QUICK GUIDE



USB3.0 SDI Video Capture DL-SDI2USB-CAP



PRODUCT OVERVIEW

The Liberty DL-SDI2USB-CAP is a commercial-grade, USB capture device designed to record uncompressed video and audio from an SDI source such as a camera, all while connected directly to a computer. Being 100% USB-compliant, the device is ideal to use with any SDI-equipped camera, switcher, and other security and broadcast equipment, and being 100% USB compliant, its plug-n-play design requires no drivers or downloads to install.

Stream from an SDI source directly to YouTube, Facebook, or your favorite video conferencing software platforms such as (Teams, Zoom, Workplace, and many others). Featuring an SDI input with loop output in addition to a USB 3.0 output. The device supports video resolutions up to 1080p/60 video and is powered via a USB port.

CAPTURE SDI SIGNALS: Using USB 3.0 technology, capture audio and video SDI signals up to 1080p @60Hz. Supporting the latest SDI technologies ranging from 3G-SDI, HD-SDI and SD-SDI signals. **SDI LOOPOUT:** Perfect for connecting to a 3G/HD/SD-SDI monitor/display connection without needing a distribution amplifier.

VIDEO RECORDING: with H.264 software compression. Supports USB 3.0 (MJPG/YUY2) and USB 2.0 (MJPG). Compatible with USB Video Class (UVC 1.0). Low latency.

Power: Bus Powered through USB 3.0 (USB 3.2, Gen 1) interface to computer.

Supported Video Resolutions: 720 x 480 (60p), 720 x 576 (50p), 1280 x 720p (50p), 1280 x 720p(60p), 1920 x 1080 (50i), 1920 x 1080 (60i), 1920 x 1080 (24p), 1920 x 1080 (25p), 1920 x 1080 (30p), 1920 x 1080 (50p), 1920 x 1080 (60p).

Supported Audio: Audio input from embedded SDI or analog stereo audio (2-channel, 16-bit PCM) Compliance: Gen USB 3.x while being fully backwards compatible with USB 2.0.

CAPTURE/STREAMING SOFTWARE: Compatible with most third-party software such as AMCap, OBS Studio (Windows,OS X); Windows Media Encoder (Windows); Adobe Flash Media Live -Encoder.



1. Female USB Type A: Connect to host computer.

- 2. Male BNC: Connect to preview monitor.
- 3. Male BNC: From source such as a camera.

SETTING UP THIRD-PARTY SOFTWARE

When using OBS Studio:

Make sure you download the latest software from their website according to your computer's operating system, and install it on your computer. Connect the DL-SDI2USB-CAP to computer using the provided USB3.0 cable. Windows will install the driver automatically, and you will see "LibAV USB SDI Capture Card" listing within your device manager.

Start the OBS Studio software and click the "+" icon under the "Sources" window, and select "Video Capture Device", then select "LibAV USB SDI Capture Card" in the dropdown next to "Device":

S Properties for 'Video	Capture Device'	?	×
Device	LibAV USB SDI Capture Card Deactivate		
	Configure Video Configure Crossbar Deactivate when not showing		
Resolution/FPS Type	Custom		
Resolution	1920x1080		
PDC			

Scroll down and set the "Audio Output Mode" to "Output desktop audio (WaveOut), Audio Device to "LibAV USB SDI Capture Card":

Resolution	1920x1080	
FPS	Match Output FPS	
Video Format	Any	
YUV Color Space	Default	
YUV Color Range	Partial	0
Buffering	Disable	0
	Flip Vertically	
Audio Output Mode	Output desktop audio (WaveOut)	0
	🖌 Use custom audio device	
Andio Device	(LibAV USB SDI Capture Card)	0
Defaults	OK Car	ncel

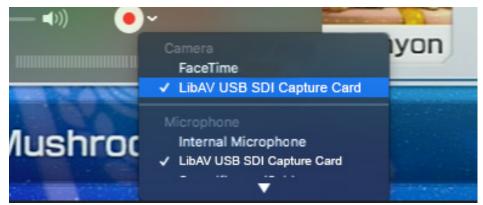
SETTING UP THIRD-PARTY SOFTWARE CONT.

When using QuickTime Player:

Run QuickTime player, select "New Movie Recording":

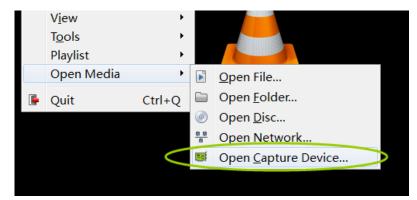


Choose "LibAV USB SDI Capture Card" under Camera and Microphone option:



When using a Linux machine with OBS VLC (shows example for Ubuntu):

Right click on window, select "Open Capture Device":



Choose "Video camera" --- "/dev/video0" then click "play"

X 🗖 Open J	Media		
Eile 💿	Disc B Network	k 📕 Capture <u>D</u> ev	ice
Capture mod	le	Video camera	:
Device Selec	tion		
Video dev	ice name 🛛 🤇	/dev/video0	
Audio dev	ice name	hw:0,0	•
Options			
Video star	ndard	Undefined	\$
			Advanced options
Show more	options		
2			Play ▼ Cancel

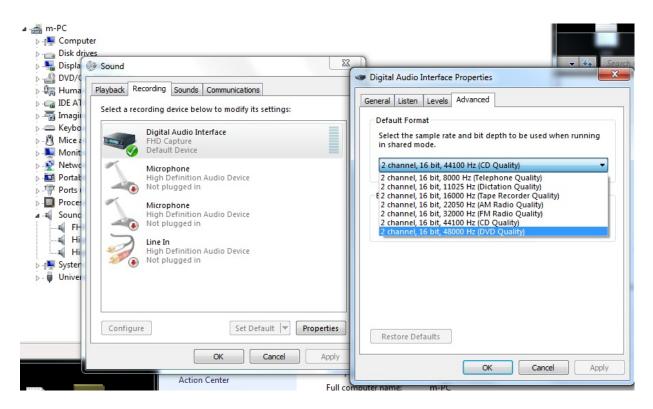
SYNCHRONIZING AUDIO WITH VIDEO

After connecting the device to your computer using the provided USB cable, right click on "Speaker" within the toolbar and choose "Recording devices" or "Sounds".

Open Volume Mixer	Open Sound settings
Playback devices	Open Volume mixer
Recording devices	Spatial sound (Off)
Sounds	Sounds
Volume control options	Sounds
→ ⁽¹⁾ 5/16/2017	Troubleshoot sound problems
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Within the pop-up window, click on the "recording" tab and find "LibAV USB SDI Capture Card". Double click on the device and then click the "Advanced" tab. The "Default format" will be shown, make sure that "2 channel 16 bit, 48000 Hz (DVD Quality)" is selected within the dropdown.

You will need to verify that your audio matches the video sample rate. IF the video sample rate is set to 44100hz or 32000hz, then you need to adjust the audio to match to reduce the introduction of noise.



SYNCHRONIZING AUDIO WITH VIDEO CONT.

When setting up the software for video latency, you want to make sure the audio and video are synchronized:

Using OBS Studio, right click on "Video Capture Device" then click "Filters":

	Add	•
<	Rename	
	Remove	Del
	Order	•
	Transform	•
	Deinterlacing	•
	Scale Filtering	,
	Fullscreen Projector (Source)	,
de la constante	Interact	
s	Filters	
	Properties	

Click on "Video Delay (Async)"

Gain
Video Delay (Async)
Noise Suppression
Noise Gate
Compressor
VST 2.x Plug-in

Within the drop down, start off with 470ms and adjust accordingly in small amounts until the video and audio are synched.



Start Recording/Streaming

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nes	Sources	Kixer 🖨		Scene Transitions	
ene 1	♥ Video Capture Device		-3.0 dB 🔨	Fade -	Start Streaming
			()	+ - 🔅	Start Recording
		ACR 1	-2.2 dB	Duration 10000ms 拿	Studio Mede
			()		Settings
- ^ ~	+-• ~~	Video Capture Device	-1.9 dB		Exit

SYNCHRONIZING AUDIO WITH VIDEO CONT.

When using VLC: Click on Tools>Effects and Filters-Synchronization, then adjust the delay value of audio track synchronization, until the audio and video are in synch.

VLC media player				
edia Playback <u>A</u> udio <u>V</u> ideo Subtiţle <u>To</u>	ols V <u>i</u> ew <u>H</u> elp			
	Effects and Filters	Ctrl+E		
118	Track Synchronization		Adjustments and Effects	×.
0	Media Information	Ctrl+I	Audio Effects Video Effects Synchronization	
•	<u>C</u> odec Information	Ctrl+J		6
	<u>VLM</u> Configuration	Ctrl+Shift+W	Audio/Video	
	Program Guide			
		Ctrl+M	Audio track synchronization: 0.000 s 🜩	
	Plugins and extensions			1
*	Customize Interface			
*	Preferences	Ctrl+P	Subtitles/Video	
			Subtitle track synchronization: 0.000 s 🖨	
				0 fps 🖨
			Subtitle duration factor:	0.000 🖨
				Close

When using Amcap: Click on Capture>Setup>Preview, set the audio latency to your preference which is normally set to 10ms:

AMCap Setup
General Preview Video Capture Still Capture
Video
Renderer:
Video Mixing Renderer 9 (recommended) Video Configure
Add overlay Configure
Enable time-stamped preview samples Automatically switch video crossbar inputs every:
Audio
Latency (ms):
On-Screen Display Color: Thickness:
Display crosshair Choose 1
Enable alpha-blending

TECHNICAL SPECIFICATIONS

USB Capture Device	
Case Material	Industrial-grade metal chassis
Supported Transfer Rates	Transfer rate of 5Gbps/1.5/12/480 Mbps
Power Protection	Over current, over voltage, short circuit protection
USB Specifications	Fully compatible with USB 2.0/3.0/1.0 specification. Fully backwards
	compatible with USB 2.0/1.1 specification.
LED Indicator	Blue LED: Status for USB peripheral or power
Compatibility	
Operating System	Windows®7 (1080p and under only), Windows 8.1, Windows 10 or
	higher MacOS™ 10.10 or higher Google™ Chromebook™ Version
	29.0.1547.70 or higher Linux
USB Communication Protocol	UVC 1.1
VIdeo Resolution	720 x 480 (60p), 720 x 576 (50p), 1280 x 720p (50p), 1280 x
	720p(60p), 1920 x 1080 (50i), 1920 x 1080 (60i), 1920 x 1080 (24p),
	1920 x 1080 (25p), 1920 x 1080 (30p), 1920 x 1080 (50p), 1920 x
	1080 (60p)
Software	OBS Studio (Windows,OS X); Windows Media Encoder (Windows); Adobe Flash Media Live -Encoder (Windows, OS
	X); Real Producer Plus (Windows); VLC (Windows, OS X, Linux);
	QuickTime Broadcaster (OS X); QuickTime Player (OS X); Wirecast
	(Windows,OS X); vMix(Windows); Potplayer (Windows) and etc.
USB Recording Resolution	1080P 60flps
Input/Output Interface	
USB Interface	1x USB-B 3.0 Upstream Port
Support on Upstream Port	SuperSpeed (SS), HighSpeed (HS) and FullSpeed (FS) traffic. Note: Trans-
	fer rates are device and USB host controller dependent
BNC	2x BNC male ports
Physical Parameter	
Power	From USB bus power
Dimension (WxHxD)	107(L) x 55(W) x 21(H) mm
Net Weight	80G
Certification	CE, FCC, RoHS

Thank you for your purchase.

For technical support please call our toll-free number at 800-530-8998 or email us at supportlibav@libav.com

