MuxLab
PRODIGITAL™

SDI to USB3.0

Video Capture & Streamer, with Audio In

Installation Guide

500705

SAFETY PRECAUTIONS

To insure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or may burn.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product's specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with good ventilation to avoid damage caused by overheating.
- Unplug the power cord if it will not be used for a long period of time.
- Do not put any heavy items on the unit.
- Do not remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- Do not twist or pull with force ends of the optical cable attached to the unit, as it may cause damage.
- Information on disposal of devices: do not burn or mix with general household waste, please treat this device as normal electrical wastes.
- Unpack the equipment carefully and save the original box and packing material for possible future shipment

NOTICE:

- Please read this user manual carefully before using the product.

Contents

1. Introduction

1.1 Introduction to the 500705

The SDI to USB3.0 Video Capture & Streamer, with Audio In (model 500705) provides a professional way to capture 3G/HD/SD-SDI signals. It adopts a USB 3.1 Gen 1 (USB 3.0) interface, which supports high-speed transmission. Users can capture 3G/HD/SD-SDI signals with this capture device to a computer via the USB port. The device can capture and display original uncompressed 3G/HD/SD-SDI video with realistic color rendition, and supports a large image buffer to effectively avoid video tearing. The high sampling rate and high sampling precision assures images with high sharpness, rich details, and less color abnormality at the edges.

1.2 Features

- Supports an SDI output resolution scaler with audio embedding

- SDI video and audio streams over USB 3.1 Gen 1

- Supports UVC 1.0

- Supports input and output video resolution up to 1080p 60Hz

- Supports SDI Loop Out (pass-thru)

- Auto-detection of video format to ensure plug-play operations

- Recording Video Format: H.264 (Software Compression)

- Works on multiple operating system platforms

  o Including Windows 7/8.1/10, Mac and Linux OS

- Compatible with most 3rd party software such as OBS Studio and AMCap

- Supports USB 3.1 Gen 1 (MJPG/YUY2) and USB 2.0 (MJPG)

- Low Latency

- Recommended System Requirements

  o Windows® 7(SP1) / Windows 8.1 / Windows 10

  o PC: Intel® Core i5-4440 3.10GHz + NVIDIA® GeForce® GTX 660 or higher

o   Laptop: Intel® Core i7-4810MQ + NVIDIA GeForce GTX 870M or higher

o   4GB RAM or higher

Notes:

- Video quality may be affected by computer capability and software configuration.

- Please use the included USB 3.1 cable to avoid possible compatibility issues.
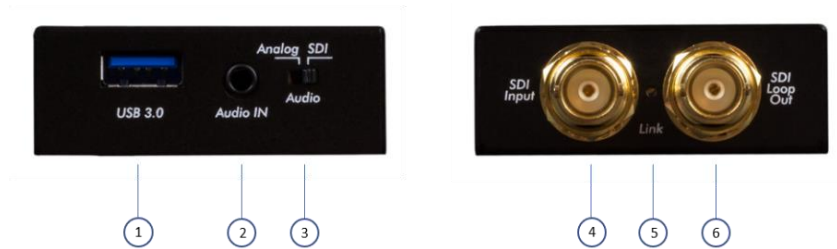

1.3 Package Contents

- 1x SDI to USB3.0 Video Capture & Streamer (500705)

- 1x USB 3.1 Gen 1 Type A to Type A Cable (host to device)

- 1x User Manual

2. Specifications

Device Application	Video Capture device
Input video bandwidth	2.970 Gbit/s, 2.970/1.001 Gbit/s
Output video bandwidth	Up to 350Mbps (USB)
Video resolution support	Up to 1080p/60
Audio input	SDI embedded audio & analog 2CH audio input
Audio format	2CH, 44.1 and 48KHz sample rate, up to 16bit PCM
Recording Compression	H.264 software compression
Recording video format	YUY2 (USB3.1 Gen 1), MJPG (USB2.0/3.1 Gen 1)
Input ports	1x SDI In (BNC connector – 3G 75 ohm) – for source 1x Audio In (3.5mm jack) – for 2CH audio insert
Output ports	1x USB 3.1 (Type A super speed connector) - for capture 1x SDI Out (BNC connector) – for Loop Out
Software compatibility	OBS Studio (Windows, Linux), AMCap (Windows), Potplayer (Windows), Skype (Windows, OS X), Google Meet/Hangout (Windows), TeamViewer (Windows)
OS Support	Windows 7 /8.1 /10, Mac and Linux OS
Firmware updates	Available via USB port
Power supply	Via USB
Power consumption	4 watts (max)
Operating temperature	32~104°F (0~40°C)
Storage temperature	-4~140°F (-20~60°C)
Relative humidity	20~90% RH (non-condensating)
Enclosure Material	Metal
Unit dimensions	4.1" x 2.7" x 0.9" (105 x 68 x 24 mm)
Packaging dimensions	6.4" x 4.4" x 1.7" (165 x 111 x 42 mm)
Shipping Weight	0.88 lbs (0.40 kg)
Ordering information	500705 - SDI to USB3.0 Video Capture & Streamer

3. Panel Description

1. USB OUT: Connect to a USB host port on a Windows PC, Laptop, Notebook, MAC, etc.

2. STEREO AUDIO IN: Connect to an analog 2CH audio source

3. AUDIO SWITCH:
[Analog position] Audio will be captured from the 2CH analog audio input port
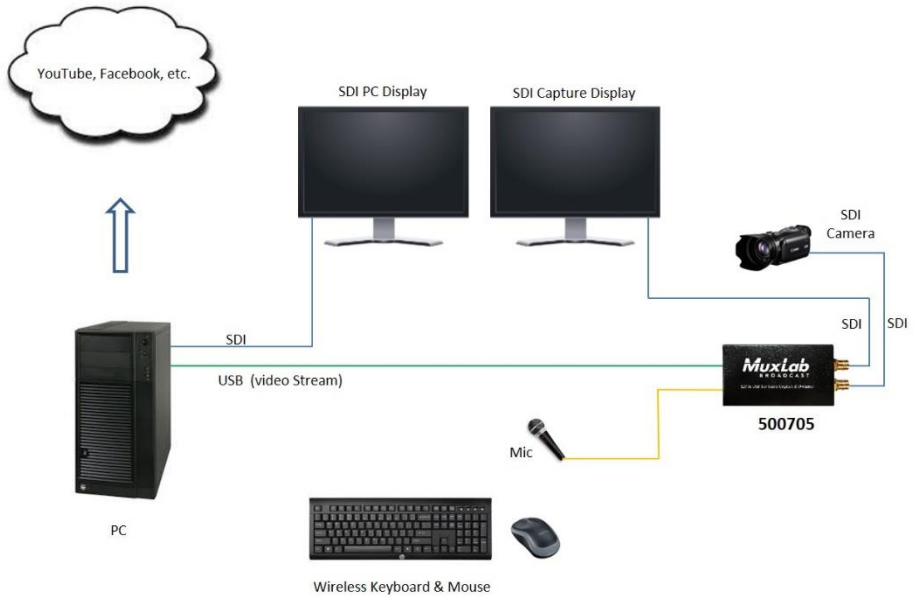[SDI position] Audio will be captured from SDI input signal

4. SDI IN: Connect to a 3G/HD/SD-SDI source

5. LED INDICATOR: Input signal indicator LED

6. SDI LOOP OUT: Connect to a 3G/HD/SD-SDI display

Note: Once all connections are made the capture device may be used. Also see the application diagram in the following section concerning connectivity.

4. Application Diagram

5. Troubleshooting

This USB device has done thoroughly tested at our manufacturing facility to our highest standards before shipping. Most of the issues we have experienced are not directly due to the USB capture device itself, but from a combination of sophisticated software and hardware devices such as PCs and Laptops. Please follow the below suggestions to help resolve any issues that you may encounter.

1. If you are having difficulties with computer capture software, OBS is a popular USB capture freeware with a variety of compatibilities and may be a good software to use as an alternative, particularly if you are not very familiar with USB capture devices and capture software. OBS may be downloaded at: https://obsproject.com/download

2. If you are having USB port related issues, please note that due to the complexities of various OS and computer hardware, USB ports on different PCs and Laptops may result in different performance levels and/or limitations. If your computer includes more than one USB port, then please try other USB ports on your computer to try and resolve your issue.

3. If the capture device performance is intermittent or poor, please make sure you are using the supplied USB cable. We cannot guarantee the overall performance of this capture device with other brand USB cables.

4. SDI cable quality may also play an essential role when capturing. Please be sure that the SDI cable being used can support 3G-SDI (1080P@60) signal transmission or better. Try different cables if the device performance is not working as expected.

5. If audio has any noise, please adjust the sampling frequency setting on the PC or Laptop. If the default sampling rate is 48000 Hz, then try 44100 Hz, or vice versa. As an example to set the sampling frequency on a Windows 10 PC follow the sequence below:

Start → Setting → System → Sound → Device properties → Additional device properties → Advanced

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