

# HDMI Displayport VGA 3D-2D Scaler w/3D Bypass ID # 786



## Operation Manual

## Introduction

This high performance video processor which allows 3D movies to be watched on a 2D display. With HDMI, DisplayPort and PC/Component inputs to its HDMI output and the associated audio signal processed synchronously. The operation of both 3D-to-2D and scaling features can be handled easily through on-panel buttons, IR remote control, or RS-232 protocol.

## Features

- Supports HDMI 3D processing on Frame Packing and Top-and-Bottom of 720p@50/60Hz and 1080p@24Hz, Side-by-Side Half signals of 720p@50/60Hz, 1080i@50/60Hz(input only) and 1080p@24/50/60Hz
- Supports HDMI / Component input timing up to 1080p@50/60Hz, DisplayPort up to 2560 x 1600@60HzRB and PC up to 1920 x 1200@60/75Hz
- Supports digital and analog audio bidirectional conversion, extraction and insertion for the audio signals from individual inputs or from the HDMI source
- Supports component input when connected VGA to 3RCA adaptor

## Applications

- 1 Convert 3D signal to 2D signal for 2D display
- 2 3D source bypass to 3D display without scaling
- 3 Scale HDMI, DisplayPort and PC/Component inputs to HDMI output

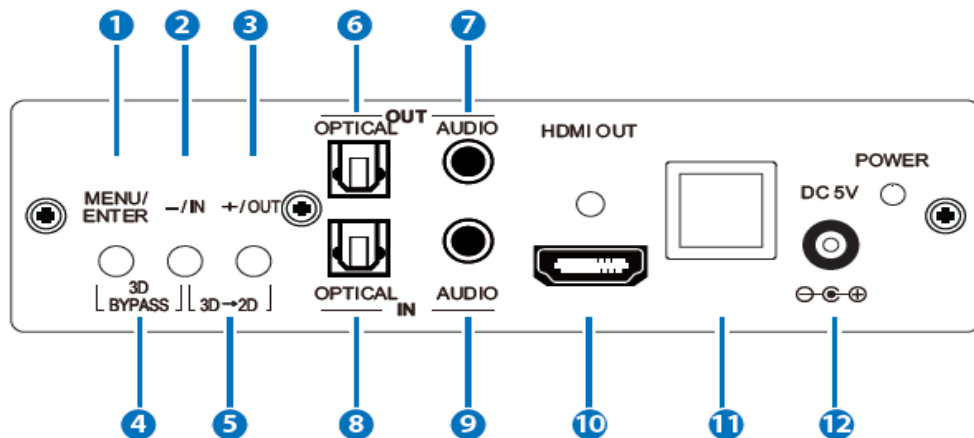
## System Requirements

Input HDMI/DisplayPort/PC sources and output with 2D or 3D HDMI display.

## Operation Controls and Functions

### Front Panel

The following sections describe the hardware components of the unit.



### 1. MENU/ENTER

Press this button to ENTER the OSD menu. Press again to confirm the selection.

### 2. -/IN

- a. "-": When in OSD page, sequentially press this button to move down the OSD selection.
- b. "IN": Press this button to quick enter the input port selection.

### 3. +/OUT

- a. "+": When in OSD page, sequentially press this button to move up the OSD selection.
- b. "OUT": Press this button to quick enter the output resolution selection.

### 4. 3D BYPASS

Press MENU/ENTER and -/IN buttons simultaneously to switch to 3D bypass without scaling.

### 5. 3D→2D

Press -/IN and +/OUT buttons simultaneously to switch from 3D to 2D.

### 6. OPTICAL OUT

This slot is where you connect the amplifier with OPTICAL cable and from amplifier to speaker.

### 7. AUDIO L/R OUT

This slot is where you connect the speaker or amplifier with audio phone jack to the display.

### 8. OPTICAL IN

This slot is where you connect the input OPTICAL audio source.

### 9. AUDIO L/R IN

This slot is where you connect the L/R input audio source.

### HDMI OUT

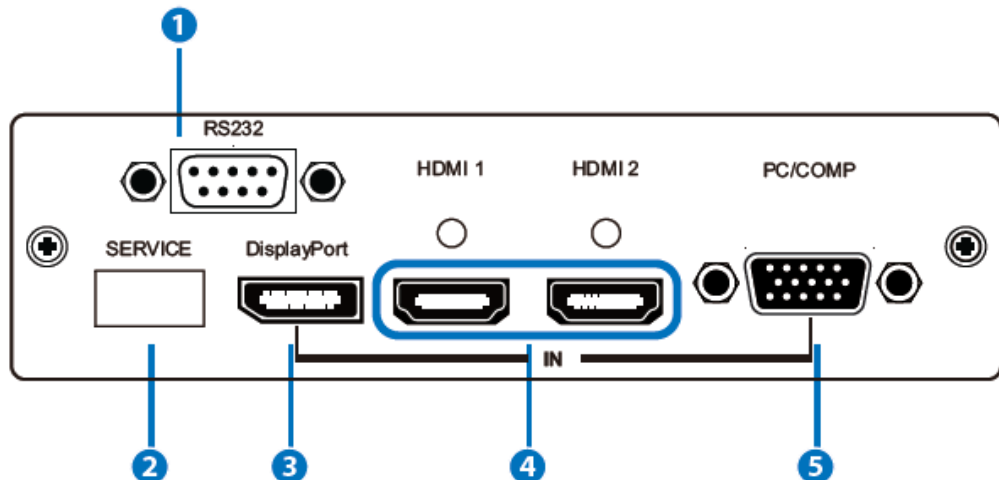
This slot is where you connect the HDMI display with HDMI cable.

### IR sensor

### DC 5V

Plug the 5V DC power supply into the unit and connect the adaptor to AC wall outlet.  
Once the system turns on the LED will turn RED.

## Back Panel



## Remote Control

### 1. RS232

This slot is to connect with D-Sub 9pin cable from the PC/NB device for RS-232 control.

### 2. SERVICE

This slot is to connect with USB cable for manufacturers' firmware update only.

### 3. DisplayPort IN

This slot is where you connect the DisplayPort source output for DisplayPort signal sending.

### 4. HDMI 1/2 IN

These slots are where you connect the HDMI sources output for HDMI signal sending.

### 5. PC/COMP IN

This slot is where you connect the PC/NB or DVD/Set-Top Box source equipment with D-Sub 15-pin cable for PC source signal input or with D-Sub 15-pin to 3 RCA adaptor for component signal input.

### 1. VIDEO IN

Press to select HDMI 1/HDMI 2/DP/PC/Component input source.

### 2. AUDIO IN

Press to select AUDIO/ OPTICAL/HDMI/DP input audio or MUTE the system.

### 3. EXIT

Press the EXIT the OSD selection.

### 4. MENU

Press this button to ENTER the OSD menu.

### 5. ENTER

Press to confirm the selection.

### 6. INFO

To show input and output resolution information.

### 7. OUTPUT

Press to show the output resolution table.

### 8. ▲/▼

Press up/down buttons to select OSD selection.

### 9. 3D→2D

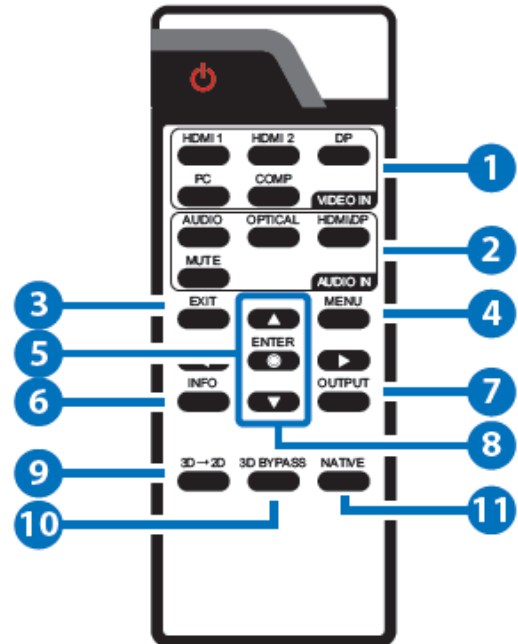
Press to switch from 3D to 2D.

### 10. 3D Bypass

Press to switch to 3D bypass.

### 11. Native

Press to switch to Native resolution.



## RS-232 Protocols

ID 15204	
PIN	Assignment
1	NC
2	Tx
3	Rx
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

Remote Control Console	
PIN	Assignment
1	NC
2	Rx
3	Tx
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC



Baud Rate: 19200bps  
Data bit: 8 bits

Parity: None  
Flow Control: None

Stop Bit: 1

## RS-232 Commands

Command	Description
POWER ?	Power Status
POWER ON	Power On
POWER OFF	Power Off
3D ?	3D Status
3D TO 2D	3D In, 2D Out
3D BYPASS	3D In, 3D Bypass Out
VIDEO ?	Video Input Source
HDMI 1	Video Input in HDMI1
HDMI 2	Video Input in HDMI2
DP	Video Input in DisplayPort
PC	Video Input in PC
COMP	Video Input in Component
AUDIO ?	Audio Input Source
AUDIO	Audio Input in AUDIO
HDMI/DP	Audio Input in HDMI/DP
OPTICAL	Audio Input in OPTICAL
MUTE ON	Mute On
MUTE OFF	Mute Off

INFO ?	Info.OSD Status
INFO ON	Info.OSD On
INFO OFF	Info.OSD 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)
NATIVE	Output by Native
EDID ?	EDID Status
EDID INT	EDID By Internal
EDID EXT	EDID By External
FEEDBACK ?	Feedback Status
FEEDBACK ON	RS232 Feedback Enable
FEEDBACK OFF	RS232 Feedback Disable
STATE ?	Video Input Signal Status
VERSION ?	Firmware Version
DEFAULT	Reset to Factory Default

**Note:** All the commands will not be executed unless followed with a carriage return. All letters are not case-insensitive.

**OSD Menu and  
Function List**

<b>MENU</b>	<b>FUNCTION</b>
Input Video	PC
	COMP
	HDMI 1
	HDMI 2
	DP
	Exit
Input Audio	AUDIO
	Optical
	HDMI/DP
	Mute
	Exit
Output Resolution	720x480P
	1280x720P
	1920x1080P
	640x480
	800x600
	1024x768
	1280x1024
	1600x1200
	1920x1200
	By Native
	3D Bypass
	Exit
Output Format	3D→2D
	3D Bypass
	Exit

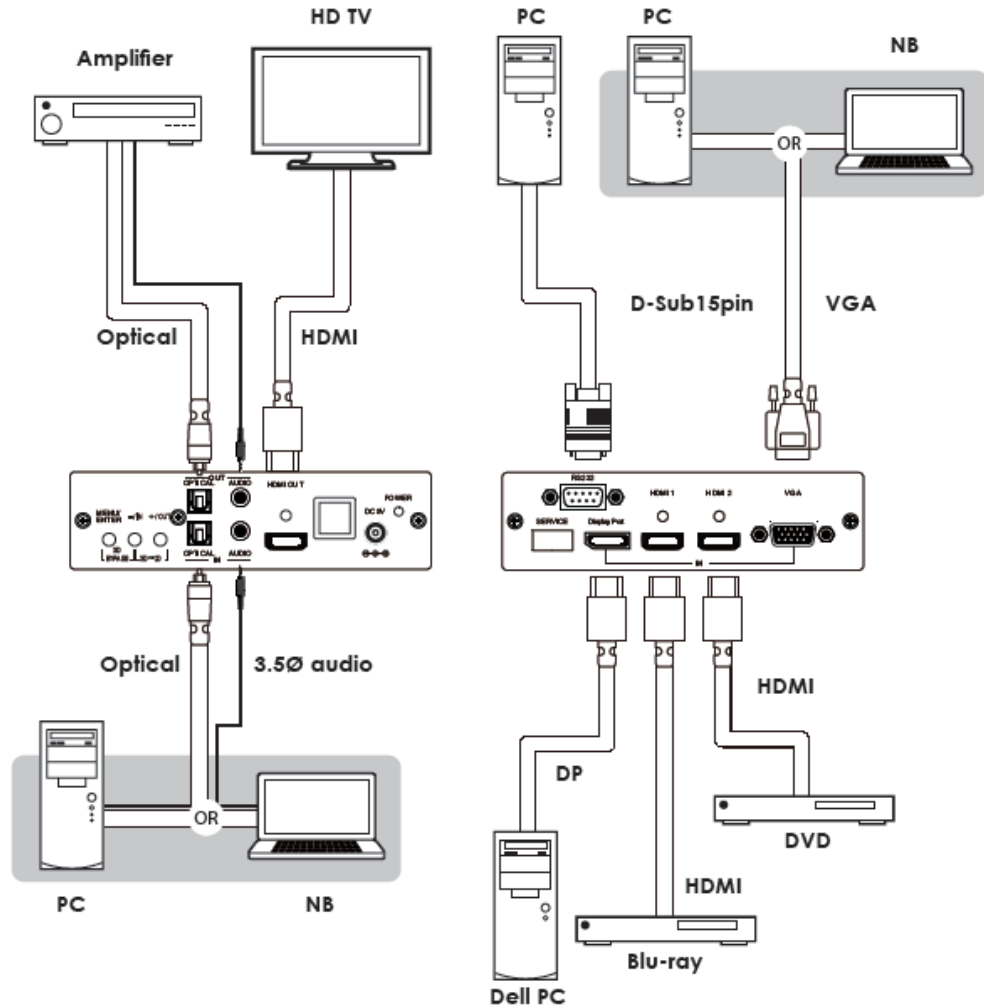
MAIN MENU	2ND LAYER	3RD LAYER
Misc. Setup	EDID Mode	Internal / External / Exit
	Info. OSD Mode	Off / On / Exit
	About ID#786	FW Ver.
	Factory Reset	System Reset
	Exit	
EXIT		

## Specifications

<b>Video Bandwidth</b>	255MHz/6.75Gbps
<b>DP Input Frequency Bandwidth</b>	2.7Gbps & 1.62Gbps/Lane
<b>Input Port</b>	2 x HDMI (Female type), 1 x DisplayPort, 1 x VGA
<b>Audio Input Port</b>	1 x L/R, 1xOptical
<b>Output Port</b>	1 x HDMI, 1 x L/R, 1 x Optical
<b>Power Supply</b>	5V DC/ 2.6A (US/EU standards, CE/FCC/UL certified)
<b>ESD Protection</b>	Human body model: ±8 kV (air-gap discharge) ±4 kV (contact discharge)
<b>Dimensions (mm)</b>	142(W) x 180(D) x 43(H)
<b>Weight(g)</b>	700
<b>Chassis Material</b>	Aluminum
<b>Silkscreen 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>	9W



## Connection Diagram



## Output Resolution

### HDMI 3D to 2D and 2D to 2D output Resolution@60Hz

640\*480  
 800\*600  
 1024\*768  
 1280\*1024  
 1600\*1200  
 1920\*1200RB  
 480P  
 720P  
 1080P

### HDMI 3D to 3D Bypass Output Resolution

Frame Packing: 720p@50/60Hz, 1080i@60Hz, 1080p@24/30Hz  
 Top-and-Bottom: 720p@50/60Hz, 1080i@60Hz, 1080p@24/30Hz  
 Side-by-Side: 720p@50/60Hz, 1080i@60Hz, 1080p@24Hz

**Note:** Some output display may not support 3D@50Hz and therefore, some 3D 50Hz signal may not be display.

**PC, HDMI, DP  
Input Timing**

2D Input Resolution	PC	HDMI	DP	COMP Input Resolution
640*350@85	✓		✓	
640*400@85	✓		✓	
720*400@85	✓	✓	✓	
VGA640*480@60/72/ 75/85	✓	✓	✓	
SVGA800*600@56/60/7 2/ 75/85/120	✓		✓	
848*480@60Hz	✓		✓	
XGA1024*768@43i/60/ 75/85/120	✓		✓	
XGA+1152*864@75	✓	✓		
1280*720@60	✓	✓	✓	
1280*768@60R/ 60/75/85/120R	✓		✓	
1280*800@60R/ 60/75/85/120R	✓		✓	
1280*960@60/85/120R	✓@60/85	✓	✓	
1280*1024@60/75/85	✓	✓	✓+120R	
1360*768@60/120R	✓	✓	✓	
1366*768@60	✓		✓	
SXGA+1400*1050@60R/ / 60/75	✓			
WXGA+1440*900@60R/ 60/75/85	✓		✓	
1440*1050@85/120R	✓		✓	
1600*900@60R	✓		✓	
UXGA1600*1200@60/ 65/70/75/85/120R	✓@60 only	✓	✓	
WSXGA1680*1050@60 R/	✓@60CVT/ 60	✓		

75/85				
1792*1366@60/75			✓	
1856*1392@60			✓	
1920*1080@60	✓		✓	
1920*1200 (@60R/60/75Hz)	✓@60	✓	✓	
1920*1440@60			✓	
720*480I/P		✓	✓	✓
720*576I/P		✓		✓
720I/P@50/60		✓		✓
1080I/P@50/60		✓	✓	
1080P@24		✓		
2048*1152@60R			✓	
2560*1600@R			✓	
<b>3D Input Resolution</b>		<b>HDMI</b>		
1080p@24Hz Frame packing		✓		
1080p@24Hz Top-and- Bottom		✓		
1080p@24Hz Side-by- Side		✓		
1080i@50/60Hz Side-by- Side		✓		
720p@50/60Hz Side-by- Side		✓		
720p@50 / 60Hz Frame packing		✓		
720p@50 /60Hz Top- and- Bottom		✓		