Osprey® 800e Series User Guide

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Note: This reminder is provided to call to the CATV installer's attention Section 820-40 of the NEC, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Note to CATV Installer: This reminder is provided to call to the CATV installer's attention Section 820-40 of the NEC, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Contents

Overview

Warranties

System requirements

- Install the Osprey video capture card in a PCI Express® (PCIe®) slot with direct lanes to the CPU or a Northbridge or IOH.
- The selection of the CPU is critical. To process full HD video, a six-core processor per HD input is a good benchmark.

-
  - ***Always*** *disable C-States*
  - *Only enable hyper threading if the CPUs have 6 cores or more*
-
  - *Power Scheme to Presentation*
  - *Turn off Monitor to Never*
  - *Turn off hard disks to Never*
  - *System Standby to Never*
-
  - *Visual Effects adjusted for best performance*
  - *Memory Usage to System Cache (for Windows XP only)*

Audience

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Installation Steps

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Note: Before you install Osprey software updates, uninstall the driver software and reboot the computer.

Installing the driver via the Multimedia CD

Note: Autoplay should be enabled by default. If the main menu does not automatically appear, click on ***Start*** ➢ ***Computer****. Double-click on the DVD in the window.*

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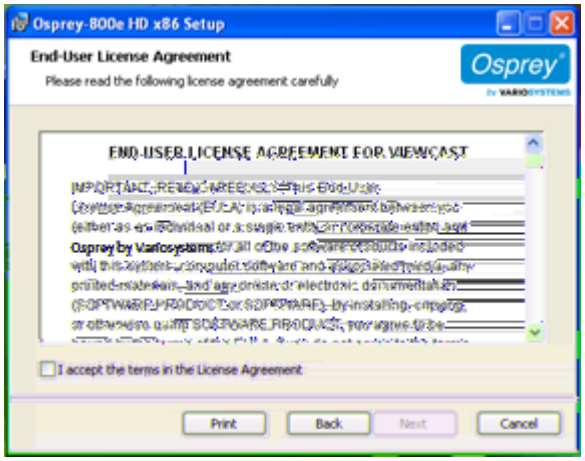
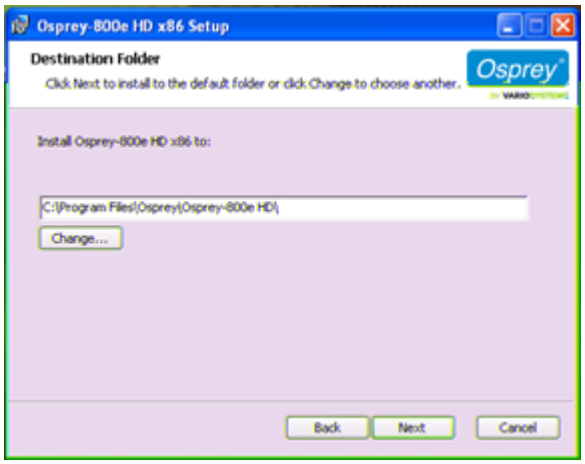
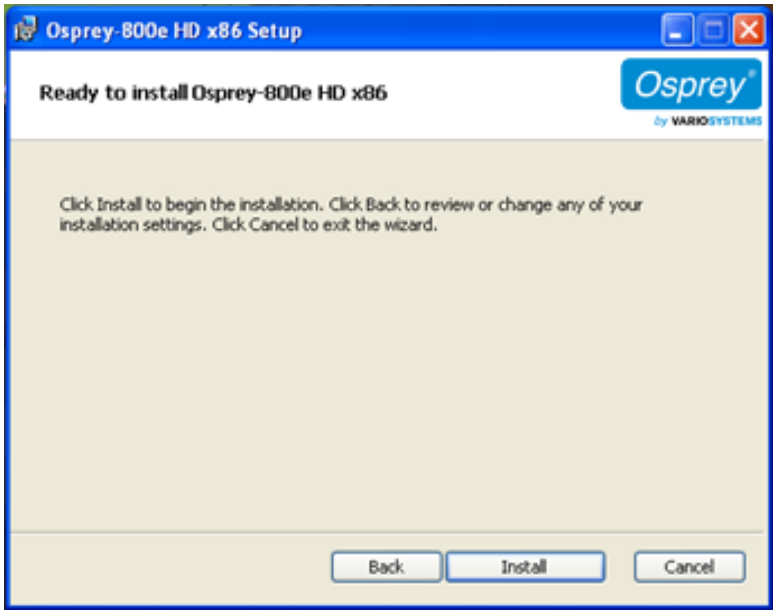
Installation Steps







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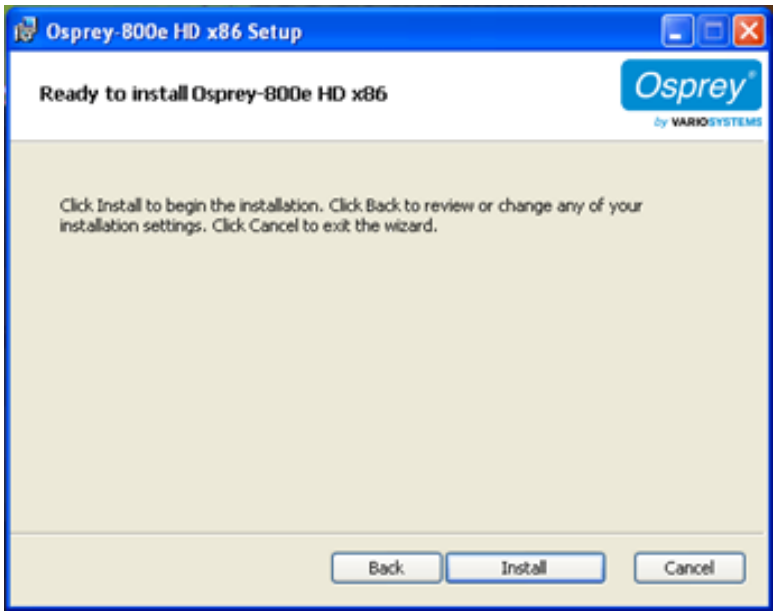
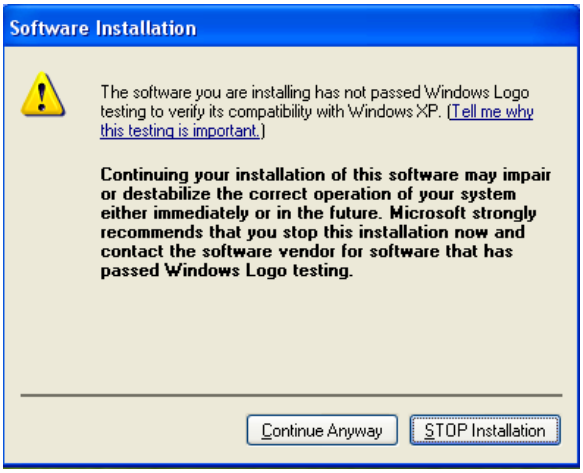
Note: This window shows the progress of the installation. If during the installation, warning windows appear regarding Windows Logo Testing, the user should click ***Continue Anyway*** *to proceed with the installation.*





Note: This window does not display with a Windows 7 installation.

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Installing the hardware

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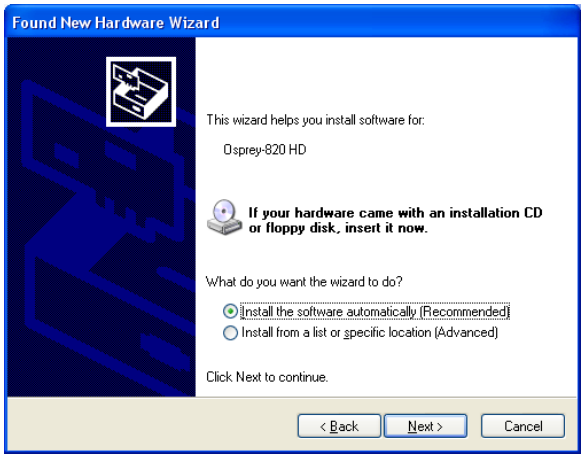
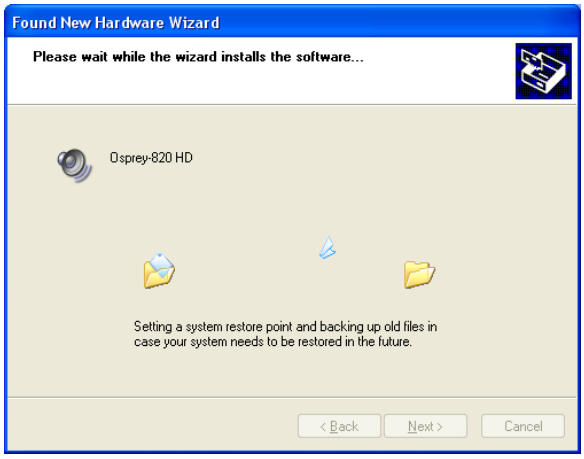
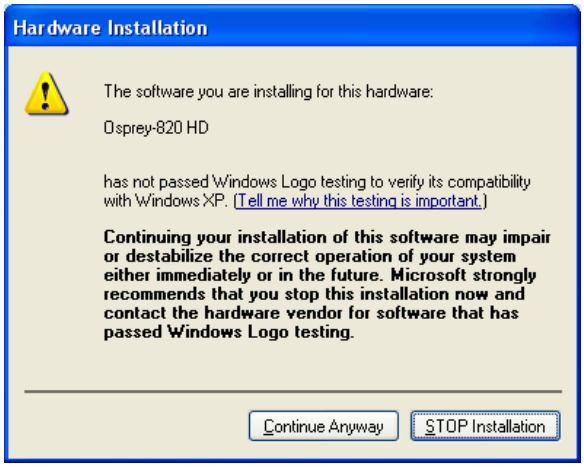
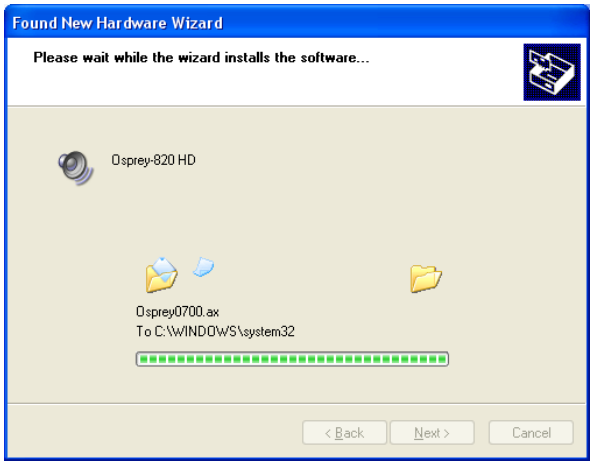


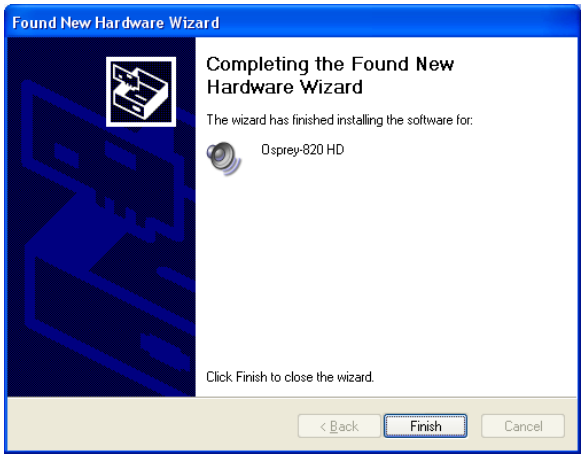
Note: The device name will vary depending on which card you are installing.





Note: This window does not display with a Windows 7 installation.

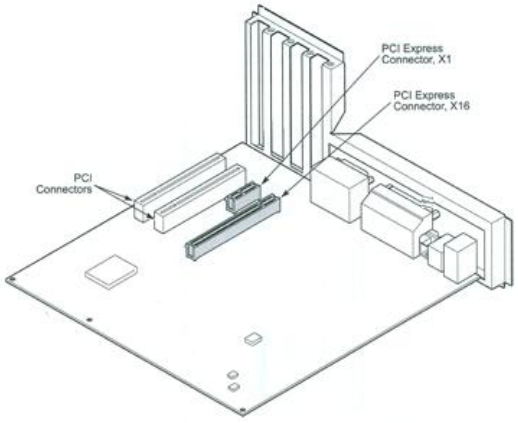

Found New Hardware Wizard
Please wait while the wizard installs the software...
Osprey-820 HD
Osprey0700.ax
To C:\WINDOWS\system32
< Back
Next >
Cancel


Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
Osprey-820 HD
Click Finish to close the wizard.
< Back
Finish
Cancel

Installing the video capture card

- Handle cards only by the non-conducting edges.
- Do not touch the card components or any other metal parts.
- Wear a grounding strap while handling the cards (especially when located in a high static area).
- Properly ground your computer to avoid static discharge.
- Ensure the workstation is powered off before installing any components.
- If you are not familiar with how to install a PCI Express bus card, refer to the
  for more complete, step-by-step instructions.
- Install the card only in UL Listed computers that include instructions for user-installed accessories.

WARNING! *Be sure to install the card in the PCI Express slot. This slot is usually black. Refer to the following diagram as a guide. Placing the card in the wrong slot can damage the card.*



Note: The slot must be x4 or higher.

Multiple board types

class 1: o100, o200, o210, o220, o230
class 2: o300
class 3: o440
class 4: o530, o540, o560
class 5: o700e HD and 0710e HD
class 6: o240e, o450e
class 7: o100e, o260e, o460e
class 8: o815e, o820e, o821e, o825e, o845e

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A. You added a board of a different class to a computer that already contains another board. For example, an Osprey 240e is already installed with its current driver on the computer. You want to add an Osprey 845e card. You must install the driver installation package for the new board to work.
B. You moved a board from one slot to another, or added another board of the same type. For example, an Osprey 240e card is installed in the computer, and you want to install another Osprey 240e card. In this case, the following sequence takes place.

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Using the video capture card

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- VGA Settings (Osprey 820e only)
- Video Proc Amp
- Video Decoder
- Crossbar
- Trace
- Performance
- Diagnostics
- Resource Monitor

- Device
- Input Detect
- Deinterlace
- Watermark
- Loss Of Signal
- Cropping
- Closed Caption

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- Crop
- Logo
- Captions

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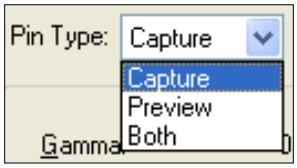
- **Switch on-the-fly between SD and HD** The Osprey 820e accepts SD and HD analog video, VGA, DVI and HDMI standards and automatically re-syncs while the Osprey 845e accepts SD and HD digital video and automatically re-syncs; without interruption, when the signal formats change between any of the supported SD and HD modes.
- **Reduce and eradicate post-production work** Minimize or eliminate post-production work to make a live broadcast available as Instant VODTM (Instant Video-on-Demand) at the end of the broadcast by encoding a Save-to-File version of the live stream. The stream can be configured with its own watermark if desired.
- **Create anything-in something-out video** One of the most popular applications of the Osprey digital HD capture cards is to accept SD and HD input for live Internet video streaming. Generally, the expected viewing experience is for the viewing window to have fixed dimensions regardless of the aspect ratio or pixel count of the incoming video. Most of the popular video encoders require that these parameters not change during the encoding session. The Osprey 800 series cards can automatically adapt, through size and scale, the incoming video to match the selected output parameters. For example, a broadcaster can freely switch sequences between a live HD studio feed, and SD promo clip form a payout server and then return to live HD 24 hours a day, 7 days a week.



filters
filter graphs

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*Note: **OK** and **Apply** commit only the changes on the currently displayed page. To set changes on three different pages, you need to click **Apply** twice and **OK** once.*

Setting Driver Properties

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Note: Most of these encoding applications expose the drivers' Property tabs without modification, so the examples set forth below will probably appear as shown. However, some applications expose the Property tabs slightly differently. Therefore, the examples below may differ somewhat.

Properties window

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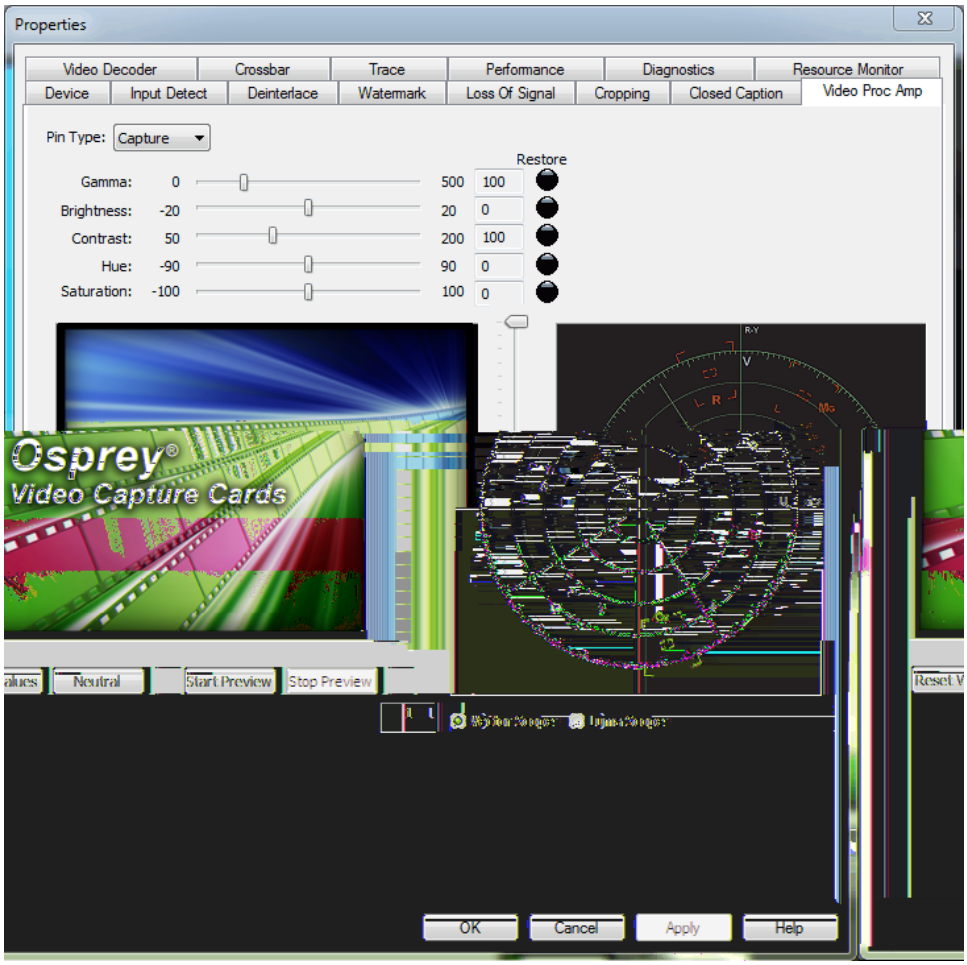
Setting Driver Properties



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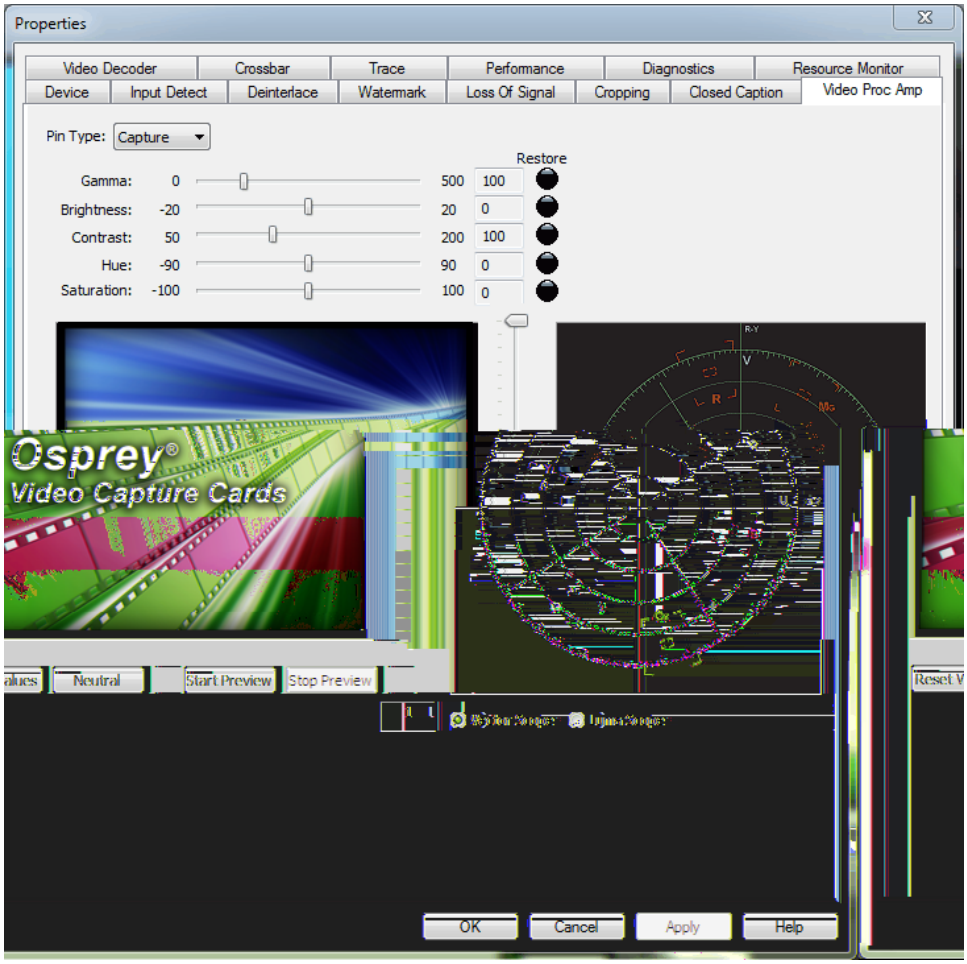
*Note: Some controls are interactive. For example, changes you make are updated immediately in the captured video. Such examples are the Brightness, Contract, Hue, and Saturation, controls, graphical Gamma control, and graphical sizing and positioning controls for watermarks/logos. The **OK**, **Cancel**, and **Apply** buttons have no effect on these controls. The **OK** and **Apply** buttons pertain only to changes on the currently displayed tab.*

Setting Driver Properties



- It increases the effective bandwidth in the low lumen range, where it is needed, at the expense of the high lumen range, where it is needed less.
- It matches the response characteristics of TV sets and monitors.

Note: When gamma correction is disabled, either by setting the Gamma to Neutral or by setting the Gamma correction value to exactly 100, the software-based Gamma filter works in passthrough mode with no effect on the video and without using processing bandwidth.

When Gamma correction is enabled, the factor applied is as shown in the slider text box and in the graphic. If you are running preview video while adjusting the filter, you will see the effects of your adjustments as you make the adjustments.

	Capture and preview pins
	Note: If you change the video standard or video input you will not see any changes in the slider controls until the driver properties dialog is closed and re-opened.

Setting Driver Properties

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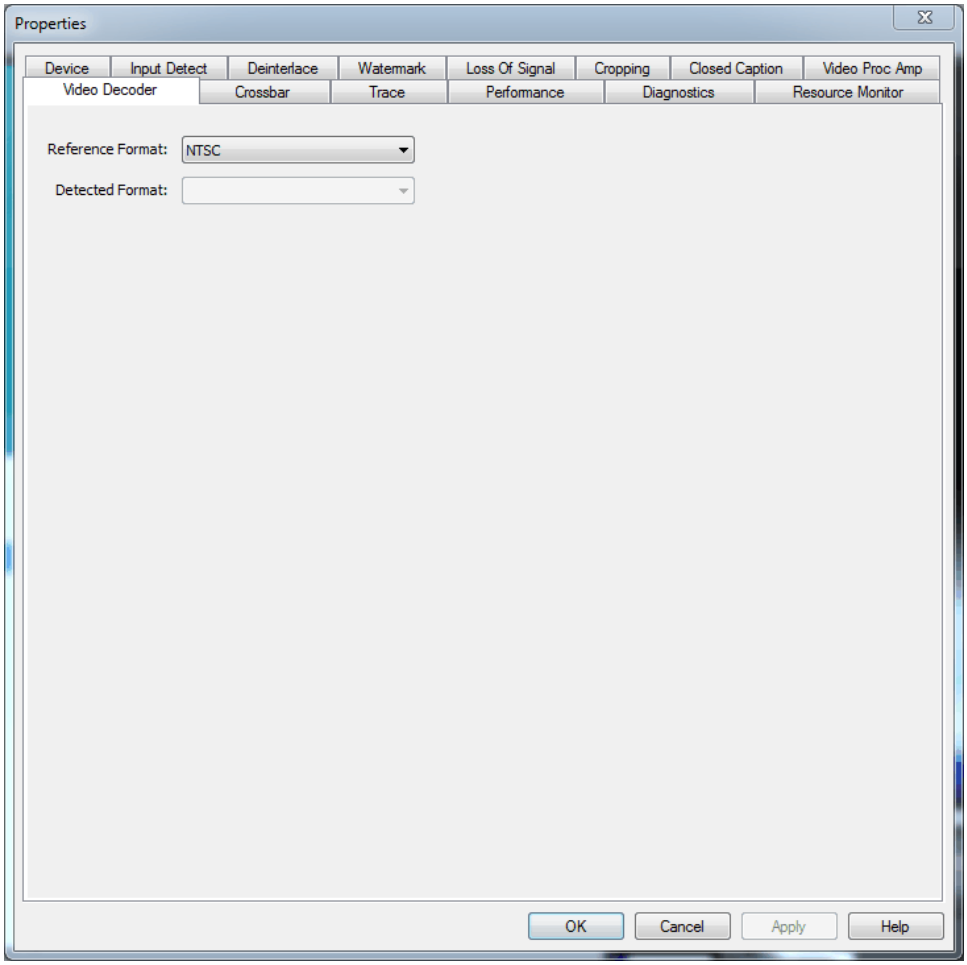

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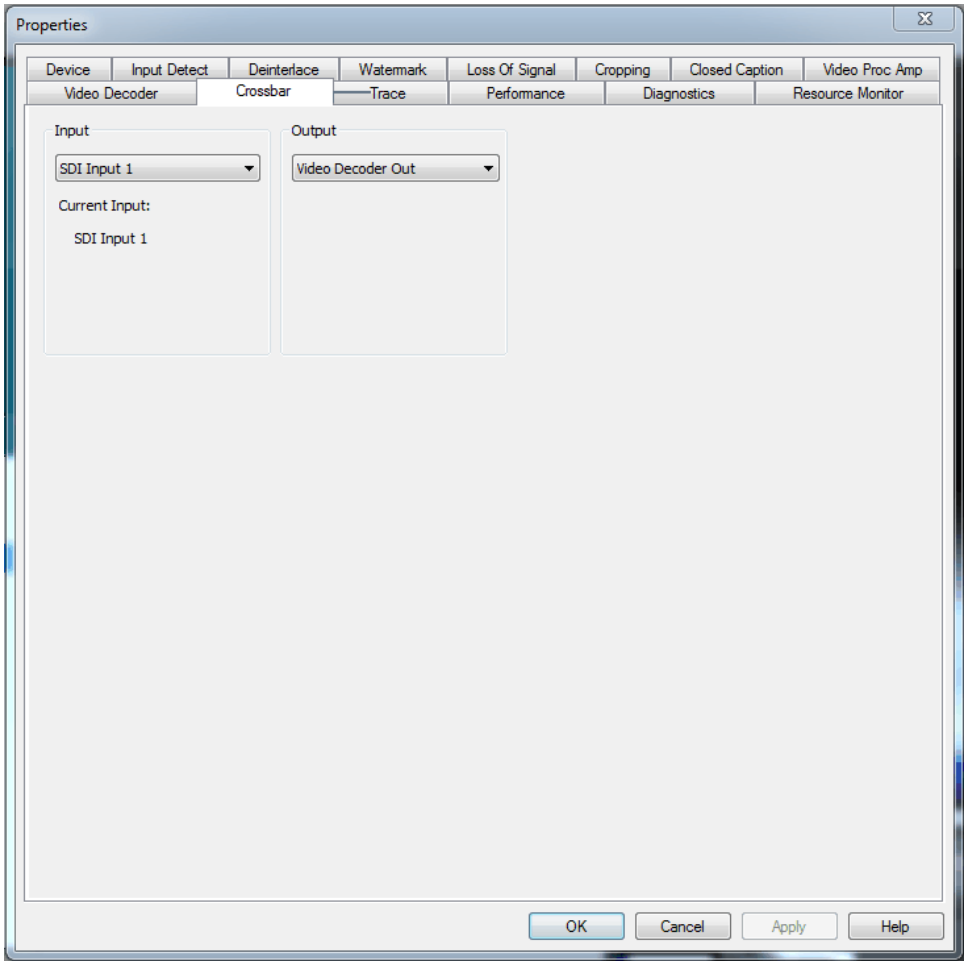
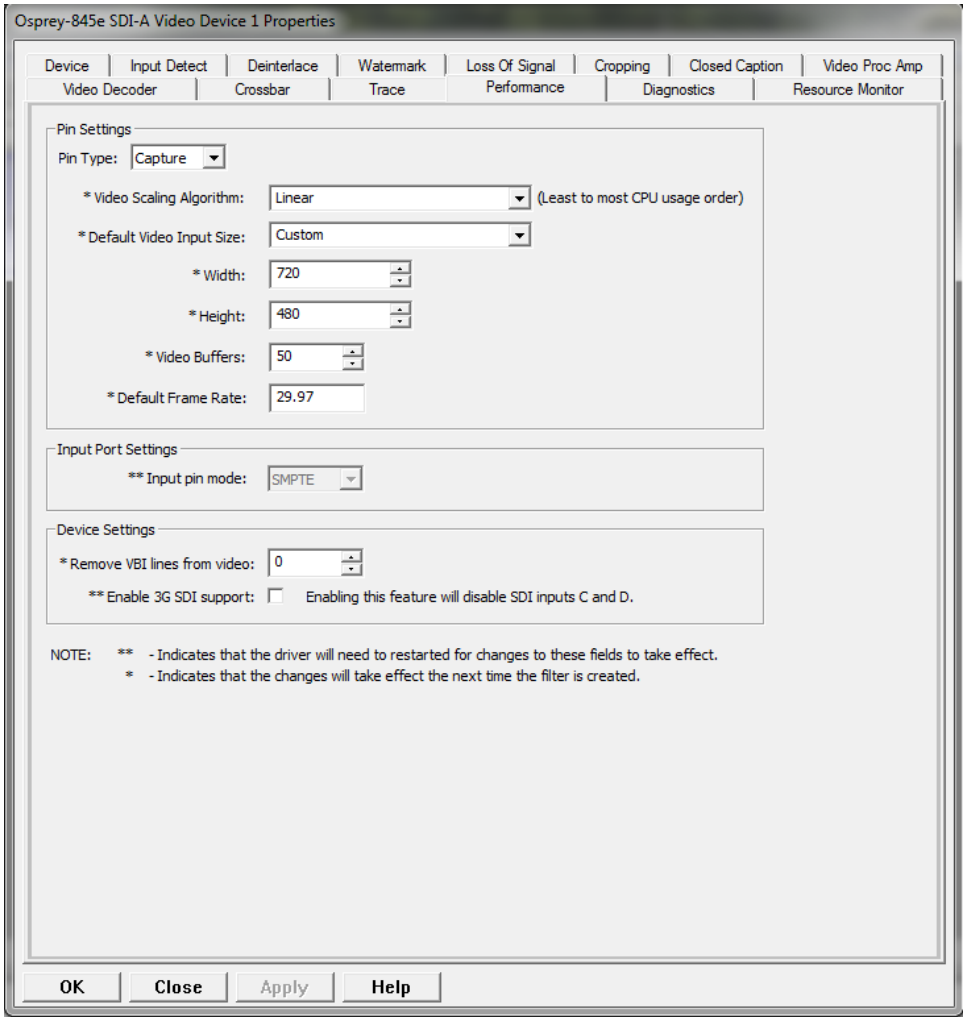

Properties
Device
Input Detect
Deinterlace
Watermark
Loss Of Signal
Cropping
Closed Caption
Video Proc Amp
Video Decoder
Crossbar
Trace
Performance
Diagnostics
Resource Monitor
Input
SDI Input 1
Current Input:
SDI Input 1
Output
Video Decoder Out
OK
Cancel
Apply
Help



	Capture and preview pins
	Note: Cubic and Lanczos are CPU intensive and are not recommended for high definition.
	Note: These values are only used if the application does not explicitly request a specific resolution.

	2 *Note: These values are only used if the application does not explicitly request a specific resolution.*
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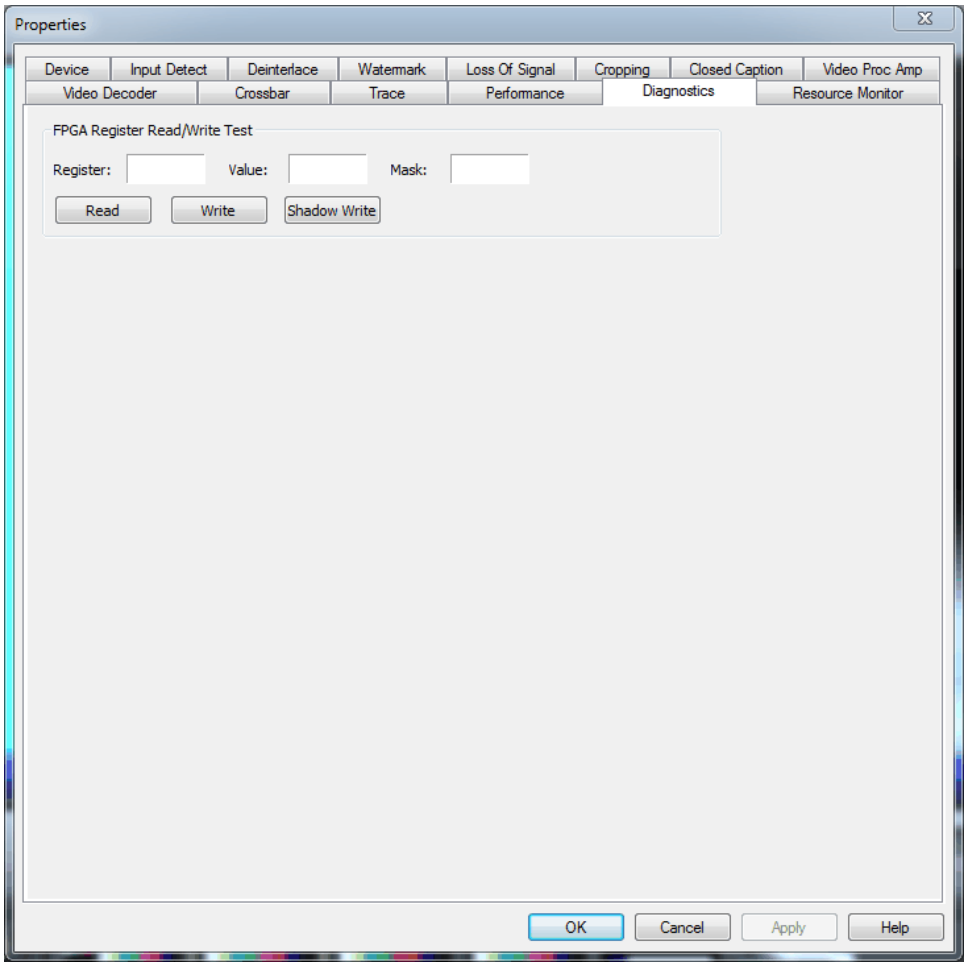
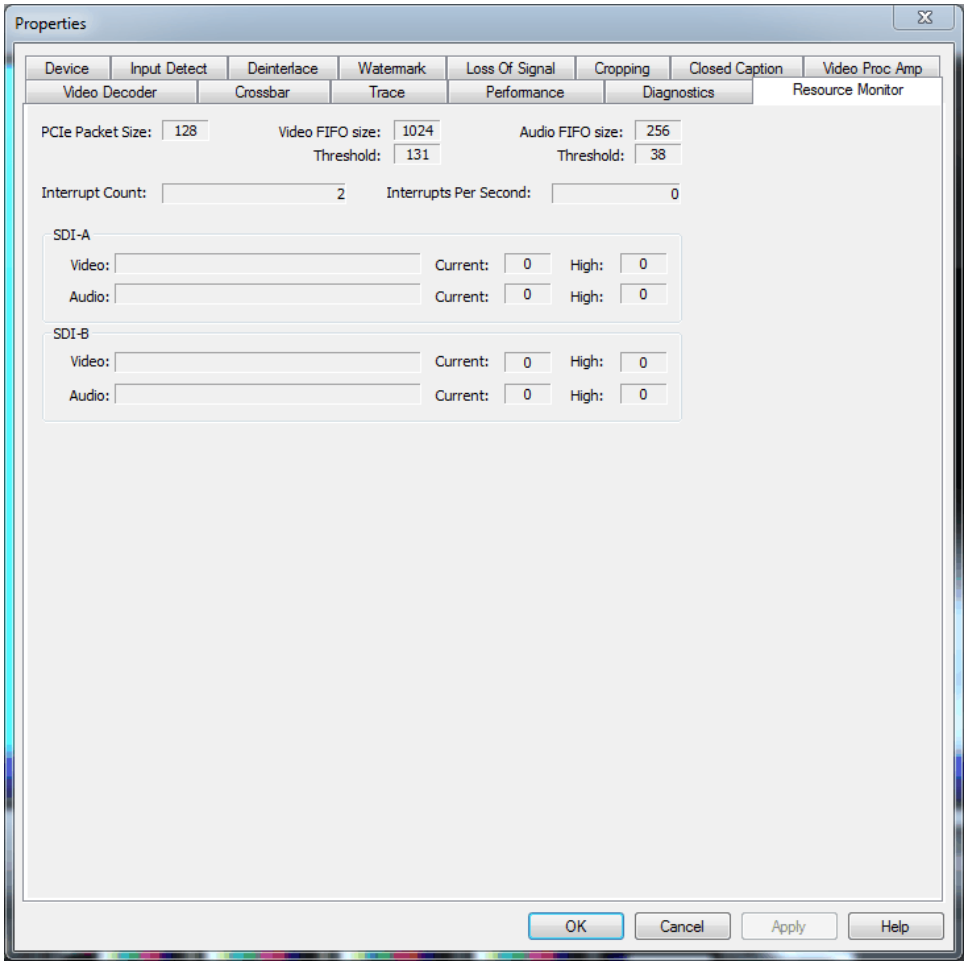
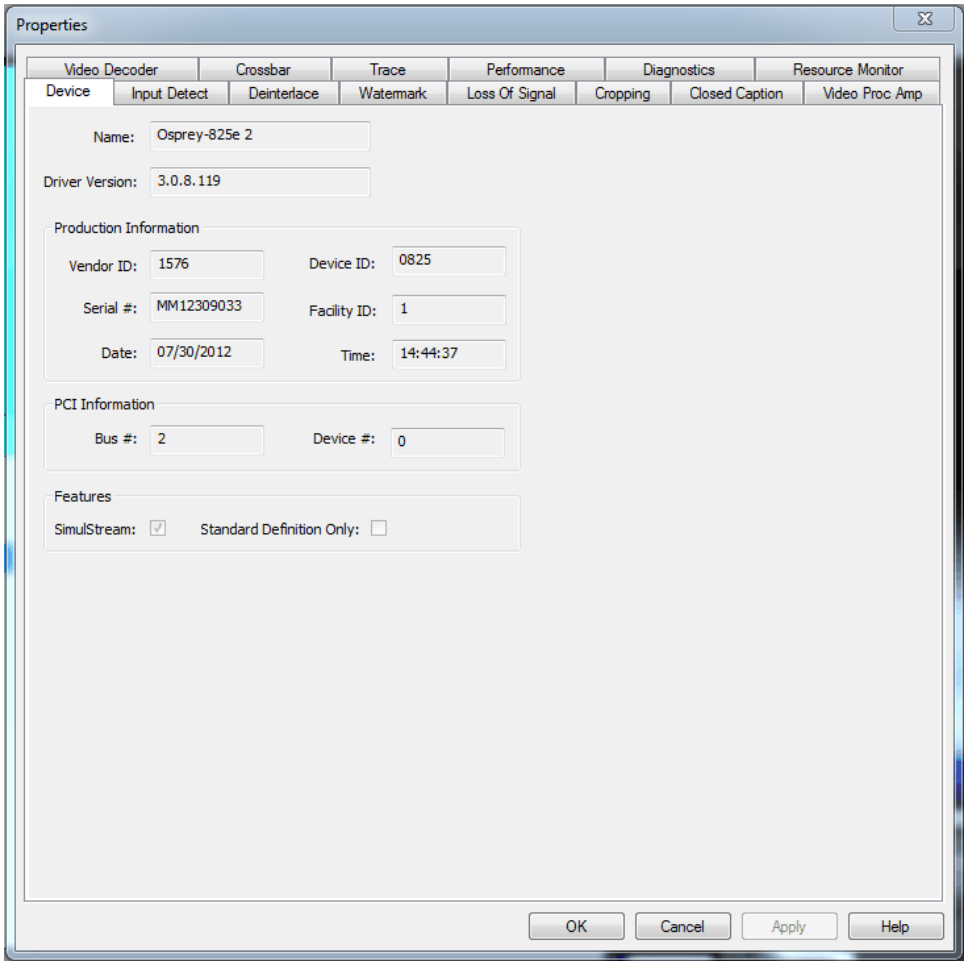
*Osprey 845e: When using the **Remove VBI lines from video** and **Enable 3G SDI support** fields, you need to restart the driver for changes to take effect.*



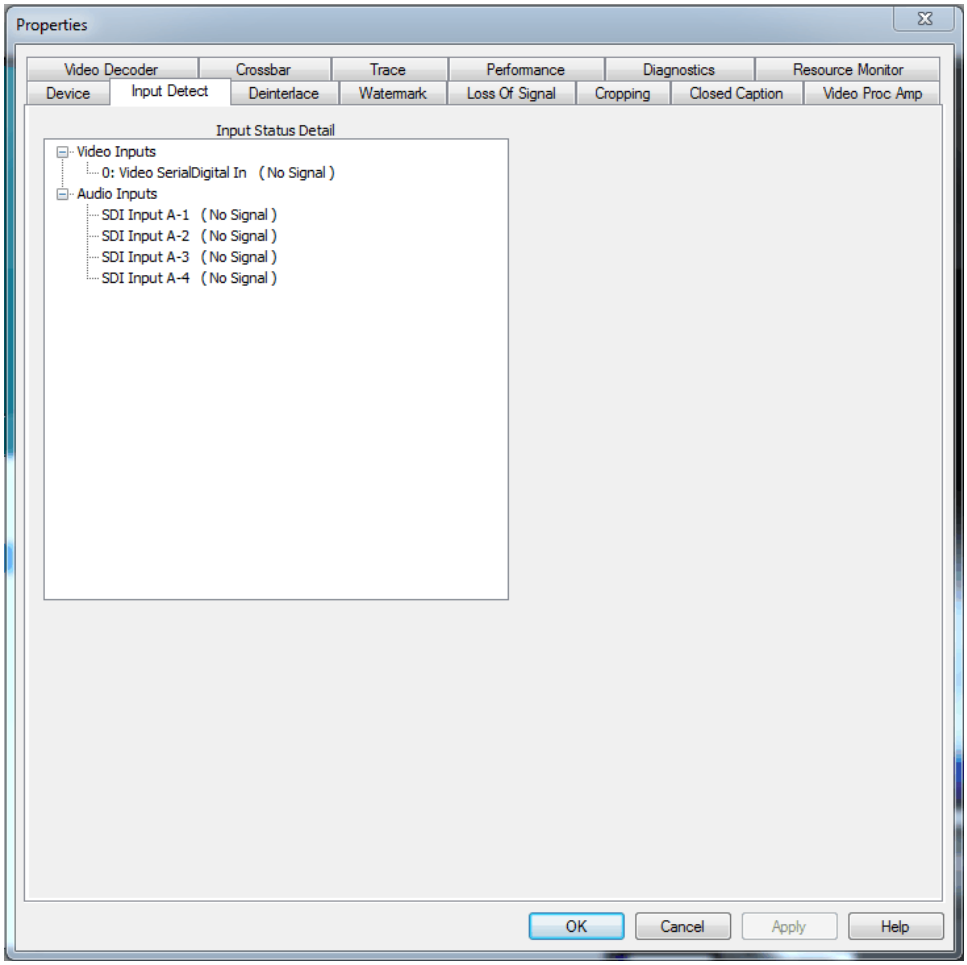
WARNING! *You should not enable these settings without specific instructions from Osprey support. Doing so without proper instructions might result in system instability or in the system crashing.*

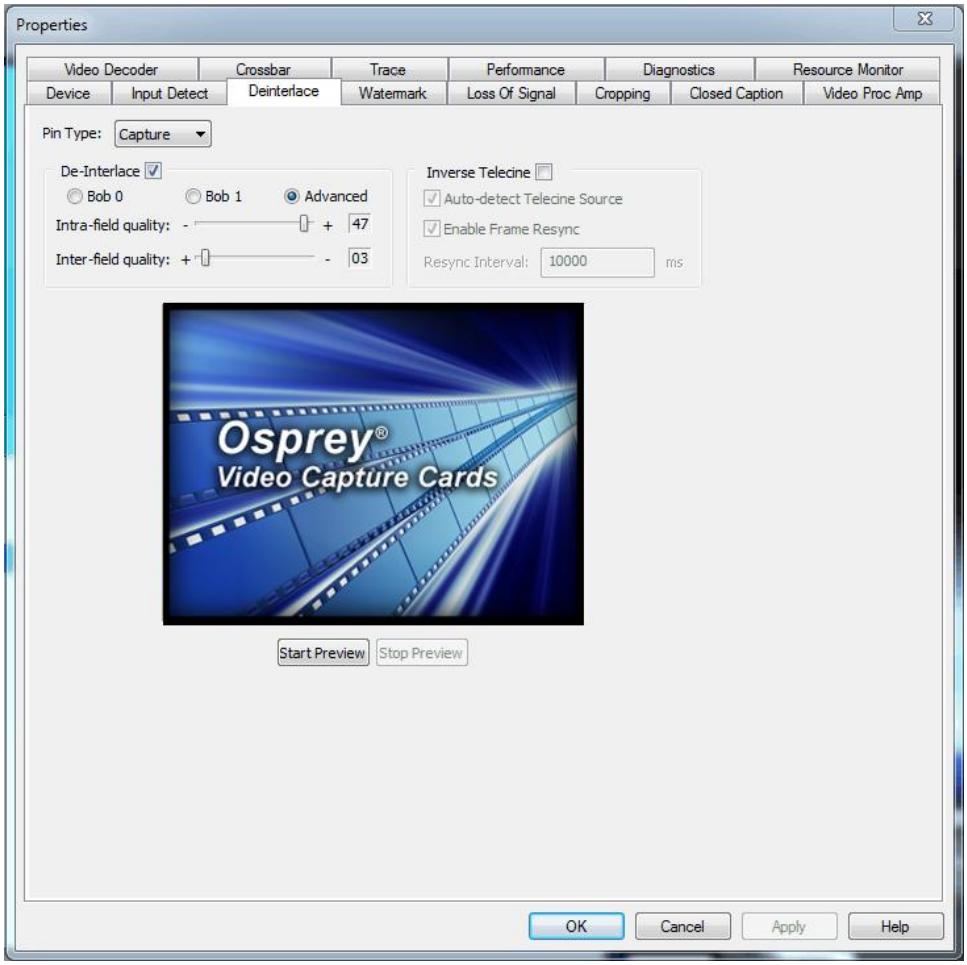

Properties
Device
Input Detect
Deinterlace
Watermark
Loss Of Signal
Cropping
Closed Caption
Video Proc Amp
Video Decoder
Crossbar
Trace
Performance
Diagnostics
Resource Monitor
PCIe Packet Size: 128
Video FIFO size: 1024
Threshold: 131
Audio FIFO size: 256
Threshold: 38
Interrupt Count: 2
Interrupts Per Second: 0
SDI-A
Video: Current: 0 High: 0
Audio: Current: 0 High: 0
SDI-B
Video: Current: 0 High: 0
Audio: Current: 0 High: 0
OK
Cancel
Apply
Help

	Note: Since the external audio is an analog sample, it may always show activity. *External Audio 1, External Audio 2, External Audio 3, and External Audio 4 apply only for the Osprey 800a audio input card and all fields are shown.*


Properties
Video Decoder
Crossbar
Trace
Performance
Diagnostics
Resource Monitor
Device
Input Detect
Deinterlace
Watermark
Loss Of Signal
Cropping
Closed Caption
Video Proc Amp
Name:
Osprey-825e 2
Driver Version:
3.0.8.119
Production Information
Vendor ID:
1576
Device ID:
0825
Serial #:
MM12309033
Facility ID:
1
Date:
07/30/2012
Time:
14:44:37
PCI Information
Bus #:
2
Device #:
0
Features
SimulStream:
Standard Definition Only:
OK
Cancel
Apply
Help

Setting Driver Properties




Properties
Video Decoder
Crossbar
Trace
Performance
Diagnostics
Resource Monitor
Device
Input Detect
Deinterlace
Watermark
Loss Of Signal
Cropping
Closed Caption
Video Proc Amp
Pin Type:
Capture
De-Interlace
Bob 0
Bob 1
Advanced
Intra-field quality:
47
Inter-field quality:
03
Inverse Telecine
Auto-detect Telecine Source
Enable Frame Resync
Resync Interval:
10000
ms
Osprey®
Video Capture Cards
Start Preview
Stop Preview
OK
Cancel
Apply
Help

- Bob 0
- Bob 1

- Advanced

- Auto-detect Telecine Source
- Enable Frame Resync
- Resync Interval

	Capture and preview pins
	• • •
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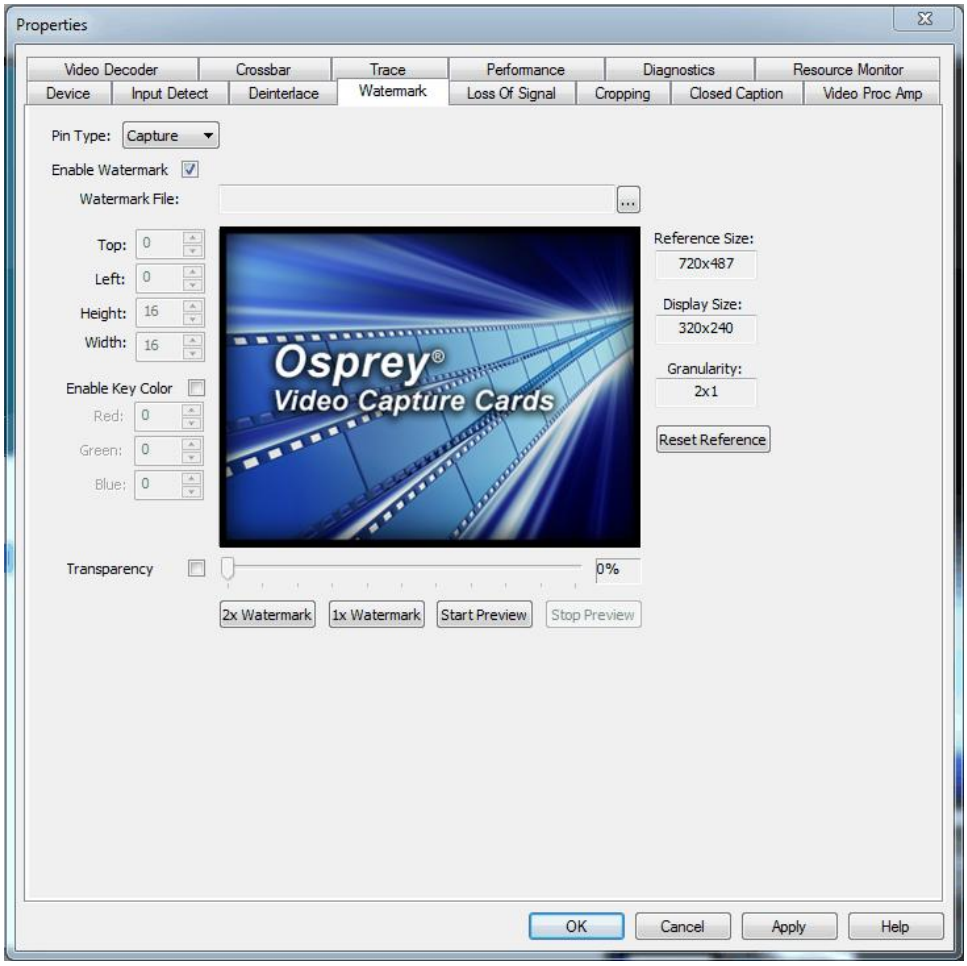
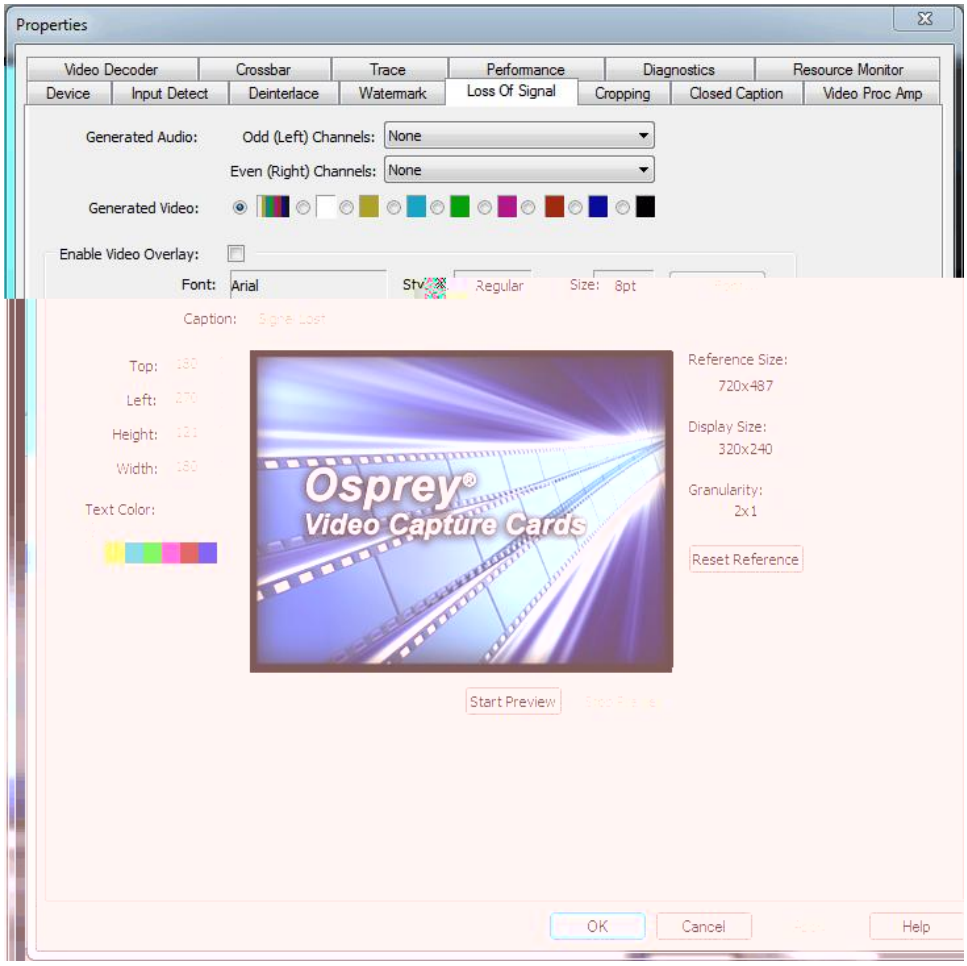


- Any RGB-24 bitmap (.bmp) can be used.
- A selectable key color can be specified; all parts of the Watermark graphic with that color are not drawn on the video.
- A transparency control can be used to blend the Watermark graphic with the background video.
- The Watermark appears on both captured and previewed video. If the capture and preview video are different sizes, the logo is scaled to look the same on the preview video when the Pin type of both has been selected and the user has set different properties for Capture and for Preview.

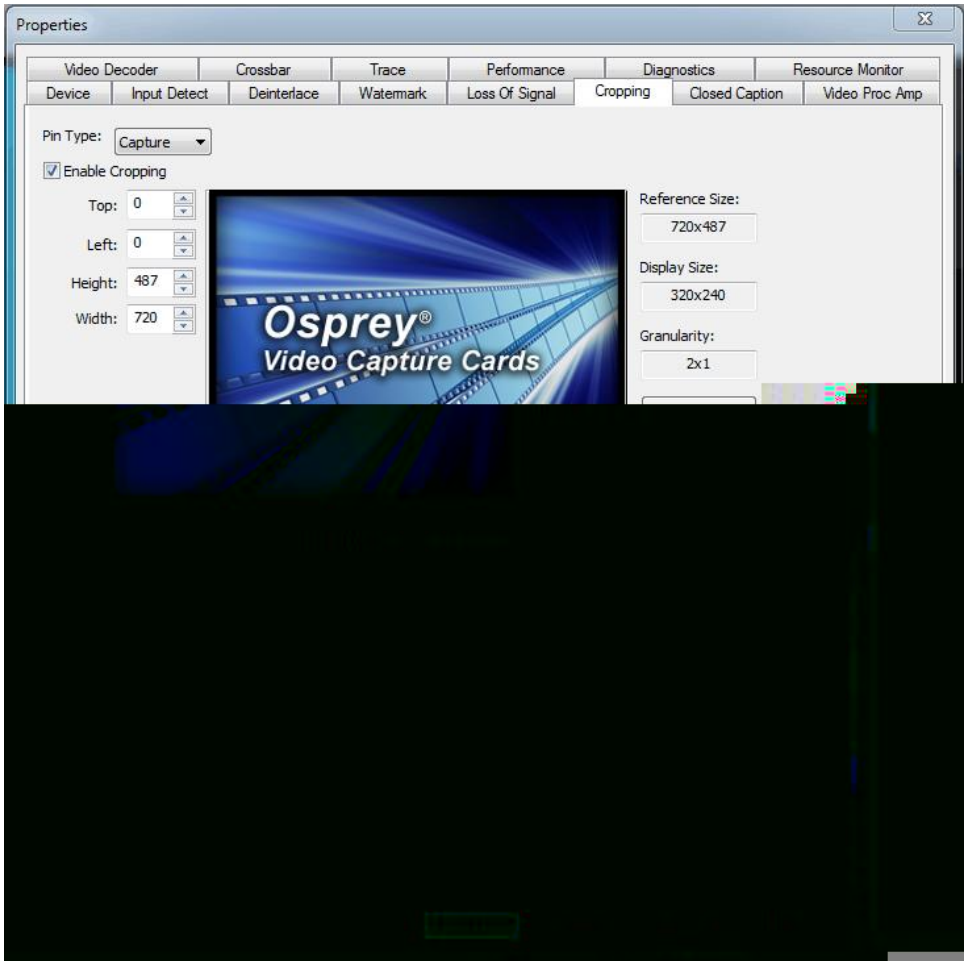
- File
- Position
- Color
- Transparency

	Capture and preview pins
	Note: If you have a graphic that is in another format, you will need to edit the graphic with a drawing or photo edit program, such as Windows Paint, and save the graphic in a RGB-24 format.
L	**L** **L**

Note: When incoming video modes switch on-the-fly, such as when you switch from SD to HD and back, the watermark size and position is recalculated automatically and, if necessary, is scaled to force the watermark to remain in the same position relative to the lower-right corner. This function is exclusive to the Designed-for-Live feature of the Osprey digital HD capture cards.


Properties
Video Decoder
Crossbar
Trace
Performance
Diagnostics
Resource Monitor
Device
Input Detect
Deinterlace
Watermark
Loss Of Signal
Cropping
Closed Caption
Video Proc Amp
Generated Audio:
Odd (Left) Channels:
None
Even (Right) Channels:
None
Generated Video:
Enable Video Overlay:
Font:
Arial
Regular
Size:
8pt
Caption:
Top:
Left:
Height:
Width:
Text Color:
Osprey®
Video Capture Cards
Reference Size:
720x487
Display Size:
320x240
Granularity:
2x1
Reset Reference
Start Preview
OK
Cancel
Help

Note: This type of cropping is different from the final desired Display size that is usually set by the application software that negotiates with the driver to deliver the desired output.



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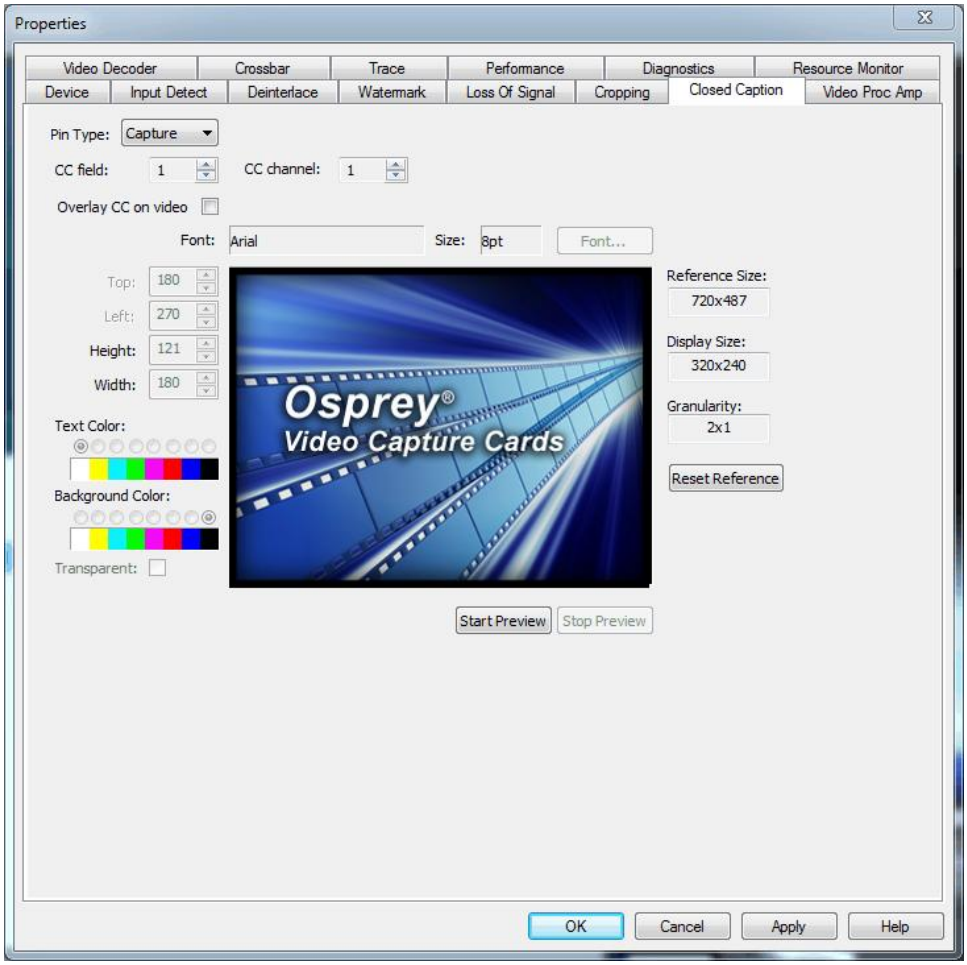

	Capture and preview pins
	Note: CC1 is commonly used.

Setting Driver Properties

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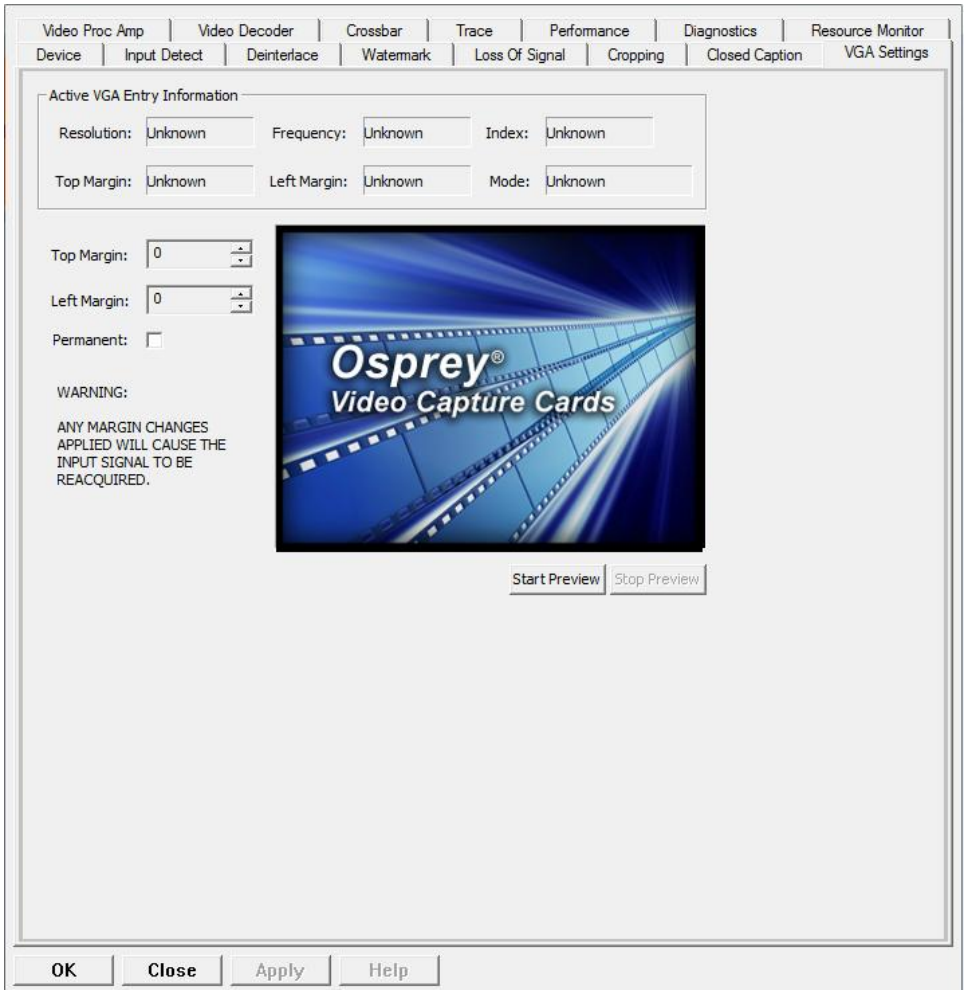
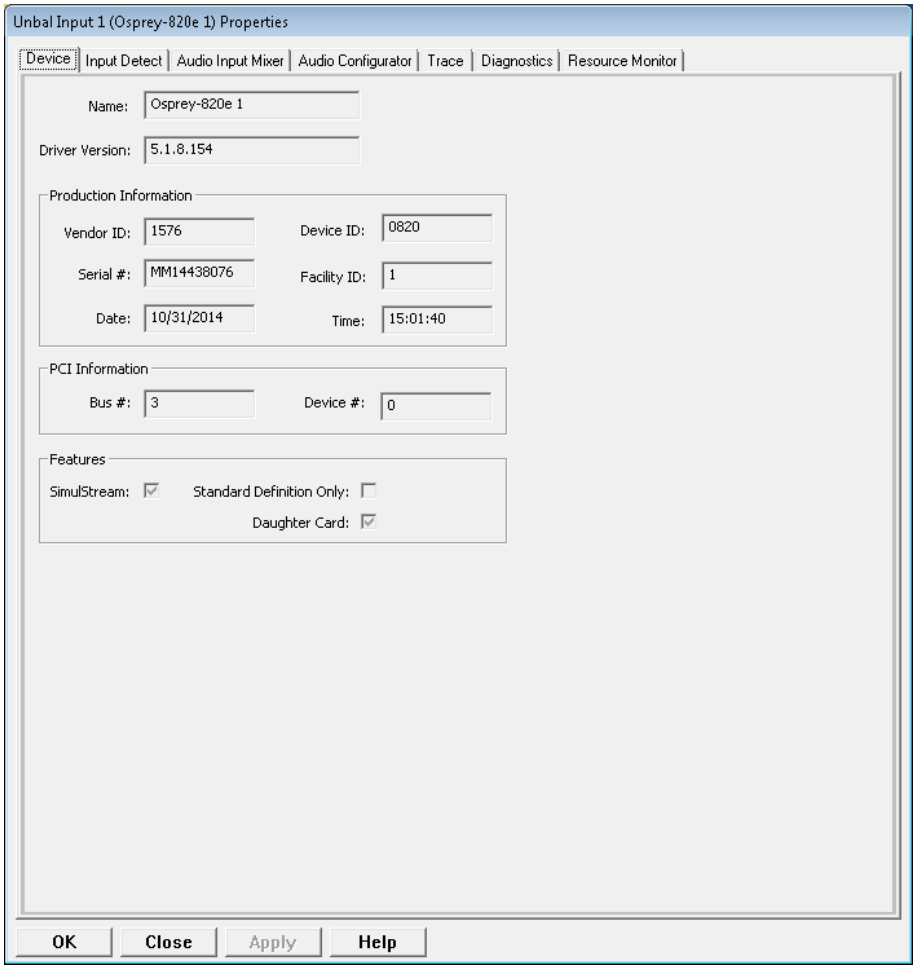


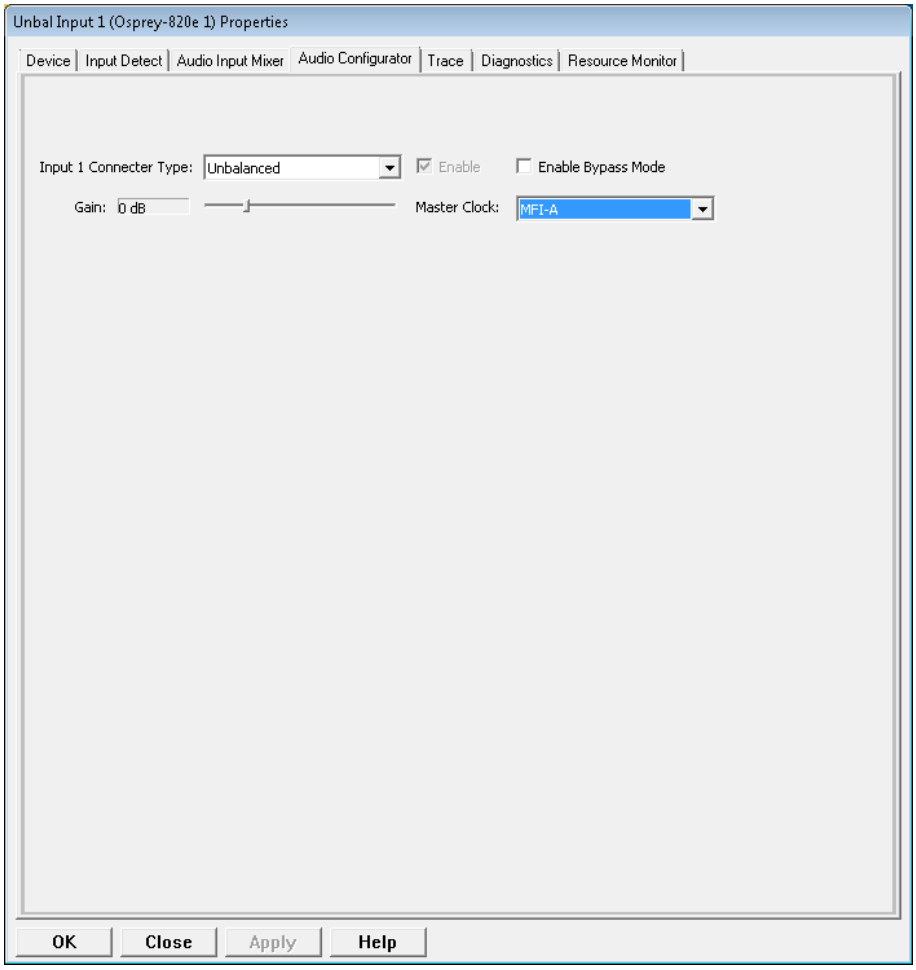
	2 *Note: These values are only applied when you have selected the VGA Input from the crossbar.*

Understanding Audio Input Properties

Audio Properties page

Note: Windows Media Encoder and Flash Media Live Encoder applications do not support these tabs.




Unbal Input 1 (Osprey-820e 1) Properties
Device
Input Detect
Audio Input Mixer
Audio Configurator
Trace
Diagnostics
Resource Monitor
Input 1 Connecter Type:
Unbalanced
Enable
Enable Bypass Mode
Gain:
0 dB
Master Clock:
MFI-A
OK
Close
Apply
Help

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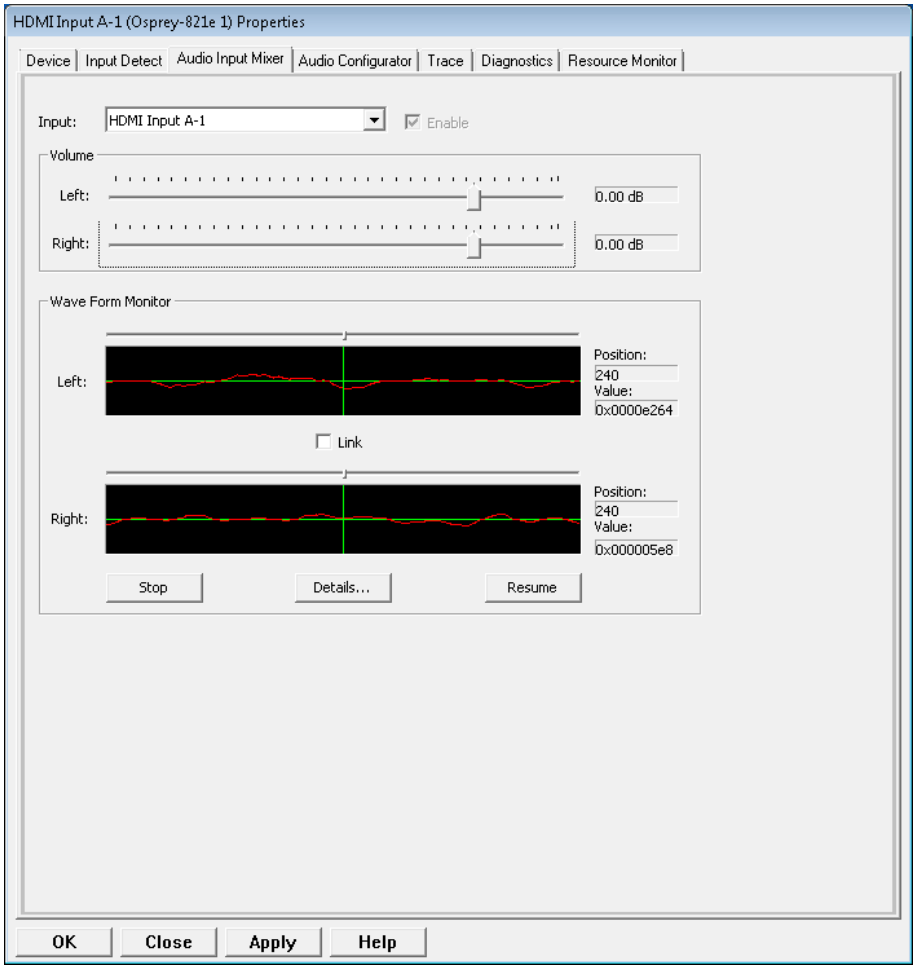
HDMI Input A-1 (Osprey-821e 1) Properties
Device
Input Detect
Audio Input Mixer
Audio Configurator
Trace
Diagnostics
Resource Monitor
Input:
HDMI Input A-1
Enable
Volume
Left:
0.00 dB
Right:
0.00 dB
Wave Form Monitor
Left:
Position:
240
Value:
0x0000e264
Link
Right:
Position:
240
Value:
0x000005e8
Stop
Details...
Resume
OK
Close
Apply
Help

Selecting the Audio Source and Input Volume

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Osprey mixer driver interface

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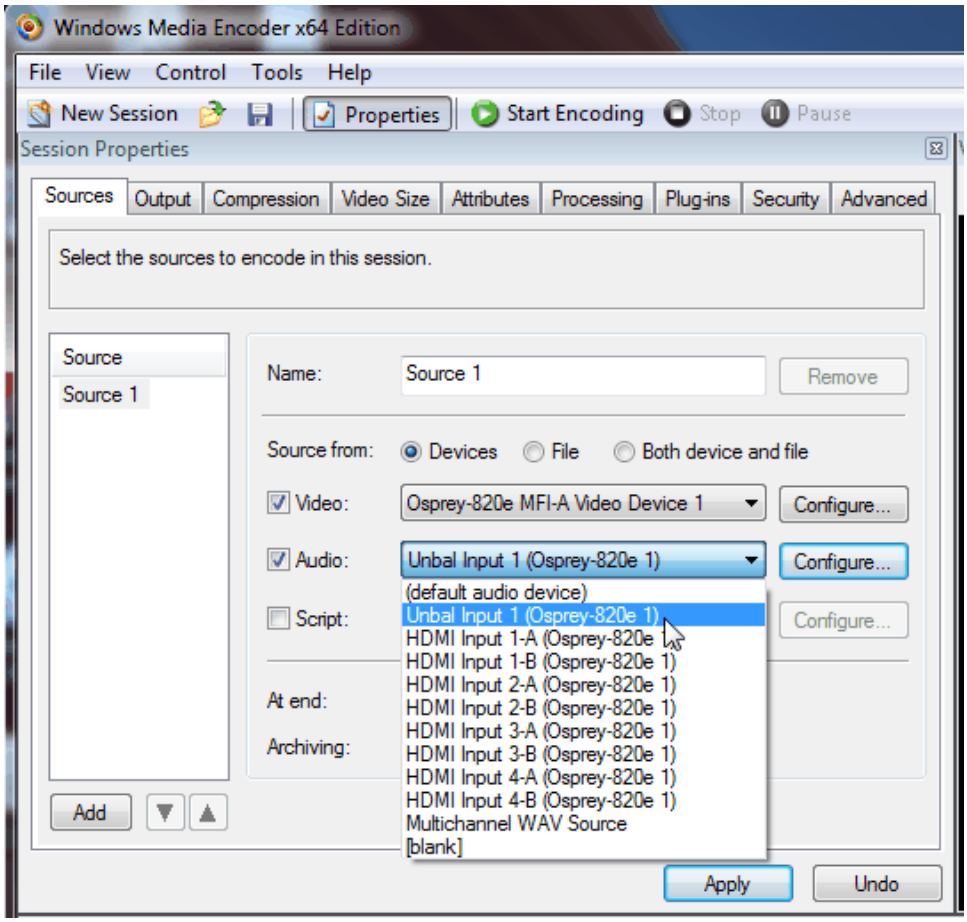
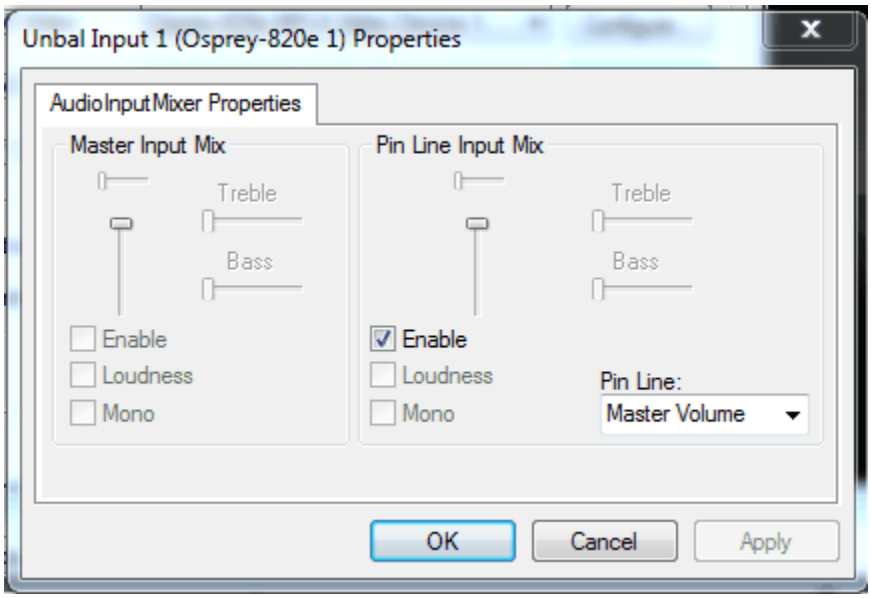


Selecting the Audio Source and Input Volume



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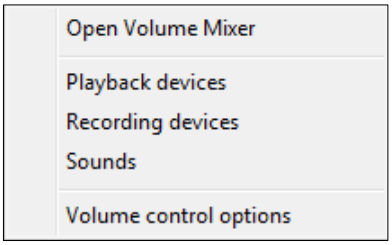
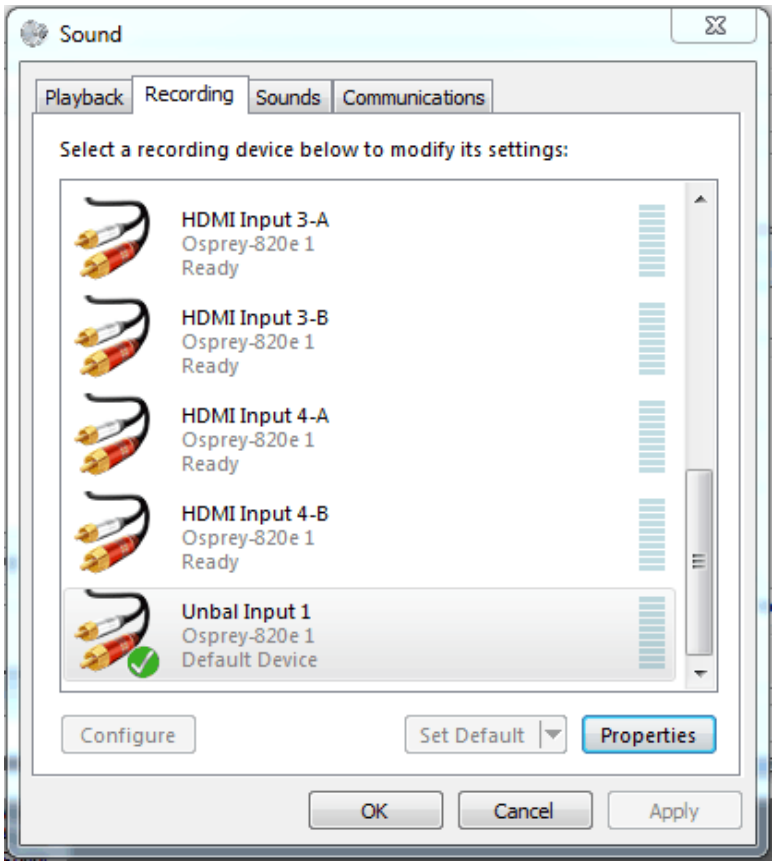
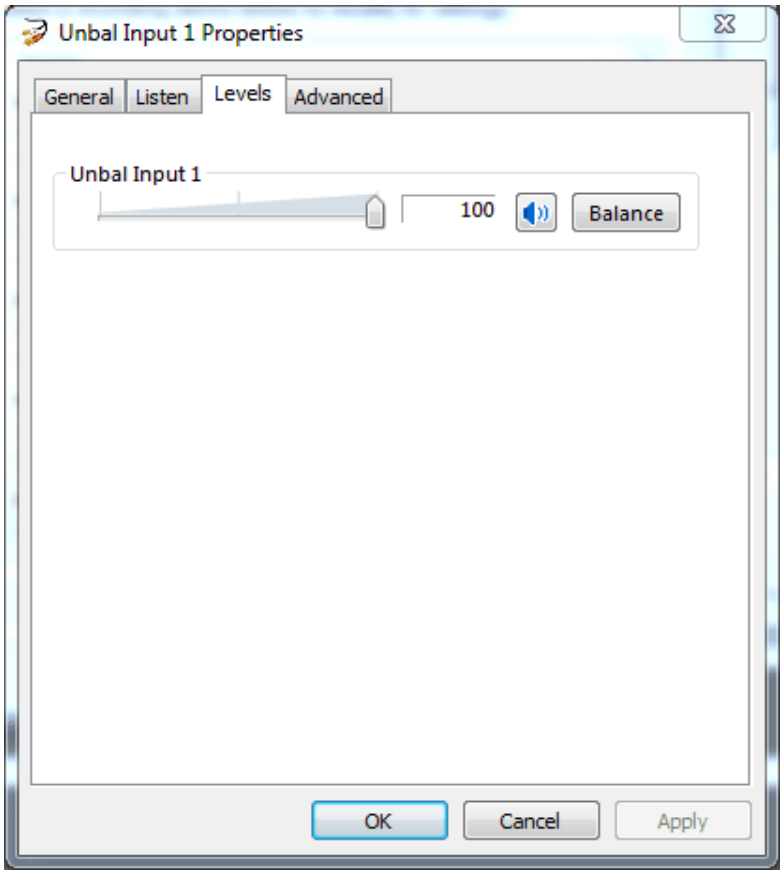


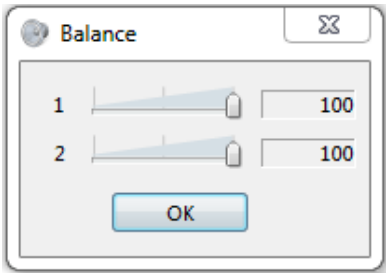
➢ ➢ ➢ ➢


Sound
Playback
Recording
Sounds
Communications
Select a recording device below to modify its settings:
HDMI Input 3-A
Osprey-820e 1
Ready
HDMI Input 3-B
Osprey-820e 1
Ready
HDMI Input 4-A
Osprey-820e 1
Ready
HDMI Input 4-B
Osprey-820e 1
Ready
Unbal Input 1
Osprey-820e 1
Default Device
Configure
Set Default
Properties
OK
Cancel
Apply

2

Selecting the Audio Source and Input Volume

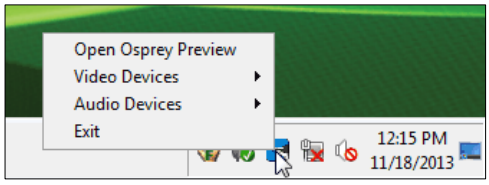




Osprey 800a audio input card

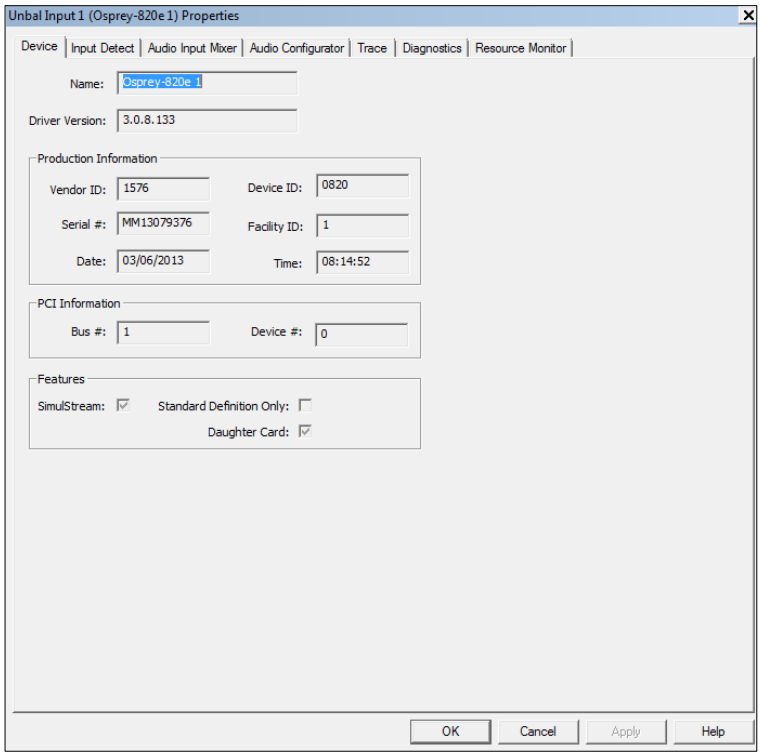
2

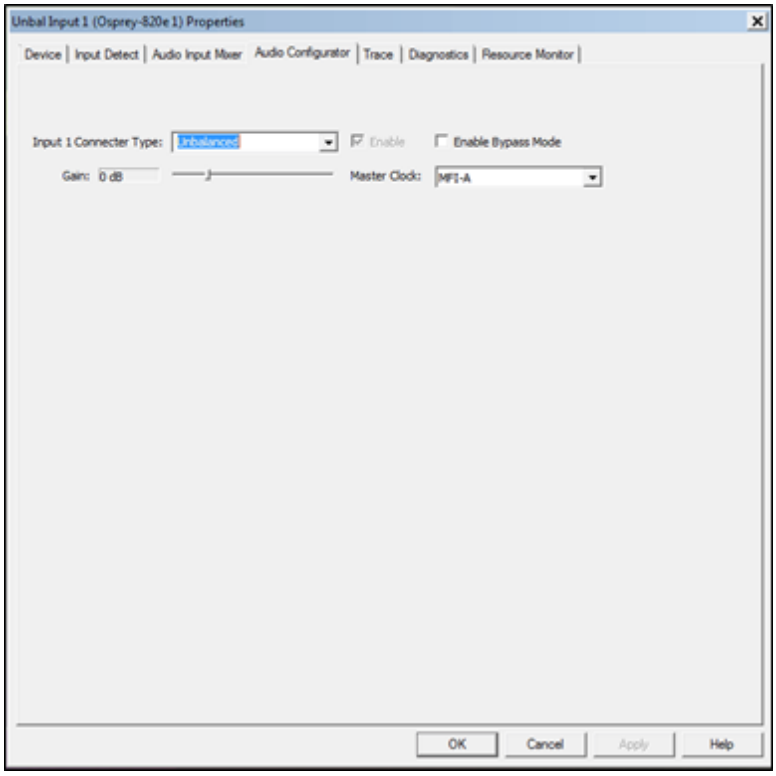
2



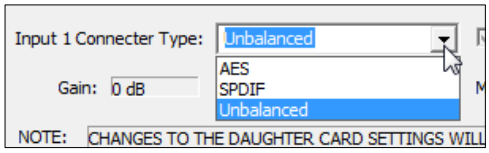
Note: After you make this change the next time you open Osprey Preview, the selection you made in step 2 is now the default.

Selecting the Audio Source and Input Volume




Unbal Input 1 (Osprey-820e 1) Properties
Device
Input Detect
Audio Input Mixer
Audio Configurator
Trace
Diagnostics
Resource Monitor
Input 1 Connecter Type:
Unbalanced
Enable
Enable Bypass Mode
Gain:
0 dB
Master Clock:
MFI-A
OK
Cancel
Apply
Help

2


Input 1 Connecter Type:
Unbalanced
AES
SPDIF
Unbalanced
Gain:
0 dB
NOTE:
CHANGES TO THE DAUGHTER CARD SETTINGS WILL

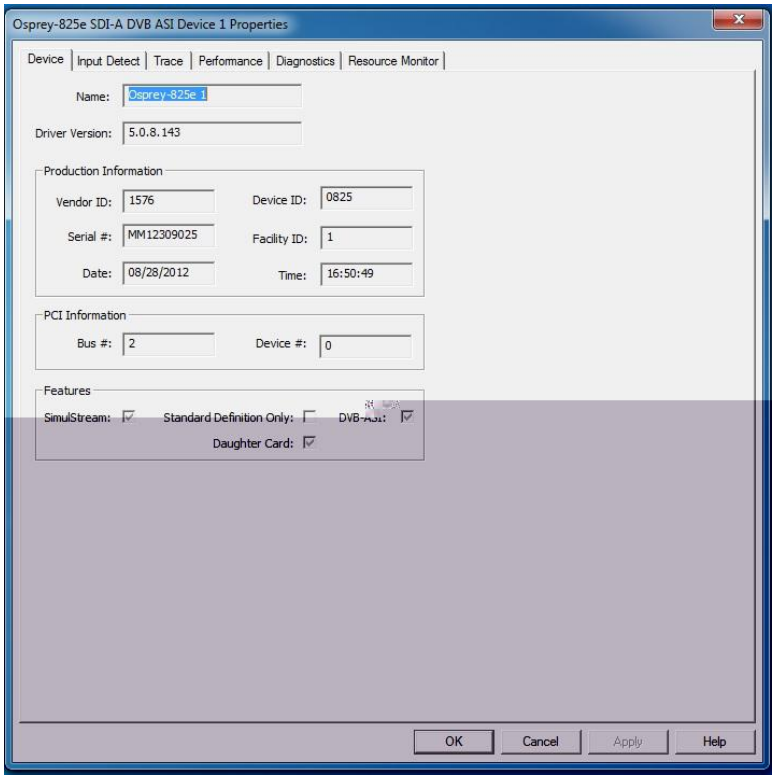
L

Selecting the Audio Source and Input Volume

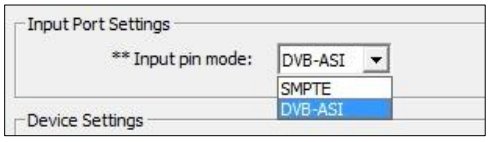
Using the DVB-ASI Feature

2 2 2

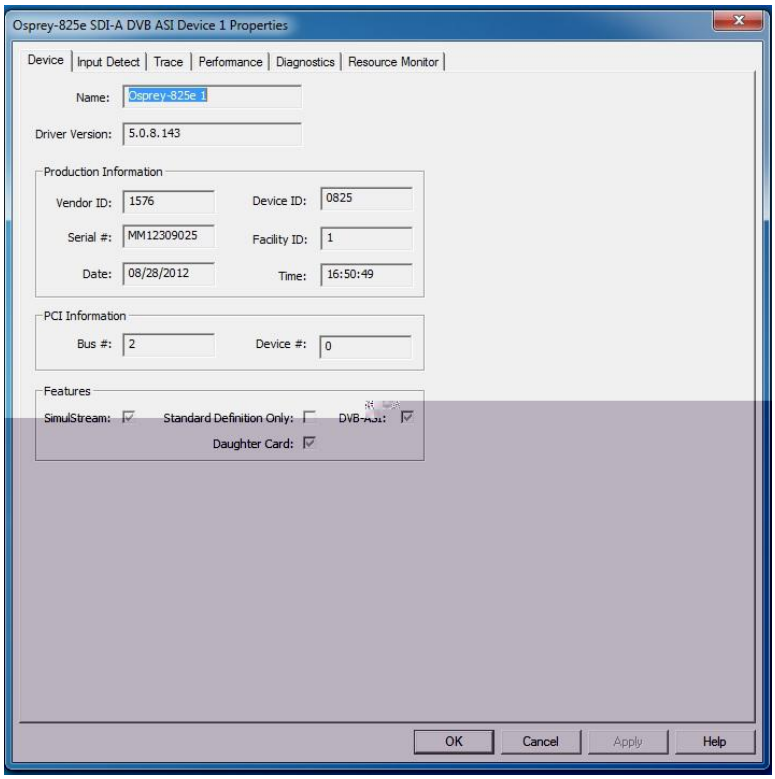
Note: The Osprey capture card must be branded to support this feature. Cards purchased after July1, 2014 will be delivered already branded.

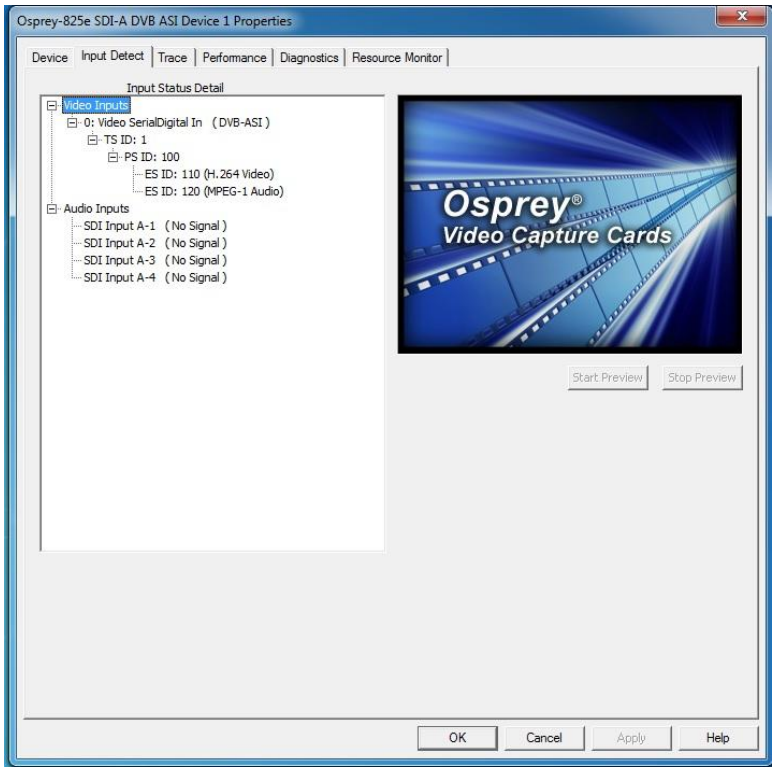


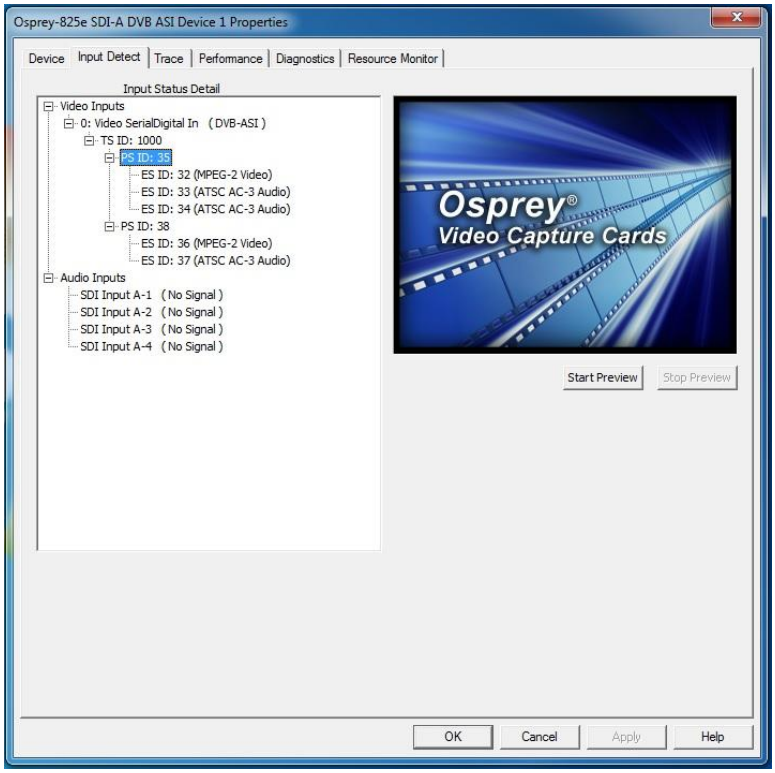
Activating the DVB-ASI Feature



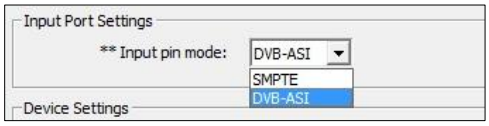
L




Osprey-825e SDI-A DVB ASI Device 1 Properties
Device
Input Detect
Trace
Performance
Diagnostics
Resource Monitor
Input Status Detail
Video Inputs
0: Video SerialDigital In (DVB-ASI)
TS ID: 1
PS ID: 100
ES ID: 110 (H.264 Video)
ES ID: 120 (MPEG-1 Audio)
Audio Inputs
SDI Input A-1 (No Signal)
SDI Input A-2 (No Signal)
SDI Input A-3 (No Signal)
SDI Input A-4 (No Signal)
Osprey®
Video Capture Cards
Start Preview
Stop Preview
OK
Cancel
Apply
Help

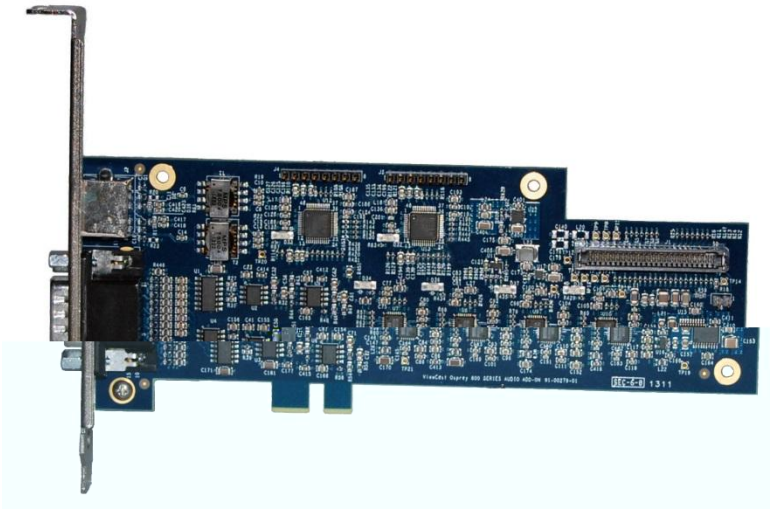

Osprey-825e SDI-A DVB ASI Device 1 Properties
Device
Input Detect
Trace
Performance
Diagnostics
Resource Monitor
Input Status Detail
Video Inputs
0: Video SerialDigital In (DVB-ASI)
TS ID: 1000
PS ID: 35
ES ID: 32 (MPEG-2 Video)
ES ID: 33 (ATSC AC-3 Audio)
ES ID: 34 (ATSC AC-3 Audio)
PS ID: 38
ES ID: 36 (MPEG-2 Video)
ES ID: 37 (ATSC AC-3 Audio)
Audio Inputs
SDI Input A-1 (No Signal)
SDI Input A-2 (No Signal)
SDI Input A-3 (No Signal)
SDI Input A-4 (No Signal)
Osprey®
Video Capture Cards
Start Preview
Stop Preview
OK
Cancel
Apply
Help

Changing the Input Setting



Appendix: Osprey Hardware Specifications

Osprey 800a audio input card



2

2

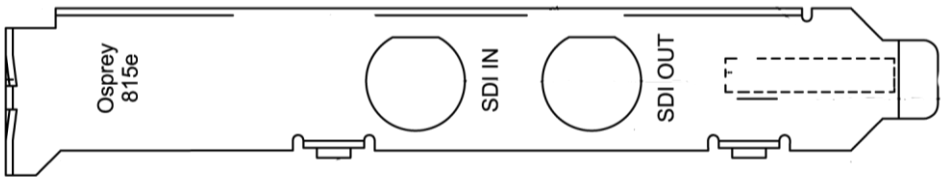
- PCI Express or PCI (x 1) for mechanical stability only (slots x 1, x 4, x 8, or x 16)
- Approximate weight:
  Osprey 800a = 65 grams

Osprey 815e video capture card

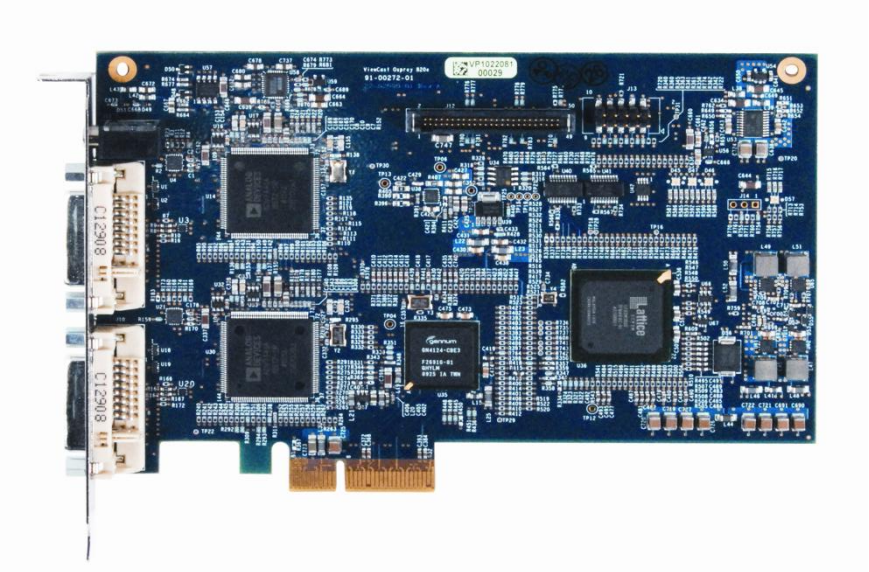
2

2

- PCI Express or PCI (x 1) for mechanical stability only (slots x 1)
- Approximate weight:
  Osprey 815e = 70 grams


Osprey
815e
SDI IN
SDI OUT

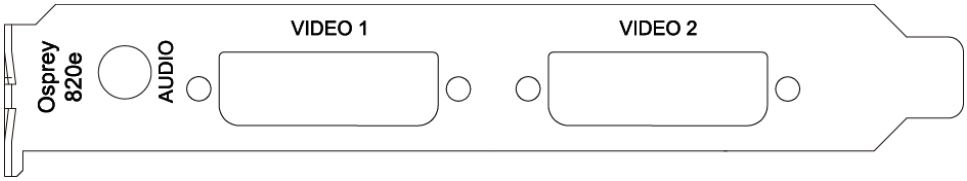
Osprey 820e video capture card



2

2

- PCI Express (x4) card compliant
- Approximate weight:
  Osprey 820e = 113 grams



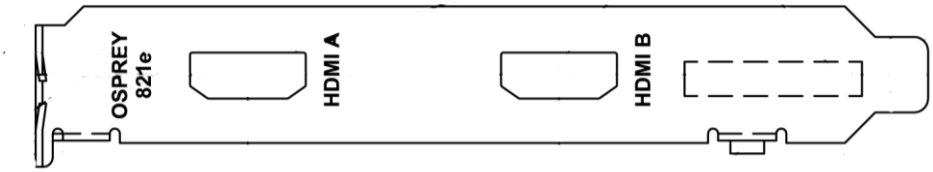
2

Osprey 821e video capture card

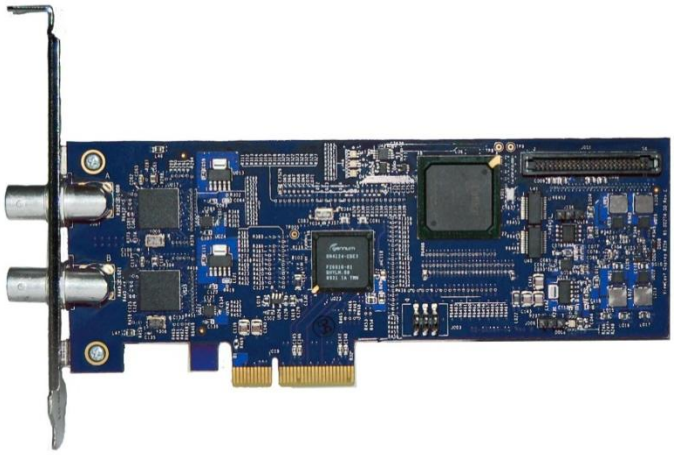
2

2

- PCI Express (x4) card compliant
- Approximate weight:
  Osprey 821e = 113 grams



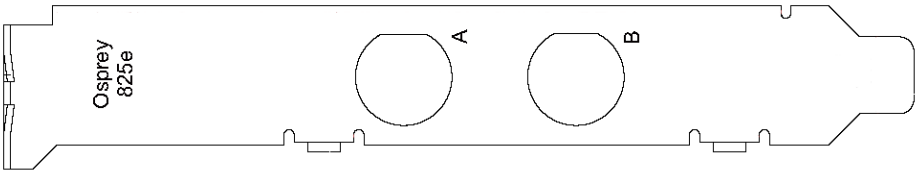
Osprey 825e video capture card

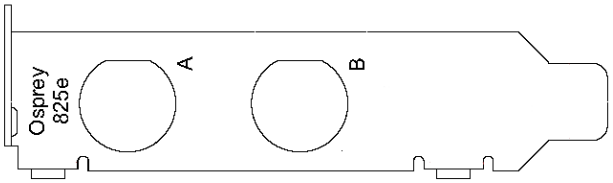


2

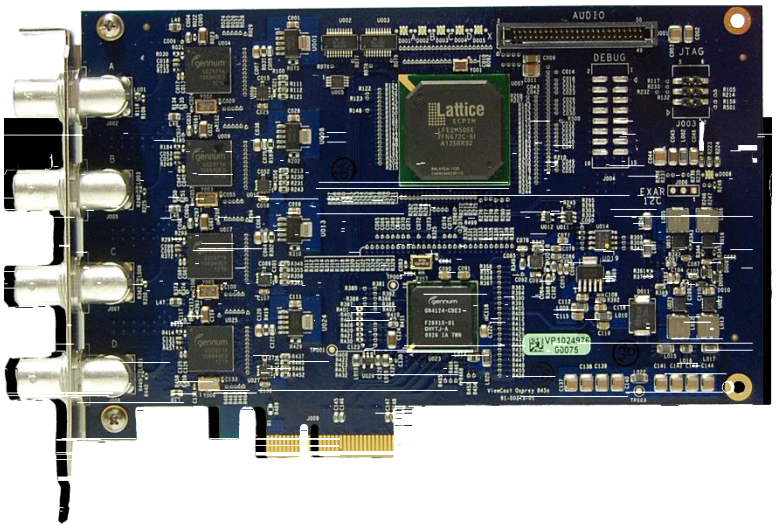
2

- PCI Express (x4) card compliant
- Approximate weight:
  Osprey 825e = 70 grams





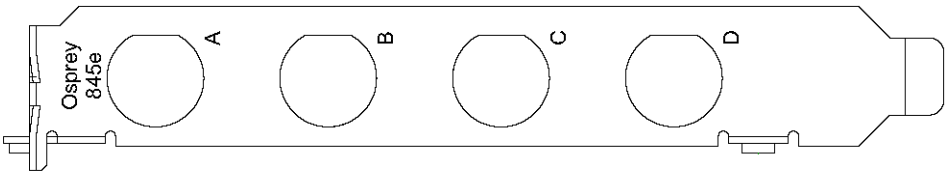
Osprey 845e video capture card



2

2

- PCI Express (x4) card compliant
- Approximate weight:
  Osprey 845e = 122 grams



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