

Video, PC, HDTV to UXGA Converter ID# 434



Operation Manual

Introduction

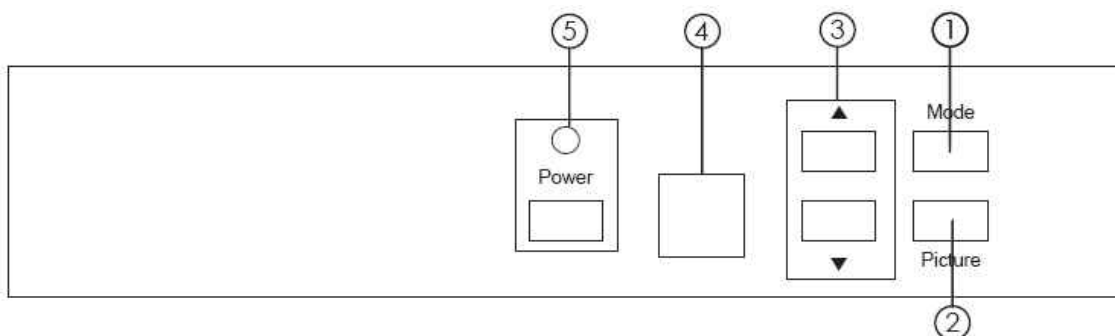
The Video, PC, HDTV to UXGA Converter is designed to convert Composite, S-Video and YCbCr/YPbPr or PC signals to a variety of computer resolutions. It handles video input from TV systems NTSC, PAL TV standards. The Video, PC, HDTV to UXGA Converter has many great features to enhance performance and is ideal for use in professional large screen presentation.

Features

1. Professional universal scaler/deinterlacer for CV, SV, YCbCr/YPbPr and PC inputs
2. All inputs can be scaled up to output resolution as below
* PC output : 640x 480, 800x 600 (SVGA), 1024 x768 (XGA), 1280 x 1024(SXGA), 848x480(WVGA), 1280x768(WXGA), 1360x768, 1600x1200(UXGA)
3. Automatically accommodates input video systems of NTSC 3.58 and PAL.
4. High performance adaptive 3D Comb filter Y/C separator.
5. Per-pixel motion compensated deinterlacing algorithms to produce artifact-free progressive scan video signal.
6. Built in Adaptive film mode 3:2 pull-down provides clear and crisp de-interlacing of video originating from 24 fps film, such as DVD movies.
7. Frame rate conversion from 50Hz up to 60Hz (PAL), or 60Hz up to 60Hz(NTSC)
8. Vertical temporal filter(VT) removes jaggy and other de-interlacing artifacts from normal video.
9. OSD menu with adjustable control on Color,Detail,Brightness,Contrast and Hue(NTSC).
10. Built-in DCTI/DLTI circuit for color/luminance transient improvement.
11. Last memory for all adjustments.
12. RS-232 interface allows remote control from PC.

Operating Functions and Controls Front Panel

The video scaler is controlled via front panel push buttons or remote control and its status is indicated by OSD display. The front panel controls are shown below.



1. Mode: Press the button repeatedly will toggle through the following adjust controls:

Source → Resolution → Aspect → 3D Enhance → Digital NR → Sources....

Source mode: While under this mode, press ▲ or ▼ button to choose your

Connecting the hardware

desired input source from Video, S-Video, Component or PC inputs.

Resolution mode: Press ▲ or ▼ button to choose output resolution from 640 x 480(VGA), 800 x 600 (SVGA), 1024 x 768(XGA), 1280 x 1024(SXGA), WVGA, WXGA, 1360x768 or UXGA PC outputs.

Aspect mode: Press ▲ or ▼ to choose between Standard, 16:9 or 4:3 aspect ratio.

3D Enhance mode: To turn on or off the 3D comb filter function.

When VCR or non-standard video source is connected to the input the output picture may be jittering. If this occurs, please turn off the 3D Enhance function.

Digital NR mode: To turn on or turn off the digital noise reduction function.

2. Picture: Press the button to toggle through picture adjust parameters as follows: Contrast→Bright → Color→ Hue →Detail→ Contrast

Contrast: Press ▲ or ▼ to adjust contrast level. The range of adjustment is 0~63. Factory default value is 58.

Bright: Press ▲ or ▼ to adjust Brightness level. The range of adjustment is 0~63. Factory default value is 31.

Color: Press ▲ or ▼ to adjust color level. The range of adjustment is 0~63. Factory default value is 31.

Hue: Press ▲ or ▼ to adjust NTSC hue level. The range of adjustment is 0~63. Factory default value is 31.

Detail: Press ▲ or ▼ to adjust detail level. The range of adjustment is 0~63. Factory default is 31.

3. ▲ , ▼ : Press to toggle through various adjust controls or to alter setting value.

4. IR Sensor: Infrared remote control sensor.

5. Power and LED button: Press once to power on the unit, press again to turn off.

Note:

* Under picture adjust mode, press ▲ and ▼ simultaneously will revert the selected parameter back to factory preset value. Press both buttons for over 5 seconds will revert all picture parameters back to their factory preset values.

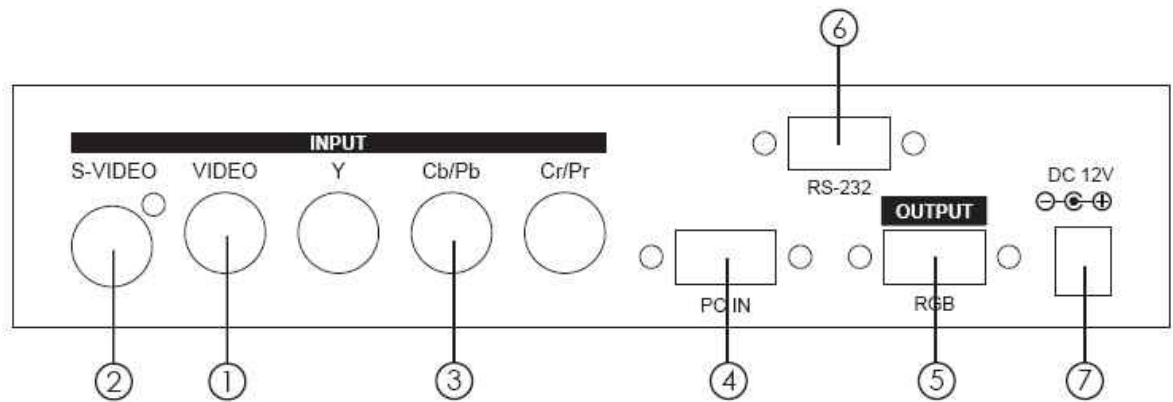
* You can use RS-232 to lockout the front panel controls. To lift this lockout and revert all parameters back to factory preset value, please press "mode" and "picture" buttons simultaneously for over 10 seconds.

6. Front Panel Lockout- Under certain circumstances it may be desirable to disable

the front panel controls. For example, to prevent unauthorized or accidental changes to the setting while the unit is in use.

To disable the front panel controls use RS-232 to set the front panel lockout to ON position.

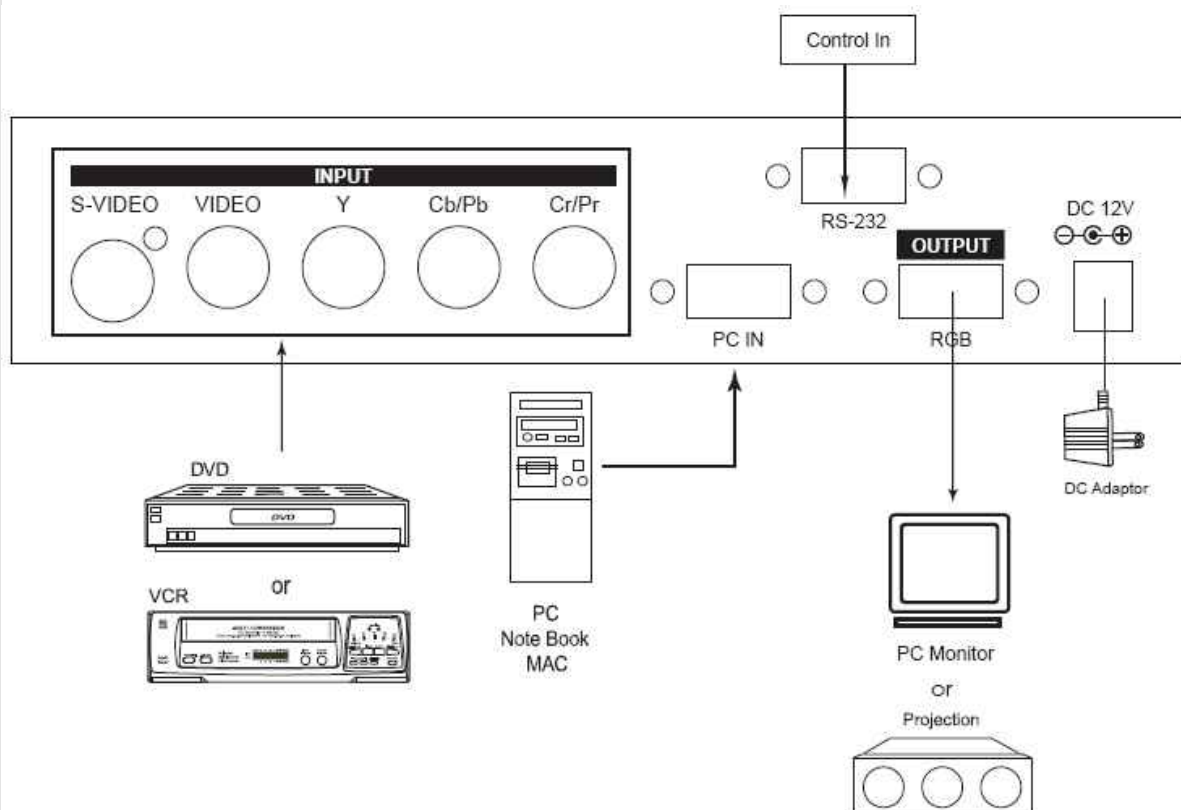
Rear Panel



- 1 . **Composite Video input:** Use a composite video cable to connect the composite video output of the source equipment to the connector labeled " Video" on the back of the Video Scaler.
- 2 . **S-Video input:** Use a S-Video cable to connect the S-Video output of the source video equipment to the connector labeled " S-Video" on the back of the Video Scaler.
S-Video provides improved performance over Composite Video and is recommended over composite.
- 3 . **YCbCr/YPbPr input:** Use the component cable to connect the component output of the source video equipment to the connectors labeled YCbCr/YPbPr on the back of the video scaler.
- 4 . **PC input:** Connect the source computer's VGA output signal to the HD 15 connector labeled "PC In" on the back of the Video Scaler.
- 5 . **PC output:** Use the HD-15 cable to connect the output to the PC input of your display monitor.
- 6 . **RS232:** 9-pin D-sub connector for connecting to your PC or other control console for remote control.
- 7 . **DC power jack:** 12V 1A DC power input.

Connecting and Installation

Output Setup



Remote Control

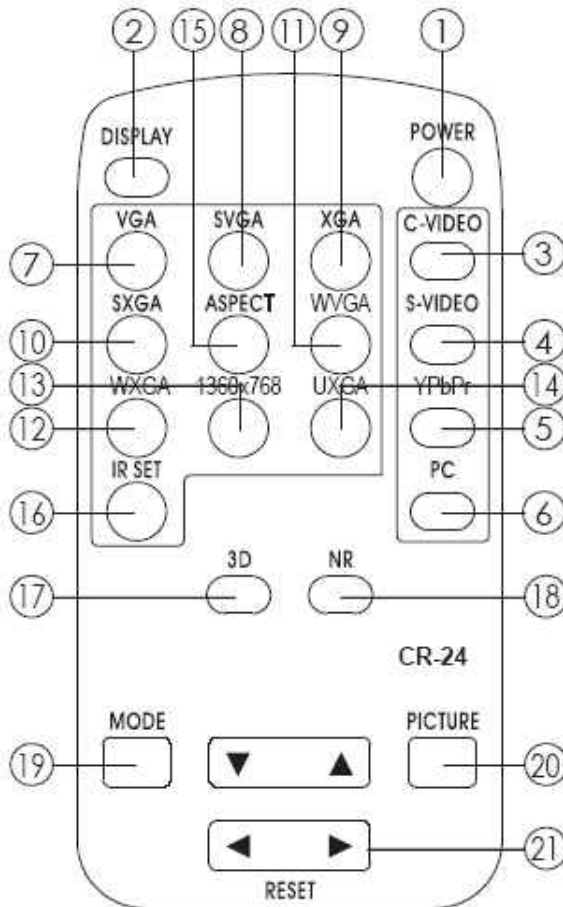
1. **Power:** Power ON/OFF button.
2. **Display:** Press the button to enable or disable the on screen display of the resolution information.
3. **C-Video:** Press the button to select composite video as input source.
4. **S-Video:** Press the button to select S-Video as input source.
5. **YPbPr:** Press the button to select component video as input source.
6. **PC:** Press the button to select PC as input source.
7. **VGA:** Press the button to select 640 x 480 as output resolution.
8. **SVGA:** Press the button to select 800 x 600 as output resolution.
9. **XGA:** Press the button to select 1024 x 768 as output resolution.
10. **SXGA:** Press the button to select 1280 x 1024 as output resolution.
11. **WVGA:** Press the button to select 848x480 as output resolution.
12. **WXGA:** Press the button to select 1280x768 as output resolution.
13. **1360x768:** Press the button to select 1360 x 768 as output resolution.
14. **UXGA:** Press the button to select 1600x1200 as output resolution.
15. **Aspect ratio:** Press the button to switch between Standard, 16:9 or 4:3 aspect ratio.
16. **IR-Set:** When front panel is locked out by RS-232, Press this button for over 15 seconds will lift the lock out.
17. **3D:** Press to turn ON/OFF the 3D enhance.
18. **NR:** Press to turn ON/OFF digital noise reduction.
19. **Mode:** Same as "mode" button on front panel. press to toggle through Source → Resolution → Aspect

→3D Enhance→Digital NR→Source

20. Picture: Same as picture button on front panel. Press to toggle through Contrast→ Bright→

Color → Hue→ Detail→ Contrast

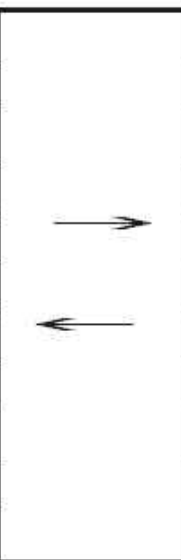
21. Reset: Press this button will revert picture adjust back to factory preset value.



RS-232 Control of the Video, PC, HDTV to UXGA Converter Video Scaler

The Video Input selection and signal parameter setting for the The Video, PC, HDTV to UXGA Converter can also be controlled via an external control system by using the RS-232 port on the unit. If information for this control method is required, beyond the scope of the instructions provided in this section, please contact Cypress Technology Support. A disk is provided with the The Video, PC, HDTV to UXGA Converter containing a sample Windows Control Panel that permits remote control of the unit from a PC via RS-232.

* The Connection between video scaler and remote controller with RS-232 modem cable.

Video 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

* RS-232 transmission format:

Baud Rate : 9600 bps

Data Bit : 8 Bits

Parity: None

Stop Bit: 1 bit

Flow control:None

RS-232 Control of the Video, PC, HDTV to UXGA Converter Video Scaler
 RS232 transmission format:

The communication is at 9600, no parity, 8 bits, 1 stop bit, no flow control

- Command / Response codes of RS232 transmission:

Command	Response	Description
"[POWER1]"	"[POWER1]"	power on(normal)
"[POWER0]"	"[POWER0]"	power off(standby)
"[IN0]"	"[IN0]"	Composite video input
"[IN1]"	"[IN1]"	S video input
"[IN2]"	"[IN2]"	Y PB PR/Y CB CR input
"[IN3]"	"[IN3]"	PC input
"[OUTPC0]"	"[OUTPC0]"	PC VGA output
"[OUTPC1]"	"[OUTPC1]"	PC SVGA output
"[OUTPC2]"	"[OUTPC2]"	PC XGA output
"[OUTPC3]"	"[OUTPC3]"	PC SXGA output
"[OUTPC4]"	"[OUTPC4]"	PC WVGA output
"[OUTPC5]"	"[OUTPC5]"	PC WXGA output
"[OUTPC6]"	"[OUTPC6]"	PC 1360X768 output
"[OUTPC7]"	"[OUTPC7]"	PC UXGA output
"[OSD0]"	"[OSD0]"	OSD off
"[OSD1]"	"[OSD1]"	OSD on
"[DISPLAY0]"	"[DISPLAY0]"	Display off
"[DISPLAY1]"	"[DISPLAY1]"	Display on
"[IR0]"	"[IR0]"	IR sensor off
"[IR1]"	"[IR1]"	IR sensor on
"[PANEL0]"	"[PANEL0]"	Front panel lockout on
"[PANEL1]"	"[PANEL1]"	Front panel lockout off
"[COMB0]"	"[COMB0]"	3D enhance off
"[COMB1]"	"[COMB1]"	3D enhance on
"[DNR0]"	"[DNR0]"	Digital NR off
"[DNR1]"	"[DNR1]"	Digital NR on
"[ASPECT0]"	"[ASPECT0]"	Aspect standard
"[ASPECT1]"	"[ASPECT1]"	Aspect 16:9
"[ASPECT2]"	"[ASPECT2]"	Aspect 4:3
"[CONTRASTx]"	"[CONTRASTx]"	Contrastx=0~63
"[BRIGHTx]"	"[BRIGHTx]"	Brightness x=0~63
"[COLORx]"	"[COLORx]"	Color x=0~63
"[HUEx]"	"[HUEx]"	Tint x=0~63
"[DETAILx]"	"[DETAILx]"	Sharpness x=0~63

"[RESET]"	Video adjustment reset "[CONTRAST58]" "[BRIGHT31]" "[COLOR31]" "[HUE31]" "[DETAIL31]"		
"[STATUS]"	Retrive video scaler all status "[POWER?]" "[IN?]" "[OUTPC?]" "[OUTH?]" "[OSD?]" "[DISPLAY?]" "[IR?]" "[PANEL?]" "[COMB?]" "[DNR?]" "[ASPECT?]" "[CONTRAST?]" "[BRIGHT?]" "[COLOR?]" "[HUE?]" "[DETAIL?]"		

Specifications

Computer input	RGB with HV Sync		
Max computer input resolution	1280x1024		
Computer input connector type	HD 15 Female		
Computer input signal level	RGB @ 0.7V, H&V Sync @ TTL		
Video inputs	Composite Video @ 1 Vp-p 75 ohm S-Video @ 1 Vp-p 75 ohm YPbPr Y : 1 Vpp 75 ohm PbPr : 0.7 Vp-p 75 ohm		
Video standard	NTSC 3.58, PAL B/D/G/I		
Video input connectors	Composite video on BNC S-Video on 4-pin Mini-DIN Component on BNC		
Scaled output resolutions	Pixels		Format
	VGA 640 x 480		RGBHV
	SVGA 800 x 600		Progressive
	XGA 1024 x 768		Progressive
	SXGA 1280 x 1024		Progressive
	WVGA 848 x 480		Progressive
	WXGA 1280x768		Progressive
	1360x768 1360x768		Progressive
Scaled output vertical refresh rates & Horizontal scan rates	Output resolution		Vert. (Hz)
	VGA		59.94
	SVGA		60.320
	XGA		60.000
	SXGA		60.020
	WVGA		60.00
	WXGA		59.99
	1360X768		60.02
Scaled output vertical refresh rates & Horizontal scan rates	UXGA		60.0
			31.469
			37.880
			48.360
			63.981
			31.020
			47.396
			47.712
			75.000
Manual control	Front panel buttons		
RS-232 control	Via rear panel DB9F connector		
IR remote control	Yes		
Video adjustments	Brightness, Contrast, Color Saturation, Hue (NTSC), Detail1		
Weight	1Kg		
Dimensions	204(D)x 154 (W) x 46(H)mm		
Power source	100~240VAC to DC 12V/1A Desktop switching adaptor		