

CAP-302AS-G

USB 3.1 Gen 1 3G-SDI Capture Device with Scaler and Audio

User Manual



rev: 200514
Made in Taiwan

TABLE OF CONTENTS

INTRODUCTION.....	1
FEATURES.....	1
PACKAGE CONTENTS	1
SPECIFICATIONS	2
PANEL DESCRIPTIONS.....	3
CONNECTION DIAGRAM.....	3
TROUBLESHOOTING	4
USB PIN DEFINITION.....	5
WARRANTY	6

INTRODUCTION

The **CAP-302AS-G USB 3.1 Gen 1 3G-SDI Capture Device with Scaler and Audio** provides a professional way to capture 3G/HD/SD-SDI signals. It adopts USB 3.1 Gen 1 (USB 3.0) interface, which can realize high-speed transmission. Users can capture 3G/HD/SD-SDI signals by this capture device. Besides, CAP-302AS-G can capture and display original uncompressed 3G/HD/SD-SDI with more realistic color rendition. CAP-302AS-G also uses large volume image buffer technology which effectively avoids the video tearing. The high sampling rate and high sampling accuracy assure images with high sharpness, rich details, and less color edges.

FEATURES

- Supports SDI output resolution scaler with audio embedding
- SDI video and audio streams over USB 3.1 Gen 1
- Supports UVC1.0
- Supports input and output video resolution up to 1080p 60Hz
- Supports SDI loop through
- Auto-detection on video format to ensure plug-play operations
- Recording Video Format: H.264 (Software Compression)
- Works on multiple operating system platforms (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 (MJPEG/YUY2) and USB 2.0 (MJPEG)
- Low Latency
- System Requirements (Recommanded)
 - Windows® 7(SP1) / Windows 8.1 / Windows 10
 - PC: Intel® Core™ i5-4440 3.10GHz + NVIDIA® GeForce® GTX 660 or higher
 - Laptop: Intel® Core i7-4810MQ + NVIDIA GeForce GTX 870M or higher
 - 4GB RAM or higher



1. Video quality is apparently related to the capability of computer and software setting.
2. Please use the included USB 3.1 cable in the box to protect the device and avoid further compatible issues.

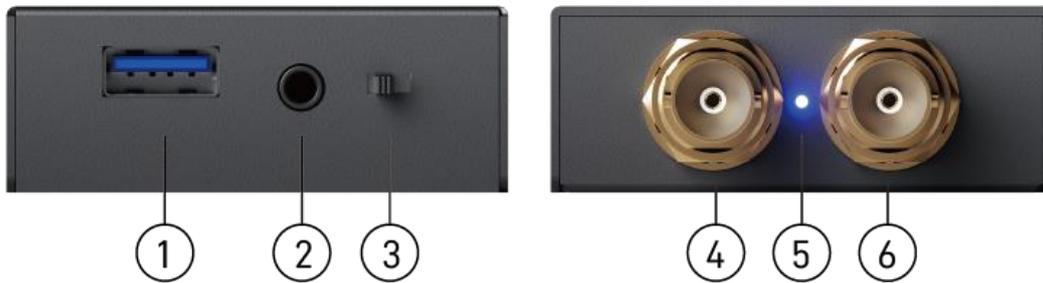
PACKAGE CONTENTS

- 1x CAP-302AS-G
- 1x USB 3.1 Gen 1 A to A Cable (host to device)
- 1x User Manual

SPECIFICATIONS

Model Name		CAP-302AS-G
Technical		
Role of usage		Video Capture Device
Input Video bandwidth		2.970 Gbit/s, 2.970/1.001 Gbit/s
Output Video bandwidth		Up to 350MBps (USB)
Video support		Up to 1080p60
Audio Input		SDI Embedded Audio & Stereo audio Input
Audio Format		2 Channel, 44.1 and 48KHz sample rate, up to 16bit PCM
Recording Mode		Software Compression
Recording Video Format		YUY2 (USB3.1 Gen 1), MJPG (USB2.0/3.1 Gen 1)
ESD protection		Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
PCB stack-up		6-layer board [impedance control — differential 100Ω; single 50Ω]
Firmware update		Feasible via USB Port
Input		1x SDI + 1x 3.5mm
Output		1x USB + 1x SDI (Loopout)
BNC connector		3G 75Ω inter-locked socket
USB connector		USB 3.1 Type A (SuperSpeed USB)
Software compatibility (not complete list)		OBS Studio (Windows, Linux), AMCap (Windows), Potplayer (Windows), Skype (Windows, OS X), Hangout (Windows), TeamViewer (Windows)
OS Support		Windows 7 /8.1 /10, Mac and Linux OS
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	102 x 57 x 21mm [4" x 2.2" x 0.8"]
	Package	165 x 111 x 42mm [6.4" x 4.4" x 1.7"]
	Carton	490 x 426 x 352mm [1'6" x 1'4" x 13.8"]
Weight	Model	
	Package	
Fixedness		Wall-mounting case with screws
Power supply		Via USB
Power consumption		4 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]

PANEL DESCRIPTIONS



1. **USB OUT:** Connect to a USB host (PC, NB, MAC...)
2. **STEREO AUDIO IN:** Connect to analog stereo audio source
3. **AUDIO SWITCH:** [left] Audio from stereo audio in, [right] Audio from SDI
4. **SDI IN:** Connect to a 3G/HD/SD-SDI source
5. **LED INDICATOR:** Input signal indicator LED
6. **SDI LOOPOUT:** Connect to a 3G/HD/SD-SDI display

CONNECTION DIAGRAM



TROUBLESHOOTING

Our USB device has done comprehensive tests before shipment. Most of the incompatibilities we have experienced are not from the USB capture device itself, but from the sophisticated software and hardware combination of PC or laptop. Please follow the following suggestions to see any helps.

1. OBS is popular USB capture freeware and has excellent compatibility. Please download it and start with OBS if users are not familiar with USB capture device.

<https://obsproject.com/download>

2. Due to the complexities of OS and computer hardware, different USB ports on PC or laptop may have different performance or limitation. Please try all USB ports to see if there are any differences.
3. Please must use the USB cable in box. We do not guarantee the overall performance when the USB capture box works with some other USB cables.
4. SDI cable quality may also play an essential role when capturing. Please be sure of that SDI cable can do 1080P@60 SDI signal transmission or better. Try different cables when the device is not able to work as expected.
5. If audio has noise, please adjust sampling frequency setting on PC or laptop. If the default sampling rate is 48000 Hz, please select 44100 Hz and vice versa. The path of setting sampling frequency on windows 10 is:

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

USB PIN DEFINITION



	P1		P2
VBUS	1	↔	1
D-	2	↔	2
D+	3	↔	3
GND	4	↔	4
SSRX-	5	↔	5
SSRX+	6	↔	6
GND	7	↔	7
SSTX-	8	↔	8
SSRX+	9	↔	9
Shield	SHELL	↔	SHELL

WARRANTY

The SELLER warrants the **CAP-302AS-G USB 3.1 Gen 1 3G-SDI Capture Device with Scaler and Audio** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surges.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables are limited to a 30 day warranty and cable must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the CAP-302AS-G features and specifications is subject to change without further notice.**