UC3021

CAMLIVE™ +

HDMI to USB-C UVC Video Capture with Power Pass-Through

User Manual

www.aten.com

EMC Information

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT: This equipment has been tested and found to comply with the limits for a Class B digital service, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

◆ Reorient or relocate the receiving antenna.

◆ Increase the separation between the equipment and receiver.

◆ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

◆ Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

KCC Statement

유선 제품용 / B 급 기기 (가정용 방송 통신 기기)
이 기기는 가정용 (B 급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며 , 모든 지역에서 사용할 수 있습니다 .

RoHS

This product is RoHS compliant.

E3914   CAN ICES-003 (B) / NMB-003 (B)   UKCA CE FC ⌧ ⑳

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://eservice.aten.com

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
	1-949-428-1111

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Package Contents

1 UC3021 CAMLIVE™ + HDMI to USB-C UVC Video Capture with Power Pass-Through

1 USB-C to USB-A cable

1 USB-C to USB-C cable

1 camera mount adapter

1 warranty card

1 user instructions

*When using the CAMLIVE™ + with USB-C to USB-A cable, if you are only detecting MJPG video, please disconnect the USB-C head that you connected with the host. Flip the USB-C head around and reconnect it to the host. Please refer to *Using the USB Cables* on page 16 for more details.

Note: Make sure that all of the components are present and in good order. If anything is missing or was damaged in shipping, contact your dealer.

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Appendix

About this Manual

This user manual is provided to help you get the most from the CAMLIVE™ + unit. It covers all aspects of installation, configuration, and operation. An overview of the information found in the manual is provided below.

Chapter 1, Introduction introduces you to the HDMI to USB-C UVC Video Capture with Power Pass-Through. Its purpose, features, installation considerations, and panel components are presented and described.

Chapter 2, Hardware Setup describes the steps that are necessary to quickly and safely set up your installation.

Chapter 3, Livestream / Record Setup explains how to find CAMLIVE on your system and presents how to setup video and audio source using an example live-stream/record software/platform.

Chapter 4, The Firmware Upgrade Utility explains how to download the CAMLIVE™ +'s firmware and upgrade the device using the utility.

An *Appendix* provides a list of safety instructions and precautions, contact information for ATEN technical support, product specifications, and other technical information.

Note:

◆ Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit or any connected devices.

◆ ATEN regularly updates its product documentation for new features and fixes. For an up-to-date CAMLIVE™ + documentation, visit http://www.aten.com/global/en/

Conventions

This manual uses the following conventions:

Monospaced	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
>	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start > Run means to open the *Start* menu, and then select *Run*.
⚠	Indicates critical information.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

<div align="right">

Chapter 1
Introduction

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Overview

CAMLIVE™ + is an UVC video capture designed for mobile streaming. It delivers 4K unencrypted captured profession camera video image to your USB-C/Thunderbolt 3 laptop or Android smartphone for 1080P post-editing or live-streaming. The captured video result is suitable for post-editing or live streaming with various popular third-party video-editing software platforms - Open Broadcaster Software (OBS), CameraFi, Xsplit, Twitch, YouTube, Facebook, to name a few. Just set up your camera gear and direct your show from anywhere.

The UC3021 supports 60W USB-C power delivery pass-through which charges your laptop or Android phone, the power profile includes 5V/9V/15V/20V. HDMI loop-out port features latency-free, hassle-free video preview suitable for vlogging and any live events. With camera mount adapter, CAMLIVE™ + can be easily installed on any mounting system. Plug and Play allows eye-popping, high-quality on Windows and Mac systems without driver installation.

Having a compact and aesthetic design , CAMLIVE™ + provides you with an intuitive, high-quality live streaming/video editing experience with style whether you are streaming inside or outside at an event.

Features

◆ Supports unencrypted 4K video input for 1080P capture

◆ Software free – plug & play designed for PC, Mac and Android platform

◆ HDMI loop-out – supports real-time HDMI video preview

◆ Up to 60W power charging capability for laptop or Android phone – supports USB-C PD3.0 power profile include 5V/9V/15V/20V (additional USB-C power adapter is needed)

◆ Camera mount adapter makes the installation easier and stable

◆ Compatible with USB & Thunderbolt 3 (USB-C) specification

Planning the Installation

Requirements

Prepare the following before installing the CAMLIVE™ + unit:

◆ 1 HDMI source device

◆ 1 HDMI display

◆ 1 PC or mobile device (Android)

◆ 1 Power adapter or power bank (Optional)

Supported Operating System and Requirements

Operation System	Minimum Hardware Requirement
Windows 7 with *Win7_driver* installed	CPU: Intel® i3 Dual Core 2.8Ghz or higher
Windows 10 or above	RAM: 4GB or more
OS X 10.13 or later	One USB-C Interface or USB-A Interface
Android 5.0.1 or later with UVC support	Android smartphone with UVC and USB-C Interface

Note: For Windows 7 users, please download and install the Win7_driver from our website. To download the driver, see *Downloading the Firmware Upgrade Package*, page 19.

Components

No.	Component	Description
1	mode switch (PC / Phone Mode)	Press to switch between PC and Phone Mode.
2	USB-C UVC output port	Connects to a host.
3	USB-C DC-in port	Connects to a USB power source for additional power supply.
4	1/4" camera mount adapter	Connects to the camera mount adapter that came with the package.
5	HDMI input port	Connects to an HDMI source device.
6	HDMI loop-out port	Connects to an HDMI enabled display.

Hardware Setup

Please review the safety information regarding the placement of this device in *Safety Instructions*, page 27.

Mounting the Camera Mount Adapter

To mount the camera mount adapter, screw the camera mount adapter on the top or bottom of the CAMLIVE™ + with the screws provided in the Camera Mount Adapter Kit.

Connecting the CAMLIVE™ + Unit

Follow the steps below to connect the CAMLIVE™ +.

1. Connect the USB-C UVC output port to a host (e.g. laptop or Android Phone) using the USB-C to USB-C cable[1] (included). Or, if your laptop only has a USB-A interface, connect the USB-C to USB- A cable (included) to the host.

2. Connect your HDMI source device to the HDMI input port[2].

3. (Optional) Connect the source (480P/720P/1080P/4K@60) to the HDMI loop-out port to a spare HDMI-enabled display using an HDMI cable (not included) to display your HDMI content.

4. (Optional) Connect the USB power source to USB-C DC-in port for additional power supply to the UC3021.

5. (Optional) To switch to Phone Mode, press the mode switch. The LED lights when the UC3021 is in Phone Mode.

6. (Optional) Attach the UC3021 on the camera with appropriate camera accessories.

Note: 1. When using the CAMLIVE™ + with USB-C to USB-A cable, if you are only detecting MJPG video, please disconnect and flip the USB-C Cable connector around, and reconnect it to the CAMLIVE™ +. Please see *Using the USB Cables*, page 16 for more details.

2. The CAMLIVE™ + cannot display or capture HDCP protected content.

Software

To enable CAMLIVE™ +, please download and install a suitable video recording or live streaming software for your requirement.

PC

Below lists some examples of supported video recording / live streaming software for PC.

All trademarks are property of their respective owners.

OBS: https://obsproject.com

Xsplit: https://www.xsplit.com

https://www.youtube.com

https://www.facebook.com

https://www.zoom.com

https://www.skype.com

https://www.microsoft.com/en-us/microsoft-365

Android Smartphone

Below is an example of supported video recording / live streaming for Android smartphone.

All trademarks are property of their respective owners.

http://www.camerafi.com/supported-devices/

A general reference of how to go about using CAMLIVE™ + is described in the next chapter.

Chapter 3
Livestream / Record Setup

Livestream / Record Platform

Below lists a few of the available live-streaming or recording software/platforms:

OBS: https://obsproject.com

Xsplit: https://www.xsplit.com

https://www.youtube.com

https://www.facebook.com

https://www.zoom.com

https://www.skype.com

https://www.microsoft.com/en-us/microsoft-365

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Discovering CAMLIVE on your System

CAMLIVE™ + is a plug-and-play device, please make sure your system is able to discover it. After connecting CAMLIVE™ + as shown in *Connecting the CAMLIVE™ + Unit* on page 5, refer to the examples below on how your system may discover CAMLIVE™ +.

Mac Operating System

1. On the desktop, click to select "Go" followed by "Utilities".

2. On the "Utilities" window, double-click "System Information" to bring up the system window.

3. Go to the USB page by clicking "USB" under "Hardware".
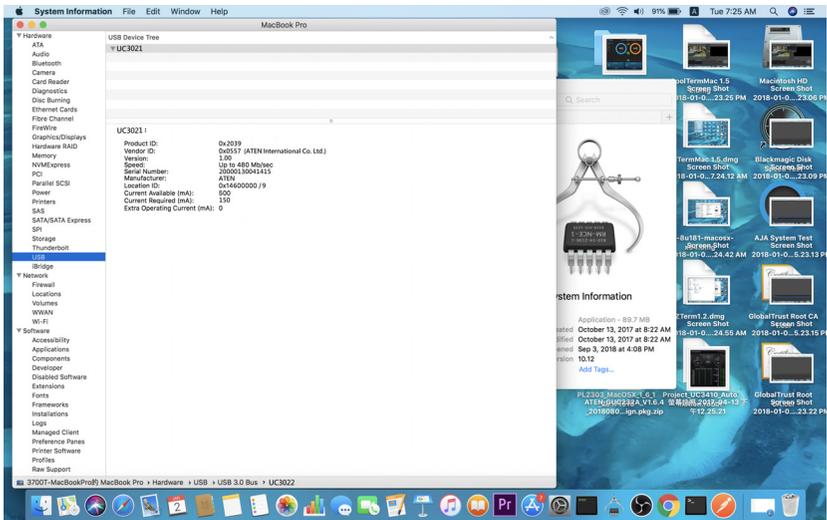
4. Under "USB 3.0 Bus", you should see an "UC3021". This indicates that your system has successfully discovered CAMLIVE™ +.
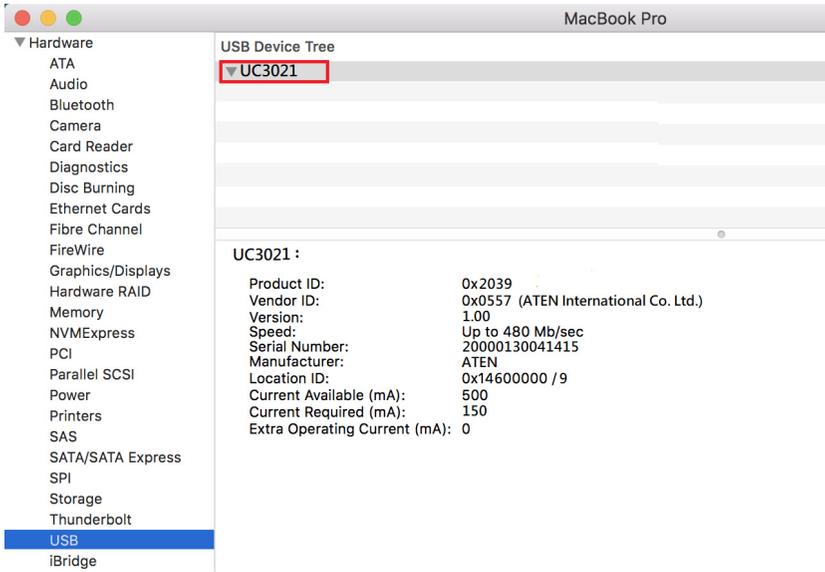
Go to the next section for an example of how to setup both video and audio for live-streaming and recording using CAMLIVE™ +.

Windows Operating System

This is an example used in a Windows 10 Operating System.

1. On a Windows 10 desktop, go to **Control Panel** and select **System**.
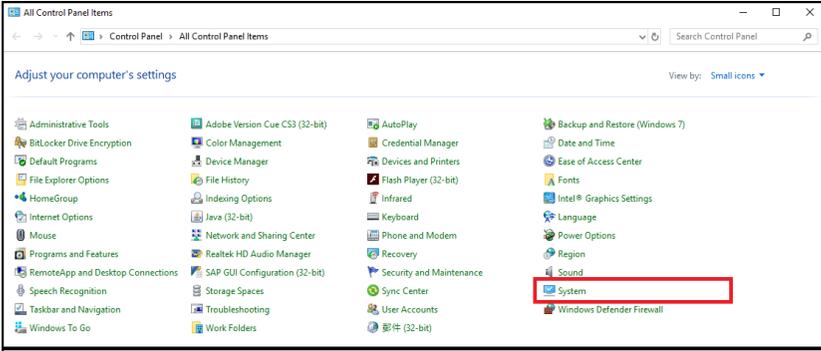
2. The System window appears, select **Device Manager**.
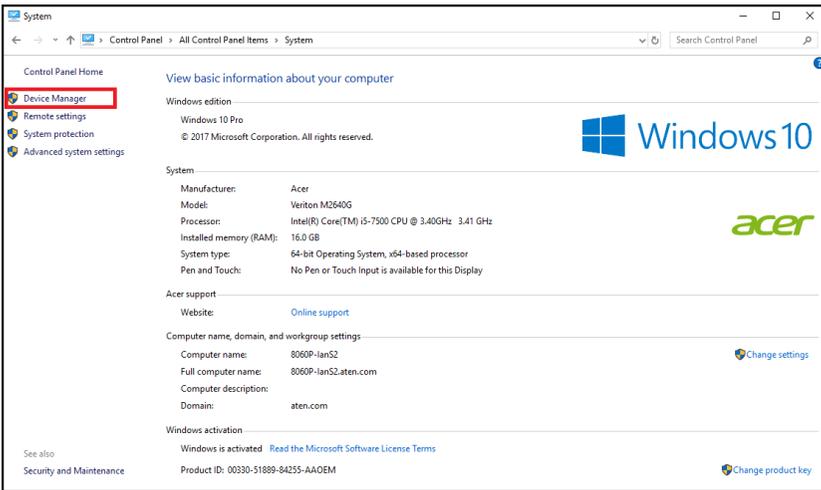
3. The Device Manager window appears. Click on **Cameras** and **Sound, video and game controllers**.
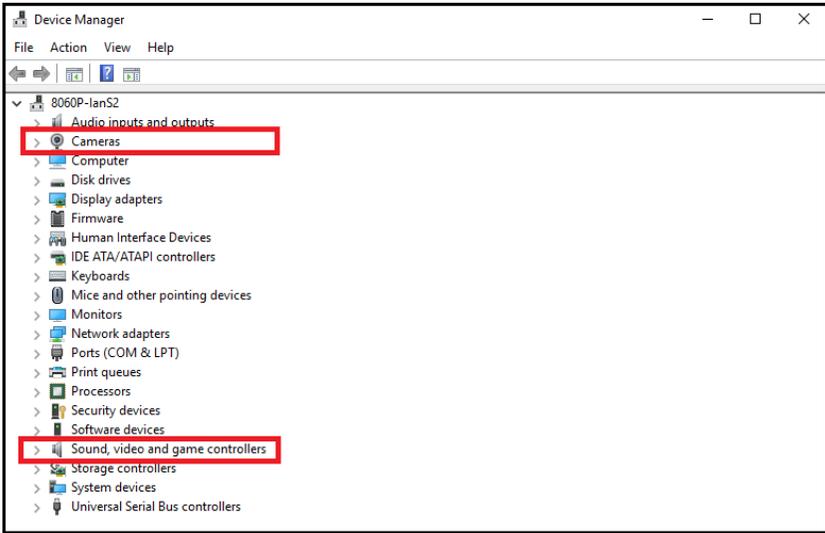
4. You should see an "UVC Video" in the *Camera list*, and an "UVC Audio" in the *Sound, video and game controllers list*. This indicates that your system has successfully discovered CAMLIVE™ +.
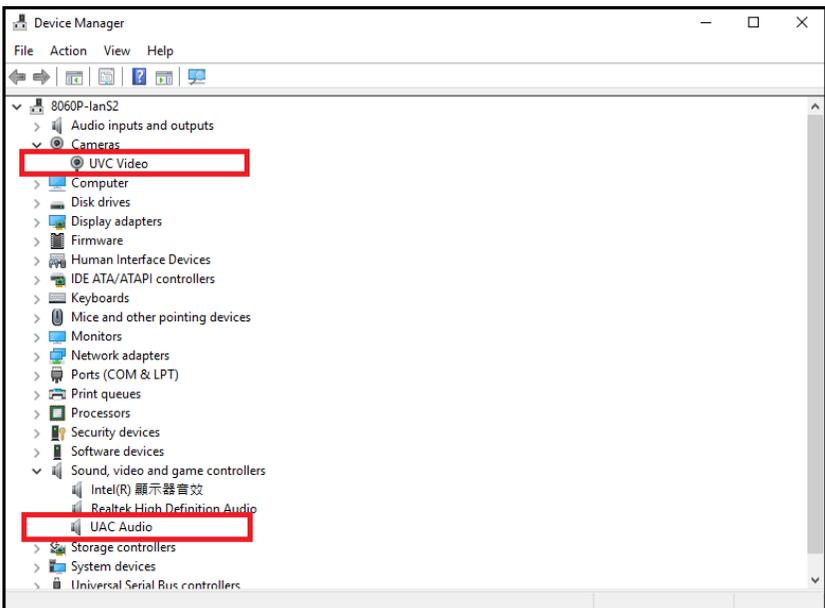
Video and Audio Setup

After your system discovers CAMLIVE™ +, choose your livestream/record platform. You will need to setup the video and audio source coming from CAMLIVE™ +.

Follow the steps below to setup your video and audio sources (separately).

Note: OBS software is the example used in the setup steps below.
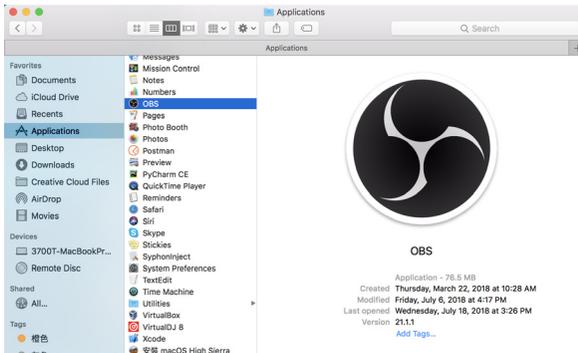
1. On your system, open the OBS software.
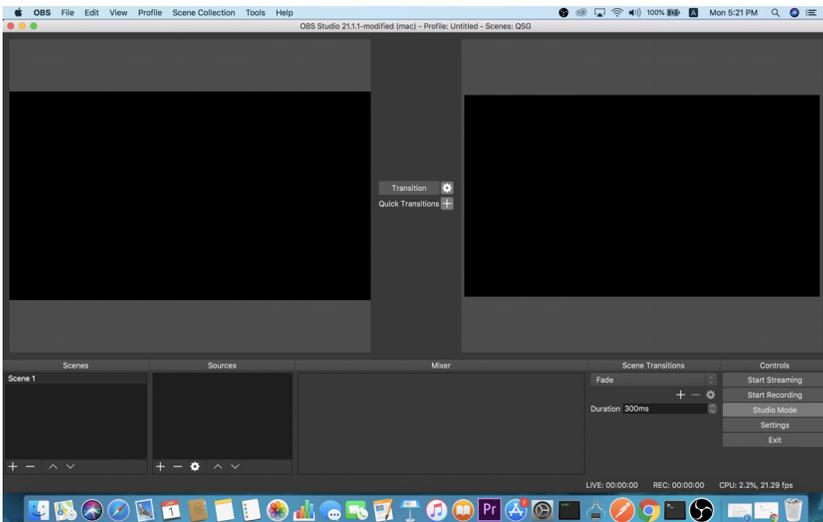
2. Locate and click the "+" button on the bottom of the "Sources" pane (outlined in red in the picture below) to open the add source menu:
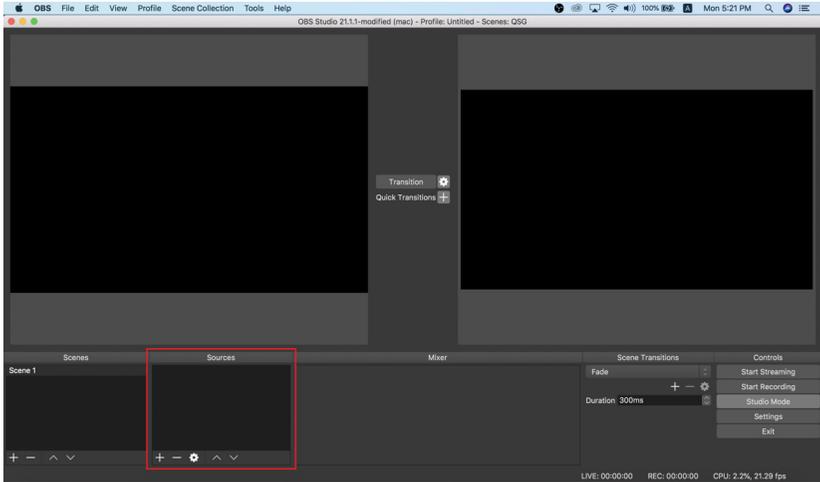
3. Select "Video Capture Device" or "Audio Capture Device.
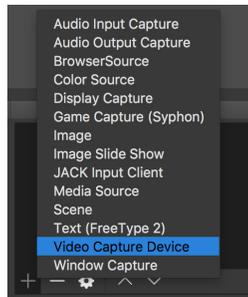
4. A pop-up window will be shown for you to name the video/audio source. Click the "OK" button to continue.

It is recommended that "Make source visible" is checked.
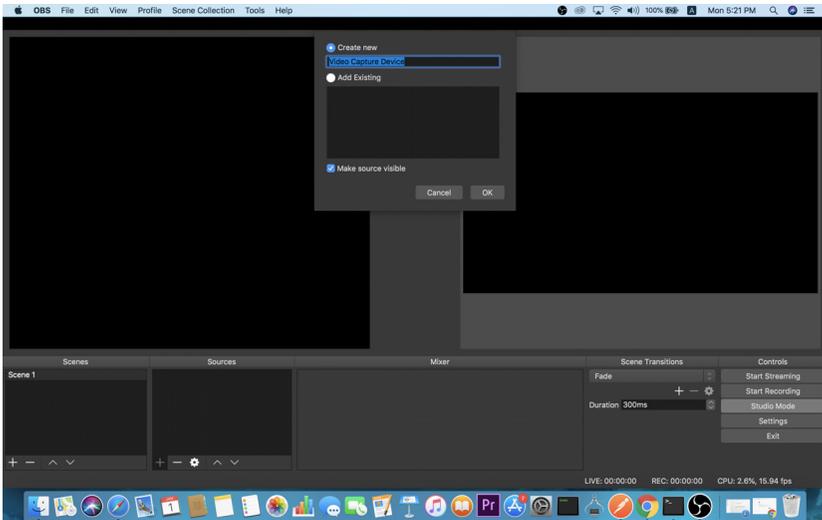
5. On the properties page, click the drop-down menu named "Device" to select CAMLIVE™ +'s video/audio source. Both the video and audio sources of CAMLIVE™ + have the name "UVC Video".
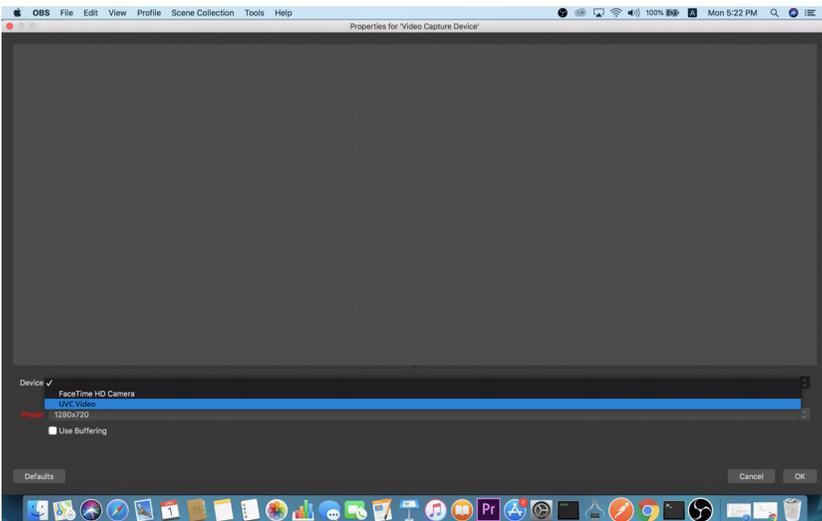
After selecting the video source, the image from CAMLIVE™ + should be displayed as shown below.

Click the "OK" button to continue.
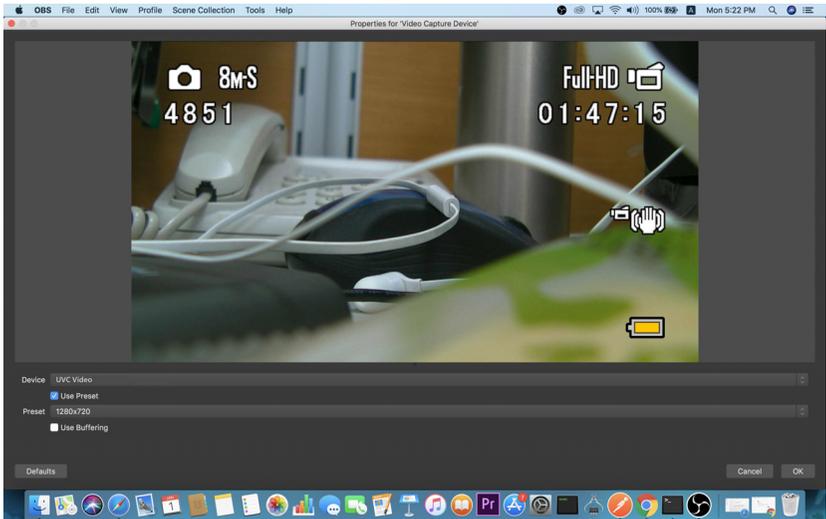
6. For successful setup, the sources will be shown in the "Source" pane.
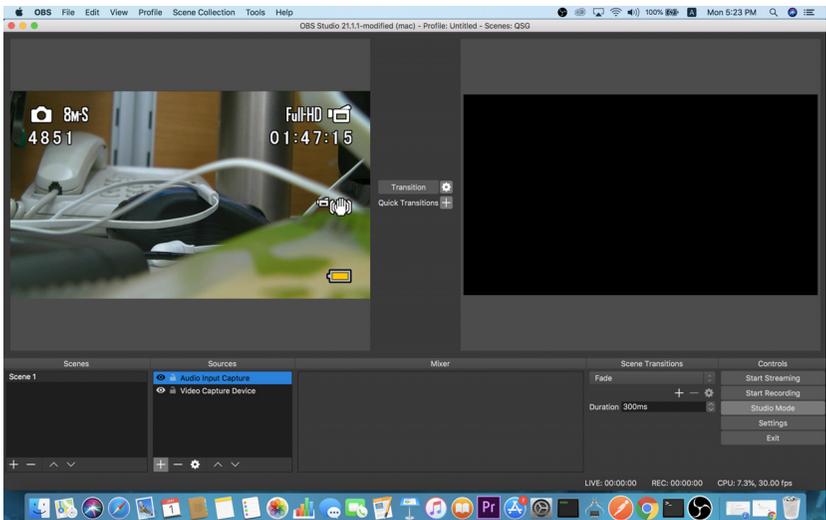
Setup of video and audio sources are complete, you can now start live-streaming/video recording.

Detailed configuration of your live-streaming/video recording software/platform is not within the scope of this user manual, please refer to the software/ platform's instruction guides/manual.

Using the USB Cables

When connecting CAMLIVE™ + on a PC with a USB2.0 interface, it will automatically set the provided compressed video quality to the MJPEG compression mode to fit the data bandwidth. For better video quality, we strongly recommend to connect CAMLIVE™ PRO to a USB3.1 Gen1 interface.

To make sure the result match your media output you wish to capture, please check the detected video format from your capture software first.

Capture device custom setting page examples displaying USB 3.1-RAW and USB2.0-MJPEG on OBS software are shown below:

◆ USB2.0 mode with MJPEG video format only
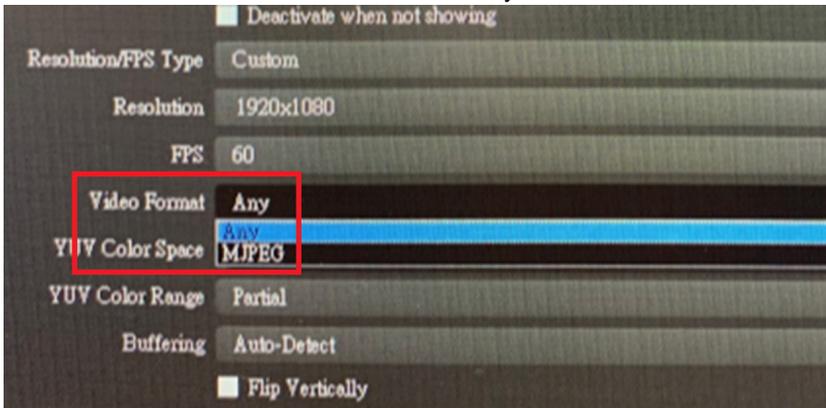
◆ USB3.1 mode with RAW (YUY2) and MJPEG video formats
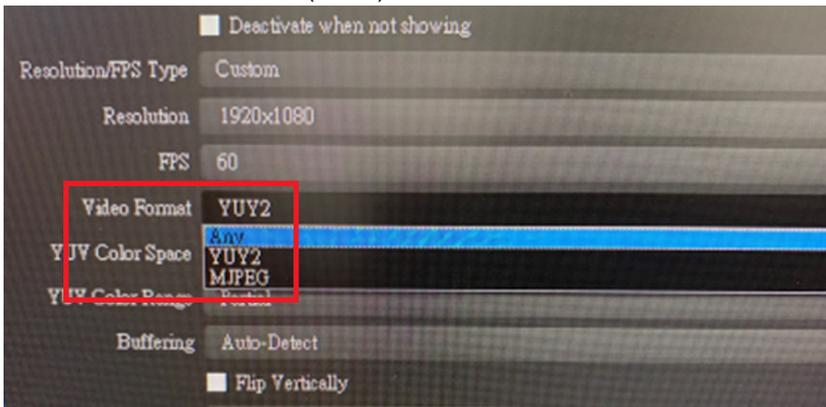
When using CAMLIVE™ + with USB-C to USB-A cable, if you find that the captured media only has MJPEG format, simply flip the USB-C Cable connector connected to the CAMLIVE™ + as shown in the diagram below:

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Chapter 4
The Firmware Upgrade Utility

Overview

The purpose of the Firmware Upgrade Utility is to provide an easy process for users to upgrade the CAMLIVE™ + unit to either support PC video capture, or Android smartphone video capture capability.

As new firmware versions become available, new firmware upgrade packages are posted on our website. Check the website regularly to find the latest information and packages.

Downloading the Firmware Upgrade Package

To download the firmware upgrade package:

1. On our Website, go to *Support Center - Download* and choose the device model, or from the CAMLIVE™ + product page, click on the *Support and Downloads* tab, and go to *Software & Drivers*. A list of available firmware upgrade packages appears.

2. Choose the firmware upgrade package that you wish to install (usually the most recent) and download it to your computer.

   Note: For Windows 7 users, please download and install the Win7_driver from our website after the upgrade is successful. See *Upgrading Driver for Windows 7 Operating System*, page 22.

Preparation

To prepare for the firmware upgrade, do the following:

Connect the USB-C UVC output port to the host using the USB-C to USB-C cable provided. If your laptop only has a USB-A interface, connect the USB-C UVC output port to the host using the USB-C to USB-A adapter provided.

Starting the Upgrade

To upgrade the CAMLIVE™ +, follow the steps below:

1. Extract and open the downloaded firmware upgrade package file, right click on the Setup icon, and select **Run as administrator** as shown in the picture below.
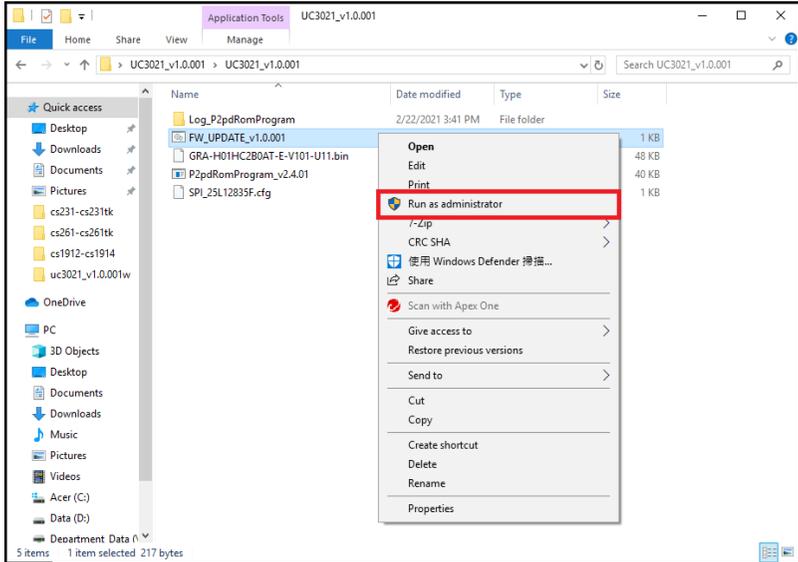
2. Wait for the firmware upgrade process to complete and press any key to continue.
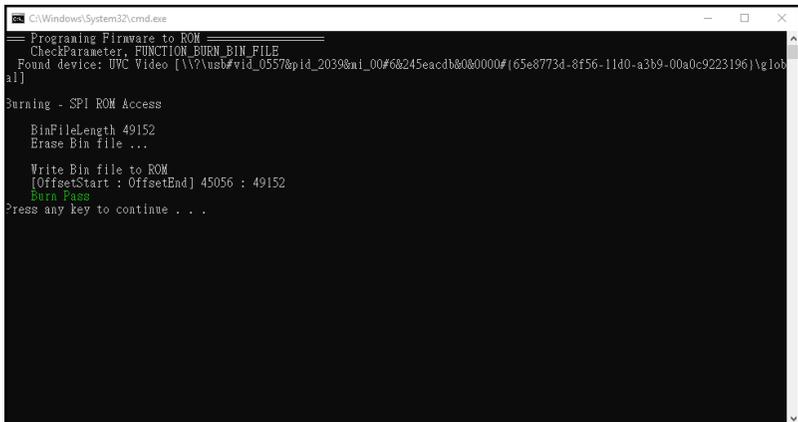
3. Power off the CAMLIVE™ + by unplugging the USB-C to USB-C or USB-C to USB-A cable from the host, and / or unplug the USB-C cable connected to the USB-C DC-in port from USB power adapter.

4. Now power back on the CAMLIVE™ +.

> **Note:** For Windows 7 users, please download and install the Win7_driver from our website after the upgrade is successful. To download the driver, see *Downloading the Firmware Upgrade Package*, page 19.

Upgrading Driver for Windows 7 Operating System

To upgrade the CAMLIVE™ +'s driver for Windows 7 operating system, follow the steps below:

1. Extract and open the downloaded firmware upgrade package file, and select **UVCLowerFilter.Build.0.15.10** as shown in the picture below.
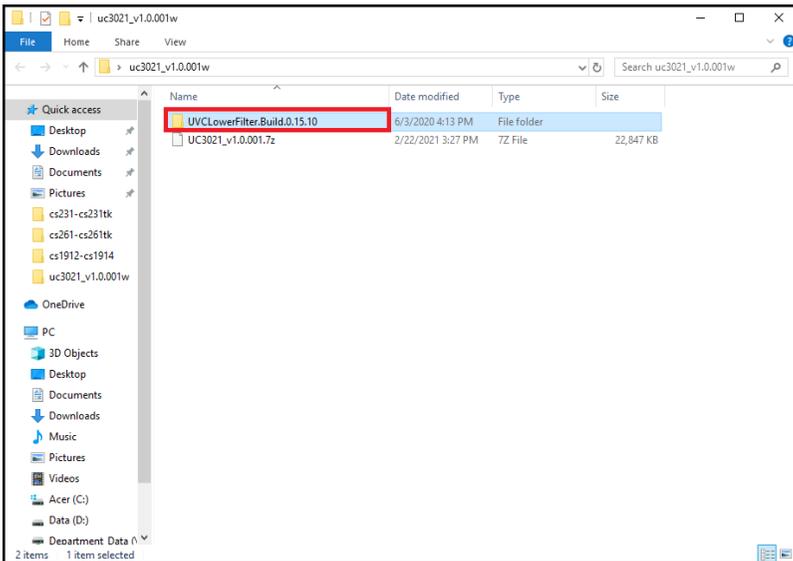
2. Select **InstallShield**.
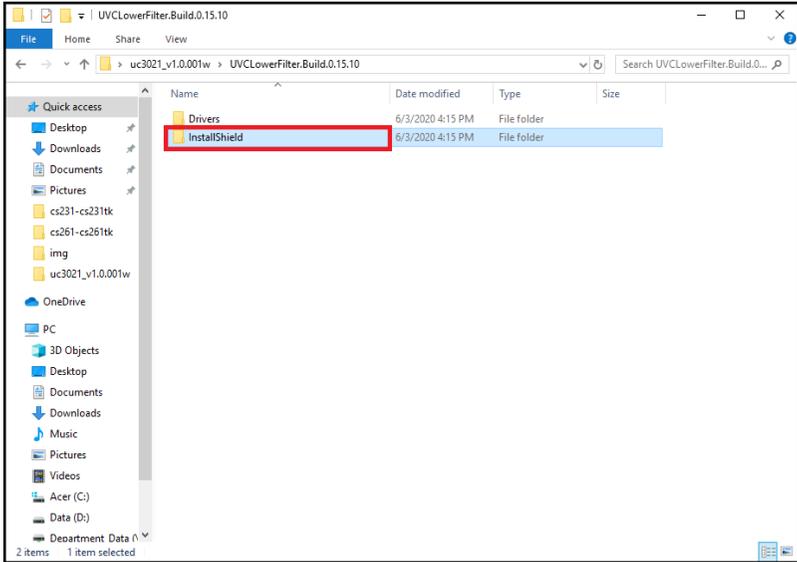
3. Select **Regular Installation**,
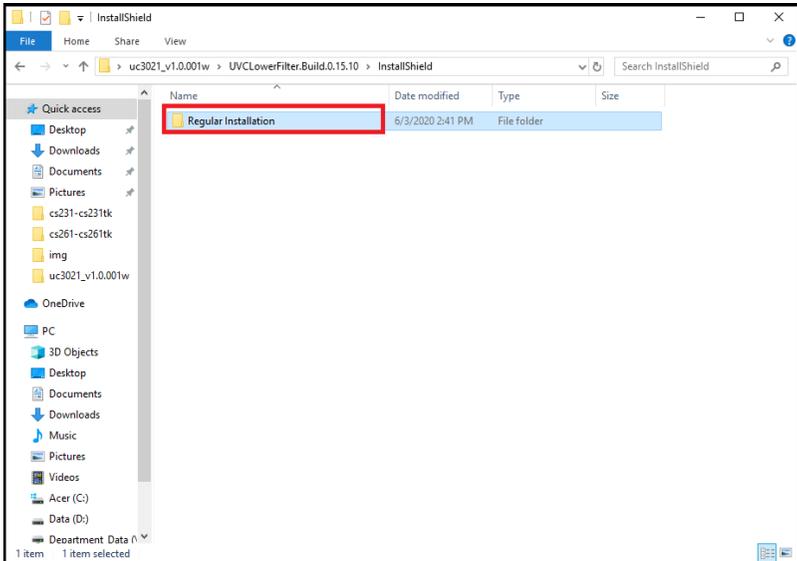
4. Right click on the Setup icon, and select **Run as administrator** as shown in the picture below.
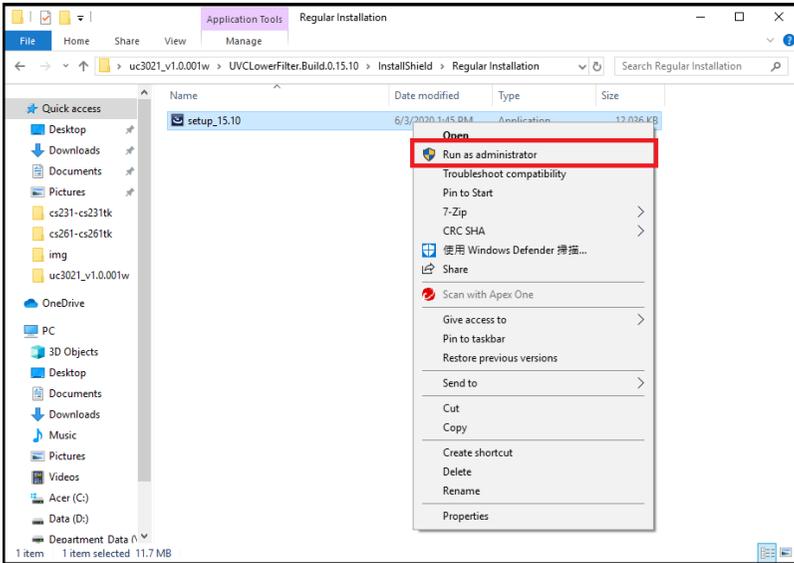
5. Wait for the installation to complete, and click **Finish**.
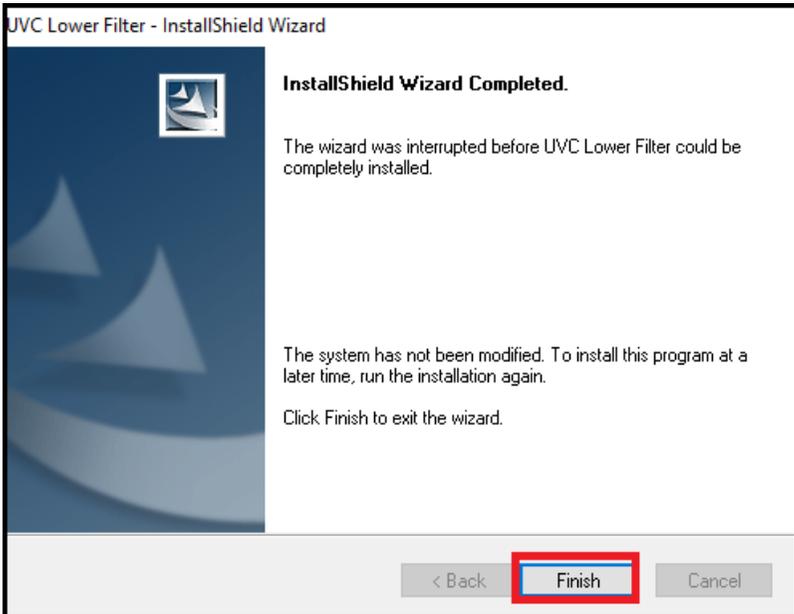
Upgrade Failed

If the *Installation Complete* screen doesn't appear, it means that the upgrade failed to complete successfully, in which case you should do the following:

1. Click **Close**.

2. Do the firmware upgrade procedure again.

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Appendix

Safety Instructions

General

- This product is for indoor use only.

- Read all of these instructions. Save them for future reference.

- Follow all warnings and instructions marked on the device.

- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.

- Do not use the device near water.

- Do not place the device near, or over, radiators or heat registers.

- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.

- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.

- Never spill liquid of any kind on the device.

- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

- To prevent damage to your installation it is important that all devices are properly grounded.

- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.

- Position system cables and power cables carefully; Be sure that nothing rests on any cables.

- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.

- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.

- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.

- The power cord or plug has become damaged or frayed.
- Liquid has been spilled into the device.
- The device has been exposed to rain or water.
- The device has been dropped, or the cabinet has been damaged.
- The device exhibits a distinct change in performance, indicating a need for service.
- The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

Technical Support

International

- For online technical support – including troubleshooting, documentation, and software updates: http://support.aten.com

- For telephone support, see *Telephone Support*, page iii:

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988 1-949-428-1111

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase

- Your computer configuration, including operating system, revision level, expansion cards, and software

- Any error messages displayed at the time the error occurred

- The sequence of operations that led up to the error

- Any other information you feel may be of help

Specifications

Function	CAMLIVE™ +
Connectors	
Video In	1 x HDMI Type A Female (Black)
Video Output	1 x HDMI Type A Female (Video Loop-out, Black)
USB Port	USB 3.2 Gen1 Type-C Female (Black) **Note:** USB-C to USB-C and USB-C to USB-A cables included in the package.
Power (Optional)	1 x USB-C Female Note: 1. Supports Power Delivery 3.0 for laptop charging up to 60W, power profiles include 5V, 9V, 15V, and 20V (additional USB-C power adapter needed). 2. Supports USB-C PD power adapter only, cannot work with USB-C QC power adapter.
Video Resolution	
Video Input (HDMI support)	480p60, 720p60, 1080p60, 2160p60 (Unencrypted)
Video Loop-out (HDMI support)	480p60, 720p60, 1080p60, 2160p60 (Unencrypted)
Audio Sampling	16-bit PCM audio, 44.1KHz and 48KHz
UVC Output	Uncompressed 480p60, 720p60, and 1080p60 UVC Video Stream with UAC Audio (Uncompressed video stream is only available on USB3.1 connection)
Environmental	
Operating Temperature	0 - 40 ºC
Storage Temperature	-20 – 60 ºC
Humidity	0 - 80% RH, Non-Condensing

Function	CAMLIVE™ +
Minimum Hardware Requirement	PC/Mac: ◆ CPU: Intel® i3 Dual Core 2.8Ghz or higher ◆ RAM: 4GB or more ◆ One USB-C Interface or USB-A Interface Smartphone*: ◆ Android smartphone with UVC and USB-C Interface **Note:** For detail UVC compatible device list, please review the following link of third part App. http://www.camerafi.com/supported-devices/
OS Support	Windows 7 or above Mac OS X 10.13 or later Android 5.0.1 or later with UVC support **Note:** For Windows 7 users, please download and install the Win_7 driver from our website. To download the driver, see *Downloading the Firmware Upgrade Package*, page 19.
Physical Properties	
Housing	Plastic
Weight	0.09 kg (0.2 lb)
Dimensions (L x W x H)	11.49 x 8.49 x 2.00 cm (4.52 x 3.34 x 0.79 in.)

Limited Warranty

ATEN warrants its hardware in the country of purchase against flaws in materials and workmanship for a Warranty Period of two [2] years (warranty period may vary in certain regions/countries) commencing on the date of original purchase. This warranty period includes the LCD panel of ATEN LCD KVM switches. Select products are warranted for an additional year (see *A+ Warranty* for further details). Cables and accessories are not covered by the Standard Warranty.

What is covered by the Limited Hardware Warranty
ATEN will provide a repair service, without charge, during the Warranty Period. If a product is detective, ATEN will, at its discretion, have the option to (1) repair said product with new or repaired components, or (2) replace the entire product with an identical product or with a similar product which fulfills the same function as the defective product. Replaced products assume the warranty of the original product for the remaining period or a period of 90 days, whichever is longer. When the products or components are replaced, the replacing articles shall become customer property and the replaced articles shall become the property of ATEN.

To learn more about our warranty policies, please visit our website:
http://www.aten.com/global/en/legal/policies/warranty-policy/