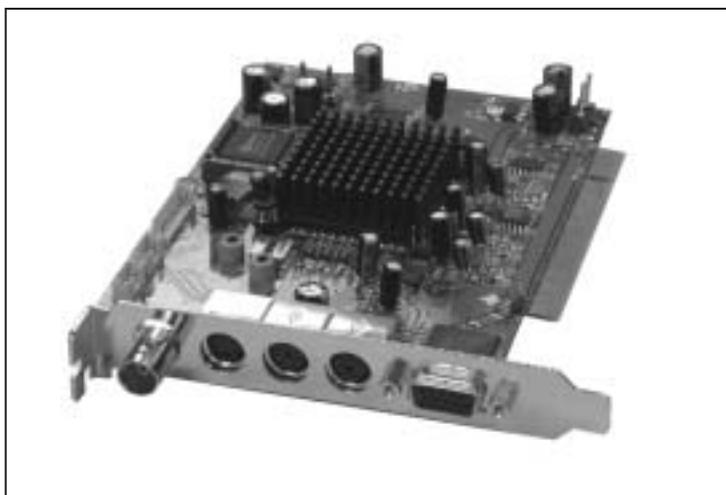


PC to Video Converter

Operation Manual



Applications

The CPT-380PCI PC to Video scan converter is designed to convert a variety of computer images, from 640x480 up to 1600x1200, to interlaced NTSC or PAL video. It is ideal for use in applications like video conference, home theater, business presentation, lecturing room or viewing PC image on TV.

Features

1. Automatically detects and down converts the incoming PC images to NTSC or PAL.
2. Plug-n-play, no software driver required.
3. PC PCI interface card.
4. Adjustable image scaling.
5. Pan and Zoom.
6. Advance 2-D flicker filter.
7. Support high resolution input up to UXGA(1600x1200@60Hz).
8. Support high input refresh rate up to 140Hz(VGA).
9. NTSC or PAL TV-system output.
10. Adjustable contrast, brightness, color, sharpness.
11. Last memory.
12. Adjustment and control through RS-232 interface.
13. Useful functions-high brite, overscan, freeze, test pattern, magnifier.
14. Remote control.
15. OSD operation display.

Specifications

Input terminal: HD-15 R/G/B/H/V

Input resolution:

Common resolution lists:
VGA@60Hz up to 140Hz refresh rate
SVGA@60Hz up to 120Hz refresh rate
XGA@60Hz up to 85Hz refresh rate
SXGA@60Hz refresh rate
UXGA@60Hz refresh rate

Output terminal:

Composite video BNC
S-Video mini-din
HD-15 (pass through)

Output system:

NTSC or PAL TV system
R/G/B/H/V (pass through)

Controls:

IR remote control,
RS-232 control

Last memory

Accessories:

HD-15x2(male,female) to HD-15(male) Y-type VGA cable x 1
HD-9(female) to mini-din7(male) RS-232 cable x 1
IR sensor to mini-din5 (male) IR sensor cable x 1
IR remote control x 1
Application software CD x 1

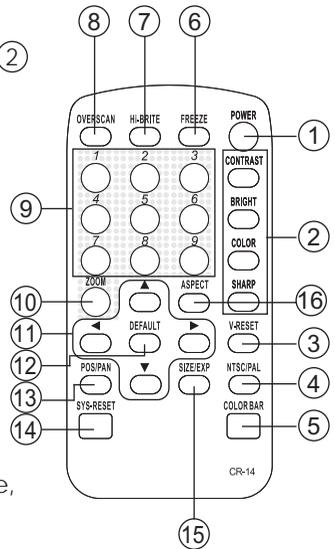
Dimensions: 135(W) x 126(D) x 19(H)mm

Weight:

Operation Controls and Functions

Remote controls and Functions

1. Power: **No function.**
2. Video setting adjustments for picture contrast, bright, color and sharpness.
3. V-Reset: Press the button to reset picture adjustment (2) to factory default value.
4. NTSC/PAL: Press the button to select NTSC or PAL as video output.
5. Color bar pattern ON/Off: Press the button to show color bar pattern on the screen. Press again to close color bar.
6. Image freeze ON/Off: Press the button to freeze/unfreeze an image.
7. Hi-bright ON/Off: Press the button to show enhanced brightness picture.
8. Under/Over Scan: Press the button to choose a underscan image or overscan image.
9. 9-blocks selection(Zoom): Under zoom mode press one of the buttons to select its corresponding sub-area which is 1/9 of the full screen.
10. Zoom ON/Off: Press the button to zoom in an picture, press again to zoom out.
11. Horizontal/Vertical adjust knob:
 - Adjust the size or position of a image when it is under Zoom, Pan/Position, or Size/EXP mode.
 - Adjust setting value of picture adjustment in (2).
12. Default: Press the button to revert the following parameters to factory preset value:
 - Zoom
 - Position
 - Size
 - Picture adjust
13. Pos/Pan: When a picture is in underscan mode, press the button to do position adjustment. When a picture is in overscan mode, press the button to do pan adjustment.
14. System reset: Press the button to revert all system parameters back to factory preset value.
The system parameters are default as follows:
 - Overscan
 - NTSC output
 - 4:3 aspect
 - Normal brightness
 - Video settings reset, position/ pan/size /expand reset.
15. Size/EXP: When a picture is in underscan mode, press the button to do size adjustment. When a picture is in overscan mode, press the button to do expand adjustment.
16. Aspect: Press the button to switch between standard 4:3 and widescreen 16:9 aspect ratio.



RS-232 Control application software

* **PC OS: Windows 98/ME/2000/XP**

* **Software installation:**

1. Place installation CD on CD-ROM drive.
2. Execute setup.exe on installation CD.
3. OS maybe requires to update some files.

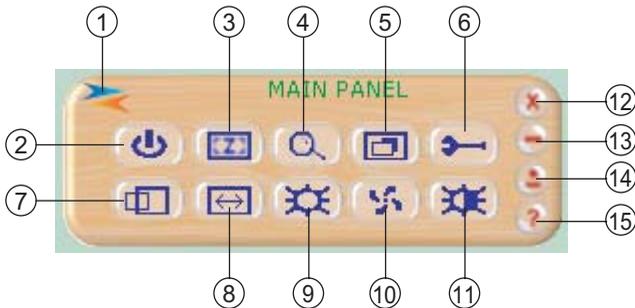
Please re-start PC. After starting PC ready, execute setup. exe again.

4. Click taskbar menu (START)->(Programs) ->(CPT-380PCI) to execute software.

* **If RS-232 or CPT-380PCI is not ready then software enters virtual mode.**

After RS-232 and CPT-380PCI connection being ready, start the software again and enters real mode.

* **Main Panel**



1. Mode indicator
2. System reset
3. Zoom
4. Magnifier

5. Over/Under scan
6. Option
7. Position/Pan
8. Size/Expand

9. Hi-Brite
10. Freeze
11. Video settings
12. Close

13. Minimize
14. System tray
15. About

* **Mode indicator:**

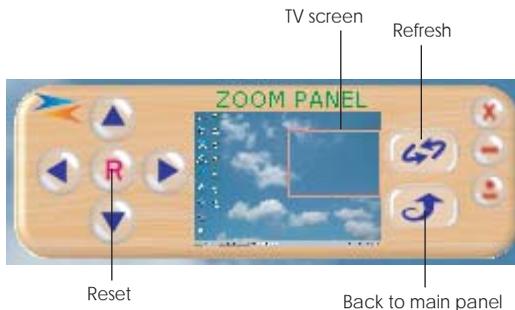
Grey icon: virtual mode operation.

Colored icon: real mode operation.

* **System reset:** Reset CPT-380PCI unit.

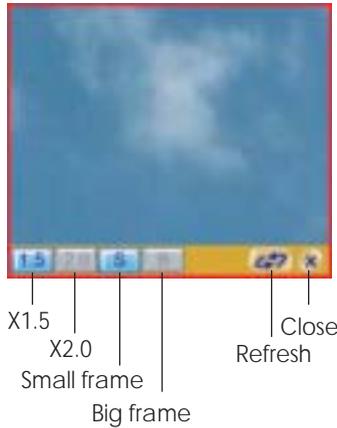
* **Zoom:** Drag and move (TV-screen) to the place where you want to see.

If the screen image is changed, then click(refresh).



RS-232 Control application software

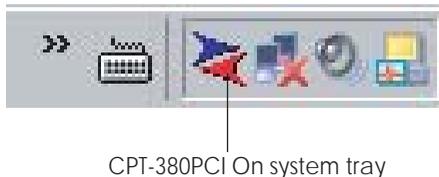
- * **Magnifier:** Drag and move magnifier to the place where you want to see.
If the screen image is changed, then click(refresh).



- * **Over/Under scan:** TV overscan/Underscan
overscan adjustments are (pan) and (expand)
underscan adjustments are (position) and (size)
- * **Option:** (TV system): NTSC or PAL output
(Aspect pattern): 4:3 or widescreen
(Test pattern): colorbar test pattern on/off
(Window ON Top): application software window always on top on/off

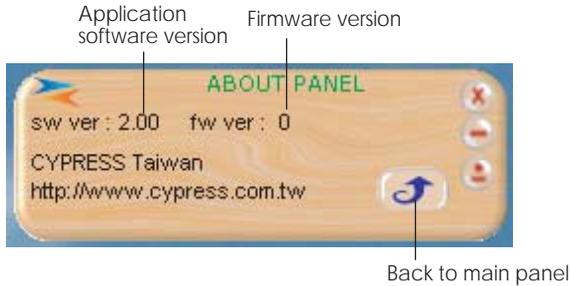


- * **System tray:** Shrink application software to system tray.
Click the icon and return to normal window.

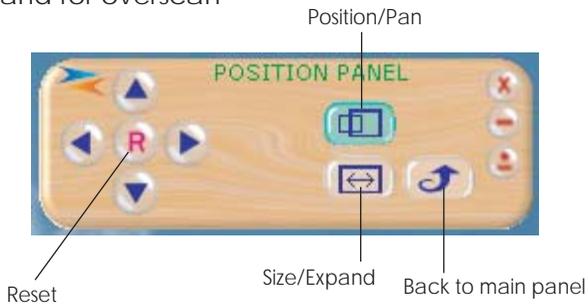


RS-232 Control application software

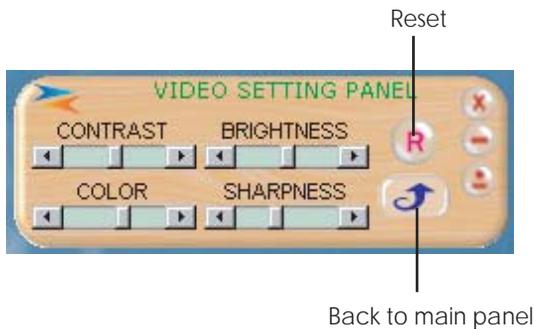
- * **Minimize:** Shrink application software to window taskbar.
- * **About:** Display application software version and firmware version.



- * **Close:** Terminate application software.
- * **Position/Pan and Size/Expand adjustments:**
Position/Size for underscan
Pan/Expand for overscan



- * **High brite:** High brite is useful for picture browsing and movie playing.
- * **Screen freeze:** Still screen.
- * **Video settings:** Contrast, Brightness, Color, Sharpness adjustments.



CPT-380PCI RS-232 Remote Control Protocol

* The connection between CPT-380PCI and remote controller with RS-232 modem cable.

Pins definition of modem cable

CPT380PCI			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

CPT-380PCI RS-232 Remote Control Protocol

* Command / Response codes of RS-232 transmission:

" The command / response codes are the combination of 3 bytes. the 1st, 2nd byte are text and the 3rd byte is value."

Remote Controller Command Codes to CPT-380PCI

Code		Comment
'NP'+0	N/P	NTSC output
'NP'+1		PAL output
'FZ'+0	FREEZE	freeze image off
'FZ'+1		freeze image on
'OV'+0	OVERSCAN	underscan
'OV'+1		overscan
'ZM'+0	ZOOM	zoom off
'ZM'+1		zoom on
'MU'+0	move UP	move UP button release
'MU'+1		move UP button press
'MD'+0	move DOWN	move DOWN button release
'MD'+1		move DOWN button press
'ML'+0	move LEFT	move LEFT button release
'ML'+1		move LEFT button press
'MR'+0	move RIGHT	move RIGHT button release
'MR'+1		move RIGHT button press
'SU'+0	size UP	shorter height image button release
'SU'+1		shorter height button press
'SD'+0	size DOWN	higher height image button release
'SD'+1		higher height image button press
'SL'+0	size LEFT	narrower width image button release
'SL'+1		narrower width image button press
'SR'+0	size RIGHT	wider width image button release
'SR'+1		wider width image button press
'RS'+0	RESET	system reset
'RS'+1		reset image location
'RS'+2		reset image size
'RS'+3		reset video settings
'TP'+0	PATTERN	test pattern off
'TP'+1		test pattern on
'HB'+0	Hi Brite	hi-brightness off
'HB'+1		hi-brightness on
'AR'+value	zoom AREA	'AR'+1 ~ 'AR'+9 zoom area1 ~ area9
'AS'+0	ASPECT	aspect is 4:3
'AS'+1		aspect is wide screen
'CO'+value	CONTRAST	value = 0 ~ 63
'BR'+value	BRIGHTNESS	value = 0 ~ 255
'SA'+value	SATURATION	value = 0 ~ 63
'FF'+value	FLICKER	value = 0 ~ 21
'VR'+1	VERSION	require CPT-380PCI unit firmware version
		retrive CPT-380PCI all status
'AL'+1	ALL	'NP'+? 'OV'+? 'AS'+? 'CO'+? 'SA'+? 'FF'+? 'ZM'+? 'BR'+? 'SH'+?

CPT-380PCI RS-232 Remote Control Protocol

CPT-380PCI transmits codes to Remote Controller when CPT-380PCI operating

Code		Comment
'NP'+0		NTSC output
'NP'+1	N/P	PAL output
'FZ'+0		freeze image off
'FZ'+1	FREEZE	freeze image on
'OV'+0		underscan
'OV'+1	OVERSCAN	overscan
'ZM'+0		zoom off
'ZM'+1	ZOOM	zoom on
'RS'+0		system reset
'RS'+1		reset image location
'RS'+2	RESET	reset image size
'RS'+3		reset video settings
'TP'+0		test pattern off
'TP'+1	PATTERN	test pattern on
'HB'+0		hi-brightness off
'HB'+1	Hi Brite	hi-brightness on
'AR'+value	zoom AREA	'AR'+1 ~ 'AR'+9 zoom area1 ~ area9
'AS'+0		aspect is 4:3
'AS'+1	ASPECT	aspect is wide screen
'VR'+value	VERSION	CPT-380PCI firmware version

Connection and Installation

