



CAMLIVE
HDMI to USB-C UVC Video Capture
User Manual



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

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.

RoHS

This product is RoHS compliant.



User Information

Online Registration

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

International	http://eservice.aten.com
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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 CAMLIVE HDMI to USB-C UVC Video Capture

1 USB-C to USB-A Adapter*

1 User Instructions

*When using the adapter, if you are only detecting MJPG video, please disconnect the USB-C head from the adapter, flip the USB-C head around and reconnect it to the adapter. Please refer to *Using USB-A Adapter* on page 14 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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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. 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.


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

Chapter 1

Introduction

Overview

"CAMLIVE" is an HDMI UVC Video Capture device that sends unencrypted HDMI video to your USB-C or Thunderbolt 3 laptop (or USB-A with the included adapter), or an UVC capture ready Android smartphone. It's compliant with latest USB 3.1 Type-C specification.

CAMLIVE is designed to Plug & Play. Its built-in UVC and UAC standard support allows system operation without installing drivers and, at the same time, delivers eye-popping, high-quality video on Windows and Mac systems at 1080/60fps. By sending captured RAW data, you can enjoy video editing or live streaming with various popular third-party video-editing software/platforms - Open Broadcaster Software (OBS), Xsplit, Twitch, YouTube, Facebook, Camerafi, to name a few.

Having a slim and aesthetic design, CAMLIVE provides you with an enjoyable, high-quality live streaming/video editing experience with style whether at work or on the go.

Features

- ◆ Captures unencrypted HDMI video signal such as camcorder or DSLR up to 1080P @ 60*
- ◆ Supports live video streaming, webcasting and video conferencing
- ◆ Compatible with popular streaming software, such as OBS, Xsplit, YouTube, Facebook and Twitch
- ◆ Plug & Play – Supports UVC/UAC v1.1
- ◆ Compatible with USB3.1 Gen1 Type-C standard
- ◆ Works with all major operating systems: Windows® and OS X®
- ◆ Works with UVC capture ready Android smartphone

*CAMLIVE cannot display or capture HDCP protected content

Planning the Installation

Requirements

Prepare the following before installing the CAMLIVE unit:

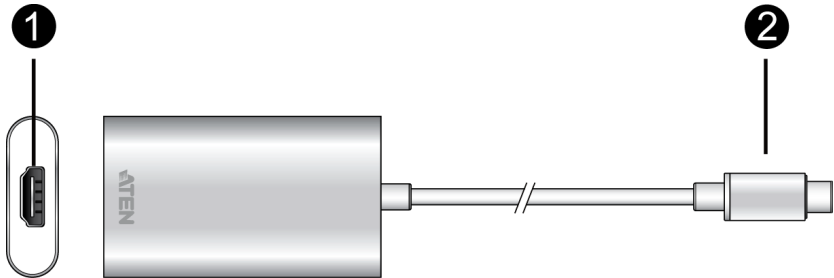
- ◆ 1 HDMI and/or VGA source device
- ◆ 1 Cat 5e/6/6a or ATEN 2L-2910 Cat 6 cable

Supported Operating System and Requirements

Operating System	Minimum Hardware Requirement
Windows 7 with <i>Win7_driver</i> installed	CPU: Intel® i3 Dual Core 2.8Ghz or higher
Windows 10 or later	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 17.

Components



No.	Component	Description
1	HDMI Port	Connects to an HDMI input.
2	USB-C Host Connector	Connects to the host for video capture or firmware upgrade.

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Chapter 2

Hardware Setup



Please review the safety information regarding the placement of this device in *Safety Instructions*, page 25.

Connecting the CAMLIVE Unit

Follow the steps below to connect the CAMLIVE to an HDMI source and the host.



1. Power on your host (e.g. laptop or Android smartphone).
2. Connect the USB-C Host Connector to the host. If your laptop only has a USB-A interface, connect the (included) USB-C to USB-A adapter* between the host and the USB-C Host connector.
3. Connect your HDMI source device to the CAMLIVE's HDMI port.**

*When using the adapter, if you are only detecting MJPG video, please disconnect the USB-C head from the adapter, flip the USB-C head around and reconnect it to the adapter. Please refer to *Using USB-A Adapter* on page 14 for more details.

**UC3020 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](https://obsproject.com)

[Xsplit: https://www.xsplit.com](https://www.xsplit.com)

<https://www.youtube.com>

<https://www.facebook.com>

Android Smartphone

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

All trademarks are property of their respective owners.

<https://play.google.com/store/apps/details?id=com.vaultmicro.camerafi&hl=en>

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>

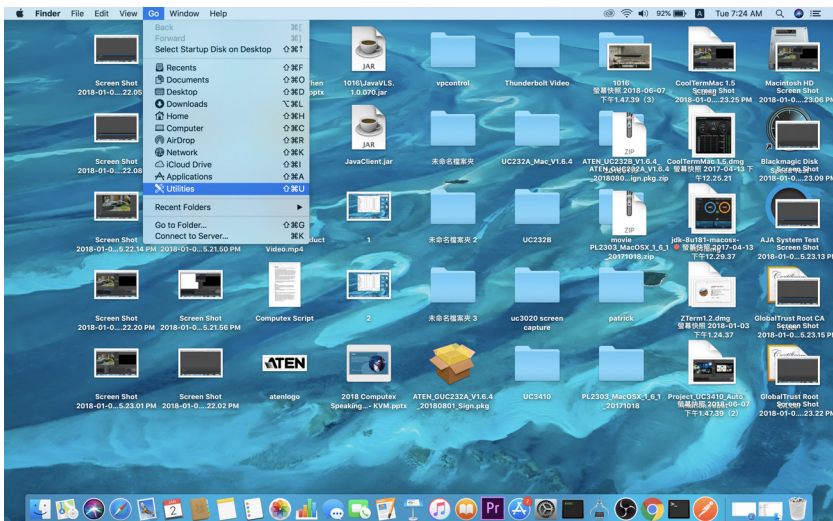
<https://www.facebook.com>

All trademarks are property of their respective owners.

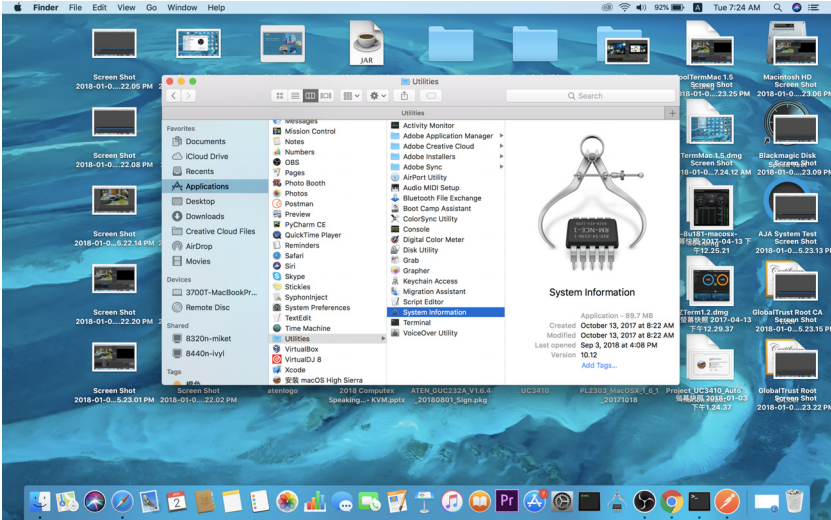
Discovering CAMLIVE on your System

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 MacOS example below on how your system may discover CAMLIVE:

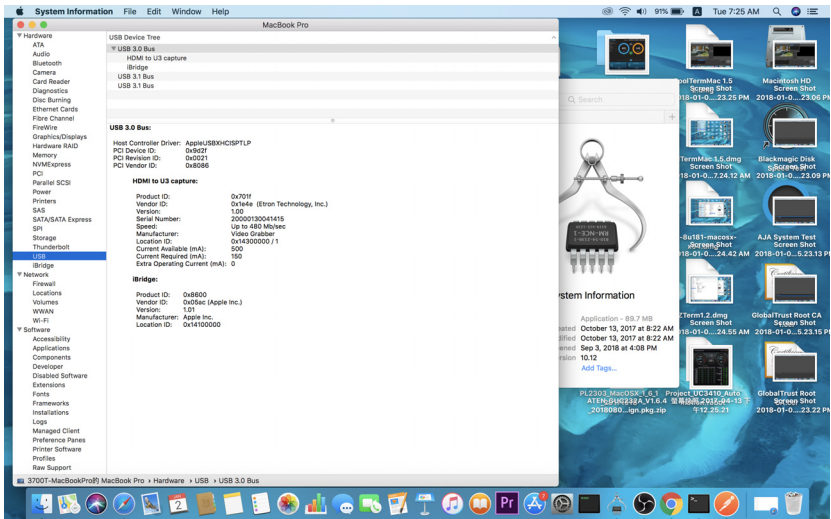
1. On the desktop, click to select “Go” followed by “Utilities”.



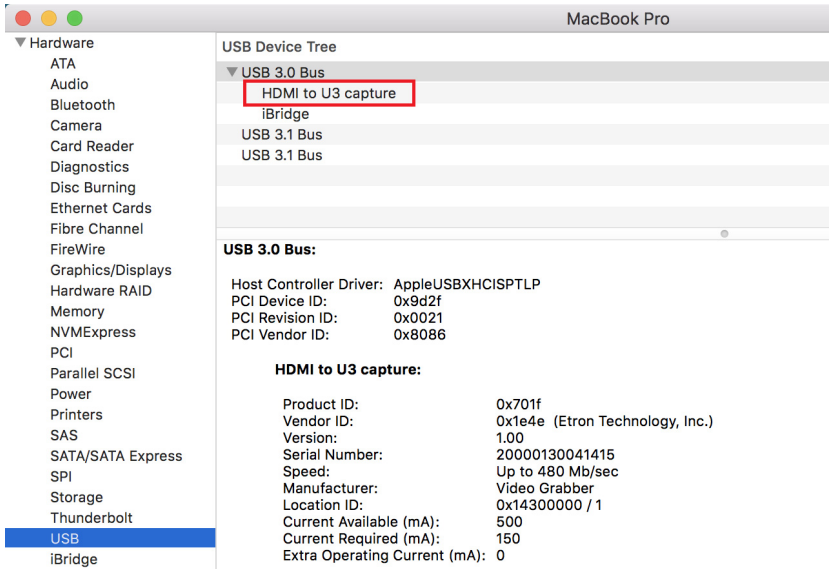
- On the “Utilities” window, double-click “System Information” to bring up the system window.



- Go to the USB page by clicking “USB” under “Hardware”.



- Under “USB 3.0 Bus”, you should see an “HDMI to U3 capture”. This indicates that your system has successfully discovered CAMLIVE.



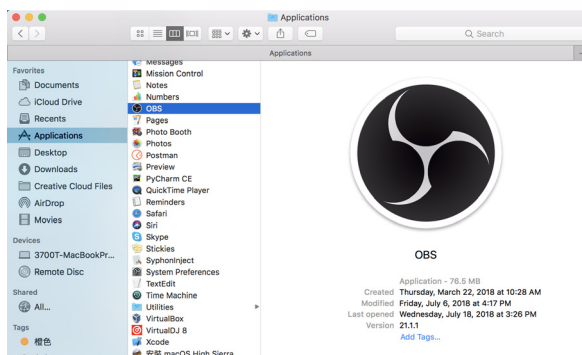
Go to the next section for an example of how to setup both video and audio for live-streaming and recording using CAMLIVE.

Video and Audio Setup

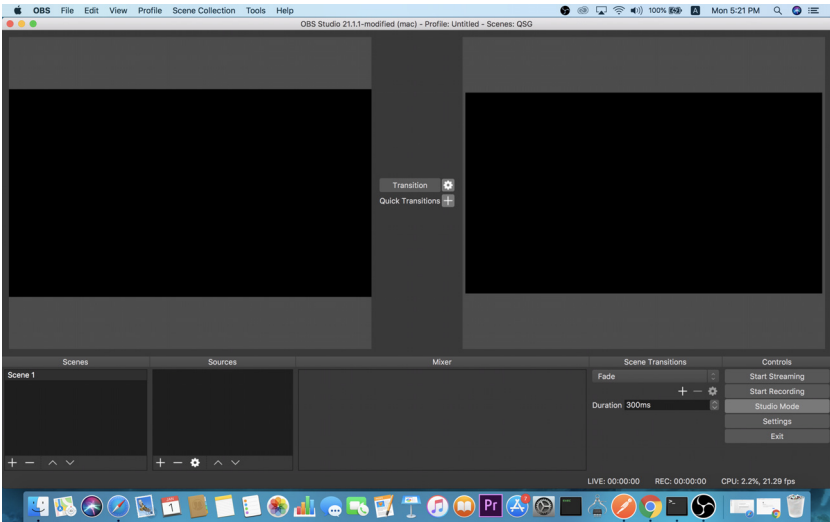
After your system discovers CAMLIVE, choose your livestream/record platform. You will need to setup the video and audio source coming from CAMLIVE.

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

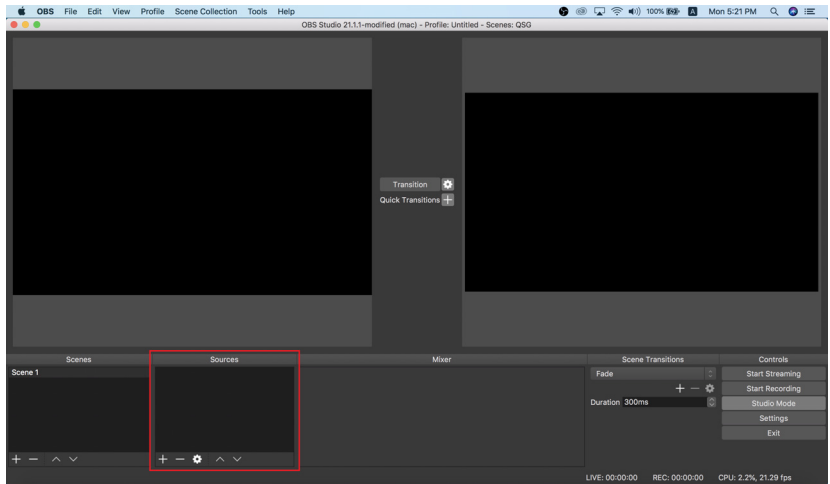
Note: OBS software is the example used in the setup steps below.



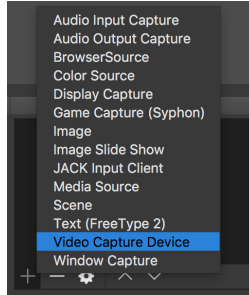
1. On your system, open the OBS software.



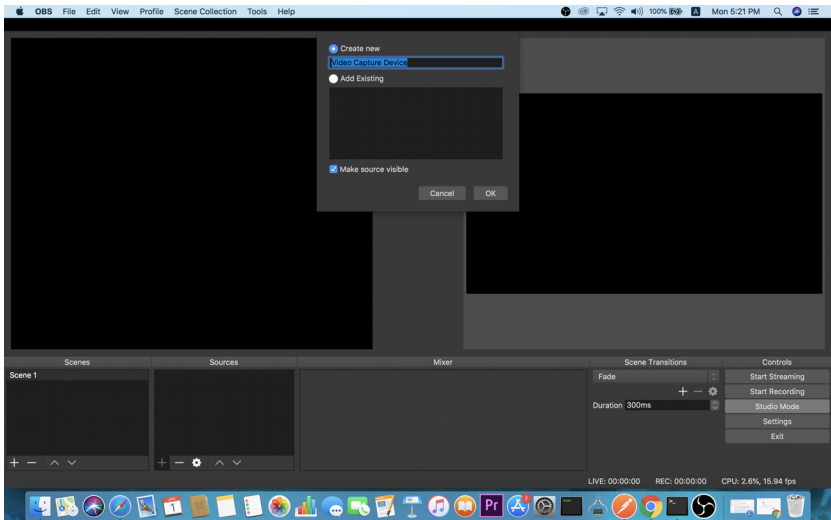
2. Locate and click the “+” button on the bottom of the “Sources” pane (outlined in red in the picture below) to open the add source menu:



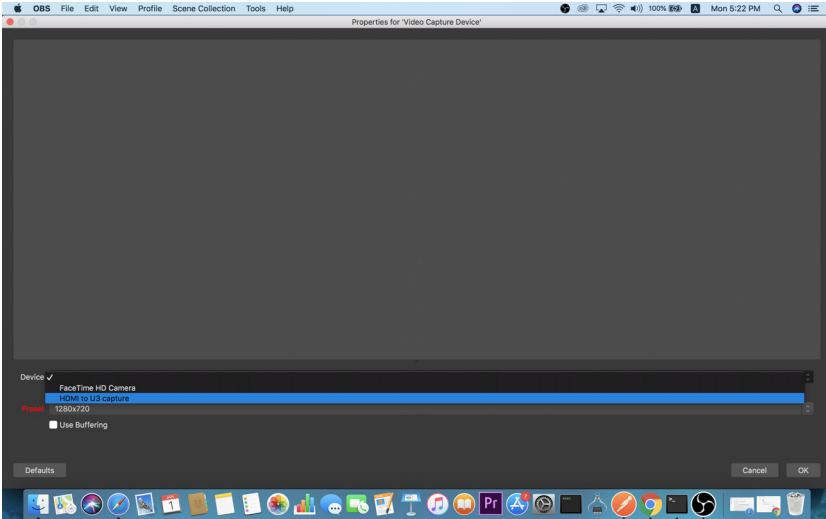
3. Select “Video Capture Device” or “Audio Capture Device.”



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 “HDMI to U3 capture”.

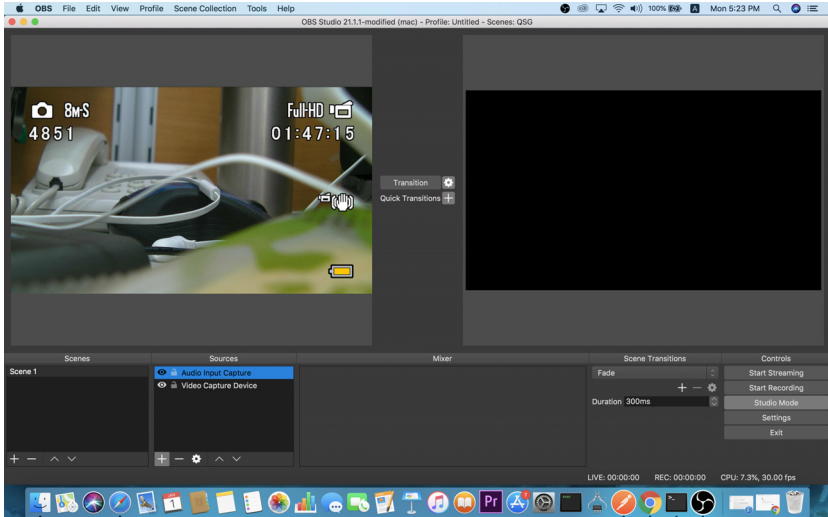


After selecting the video source, the image from CAMLIVE should be displayed as shown below.

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.

Discovering CAMLIVE on your Android Device

CAMLIVE is a plug-and-play device. Please make sure the CAMLIVE is upgraded to the firmware that supports Android smartphone video capture, and your system is able to discover it. Please refer to the steps below to discover CAMLIVE on your Android smartphone.

1. Download and run the Android smartphone software listed in *Android Smartphone*, page 6.
2. Connect the CAMLIVE as shown in *Connecting the CAMLIVE Unit* on page 5.

The setup is 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.

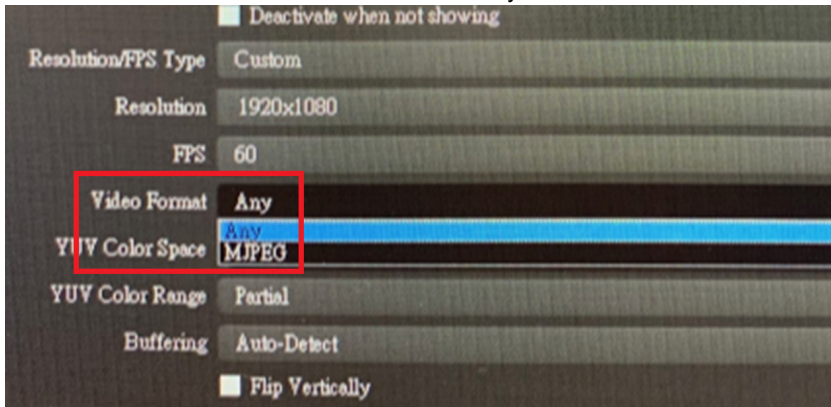
Using USB-A Adapter

When connecting CAMLIVE with a USB-C to USB-A adapter, CAMLIVE will be set to either USB3.1 or USB2.0 connection mode. This will affect the available options of your video input format (USB3.1-RAW or USB2.0-MJPEG compression).

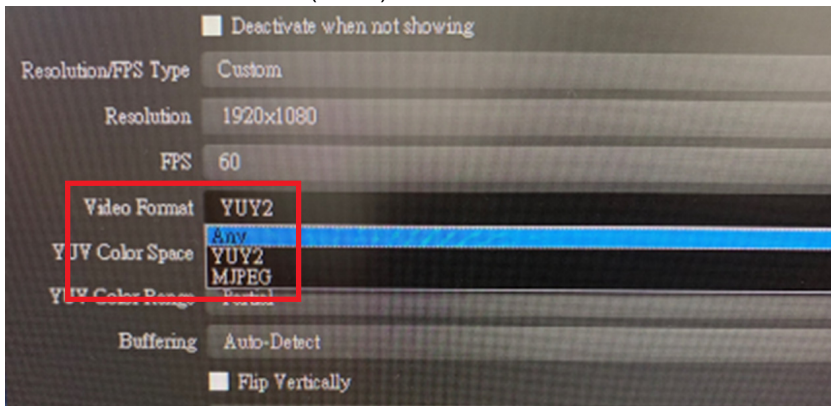
To make sure the result match your media output you wish to capture, please check the detected video format from your capture software first.

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

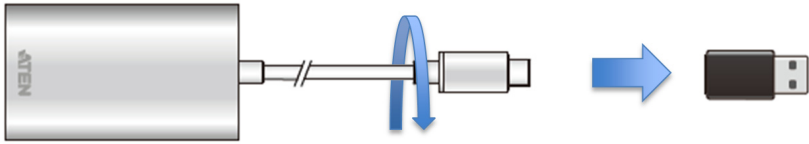
- ◆ USB2.0 mode with MJPEG video format only



- ◆ USB3.1 mode with RAW (YUY2) and MJPEG video formats



If you find that the captured media only has MJPEG format, simply flip the USB-C interface on 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:

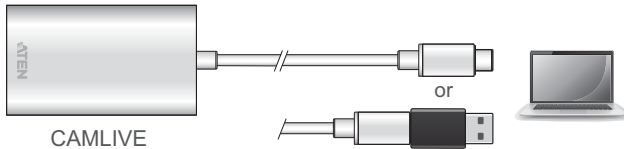
1. On our Website, go to *Support Center - Download* and choose the device model, or from the CAMLIVE product page, click on the *Support and Downloads* tab, and go to *Software & Drivers*. A list of available firmware upgrade packages appears.
2. Choose the firmware upgrade package that you wish to install (usually the most recent) and download it to your computer.

Note: For Windows 7 users, please download and install the Win7_driver from on our website after the upgrade is successful. See *Starting the Upgrade*, page 19.

Preparation

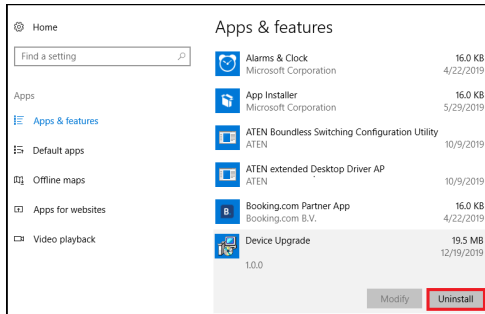
To prepare for the firmware upgrade, do the following:

1. Connect the USB-C Host Connector to the host. If your laptop only has a USB-A interface, connect the (included) USB-C to USB-A adapter between the host and the USB-C Host connector.



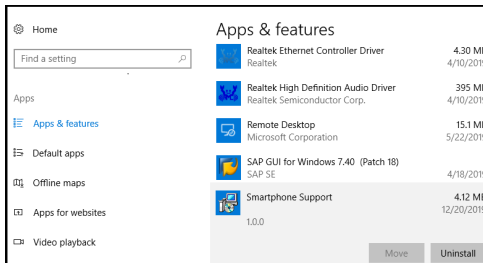
2. Uninstall the *Device Upgrade Software* if you wish to upgrade the CAMLIVE to support Android smartphone video capture. Go to Settings - Apps & features, search for *Device Upgrade*, then select **Uninstall**.

Note: This is an example of a Windows 10 Pro operation system.



Or

Uninstall the *Smartphone Support Software* if you wish to upgrade the CAMLIVE to support PC video capture. Go to Settings - Apps & features, search for *Smartphone Support*, then select **Uninstall**.

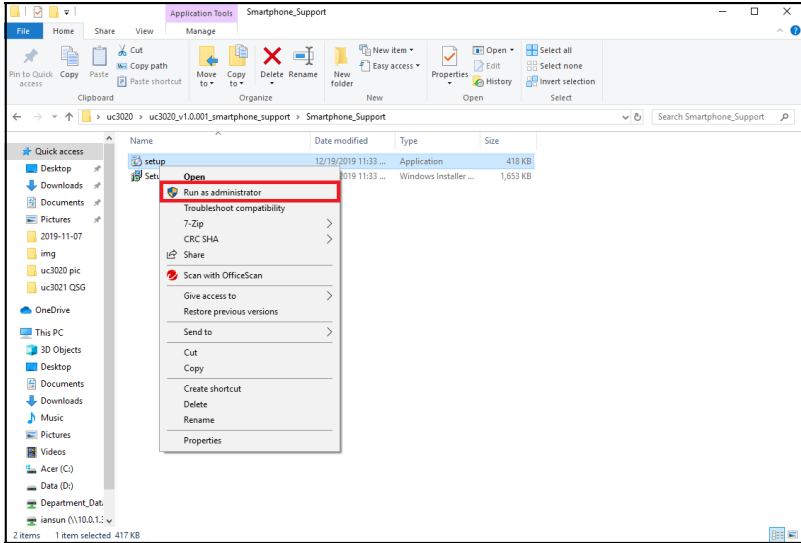


Starting the Upgrade

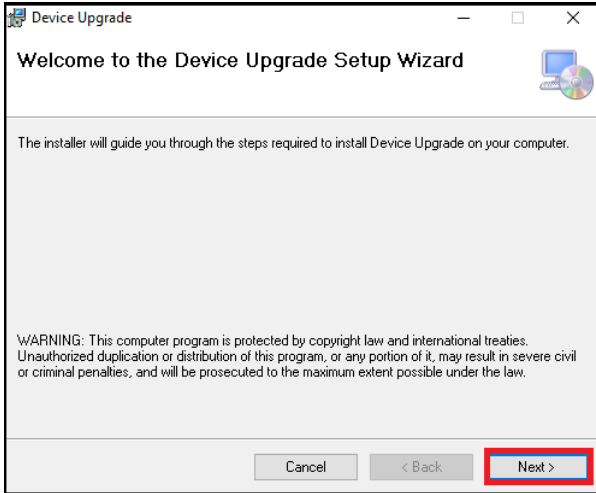
Upgrading the CAMLIVE to Support Android Smartphone

To upgrade the CAMLIVE to support Android smartphone video capture:

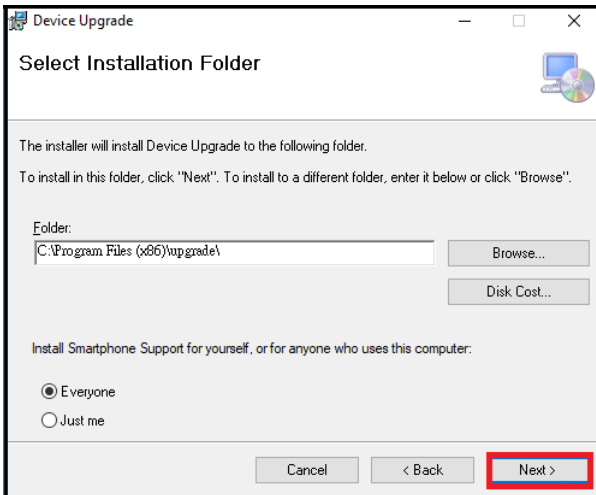
1. Extract and open the downloaded firmware upgrade package file, right click on the Setup icon, and select **Run as administrator** as shown in the picture below.



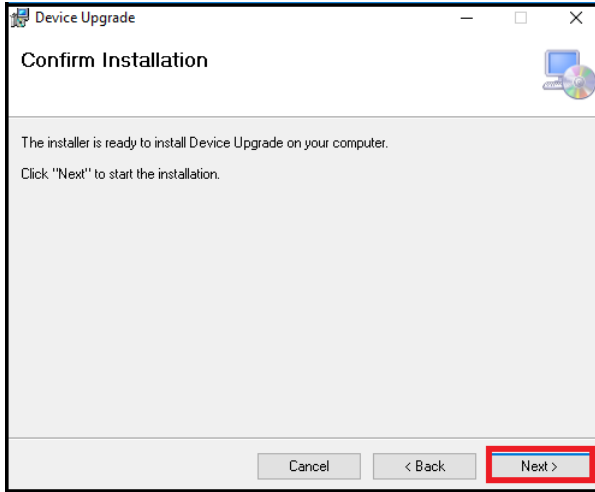
2. The *Firmware Upgrade Utility* welcome screen appears, and select **Next**.



3. To select an installation folder, click **Browse**, or click **Next** to continue.



4. A confirmation screen appears, click **Next** to perform the upgrade.

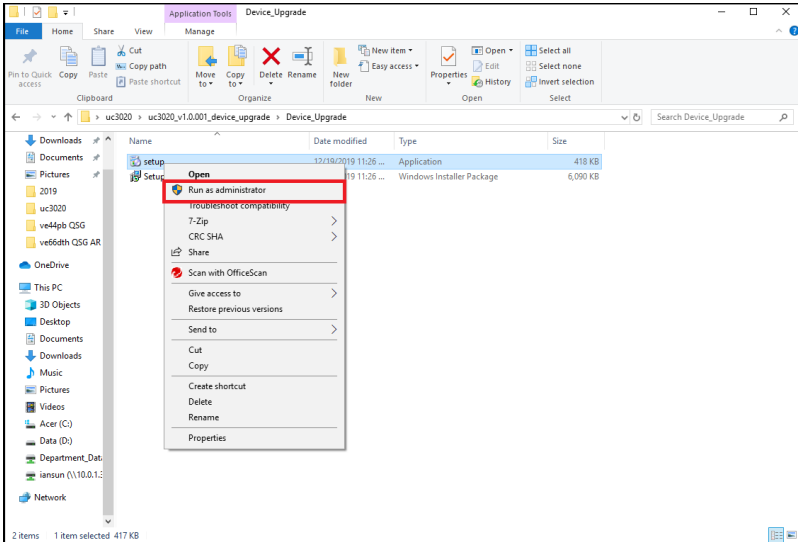


5. After the upgrade has completed, click **Close** to close the *Firmware Upgrade Utility*.

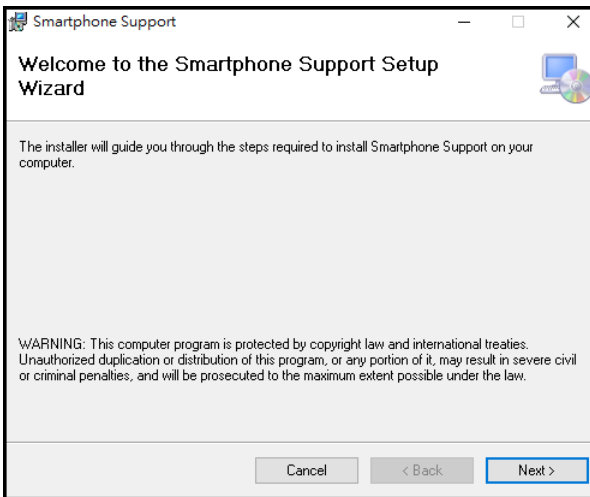
Upgrading the CAMLIVE to Support PC

To upgrade the CAMLIVE to support PC video capture:

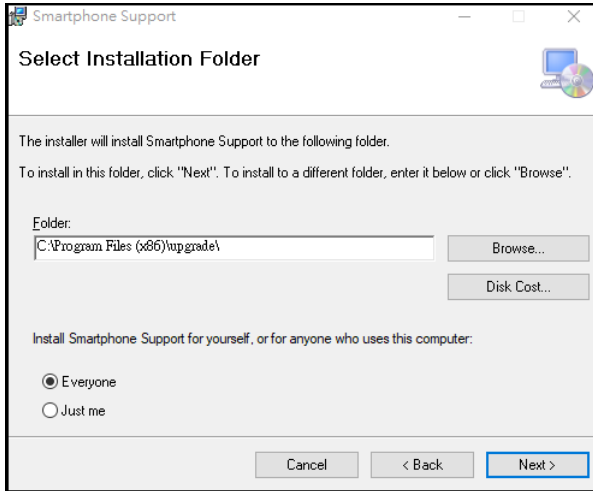
1. Extract and open the downloaded firmware upgrade package file, right click on the Setup icon, and select **Run as administrator** as shown in the picture below.



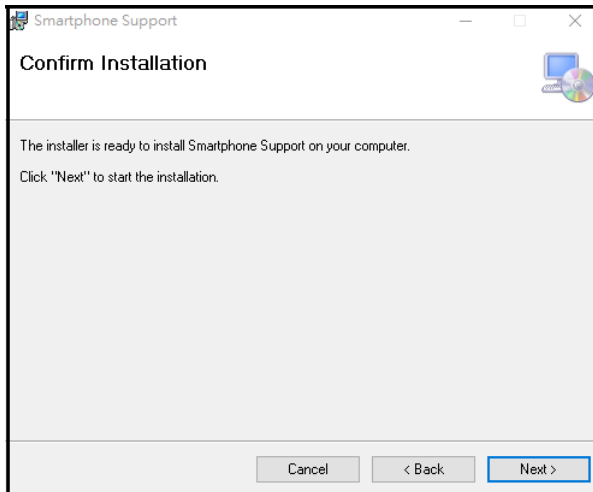
2. The *Firmware Upgrade Utility* welcome screen appears, and select **Next**.



- To select an installation folder, click **Browse**, or click **Next** to continue.



- A confirmation screen appears, click **Next** to perform the upgrade.



- After the upgrade has completed, click **Close** to close the *Firmware Upgrade Utility*.

Note: For Windows 7 users, please download and install the Win7_driver from on our website after the upgrade is successful. See *Downloading the Firmware Upgrade Package*, page 17.

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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.
- ◆ The device is designed for IT power distribution systems with 230V phase-to-phase voltage.
- ◆ To prevent damage to your installation it is important that all devices are properly grounded.
- ◆ The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- ◆ 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.
- ◆ If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the

extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.

- ◆ To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).
- ◆ 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)
USB Port	USB 3.1 Gen1 Type-C Male (White) or USB 3.1 Gen1 Type-A Male (via Dongle, Black)
Video Input	
Compliance	HDMI 1.4b, support 480p@60, 720p@60, and 1080p@60 (non-HDCP)
Video Resolution	480p@60, 720p@60, and 1080p@60
Color Space	YUV2, RGB
Audio Sampling	16-bit PCM audio, 32KHz, 44.1KHz and 48KHz
Output	Up to 1080P UVC video stream with UAC audio (Uncompressed video stream is only available on USB3.1 connection)
Environmental	
Operating Temperature	0 - 40 °C
Storage Temperature	-20 – 60 °C
Humidity	0 - 80% RH, Non-Condensing

Function	CAMLIVE
Minimum Hardware Requirement	PC/Mac: <ul style="list-style-type: none"> ◆ CPU: Intel® i3 Dual Core 2.8Ghz or higher ◆ RAM: 4GB or more ◆ One USB-C Interface or USB-A Interface Smartphone: <ul style="list-style-type: none"> ◆ Android smartphone with UVC and USB-C interface <p>Note:</p> <ol style="list-style-type: none"> 1. Latest UC3020 firmware upgrade for smartphone support is required. 2. 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 and above with UVC support Mac OS X 10.13 and above with UVC support Android 5.0.1 and above with UVC support <p>Note:</p> <ol style="list-style-type: none"> 1. Latest UC3020 firmware upgrade for smartphone support is required. 2. For Windows 7 users, please download and install the Win7_driver from on our website. To download the driver, see <i>Downloading the Firmware Upgrade Package</i>, page 17.
Physical Properties	
Housing	Aluminum
Weight	0.042kg (0.09lb)
Dimensions (L x W x H)	7.30 x 4.20 x 1.40 cm (2.87 x 1.65 x 0.55 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 defective, 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>