

# Osprey<sup>®</sup> 800e Series User Guide

- 2

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.



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# **Overview**

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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.



Osprey-800e HD x86 Setup	
End-User License Agreement Please read the following license agreement carefully	sprey
END-USER LICENSE AGREEMENT FOR VIEW CAST	^
INPURTANCERERECTORECTORECTORECTORECTORECTORECTOR	
or otherwise sump SOETWARE PRODUCT, nor agree to be	-
Print Back Next	Cancel

j∂ Osprey-800e HD x86 Setup	
Destination Folder Click Next to install to the default folder or skid: Change to choose another.	Osprey
Instal Osprey-800e HD x86 to:	
C:IProgram Files[Osprey Osprey-800e HD  Change	
Back Next	Cancel



- 2
- 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.



#### Installation Steps



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

### Installing the hardware





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



Hardwa	re Installation
1	The software you are installing for this hardware: Osprey-820 HD has not passed Windows Logo testing to verify its compatibility with Windows XP. ( <u>Tell me why this testing is important</u> .) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway

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





#### 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: 0100, 0200, 0210, 0220, 0230 class 2: 0300 class 3: 0440 class 4: 0530, 0540, 0560 class 5: 0700e HD and 0710e HD class 6: 0240e, 0450e class 7: 0100e, 0260e, 0460e class 8: 0815e, 0820e, 0821e, 0825e, 0845e

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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.

Installation Steps

## Using the video capture card

#### 2

- VGA Settings (Osprey 820e only)
- Video Proc Amp
- Video Decoder
- Crossbar
- Trace
- Performance
- Diagnostics
- Resource Monitor
  - 2
- Crop
- Logo
- Captions

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2

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

- 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.

Pin Type:	Capture	<
Gamma	Capture Preview Both	

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**

Device       Input Detect       Deinterlace       Watermark       Loss Of Signal       Cropping       Closed Caption       Video Proc .         Pin Type:	Video Decoder	Crossbar Trace	Performance	Diagnostics	Resource Monitor
Pin Type: Capture  Gamma: 0 Gamma: 0 Contrast: 50 Hue: -90 Saturation: -100	vice Input Detect	ct Deinterlace Waterma	ark Loss Of Signal Cr	opping Closed Caption	n Video Proc Amp
Sprey be Capture Cards Veutral Star Preview Stop Preview Contract Star Preview Contract Contract Cards Contract Cards Contract Contract Cards Contract Cards Cont	amma: 0	Cards	Restore 20 0 200 100 90 0 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0		

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2
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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.

Properties	X
Video Decoder Crossbar Trace Performance Diagnostics Resource I	Monitor
Device Input Detect Deinterlace Watermark Loss Of Signal Cropping Closed Caption Video	Proc Amp
Pn Type: Genmai: Bightness: 20 Contrast: 50 Hue: 100 Contrast: 100 C	Reset

- 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.

	2
2	

 Properties
 X

 Device
 Input Detect
 Deinterface
 Watemark
 Loss Of Signal
 Cropping
 Closed Caption
 Video Proc Amp

 Wdeo Decoder
 Crossbar
 Trace
 Performance
 Dagnostics
 Resource Monitor

 Reference Format:
 INTSC
 •

 Detected Format:
 •

Properties							23
Device Input Detect Video Decoder	Deinterlace Crossbar	Watermark Trace	Loss Of Signal Performance	Cropping	Closed Capt	tion Vid Resourc	eo Proc Amp e Monitor
Device Input Detect Video Decoder	Deinterface Crossbar Output Video I	Watemark Trace	Loss Of Signal Performance	Cropping Diag	Closed Capt	ion Vid Resourc	e Monitor
			0	к	Cancel	Apply	Help

Osprey-845e SDI-A Video Device 1 Properties
Device         Input Detect         Deinterlace         Watermark         Loss Of Signal         Cropping         Closed Caption         Video Proc Amp           Video Decoder         Crossbar         Trace         Performance         Diagnostics         Resource Monitor
Wee Decoder       Cossbar       Irace       Periomance       Diagnostics       Resource Montor         Pin Settings       *       Video Scaling Algorithm:       Linear       (Least to most CPU usage order)         * Udeo Input Size:       Custom       •       •       (Least to most CPU usage order)         * Default Video Input Size:       Custom       •       •       •         * Wideb Buffers:       50       •       •       •         * Default Frame Rate:       29.97       •       •       •         Device Settings       **       Input Port Settings       •       •         *** Enable 3G SDI support:       Enabling this feature will disable SDI inputs C and D.       •         NOTE:       **       - Indicates that the driver will need to restarted for changes to these fields to take effect.       *         *       - Indicates that the driver will take effect the next time the filter is created.       •       •
OK Close 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.

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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.

Device	Input Detect	Deinterlace	Watemark	Loss Of Signal	Cropping	Closed Cantion	Video Proc Amp
Video De	ecoder	Crossbar	Trace	Performance	Diag	nostics	Resource Monitor
	inter Den diturit	- <b>T</b> +					
FPGA Reg	ister Read/Write	e lest					
Register:		Value:	Mask:				
Read	J W	rite Shadov	v Write				

**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.

Video Decoder  CIE Packet Size: 128  nterrupt Count:  SDI-A  Video: Audio:  CDI D	Crossbar Video FIFO Thresi 2	Trace size: 1024 hold: 131 Interrupt	Performance Audio F. T1 ts Per Second:	Diag IFO size: 256 nreshold: 38	nostics	Resource Monitor
PCIe Packet Size: 128 Interrupt Count: SDI-A Video: Audio:	Video FIFO Thres 2	size: 1024 hold: 131 Interrupt	Audio F. Ti ts Per Second:	IFO size: 256 hreshold: 38	-	
SDI-A Video:	2	Interrupt	ts Per Second:		-	
SDI-A Video: Audio:					0	
Video: Audio:						
Audio:		C	Current: 0	High: 0		
CDI B		C	Current: 0	High: 0		
SDI-D						
Video:		0	Current: 0	High: 0		
Audio:		0	Current: 0	High: 0		

2

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.
Video Decoder O
------------------------------
Device
Name: Osprey-825e 2
Driver Version: 3.0.8.119
Productio
Vendor
Seria
Di
PCI Infor
Bu: Features SimulStre
Bux Features SimulStre

Pr	operties								X
	Video I	Decoder	Crossbar	Trace	Performance	Diag	nostics	Res	ource Monitor
ļ	Device	Input Detect	Deinterlace	Watermark	Loss Of Signal	Cropping	Closed Cap	ption	Video Proc Amp
	Video I Device - Video - Audiu - S - S - S - S	Input Detect Input Detect Inputs Inputs Inputs Input A-1 ( Input A-2 ( Input A-3 ( Input A-3 ( Input A-4 (	t Deinterface Input Status Detail gital In (No Signal) No Signal) No Signal) No Signal)	Watemark	Loss Of Signal	Cropping	Closed Ca	ption	Video Proc Amp
					0	K C	ancel	Apply	Help



- Bob 0
- Bob 1

Setting Driver Properties

Advanced

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

Capture and preview pins
•
•
•
•
•



- 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.







•
•

	oder	Crossbar	Trace	Performance	Diag	gnostics	F	Resource Monitor
Device	Input Detect	Deinterlace	Watermark	Loss Of Signal	Cropping	Closed Ca	aption	Video Proc Amp
Pin Type: CC field: Overlay CC	Capture	CC channel:	1					
	Font:	Arial	S	ize: 8pt	Font			
Тор	); <b>180</b>	-				Reference Siz	ze:	
Left	270 🔺				- March	720x487		
Height	t: 121 🔺					Display Size:		
Width	n: 180 🖄			mulumuham		320x240		
		Os	sprey	O LINA HITTER		Granularity:	_	
Text Color:		Vide	o Cantu	ire Cards		2x1		
			a a a	Cargon and		Reset Refer	ence	
Background	Color:			STOTOTO STATE		Reset Refer	ence	
Background	Color:		The second second	and		Reset Refer	ence	
Background	Color:		1	and the second second		Reset Refer	ence	
Background	l Color:			The state of the s		Reset Refer	ence	
Background 0000 Transparent	t:			Start Preview Sta	op Preview	Reset Refer	ence	
Background	Color:			Start Preview Sta	op Preview	Reset Refer	ence	
Background	Color:			Start Preview St	op Preview	Reset Refer	ence	
Background	t:			Start Preview Sta	op Preview	Reset Refer	ence	
Background	Color:		a second se	Start Preview St	op Preview	Reset Refer	ence	
Background	Color:		a second se	Start Preview St	pp Preview	Reset Refer	ence	
Background Transparent	Color:		a second second	Start Preview St	op Preview)	Reset Refer	ence	
Background Transparent	Color:		A PORT	Start Preview St	op Preview	Reset Refer	ence	

Capture and preview pins
Note: CC1 is commonly used.



<b>2</b> Note: These values are only applied when you have selected the VGA Input from the crossbar.

Setting Driver Properties

## **Understanding Audio Input Properties**

2

#### **Audio Properties page**

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

Unbal Input 1 (Osp	orey-820e 1) Properties
Device Input De	tect   Audio Input Mixer   Audio Configurator   Trace   Diagnostics   Resource Monitor
Name:	Osprey-820e 1
Driver Version:	5.1.8.154
Production Inf	ormation
Vendor ID:	1576 Device ID: 0820
Serial #:	MM14438076 Facility ID: 1
Date:	10/31/2014 Time: 15:01:40
PCI Informatio	un
Bus #:	3 Device #: 0
SimulStream:	I Standard Definition Only: □ Daughter Card: I
ОК	Close Apply Help

Unbal Input 1 (	Osprey-820e	1) Properties				
Device Input	Detect Au	dio Input Mixer	Audio Configurator	Trace Diag	nostics Resource Monitor	
Device   Input Input 1 Conr Gain:	Detect   Aux	Unbalanced		∏race Diag	Inostics   Hesource Monitor   Enable Bypass Mode MPI-A	
ок	Close	Apply	/ Help	1		

2

vice   In	nput Detect Audio Input Mixer Audio Configurator Trace Diagnostics Resource Monitor	
nput:	HDMI Input A-1	
Left:	0.00 dB	
Right:		
Wave F	Form Monitor	
Left:	Position: 240 Value: 0x0000e264	
Right:	Position: 240 Value: 0x000005e8	
	Stop Details Resume	

#### Selecting the Audio Source and Input Volume

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## **Osprey mixer driver interface**

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Windows Media Enc	od <mark>er x6</mark> 4 Editio	n
File View Control	Tools Help	
🔮 New Session 🤌	🕞 🚺 Prop	erties 🚺 🏷 Start Encoding 🔘 Stop 🕕 Pause
Session Properties		8
Sources Output Com	pression Video	Size Attributes Processing Plug-ins Security Advanced
Select the sources to e	encode in this see	ssion.
Source	Name:	Source 1 Remove
Source 1		Tonoro
	Source from:	Oevices File OBoth device and file
	Video:	Osprey-820e MFI-A Video Device 1  Configure
	Audio:	Unbal Input 1 (Osprey-820e 1)  Configure
	Script:	(default audio device) Unbal Input 1 (Osprey-820e 1) HDMI Input 1 A (Osprey-820e 1) HDMI Input 1 R (Osprey-820e 1)
	At end:	HDMI Input 1-B (Ospiey-820e 1) HDMI Input 2-A (Osprey-820e 1) HDMI Input 2-B (Osprey-820e 1)
	Archiving:	HDMI Input 3-A (Osprey-820e 1) HDMI Input 3-B (Osprey-820e 1) HDMI Input 4-A (Osprey-820e 1)
Add 🔻 🛦		HDMI Input 4-B (Osprey-820e 1) Multichannel WAV Source [blank]
		Apply Undo

AudioInputMixer Properties		
Master Input Mix	Pin Line Input Mix	
Treble		Treble D Bass D
<ul> <li>Enable</li> <li>Loudness</li> <li>Mono</li> </ul>	Enable     Loudness     Mono	Pin Line: Master Volume  ▼
	ок	Cancel Apply



Sound Playback	Recording Sounds Communications	25
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	
477 197	HDMI Input 4-A Osprey-820e 1 Ready	
	HDMI Input 4-B Osprey-820e 1 Ready	ш
	Unbal Input 1 Osprey-820e 1 Default Device	•
Confi	gure Set Default 💌 Proper	ties
	OK Cancel Ap	oply

Unbal Input 1 Properties	23
General Listen Levels Advanced	
Unbal Input 1 100 ()) Balance	
OK Cancel Ap	ply

🛞 Ba	lance	_ XX )
1		100
2	<u> </u>	100
	ОК	

## Osprey 800a audio input card



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

Inbal Input 1 (Osp	orey-820e 1) Prop	erties					×
Device Input De	stect Audio Input	Mixer Audio Config	gurator   Trace	Diagnostics	Resource Monitor		
Name:	Osprey-820e 1						
Driver Version:	3.0.8.133						
Production Inf	ormation						
Vendor ID:	1576	Device ID:	0820				
Serial #:	MM13079376	Facility ID:	1				
Date:	03/06/2013	Time:	08:14:52				
PCI Informatio	n						
Bus #:	1	Device #:	0				
reaures SimulStream:	☑ Standard	Definition Only:  Daughter Card:					
				ОК	Cancel	Apply	Help

Unbal Input 1 (Osprey-820e 1) Properties					×
Device   Input Detect   Audio Input Mixer Audio Configurator   T	Trace   Diag	nostics   Resource	Monitor		
Input 1 Connector Type: Intellined	Enable	Enable Bypass	Mode		
Gain: 0 dB Mas	ster Clock:	MF1-A	٠		
		OK L C	and I	Acels	Help
	_	- C	ance	P0997	nep

	Input 1 Connecter Type:		Б
	Gain: 0 dB	AES SPDIF Unbalanced	M
Į	NOTE: CHANGES TO TH	E DAUGHTER CARD SETTINGS W	/ILL

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Selecting the Audio Source and Input Volume



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

rey-825e SDI-	A DVB ASI Device 1	L Properties				<b>—</b> ×
vevice   Input D	etect   Trace   Perfo	omance   Diagno:	stics   Resource Mr	nitor		
Name:	Osprey-825e 1					
Driver Version:	5.0.8.143					
Production In	formation			-		
Vendor ID:	1576	Device ID:	0825			
Serial #:	MM12309025	Facility ID:	1			
Date:	08/28/2012	Time:	16:50:49			
-PCI Informati	on					
Bus #:	2	Device #:	0			
		aughter Card: ₩				

# Activating the DVB-ASI Feature

purforcerings	
** Input pin mode:	DVB-ASI 💌
	SMPTE
autica Cattiana	DVB-ASI



	A DVD ASI DEVICE I	Properties					
Device   Input De	etect   Trace   Perfo	omance   Diagno:	stics   Resource	Monitor			
Name:	Osprey-825e 1						
Driver Version:	5.0.8.143						
Production Inf	formation						
Vendor ID:	1576	Device ID:	0825				
Serial #:	MM12309025	Facility ID:	1	-			
Date:	08/28/2012	Time:	16:50:49	-			
PCI Informatio	on —						
Bus #	2	Device #•		_			
000 //1	-	Device #1	0				
-Features	↓ Standard De	efinition Only:	DVB-nat	5	_		_
Features SimulStream:	≁  ⊽ Standard De De	efinition Only:	DVB-nau:	지 지	1	1	1
Features SimulStream:	Γ Standard Dι Dε	efinition Only: F	DVB-Ass:	् ज			
Features SimulStream:	∏~ Standard Dr Dz	efinition Only:	DVB Asi:	् ज			





# **Changing the Input Setting**

out Port Settings	54	
** Input pin mode:	DVB-ASI	•
	SMPTE	-
	DVB-ASI	

## Appendix: Osprey Hardware Specifications

#### **Osprey 800a audio input card**



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

<sup>2</sup> 



## Osprey 820e video capture card



2

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


Using the DVB-ASI Feature

## Osprey 821e video capture card



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



2

## **Osprey 825e video capture card**



2

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





Using the DVB-ASI Feature

## **Osprey 845e video capture card**



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



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additional audio inputs, 57

Audio Input Card

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