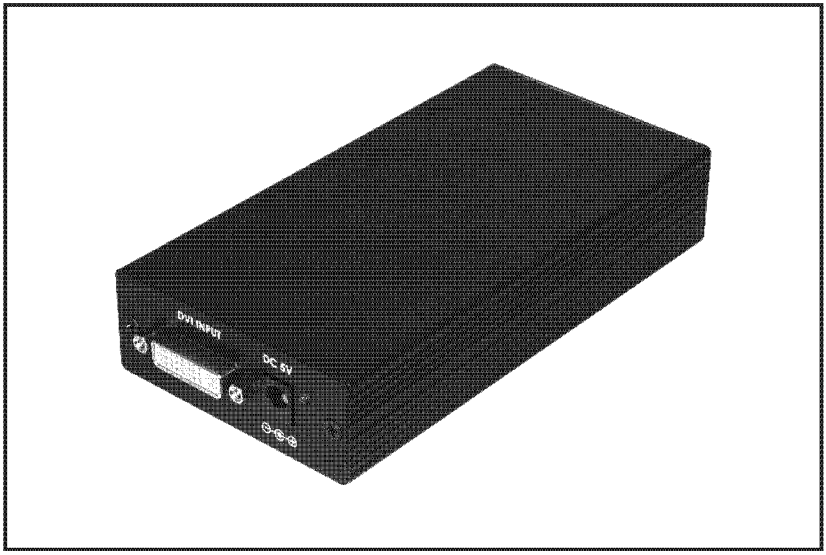
DVI-D to DVI-I Scaler Box

CP-254

Operation Manual



I. Introduction

Cypress's high performance scaler/processor family

Spec. / Model	Signal Type		Connector		Format	
	Input	Output	Input	Output	Input	Output
VGA2TV2WAY	Analog	Analog	HD-15F	HD-15F	PC-RGB+HDTV-RGB/YPbPr(Auto/Manual)	PC-RGB+HDTV-RGB/YPbPr
VGA2DVII	Analog	Digital/Analog	HD-15F	DVI-I	PC-RGB+HDTV-RGB/YPbPr(Auto/Manual)	Digital:PC-RGB+HDTV-RGB Analog: PC-RGB+HDTV-RGB/YPbPr
DVI2VGA	Digital	Analog	DVI-D	HD-15F	PC-RGB+HDTV-RGB/YPbPr(Manual)	PC-RGB+HDTV-RGB/YPbPr
DVI2DVI	Digital	Digital/Analog	DVI-D	DVI-I	PC-RGB+HDTV-RGB+YPbPr(Manual)	Digital:PC-RGB+HDTV-RGB Analog: PC-RGB+HDTV-RGB/YPbPr
VID2VGATV	Analog	Analog	RCA/4Din/7Din	HD-15F	CVBS/S-Video/TUV/RGsB(Manual)	Analog: PC-RGB+HDTV-RGB/YPbPr
VID2DVIDTV	Analog	Digital/Analog	RCA/4Din/7Din	DVI-I	CVBS/S-Video/TUV/RGsB(Manual)	Digital:PC-RGB+HDTV-RGB Analog: PC-RGB+HDTV-RGB/YPbPr

Note:

4 Din:4-pin mini Din

7 Din: 7-pin mini Din

RGsB: RGB Sync on Green

Table 1

Features:

1. CP-254 is a high performance DVI scaler that accepts Digital DVI-D input and converters to DVI-I (digital + analog RGB) output.
2. The input to the CP-254 is digital PC or HDTV signal in the fromat of either RGBHV or YPbPr/YCbCr data bitstream via 24-pin DVI connector.
3. The output of the CP-254 is digital + analog PC or HDTV signal in the format of digital RGBHV bitstream plus analog RGBHV,known as DVI-I (Integrated digital and analog).
4. The input resolution is automatically detected while the output resolution and refresh rate can be selected through OSD menu and front panel push buttons.
5. 48 MB frame memory for frame rate conversion.
6. Output picture adjustment on brightness, Contast, Color, RGB level, and H-V position.
7. DVI output enables an all digital rendering of video without the losses associated with an analog interface and is ideal for use with digital display such as LCD, Plasma and DLP projectors.

2. What's included:

The following items are included in the standard package.

1. DVI cable x 1.
2. AC power adaptor 5V/2A.

Installation

Input connection:
The CP-254 can accept both PC and HDTV input in the format of digital DVI. Use the DVI-to DVI cable to connect the DVI output of a PC ot HDTV device to the DVI input connector of the CP-254.

Output connection:
The CP-254 can output a variety of PC resolution and HDTV progressive resolution, in both digital and analog format.

To use CP-254 digital output select " DVI-D " in the Output Setup of the menu, and use DVI cable to connect the DVI output of the CP-254 to the DVI input of a display monitor, or HDTV device.

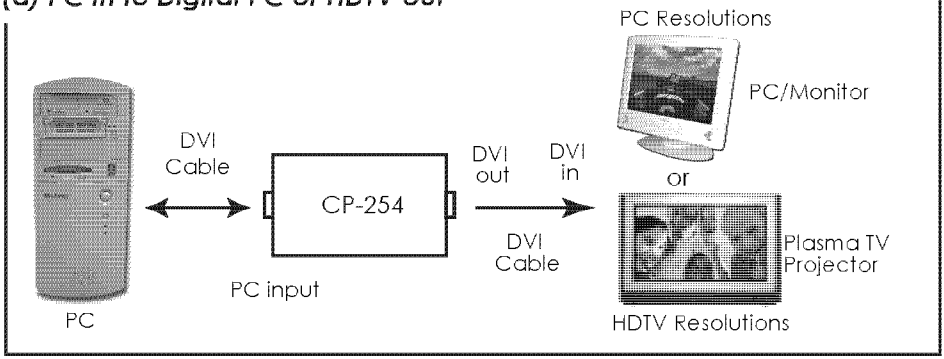
To use analog output of the CP-254 , select " DVI-A" in the Output Setup of the menu, and use the DVI to VGA adaptor to transfer analog output into VGA configuration, which can subsequenty connect to the VGA input of a display monitor through a VGA cable when one of the PC resolution is selected as output; or connect to the YPbPr input of a HDTV device through a VGA to YPbPr/3RCA adaptor cable when one of the HDTV resolution is selected as output.

3.Installation

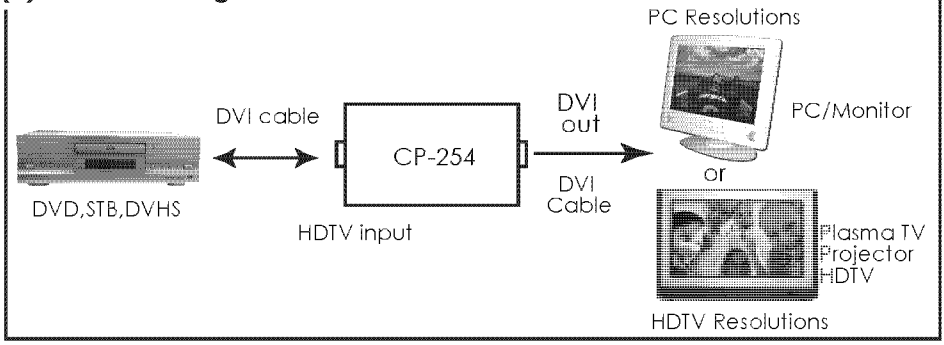
3.3 Connections :

A. For digital RGB (DVI) output, (Select DVI-D in the Output Setup of the menu).

(a) PC in to Digital PC or HDTV out



(b) HDTV in to Digital PC or HDTV out

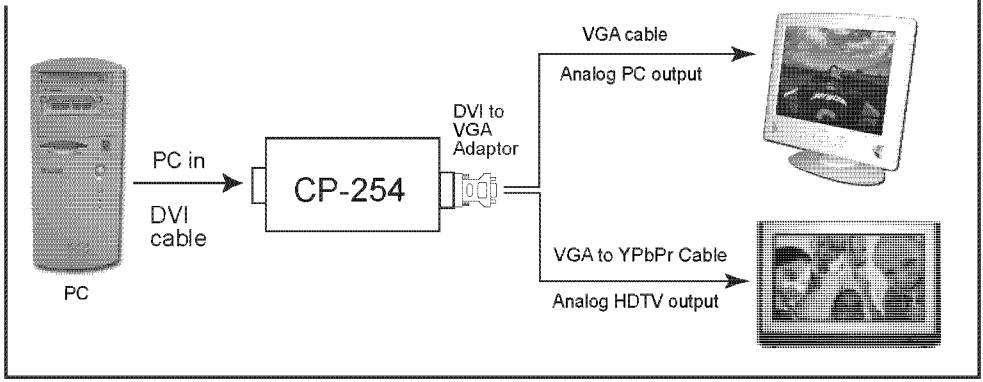


3. Installation

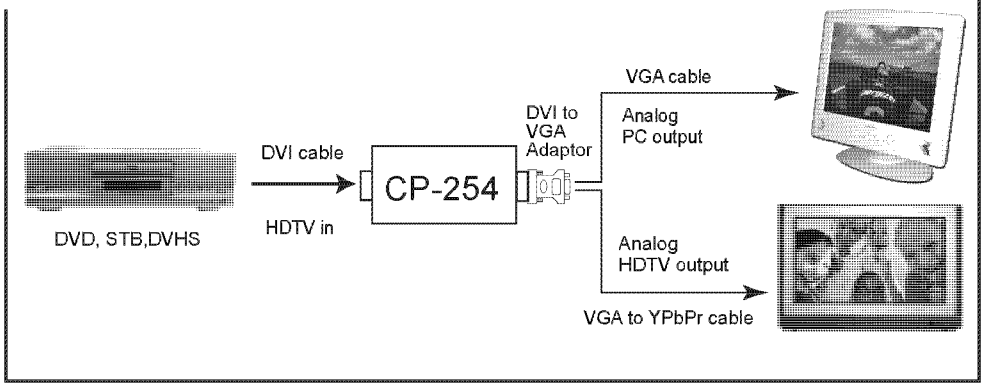
3.3 Connections :

B. For analog RGB(VGA) output, (Select DVI-A in the Output Setup of the menu).

(a) PC in to PC or HDTV out

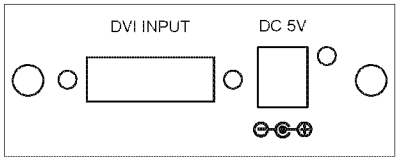


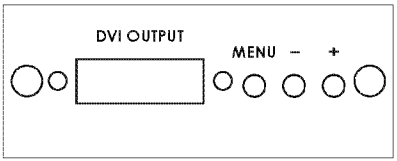
(b) HDTV in to PC or HDTV out



Configuration & Operation

Front and Rear Panels





Menu and Adjustments

Pressing the Menu button will bring up the OSD menu controls on the screen as follows:

* Input set up
* Picture Adjust
* HV Adjust
* OSD Adjust
* System Information
* Auto Adjust
* Exit

Use +,- to move the arrow cursor to your desired selection, then press MENU to confirm your selection and enter into sub menu.

Use +,- to choose the parameter your want to adjust and then press the Menu (Enter) to highlight your selection. Once a parameter is highlighted, use +,- to increase or decrease the setting value.
Press Menu (Enter) again to leave the setting. Move the arrow to exit then press Menu/Enter to Exit.

Input set up - When it is selected, a sub menu as below will appear.

YPbPr ✓ RGB

The CP-254 will automatically detect and show the input signal format as YPbPr or RGB.

You can also manually select the YPbPr or RGB to match the format of your input. Selecting a format that doesn't coincide with your input will result in an abnormal picture.

4.Configuration & Operation

4.2 Menu and Adjustments

Output set up-When it is selected, a sub-menu as below appears.

DVI-A	DVI-D
Mode	XXXX-XX

Select DVI-A when you would like to use analog output of CP-254.
Select DVI-D when you would like to use digital output of CP-254.

When DVI-A is selected, it gives you choice for the output mode as follow:
Output modes under DVI-A.

PC (RGBHV)			HDTV (YPbPr, RGBHV)		
VGA	640X480	60/72/75/85 Hz	**1080i** -RGB	1920X1080	60 Hz
VESA85	640X400	85 Hz	**720p** -RGB	1280X720	60 Hz
VGA70	720X400	70 Hz	**576p** -RGB	720X576	50 Hz
SVGA	800X600	60/72/75/85 Hz	**480p** -RGB	720X480	60 Hz
XGA	1024X768	60/70/75/85 Hz	**1080i** -YPbPr	1920X1080	60 Hz
Mac	1152X864	70/75 Hz	**720p** -YPbPr	1280X720	60 Hz
WXGA	1280X768	60 Hz	**576p** -YPbPr	720X576	50 Hz
1280A	1280X960	60 Hz	**480p** -YPbPr	720X480	60 Hz
SXGA	1280X1024	60/75 Hz			

When DVI-D is selected, it gives you choices for the output mode as follows:

Output modes under DVI-D.

PC (RGBHV)			HDTV (RGBHV)		
VGA	640X480	60/72/75/85 Hz	**1080i** -RGB	1920X1080	60 Hz
VESA85	640X400	85 Hz	**720p** -RGB	1280X720	60 Hz
VGA70	720X400	70 Hz	**576p** -RGB	720X576	50 Hz
SVGA	800X600	60/72/75/85 Hz	**480p** -RGB	720X480	60 Hz
XGA	1024X768	60/70/75/85 Hz			
Mac	1152X864	70/75 Hz			
WXGA	1280X768	60 Hz			
1280A	1280X960	60 Hz			
SXGA	1280X1024	60/75 Hz			

Use +,- to choose your desired PC or HDTV resolution.

Picture Adjust-When it is selected the following adjust parameters will appear:

Cont.		070
Bright		130
Color		070
Reset		
Exit		

Configuration & Operation

Manu and Adjustments

The adjustment range and factory preset value as follows:

	Range	Default
Contrast	0~255	047
Bright	0~255	102
Color	0~255	064

Use +,- and MENU/Enter to adjust the value of your selected parameter.
Select reset to reset all adjustment back to the factory preset value.

HV adjust- When it is selected the following sub-menu appears.

Use +,- to adjust the best horizontal and vertical position of the picture.

OSD adjust-When it is selected, you can adjust the Horizontal and Vertical position of the OSD menu.

System information- When it is selected, it shows the input/output resolution and their vertical refresh rate on the screen.

Auto adjust- When it is selected the CP-254 will automatically adjust all the parameter to the factory preset value.

Exit- Select to exit from the current page.

Notes:

* The default output resolution of the CP-254 is XGA@60Hz.
* The unit has non-volatile memory and memorizes all your settings before power off and recalls those settings on next power on.
* At any time, pressing + and - buttons simultaneously will reset the output resolution to XGA@60Hz, and other settings back to factory default values.

5. Specifications

Input resolutions:

Digital	PC (RGBHV)		HDTV(YPbPr,RGBHV)		
VGA	640X480	60/72/75/85 Hz	**1080i**	1920X1080	60 Hz
VESA85	640X400	85 Hz	**720p**	1280X720	60 Hz
VGA70	720X400	70 Hz	**576p**	720X576	50 Hz
SVGA	800X600	60/72/75/85 Hz	**480p**	720X480	60 Hz
XGA	1024X768	60/70/75/85 Hz	**576i**	720X576	50 Hz
Mac	1152X864	70/75 Hz	**480i**	720X480	60 Hz
WXGA	1280X768	60 Hz			
1280A	1280X960	60 Hz			
SXGA	1280X1024	70/75 Hz			

Output resolutions:

Digital/Analog	PC (RGBHV)		HDTV (RGBHV, YPbPr)*		
VGA	640X480	60/72/75/85 Hz	**1080i**	1920X1080	60 Hz
VESA85	640X400	85 Hz	**720p**	1280X720	60 Hz
VGA70	720X400	70 Hz	**576p**	720X576	50 Hz
SVGA	800X600	60/72/75/85 Hz	**480p**	720X480	60 Hz
XGA	1024X768	60/72/75/85 Hz			
Mac	1152X864	70/75 Hz			
WXGA	1280X768	60 Hz			
1280A	1280X960	60 Hz			
SXGA	1280X1024	60/75 Hz			

*** HDTV YPbPr format only available on Analog out.**

Input format: Digital RGBHV, YPbPr or YCbCr
Input signal: Digital RGB data bitstream
Input connector: 24-pin DVI-D connector
Output format: Analog RGBHV+Analog RGBHV or YPbPr(through DVI to HD-15 adaptor)
Output signal: Digital data bitstream
Output connector: 24-pin DVI-D connector
Power: 5V 2A center-positive