERVICE:** Manufacturer use only.
- 3 **MDP IN:** Connect to a DisplayPort source device such as a PC or laptop with a mini-DisplayPort cable.
- 4 **Dual-Link DVI IN:** Connect to a DVI source device such as a PC or Laptop with a DVI cable.
- 5 **PC/COMP IN:** Connect to a VGA source such as a PC/Laptop source equipment with D-Sub 15-pin cable or to a Component source with the supplied D-Sub 15-pin to 3 RCA phono adaptor for component signal input.



## 6.3 Remote Control

- 1 **POWER:** Press to turn the system ON/OFF.
- 2 **VIDEO IN:** Press the required key to directly select the video source (DVI/MDP/PC/COMP).
- 3 **AUDIO IN:** Press the required key to directly select the audio source (AUDIO/OPTICAL/MDP) or to MUTE the system.
- 4 **MENU:** Press this button to ENTER the OSD menu.
- 5 **EXIT:** Press the EXIT the OSD menu.
- 6 **ENTER and ▲/▼/◀/▶:** Press ENTER to confirm the selection. Press the arrow keys to navigate the OSD menu.
- 7 **INFO:** Press to show the input and output resolution information.
- 8 **OUTPUT:** Press to show the output resolution table.
- 9 **NATIVE:** Press to switch to the native resolution.



## 6.4 RS-232 Protocols

SCALER		REMOTE CONTROLLER	
Pin	Definition	Pin	Definition
1	NC	1	NC
2	TxD	2	RxD
3	RxD	3	TxD
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: 19200 bps

Data Bit: 8 bits

Parity: None

Stop Bit: 1 bit

Flow Control: None

## 6.5 RS-232 Commands

COMMAND	DESCRIPTION
<b>POWER ?</b>	Power Status
<b>POWER ON</b>	Power On
<b>POWER OFF</b>	Power Off
<b>VIDEO ?</b>	Video Input Source
<b>DVI</b>	Video Input in DVI
<b>MDP</b>	Video Input in Mini-DisplayPort

COMMAND	DESCRIPTION
PC	Video Input in PC
COMP	Video Input in Component
AUDIO ?	Audio Input Source
AUDIO	Audio Input in AUDIO
OPTICAL	Audio Input in OPTICAL
MDPA	Audio Input in MDP
MUTE ?	Mute Status
MUTE ON	Mute On
MUTE OFF	Mute Off
INFO ?	Info.OSD Status
INFO ON	Info.OSD On
INFO OFF	Info.OSD Off
INFO DISPLAY	Info.OSD On/Off
OUTPUT ?	Output Status
480P	Output in 480P
720P	Output in 720P
1080P	Output in 1080P
VGA	Output in VGA (640x480)
SVGA	Output in SVGA (800x600)
XGA	Output in XGA (1024x768)
SXGA	Output in SXGA (1280x1024)
UXGA	Output in UXGA (1600x1200)
WUXGA	Output in WUXGA (1920x1200)
WXGA	Output in WXGA (1280x800)
NATIVE	Output by Native
EDID ?	EDID Status



COMMAND	DESCRIPTION
EDID INT	EDID By Internal
EDID EXT	EDID By External
FEEDBACK ?	Key Feedback Status
FEEDBACK ON	Key Feedback Enable
FEEDBACK OFF	Key Feedback Disable
STATE ?	Video Input Signal Status
VERSION ?	Firmware Version
DEFAULT	Reset to Factory Default
About ?	About CS-802D

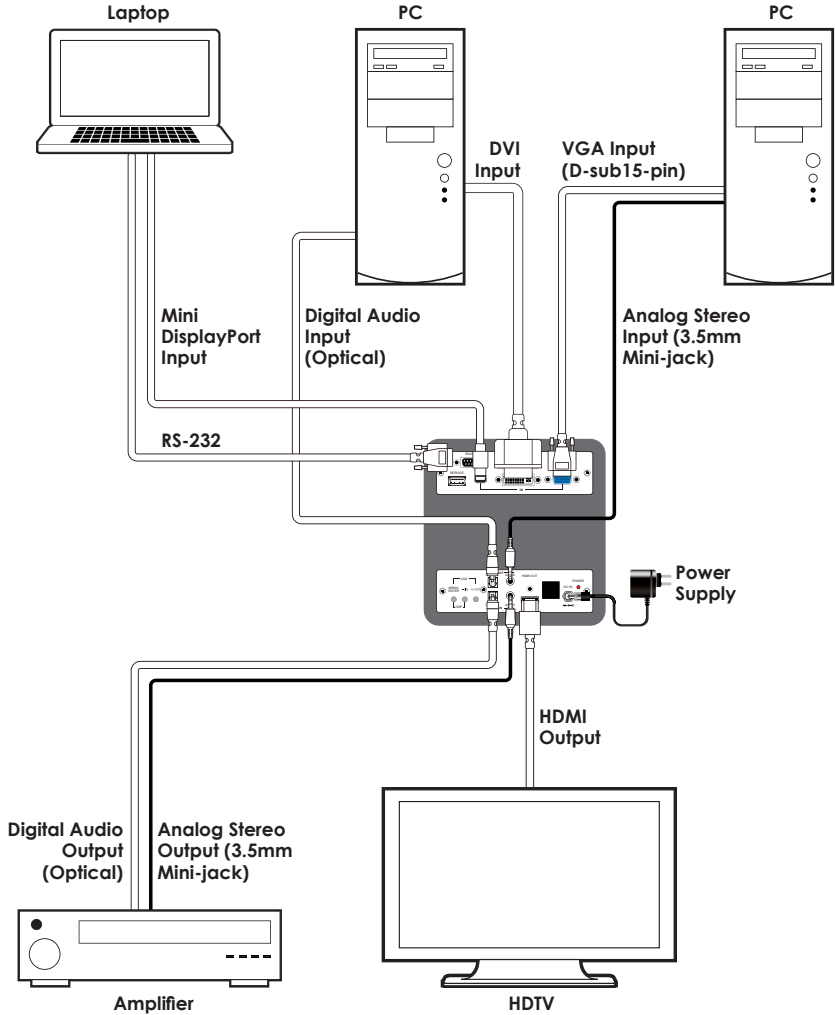
*Note: Any commands will not be executed unless followed by a carriage return. Commands are not case-sensitive.*

## 6.6 OSD Menu

FIRST LEVEL	SECOND LEVEL	THIRD LEVEL
<b>Input Video</b>	PC	
	COMP	
	DVI	
	MDP	
	Exit	
<b>Input Audio</b>	AUDIO	
	Optical	
	MDP	
	Mute	
	Exit	

FIRST LEVEL	SECOND LEVEL	THIRD LEVEL
<b>Output Resolution</b>	720x480P	
	1280x720P	
	1920x1080P	
	640x480	
	800x600	
	1024x768	
	1280x1024	
	1600x1200	
	1920x1200	
	1280x800	
	By Native	
	Exit	
<b>Misc. Setup</b>	EDID Mode	Internal
		External
		Exit
	Info. OSD Mode	Off
		On
		Exit
	About CS-802D	FW Ver.
Factory Reset	System Reset	
Exit		
<b>Exit</b>		

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

### 8.1 Technical Specifications

<b>Mini DisplayPort Video Bandwidth</b>	2.7Gbps & 1.62Gbps/Lane
<b>Input Ports</b>	1×Dual-Link DVI, 1×Mini DisplayPort, 1×D-sub 15-pin, 1×Optical, 1×3.5mm Mini-jack
<b>Output Ports</b>	1×HDMI, 1×Optical, 1×3.5mm Mini-jack
<b>Power Supply</b>	5V/2.6A DC (US/EU standards, CE/FCC/UL certified)
<b>ESD Protection</b>	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
<b>Dimensions</b>	141 mm (W) × 179 mm (D) × 38 mm (H)
<b>Weight</b>	700g
<b>Chassis Material</b>	Aluminum
<b>Color</b>	Black
<b>Operating Temperature</b>	0 °C ~ 40 °C / 32 °F ~ 104 °F
<b>Storage Temperature</b>	-20 °C ~ 60 °C / -4 °F ~ 140 °F
<b>Relative Humidity</b>	20 ~ 90 % RH (non-condensing)
<b>Power Consumption</b>	9 W



## 8.2 Input Resolution Supports

INPUT RESOLUTION	DVI	MDP	PC	COMP
640x350@85	✓	✓	✓	
640x400@85	✓	✓	✓	
720x400@85	✓	✓	✓	
VGA640x480@60/72/75/85	✓	✓	✓	
SVGA800x600@56/60/72/75/85/120RB	✓	✓	✓	
848x480@60Hz	✓	✓	✓	
XGA1024x768@43i/60/75/85/120R	✓	✓	✓	
1280x720@60	✓	✓	✓	
1280x768@60R/60/75/85/120R	✓	✓	✓	
1280x800@60R/60/75/85/120R	✓	✓	✓	
1280x960@60/85	✓	✓	✓	
1280x1024@60/75/85	✓	✓	✓	
1360x768@60/120R	✓	✓	✓	
1366x768@60/60R	✓	✓	✓	
SXGA+1400x1050@60R/60/75	✓	✓	✓	
WXGA+1440x900@60R/60/75/85	✓	✓	✓	
1600x900@60R	✓	✓	✓	
UXGA1600x1200@60	✓	✓	✓	
WSXGA1680x1050@60/60RB	✓	✓	✓	
1792x1344@60/75	✓	✓		
1856x1392@60/75	✓			
1920x1080@60	✓	✓	✓	



INPUT RESOLUTION	DVI	MDP	PC	COMP
1920x1200@60/60RB	✓	✓	✓ (60RB only)	
1920x1440@60	✓	✓		
720x480I/P				✓
720x576I/P				✓
720I/P@24/25/30/50/60				✓
1080I@50/60				✓
1080P@24/30/50/60				✓
2048x1080@@50/60	✓	✓	✓	
2048x1152@@60R	✓	✓		
2560x1600@60R	✓	✓		



## 8.3 Output Resolution Supports

OUTPUT RESOLUTION	HDMI
640x480	✓
800x600	✓
1024x768	✓
1280x1024	✓
1600x1200	✓
1920x1200@60	✓
1280x800	✓
720x480P	✓
1280x720P	✓ (Default)
1920x1080P	✓

*Note: When the output resolution is set to 'By Native' but it does not match the built-in supported resolution, the output resolution will automatically be set to the default of 1280x720p.*

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
COMP	Component Video
DVI	Digital Visual Interface
HDMI	High-Definition Multimedia Interface
MDP	Mini DisplayPort





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