

CAPTIVA USB-PRO

All in One HD USB3.0 Capture Box User's Guide

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Content

1	Preface.....	1
2	Minimum Hardware Configuration	1
3	Recommended Hardware Configuration.....	1
4	System Requirements.....	2
5	Hardware and Driver Installation	2
6	Connection of Video Input.....	2
6.1	SDI Signal	2
6.2	DVI-D/DVI-I Signal.....	3
6.3	HDMI Signal	3
6.4	VGA Signal.....	3
6.5	YpbPr / Component Signal.....	4
6.6	Composite (CVBS) signal.....	4
6.7	S-Video signal	5
7.	Connection of Audio Signal	5
8	Video Capture Device Instruction.....	5
8.1	Display "Filter Properties Dialog Window" In DVME.....	6
8.2	"Device" Instruction	6
8.3	"Advanced Settings" Instruction.....	7
8.3.1.1	Input Interface.....	7
8.3.1.2	Signal Status	8
8.3.1	Image Adjustment.....	8
8.3.2	Image Output	9
8.4	"Color Adjustment" Instruction.....	10
9	Audio Capture Device Instruction	10
9.1	Windows XP, Windows 2003	10
10.2	Windows Vista, Windows 7, Windows 2008, Windows 2008 R2.....	11
10	Compatible Software Instruction	13

1 Preface

Thank you for purchasing Captiva USB-PRO USB3.0 capture box. The capture box is small, easy to carry, and has superior performance and flexible characteristics.

Captiva USB-Pro can capture one High-Definition video signal or one Standard Definition video signal and one stereo analog audio signal. Video input can connect with SDI, HDMI, DVI, Component (YPbPr), VGA, Composite (CVBS), or S-VIDEO. The user's guide will provide with instruction for proper use of the capture device.

2 Minimum Hardware Configuration

Captiva USB-Pro requirements are largely overshadowed by the requirements of the DVME or other software.

- Intel Core Solo
- 1G of RAM
- Available USB 3.0 interface

3 Recommended Hardware Configuration

- Intel Core i5 or i7
- 2G of RAM
- Available USB 3.0 interface

4 System Requirements

System supports the following operation systems (x 86 version or x64 version):

- Microsoft Windows XP
- Microsoft Windows Server 2003
- Microsoft Windows Vista
- Microsoft Windows Server 2008
- Microsoft Windows 7
- Microsoft Windows Server 2008 R2

5 Hardware and Driver Installation

Install the Captiva USB-Pro by inserting the USB 3.0 cable, then run the driver installer. Upon successful driver installation, an alert will indicate success.

6 Connection of Video Input

6.1 SDI Signal

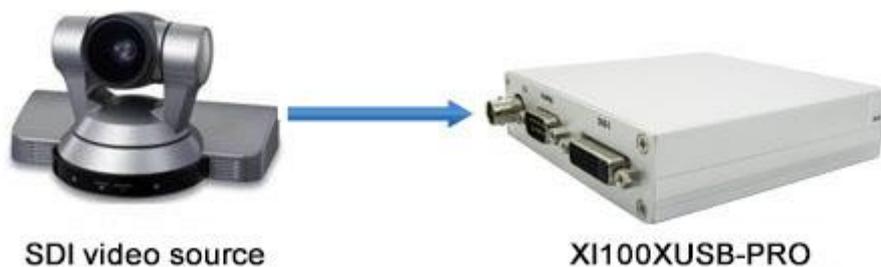


Figure 1, SDI signal connection sketch map

6.2 DVI-D/DVI-I Signal

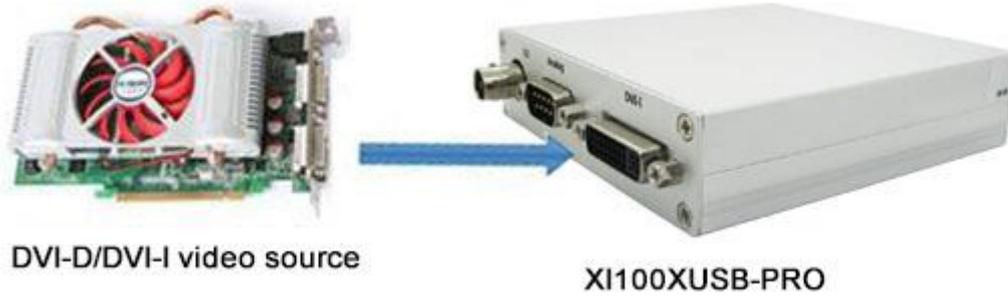


Figure 2, 6.2 DVI-D/DVI-I signal connection sketch map

6.3 HDMI Signal

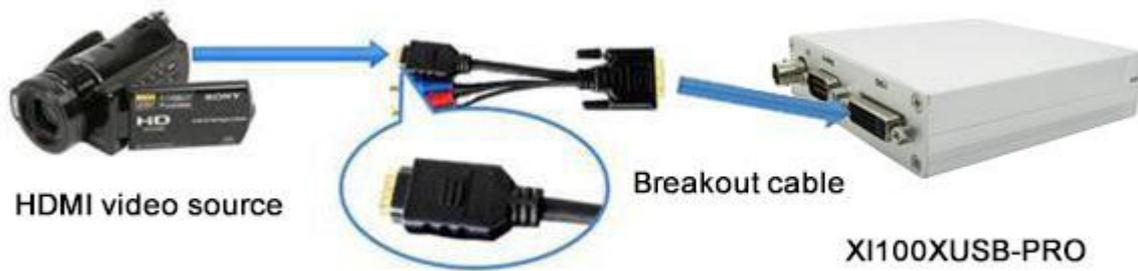


Figure 3, HDMI signal connection sketch map

6.4 VGA Signal

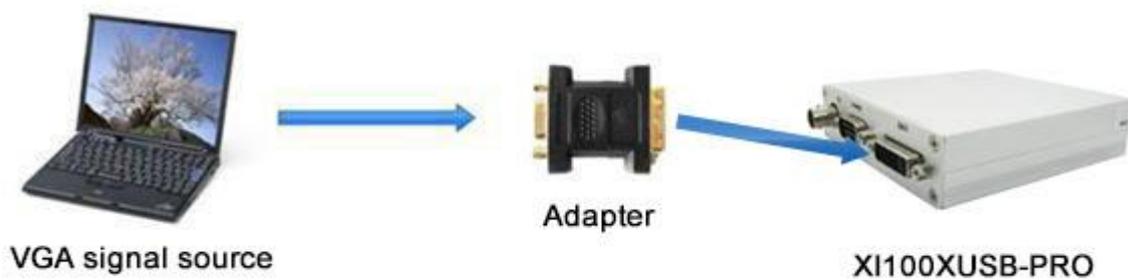


Figure 4, VGA signal connection sketch map

6.5 YpbPr / Component Signal

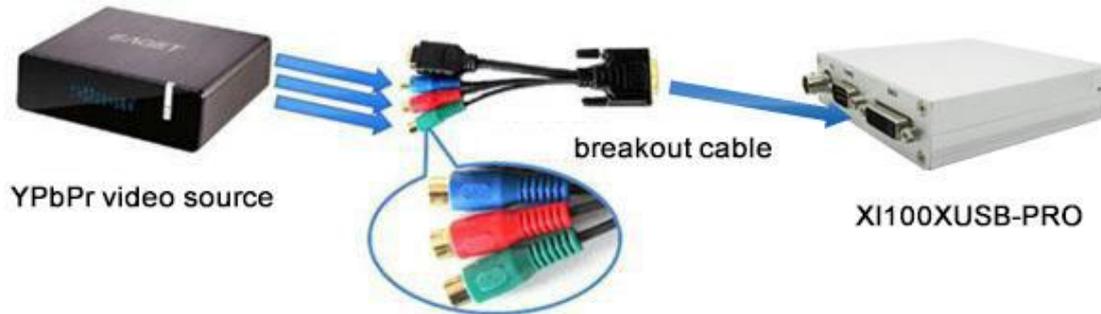


Figure5, first YpbPr signal connection sketch map

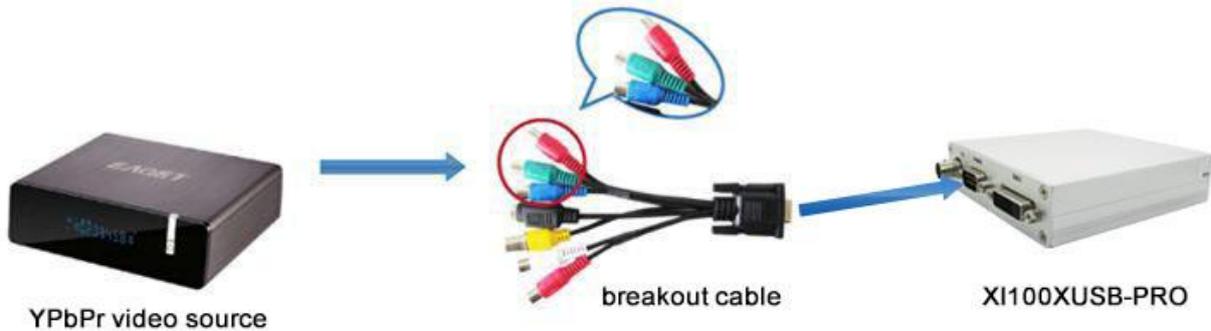


Figure6, second YpbPr signal connection sketch map

Note: Second YpbPr signal should be chosen manually.

6.6 Composite (CVBS) signal

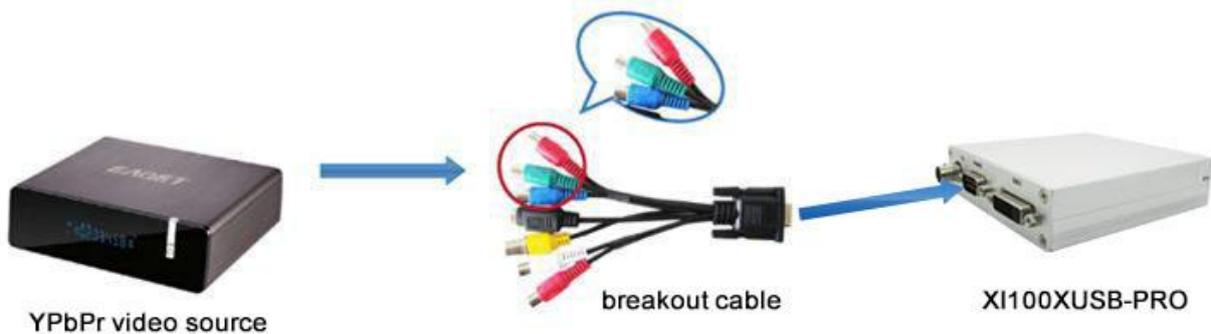


Figure7, CVBS signal connection sketch map

6.7 S-Video signal

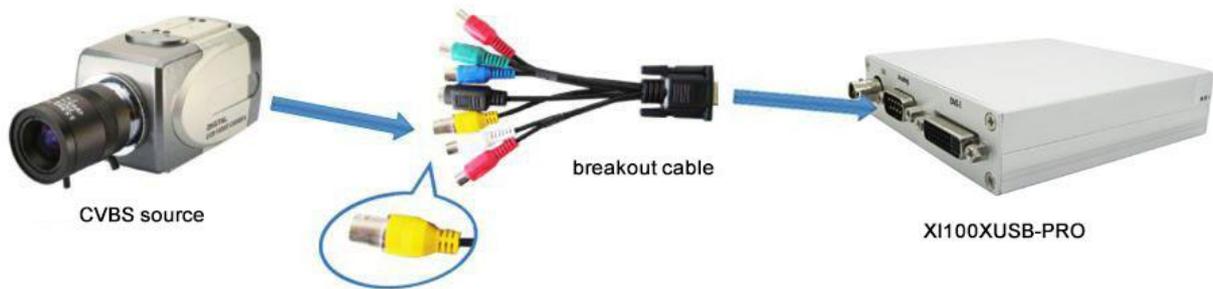


Figure8, S-video signal connection sketch map

7. Connection of Audio Signal

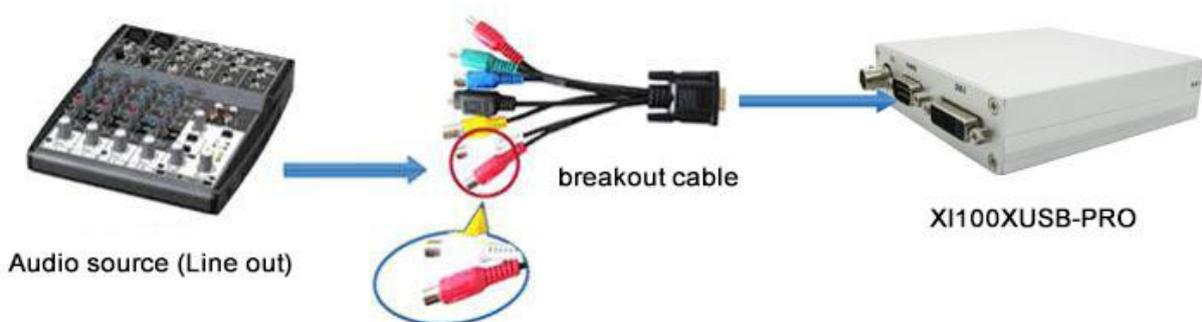


Figure 9, audio line in signal connection sketch map

Notes: The audio signal input is up to " **Line in**" level standard, if you need to connect microphone, you must use an amplifier or mixer that provides line level output.

8 Video Capture Device Instruction

Captiva USB-PRO is based on Microsoft DirectShow interface, and the HD video capture device will be listed as "HD Video (XI100XUSB-Pro Box 1)".

XI100XUSB-PRO not only offers basic options, such as image brightness, contrast, hue, saturation, Gamma and so on, but also provides additional options for setting function. You can use "**Filter Properties dialog window**" in DirectShow to set these options.

8.1 Display "Filter Properties Dialog Window" In DVME

Discover Video Multimedia Encoder (DVME) gives you convenient access to the Captiva properties. Simply select the Video Properties dialog (the tool icon next to each video input), then select "Native Device Setting".

8.2 "Device" Instruction

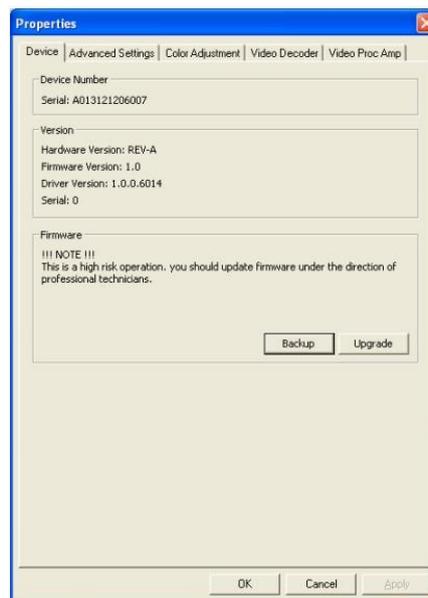


Figure 10, Device Properties tab

Device Number: display serial of card, the number should be accorded with the barcode on the card.

Version: display related version number; versions include hardware version, firmware version, driver version, and device serial. You may request user to provide relevant version number when you solve problems.

Firmware: if new features need to upgrade the firmware, we should first backup it

and then upgrade the firmware.

Notes: The different versions of the firmware and hardware cannot be mixed together, or else it will get error when upgrade. Additionally, do not power outage in the process of firmware upgrade, otherwise it will lead to upgrade firmware fail, then XI100XUSB will not work. You have to return back to factory for being repaired.

8.3 "Advanced Settings" Instruction

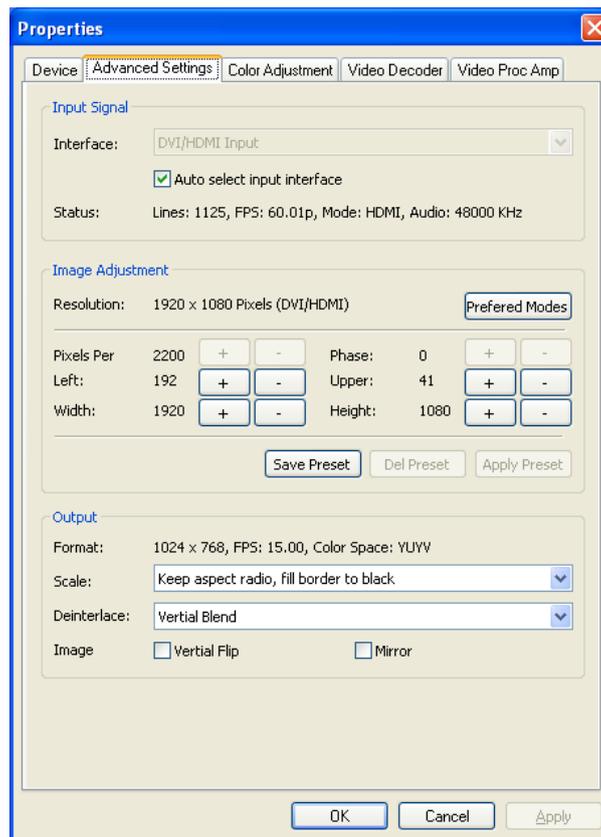


Figure 11, "Advanced Settings" page

8.3.1.1 Input Interface

By default, check “**Auto Select Input Interface**”, supporting input interface includes: DVI / HDMI input, YPbPr input, CVBS input, S-Video input. **Note:** when “**Auto Select Input Interface**” is selected, if SDI, HDMI and YPbPr input interfaces all have signal access, then SDI input is preferred. You must select CVBS and S-Video input manually, otherwise it will be identified with YPbPr input.

8.3.1.2 Signal Status

The relevant parameters of signal are shown, such as total number of rows, frame rate (p is progressive scan, i is interlaced), mode, audio frequency.

8.3.1 Image Adjustment

By default, image is auto, but you can change the settings to achieve a desired effect, such as black border, unclear image, picture which needs clipping, by manual adjustment. After adjustment, you can save the preset. Then you can apply preset values without adjustment when the same signal accesses.

For example as VGA signal adjustment:

- **Black border adjustment:** Through adjust left margin and top margin to eliminate black border. Every time you can adjust 1 pixel.
- **Image clipping:** Through adjust image width, height, left margin and top margin to achieve desired requirement. Increasing/reducing width of image starts from right, increasing/reducing height of image starts from below.
- **Select the correct resolution:** For the resolution with same number of row, the capture boxes may not recognize the correct resolution, like 1024x768, 1280x768, 1360x768, 1368x768, the number of rows are all 768, automatic adjustment may all recognition into 1024x768, then click automatic adjustment will pop up as shown in the following figure list, the user can select the correct resolution.



Resolution Ratio: 1024 x 768 Pixels (GTF Standard)
Resolution Ratio: 1280 x 768 Pixels (GTF Standard)
Resolution Ratio: 1360 x 768 Pixels (GTF Standard)
Resolution Ratio: 1368 x 768 Pixels (GTF Standard)

- **Image clipping:** Through adjust image width, height, left margin and top margin to achieve desired requirement. Increasing/reducing width of image starts from right; increasing/reducing height of image starts from below.

1. Set scale full output image to confirm whether clipping adjustment is appropriate.
2. Cut off left margin of image: firstly increase left margin, then reduce image width.
3. Cut off right margin of image: reduce image width.
4. Cut off top margin of image: firstly reduce image height, and then increase top margin.
5. Cut off lower margin of image: reduce image height.

After image adjustment completes, click "**Save Preset**" to save current adjustment; click "**Del preset**" to delete preset you saved; click "**Apply Preset**" to apply the saved preset to current settings.

8.3.2 Image Output

Display output format of current image, set image zoom scale, deinterlace and image flipping.

- **Format:** display output image size, frame rate, color format.
- **Scale:** if image size is not unified with user setting, we provide three ways, full output image and keep aspect ratio, fill border to black and keep aspect ratio, clip border. Full output image and keep aspect ratio is default.
- **De-interlace:** vertical blend, motion adaptive. Motion adaptive is better, but it takes up high CPU usage, also you can choose "disabled".
- **Image:** offer two ways, vertical flip and mirror.

8.4 "Color Adjustment" Instruction



Figure13 , "Color Adjustment" properties page

Here you can be adjust R, G, B brightness and contrast separately, click "**Default**" to restore default values.

9 Audio Capture Device Instruction

Captiva USB-PRO support embedded HDMI and SDI in LPCM audio, based on the Microsoft DirectShow interface. After installation in operating system, the relevant audio devices will be added. Any software which is compatible with DirectSound, DirectShow can use the recording device for capturing sound.

9.1 Windows XP, Windows 2003

The name of audio capture device under Windows XP, Windows 2003:

- HDMI In (XI100XUSB-PRO Box 1) , digital audio devices, embedded SDI or HDMI audio signal.
- Line In (XI100XUSB-PRO Box 1) , analog audio equipment

Through system "**Volume Control**" to adjust the recording volume, specific steps as follows:

1. In system notification icon area on right corner double-click " " button to pop-up "**Open Volume Control**" window.
2. Open "**Options**" menu, select "**Properties**" menu item.
3. In "**Mixer**", select "**Digital In (XI100XE-PRO Box 1)**" or '**Line In (XI100XUSB-PRO Box 1)**', click "**OK**" button.
4. Corresponding volume control project will be displayed and you can operate volume according to your needs.



Figure 15, Windows XP/2003 "VolumeControl" - "Properties" dialogue

10.2 Windows Vista, Windows 7, Windows 2008, Windows 2008 R2

- HDMI In (XI100XUSB-PRO Box 1) , digital audio devices, embedded SDI or HDMI audio signal.
- Line In (XI100XUSB-PRO Box 1) , analog audio equipment

Through system "**Volume Control**" to adjust recording volume, specific steps as follows:

1. In system notification icon area on right corner right-click "" button, select "**Recording devices**" in pop-up menu.
2. In pop-up list which displays recording device, select "**HDMI In**" or "**Line In**", click "**Properties**" button, system will pop up device properties dialog window.
3. In Properties dialog box, select "**Levels**" property page, then you can operate volume control and "**Quiet**" according to your requirement.



Figure16 , Windows Vista/7 dialogue

10 Compatible Software Instruction

Captiva USB-PRO is compatible with DVME and with a variety of 3rd party audio and video capture software which is based DirectShow interface, and audio capture software which is based DirectSound interface, such as:

- Discover Video Multimedia Encoder
- Windows Media Encoder
- Adobe Flash Media Live Encoder
- Real Producer Plus
- VideoLAN for Windows