



**XI104AE VGA+ 4 SD Signals+ Audio Capture Adapter  
User's Guide**

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## **1 Preface**

Thank you for purchasing XI104AE video capture adapter!

XI104AE is featured with small and exquisite bulk, superior performance and flexible characteristics. XI104AE can simultaneously capture one VGA signal, four Standard-Definition video signals, and two stereo analog audio signals. VGA input can connect with YPbPr signal via breakout cable.

The user's guide will provide with necessary instruction for proper use of XI104AE.

## **2 Minimum Hardware Configuration**

- Intel Core Solo
- 1G of RAM
- Available PCI-Express x1 expansion slot on motherboard

## **3 Recommended Hardware Configuration**

- Intel Core i5
- 2G of RAM
- Available PCI-Express x4 expansion slot on motherboard

## **4 System Requirements**

System should be one of the following systems (x 86 version or x64 version):

- Microsoft Windows XP
- Microsoft Windows Server 2003
- Microsoft Windows Vista

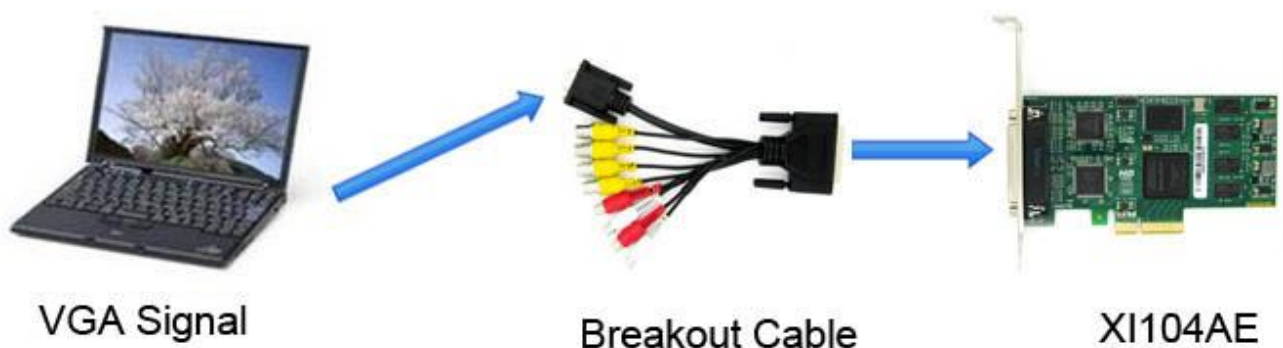
- Microsoft Windows Server 2008
- Microsoft Windows 7
- Microsoft Windows Server 2008 R2

## 5 Hardware and Driver Installation

Please refer to "XI104AE Installation Guide" to install the hardware and the driver.

## 6 Connection of HD Input

### 6.1 VGA Signal (RGB-HV)



*Figure 1, VGA signal connection sketch map*

## 6.2 CVBS

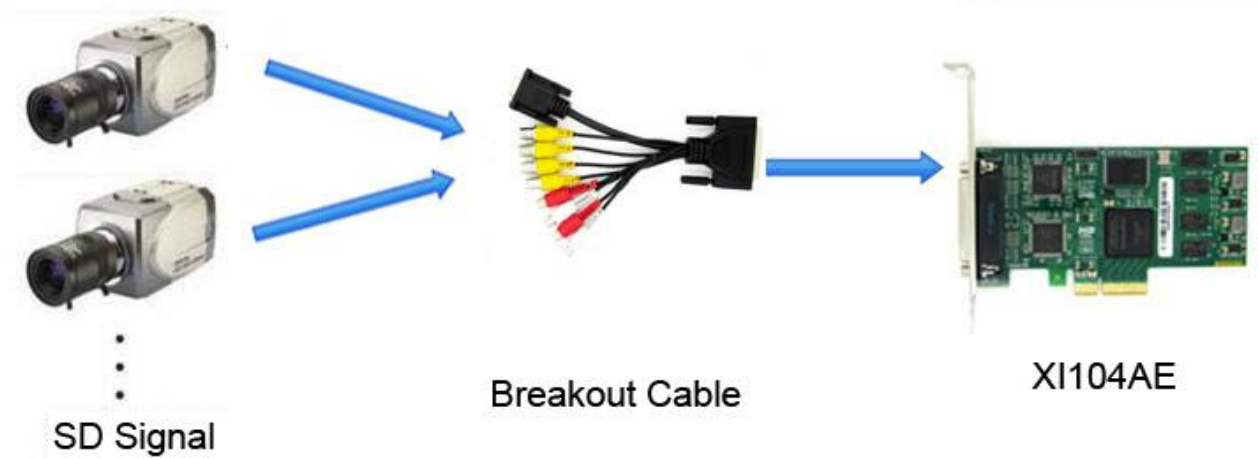


Figure 2, CVBS connection sketch map

## 6.3 Connection of Audio Signal

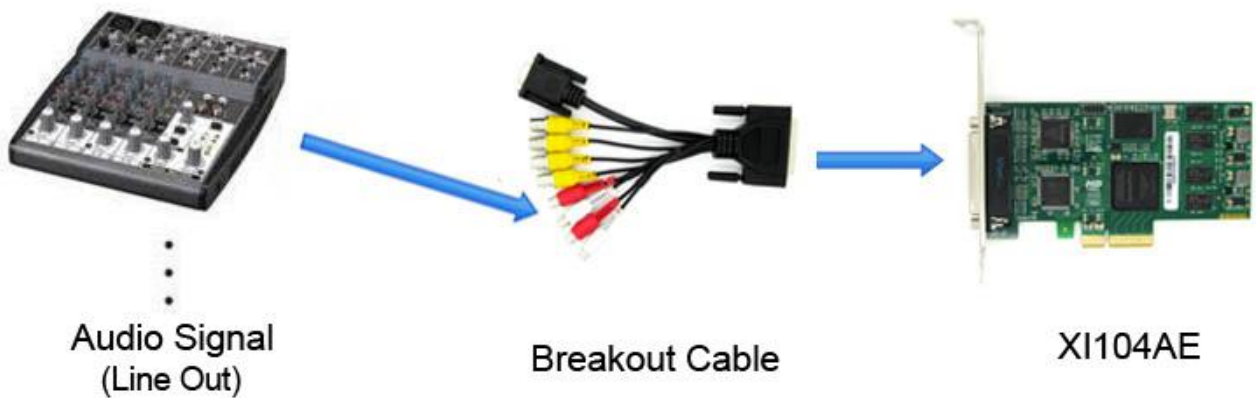


Figure 3, audio line in signal connection sketch map

**Notes:** The audio signal input is up to " **Line in** " level standard, if you need to connect microphone , must connect microphone with microphone input of "**microphone amplifier**" or "**mixer**" , and then "**microphone amplifier**" or "**mixer** "output is connected to the interface.

## 7 Video Capture Device Instruction

XI104AE is based on Microsoft DirectShow interface, five video devices will be increased in operating system after installation:

- HD Video (XI104AE Adapter x), VGA capture device
- Video 1 (XI104AE Adapter x), SD capture device
- Video 2 (XI104AE Adapter x), SD capture device
- Video 3 (XI104AE Adapter x), SD capture device
- Video 4 (XI104AE Adapter x), SD capture device

The HD Video (XI104AE Adapter x) is corresponding to VGA input interface in DB25 breakout cable; Video1/2/3/4(XI104AE Adapter x) is corresponding to four yellow video BNC interface.

XI104AE not only offers basic options, such as image brightness, contrast, hue, saturation, Gamma and so on, but also provide additional options for setting function. You can use "**Filter Properties dialog window**" in DirectShow to set options.

### 7.1 Display "**Filter Properties Dialog Window**" In Common Software

AMCAP: Double click "**AmCap.exe**", choose HD video device "**HD Video (XI104AE Adapter1)**" in "**Devices**" menu, then click "**Video Capture Filter ...**" in "**Settings**" menu, pop-up "**Filter Properties dialog window**".

### 7.2 “Device” Instruction



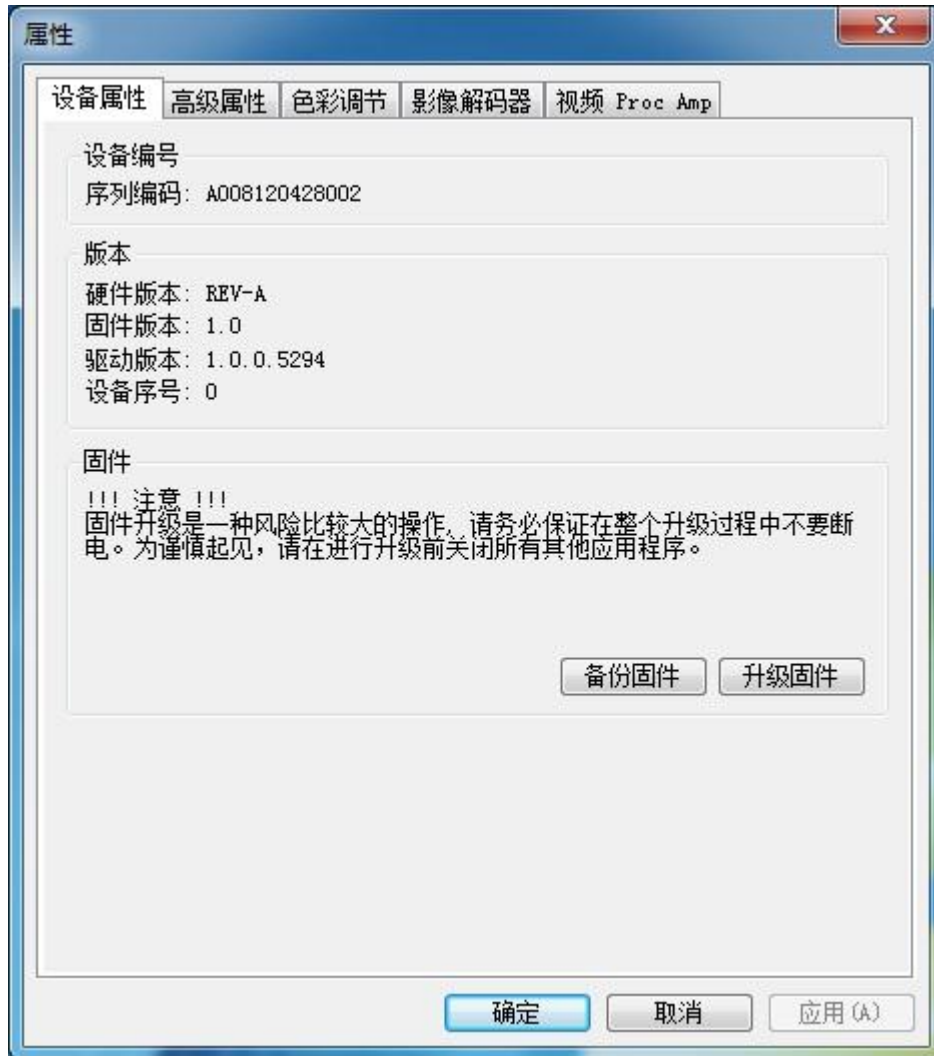


Figure 4, Device Properties tab

**Device Number:** display serial of XI102XE, the number should be accorded with the barcode on the adapter.

**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 the

capture card will not work. You have to return the capture card back to factory for being repaired.

### 7.3 HD Capture Device "Advanced Settings" Instruction



Figure 5, "Advanced Settings" page

#### 9.3.1 Input Signal

By default, select "Auto Select Input Interface", supporting input interface includes: VGA(RGB-HV), YPbPr.

Notes: when "Auto Select Input Interface" is selected, if you connect with VGA input or YPbPr input, it will be identified input automatically without selecting manually.

## 9.3.1.1 Input Interface

## 9.3.1.2 Signal Status

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

## 9.3.2 Image Adjustment

By default, image is auto, but it cannot achieve desired effect, such as black border, unclear image, picture which needs clipping, it must be adjusted manually. 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.

**Text definition adjustment:** adjust line number of samples and sampling phase to achieve desired definition of text.

**Select correct resolution quickly:** the capture card cannot identify correct resolution with the same number of rows, such as 1024x768, 1280x768, 1360x768, 1368x768, lines are all 768, auto may be all identified as 1024x768, then click “**auto**”, a list will pop up as shown below, user can select the correct resolution.



*Figure 6, auto pop-up menu*

**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 bottom.

**Skills of image clipping as follows:**

1. Set scale “fill output image” to confirm whether clipping adjustment is

appropriate.

2. Cut off image left: firstly increase left margin, then reduce image width.
3. Cut off image right: reduce image width.
4. Cut off image top: firstly reduce image height, and then increase top margin.
5. Cut off image bottom: 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.

### 9.3.3 Image Output

Display output format of current image, set image zoom scale, de-interlace and image flipping.

- Format: display output image size, frame rate, color format.
- Scale: provide three ways, fill output image and keep aspect ratio, fill border to black and keep aspect ratio, clip border.
- De-interlace: vertical blend, motion adaptive. Motion adaptive is better, but it takes up high CPU usage, also you can select "disabled".  
Image: offer two ways, vertical flip and mirror.

## 7.4 SD Capture Device” Advanced Video Settings” Instruction



Figure 7, SD Capture Device” Advanced Video Settings” page

SD capture device” Advanced Video Settings” is unified with HD capture device, except input interface has only CVBS.

## 7.5 "Color Adjustment" Instruction

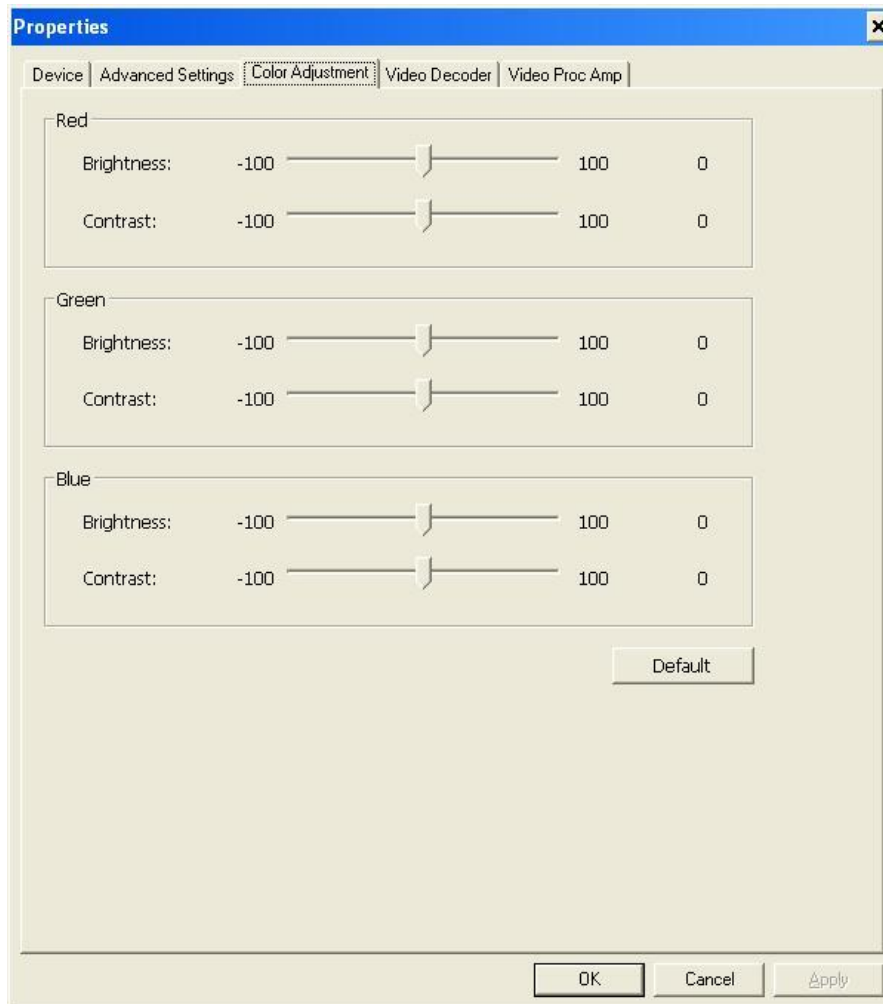


Figure 8 , HD device "Color Adjustment" properties page

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

## 8 Video Formats Setting

Driver is redefined "**Filter Output Pin**" interface and unified standard for SD and HD. Output resolution can be any size, even special resolution which is cut.

## 8.1 Display "Filter Output Pin" In Common Software

- **AMCAP:** Double click "AmCap.exe", choose HD video device "HD Video (XI102XE Adapter1)" in "Devices" menu, then click "Video Capture Pin ..." in "Settings" menu, pop-up "Filter Output Pin".

## 8.2 "Out Format" Instruction

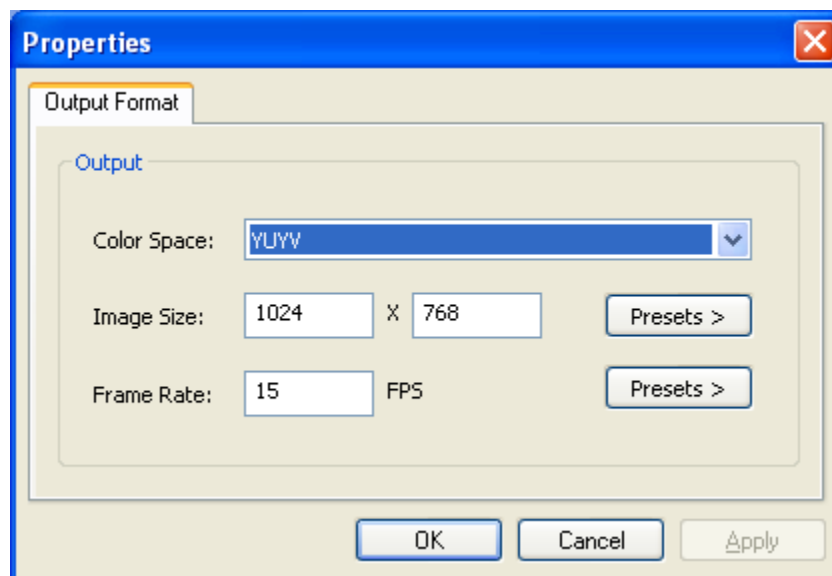


Figure 9, "properties page"

**Color Space:** offer five color formats, YUYV, UYVY, I420, RGB 24 Bits, and RGB 32 Bits.

**Image Size:** set image size of output, it can be written manually, or select output resolution from "Presets", the bold font resolution at the top is the same as capture image, it is the best resolution.

**Frame Rate:** set output frame rate, it can be written manually, or select from "Presets". If application software is set output frame rate, now setting is no effect, when you open again, it will return frame rate in application software.

## 9 Audio Capture Device Instruction

XI104AE is based on the Microsoft DirectShow interface. After installation in


operating system, the relevant audio devices will be added on. Any software which is compatible with DirectSound, DirectShow can use the recording device for capturing sound, and then recorded as voices that HDMI and analog line are mixed. Also "**Volume**" and "**Mute**" in HDMI and analog line can be independently controlled.

## 9.1 Windows XP, Windows 2003

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

- Line In 1 (XI104AE Adapter x)
- Line In 2 (XI104AE Adapter x)

Through system "**Volume Control**" to adjust 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 "**Line In 1 (XI104AE Adapter x)**", click "**OK**" button.
4. Corresponding volume control project will be displayed, this time you can operate volume and "**quiet**" according to your requirement.



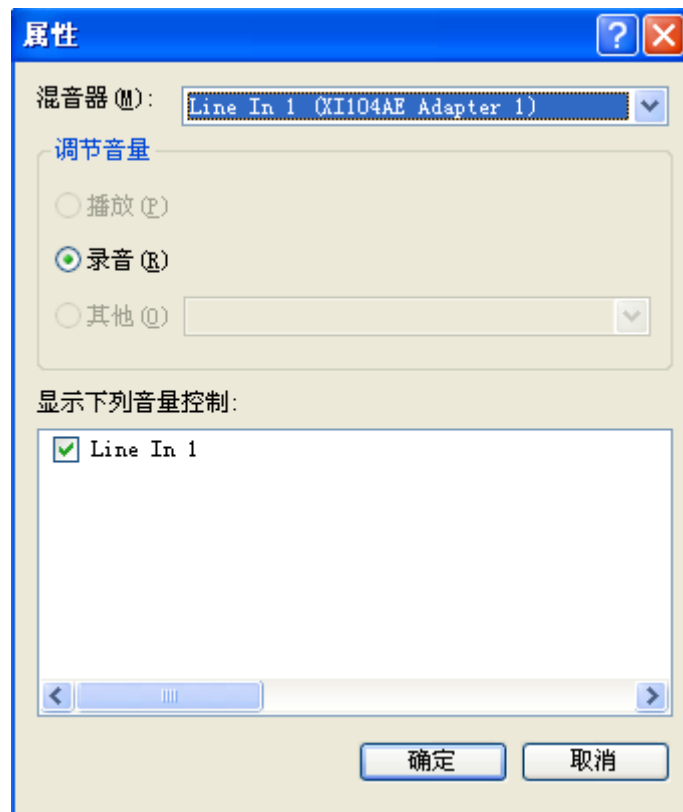


Figure 10 , Windows XP/2003 "VolumeControl"- "Properties" dialogue

## 9.2 Windows Vista, Windows 7, Windows 2008, Windows 2008 R2

Under such operating systems, each capture card will show two audio capture devices:

- Line In 1 (XI104AE Adapter x)
- Line In 2 (XI104AE Adapter x)

Through system "**Volume Control**" to adjust the 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 "**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.



Figure 11, Windows Vista/7 recording device properties dialog windows

## 10 Compatible Software Instruction

XI104AE can be compatible with variety of audio and video capture software which is based DirectShow interface, and audio capture software which is based DirectSound interface, such as:

- Windows Media Encoder
- Adobe Flash Media Live Encoder
- Real Producer Plus

- Video LAN for Windows