



**NTI**® NETWORK  
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# 3GSDI-USB3-CPTR-HDO

## 3G-SDI to USB 3.0 Video Capture with HDMI Loopout Installation and Operation Manual



(Front and Rear View of 3GSDI-USB3-CPTR-HDO)

**HDMI**®  
HIGH-DEFINITION MULTIMEDIA INTERFACE

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## INTRODUCTION

The 3G-SDI to USB 3.0 Video Capture device is used to record or stream an SD/HD/3G-SDI signal via USB 3.0 at up to 350 MB/s. It features an HDMI loop output for local display, as well as separate 3.5mm stereo audio input/output connectors.

### Features:

- Converts SD/HD/3G-SDI and stereo audio input signals to high quality USB 3.0 output
  - Automatic input equalization – compensates for attenuation on the incoming signal and automatically equalizes cables for the following distances using 75 Ohm RG6 BNC cables:
    - 3G-SDI 1920x1080 @60Hz to 328 feet (100 meters).
    - HD-SDI 1280x720 @60Hz to 656 feet (200 meters).
    - SD-SDI 525i @60Hz and 625i @50Hz to 984 feet (300 meters).
  - Automatic output reclocking – reshapes and restores timing of digital video signal at output, eliminating high frequency jitter.
- Compliant with USB Video Class (UVC) and USB Audio Class (UAC) standards.
  - UVC protocol allows the host computer/laptop to set the parameters for the USB stream such as resolution, frame rate, and aspect ratio.
- Supports resolutions to 1920x1080 @60Hz.
- Independent HDMI loop-through allows the original full-quality source to be routed to monitors or other equipment.
  - Fixed resolution: 1920x1080 @60Hz.
- Auto-detects 3G-SDI, HD-SDI, or SD-SDI format.
  - Supports SMPTE 259M-C, SMPTE 292M, SMPTE 424M, SMPTE 425M Level A and B video interfaces used for broadcast-grade video.
- 3.5mm stereo audio input for microphone and output for use with headphones, powered speakers, or connection to an amplifier/receiver.
  - 3.5mm audio output only plays the SDI audio.
  - USB audio stream embeds the microphone audio and plays the SDI audio simultaneously.
- Multiplatform support: Windows 7/8/10/11, Linux, Mac OS 10/11/12.
- Easily stream content online – compatible with most third party software, such as: OBS, Zoom, Teams, Twitch, YouTube, Facebook, Twitter, etc.
- Plug-and-play functionality – no software needed.
  - Once plugged in, the device is identified automatically as a webcam.
- No power supply is necessary – powered from USB port.
- Compact/portable design – perfect for recording in the field or on the go.
- Ideal for live broadcast, online meetings/classes, gaming, houses of worship, and other A/V applications.

## MATERIALS

### Materials supplied with this kit:

- NTI 3GSDI-USB3-CPTR-HDO USB 3.0 Video Capture Recorder with HDMI Output
- 1 x USB 3.0 Type A male to Type A male cable – 3.48 ft (1.1 m)
- 1 x HDMI Male to Male Cable – 4.79 ft. (1.5m)
- URL Slip with path to this manual

### Materials recommended but not supplied by NTI:

- RG6 75 Ohm coaxial cable terminated with BNC connectors

### Materials not REQUIRED but available from NTI:

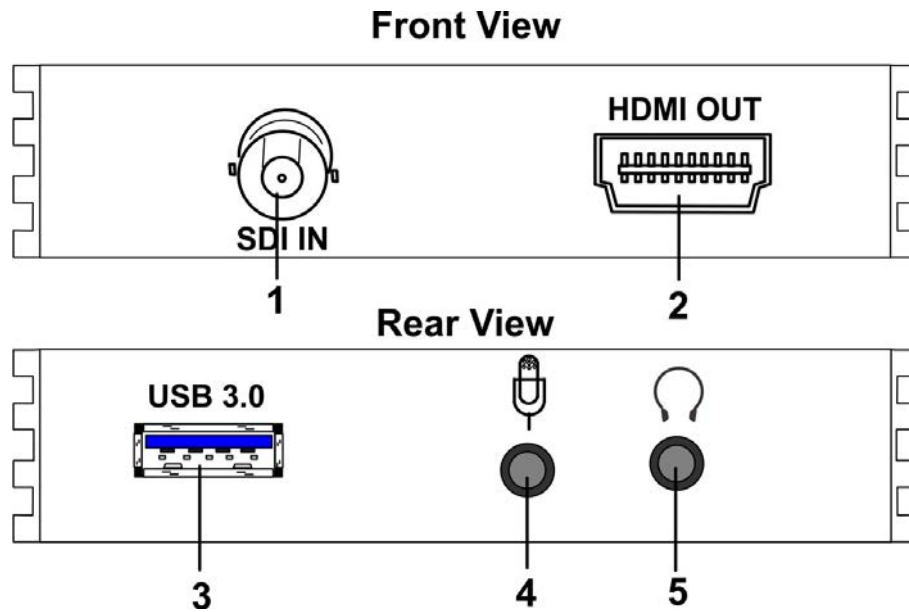
Supports HDMI cables (HD-xx-MM) up to 50 feet.

Use DVI-HD-xx-MM cable to connect a DVI display up to 5 meters

Use SA-xx-MM male to male 3.5mm stereo audio cables to connect speakers, headphones, microphone up to 50 feet

*Cables can be purchased from Network Technologies Inc by calling (800) 742-8324 (800-RGB-TECH) in the US and Canada or (330) 562-7070 (worldwide).*

# CONNECTORS

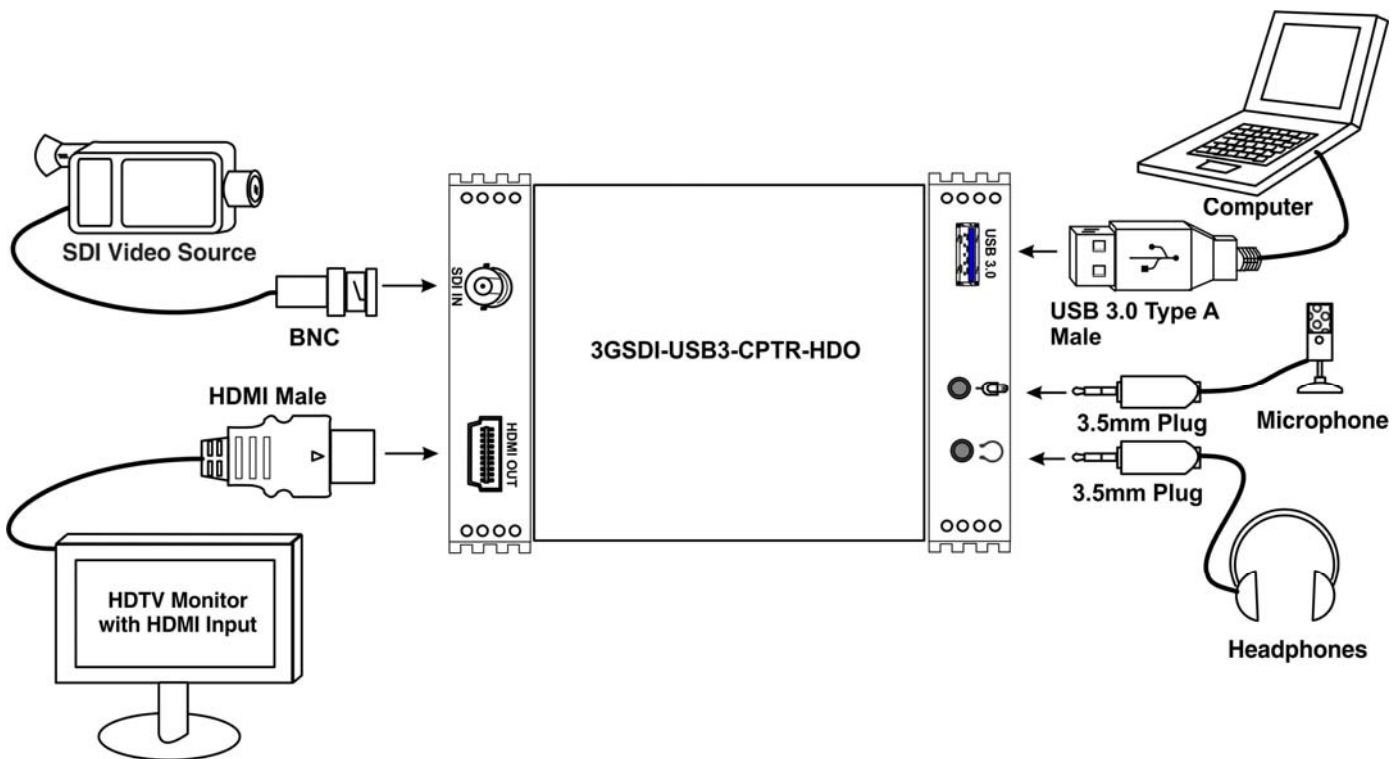


#	LABEL	CONNECTOR	DESCRIPTION
1	SDI IN	BNC Connector	for connection of incoming SDI video signal
2	HDMI OUT	HDMI female connector	for connection of HDMI display device
3	USB 3.0	USB Type A Female	for connection of recording device
4	MICROPHONE	3.5mm Jack	for connect of microphone
5	HEADPHONES	3.5mm Jack	for connection of headphones

## INSTALLATION

1. Connect an SDI video source (Blu-Ray Player, Play Station, audio/video receiver, satellite receiver, etc) to the SDI IN port with an RG6 Coaxial cable with BNC connector.
2. Connect optional HDMI display device with HDMI cable to the "HDMI OUT" port.
3. Connect an optional microphone to the microphone port (audio-in) using an audio cable with 3.5mm plug.
4. Connect an optional set of headphones to the headphone (audio-out) port using another audio cable with 3.5mm plug.
5. Connect a computer to the USB 3.0 port using a USB 3.0 rated cable and a computer with a USB 3.0 rated connection port.

**Using a USB 3.0 rated cable and port is important. The 3GSDI-USB3-CPTR-HDO recorder is compatible with USB 2.0 computers, but we do not recommend to use USB 2.0, because the video quality and fluency will deteriorate. Also, the recorder needs 600mA to operate which exceeds the USB 2.0 standard.**



## OPERATION

The 3GSDI-USB3-CPTR-HDO Video Capture device is based on the UVC (USB video class) and UAC (USB audio class) standard. No additional drivers have to be installed. After installation in the operating system, the relevant video and audio devices will be added. In the Windows Device Manager, for example, will appear two new devices:

Under Imaging Devices: **USB 3.0 HD Video Capture**

Under Audio inputs and outputs: **USB 3.0 HD Audio Capture**

Use a third party Video Media Player like PotPlayer, OBS, Windows Media Player to play and store the captured video content. Easily stream content online as this device is compatible with most third party software, such as: OBS, Zoom, Teams, Twitch, YouTube, Facebook, Twitter, etc.

## TECHNICAL SPECIFICATIONS

Input Connectors	<ul style="list-style-type: none"> <li>○ One female BNC connector for SD/HD/3G-SDI                             <ul style="list-style-type: none"> <li>▪ Supports HDTV resolutions up to 1080p @60Hz.</li> <li>▪ Supports 48kHz SDI audio.</li> </ul> </li> <li>○ One female 3.5mm stereo audio jack.</li> </ul>
Output Connectors	<ul style="list-style-type: none"> <li>○ One female USB 3.0 connector                             <ul style="list-style-type: none"> <li>▪ Multiplatform support: Windows 7/8/10/11, Linux, Mac OS 10/11/12.</li> <li>▪ UVC/UAC compliant.</li> <li>▪ Supports HDTV resolutions up to 1080p @60Hz.</li> </ul> </li> <li>○ One female HDMI connector.                             <ul style="list-style-type: none"> <li>▪ Fixed resolution: 1920x1080 @60Hz.</li> </ul> </li> <li>○ One female 3.5mm stereo audio jack.</li> </ul>
Bandwidth	up to 350Mbps
Protocols supported	SMPTE 259M-C, SMPTE 292M, SMPTE 424M, SMPTE 425M Level A and B
Power	Powered by the attached USB computer
Power consumption	3W (max.)
Operating current	600mA (max)
Operating Temperature	32 to 122°F (0 to 50°C)
Storage temperature	4 to 158°F (-20 to 70°C)
Operating/storage relative humidity	5 to 90% non-condensing RH
Regulatory Approval	CE, FCC, RoHS
Size (In.) WxDxH	2.81x4.45x0.75 in (72x113x19 mm)
Cables	<ul style="list-style-type: none"> <li>• RG6 75 Ohm coaxial cable terminated with BNC connectors is recommended for use. (Not included.)</li> <li>• 3.48 ft (1.1 m) USB 3.0 Type A male-to-male cable included.</li> <li>• 4.79ft (1.5 m) HDMI male-to-male cable included.</li> </ul>



**NTI HDMI Cable Maximum Length Chart:**

<b>Cables Available</b>	<b>Max. Length To support 1920x1080 @60Hz:</b>
HD-xx-MM	50 ft
DVI-HD-xM-MM (DVI Monitor)	5 m

**Audio Cable (Input / Output):**

<b>Cable Available</b>	<b>Max. Length</b>
SA-xx-MM	50 ft

**WARRANTY INFORMATION**

The warranty period on this product (parts and labor) is two (2) years from the date of purchase. Please contact Network Technologies Inc at **(800) 742-8324** (800-RGB-TECH) or **(330) 562-7070** or visit our website at <http://www.networktechinc.com> for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.