UC9020 StreamLIVE™ HD

Multi-Channel AV Mixer

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 A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The 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.

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.

Warning: Operation of this equipment in a residential environment could cause radio interference.

KCC Statement

유선 제품용 / A 급 기기 (업무용 방송 통신 기기)

이 기기는 업무용 (A 급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 , 가정 외의 지역에서 사용하는 것을 목적으로 합니다 .

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

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 UC9020 StreamLIVE™ HD Multi-Channel AV Mixer

1 USB Type-A to USB Type-C Cable

1 USB Type-A to USB Type-A Cable

1 AC Power Cord

1 User Instructions

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 UC9020 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 Multi-Channel AV Mixer. 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, ATEN OnAir App & Side Menu explains the functions in the OnAir App and its side menu.

Chapter 4, ATEN OnAir App & Video Mixer explains the functions in the Video Mixer deck in the OnAir App, including scene editing, media resizing/cropping and text and image overlays.

Chapter 5, ATEN OnAir App & Audio Mixer explains the functions in the Audio Mixer deck in the OnAir App.

Chapter 6, ATEN OnAir App & Settings explains the settings you can configure for the collaborations between the unit and the OnAir App.

Chapter 7, Quick Live-Stream Setup describes how to quickly setup your system to help you start live-streaming.

Chapter 8, Firmware Upgrade describes the firmware upgrade procedure and how the volume mixer LED behaves during the firmware upgrade.

Appendix provides a list of safety instructions and precautions, ATEN technical support information, 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 UC9020 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

The StreamLIVE™ HD is a portable, all-in-one, multi-channel audio/video mixer device that integrates a 1080p video capture, video switch, stream broadcaster, video converter, video splitter, and audio mixer into one compact box to eliminate the hassle of working with different AV equipment. The StreamLIVE™ HD makes HDMI video sources broadcast for higher quality live stream to CDN platforms such as YouTube Live, Facebook and Twitch.

For added convenience, the StreamLIVE™ HD provides an intuitive app, making it easy to monitor, edit image layouts, and adjust PIP settings. The StreamLIVE™ HD is PC and software-free, and with its well-designed control panel, it makes livestreaming operations smooth and effortlessly. You can even preview video and monitor audio levels before going live with your web broadcast! To get started, simply connect video/audio sources, and an Ethernet with an ATEN app-installed iPad, and you are ready to roll.

Whether you're capturing, editing or streaming, the StreamLIVE™ HD with its ergonomic and practical design, it is flexible enough to fit all independent live streaming broadcasting environments. With a rich feature set, the StreamLIVE™ HD addresses the challenges that independent live streaming broadcasters encounter and provides an easy-to-use solution.

Features

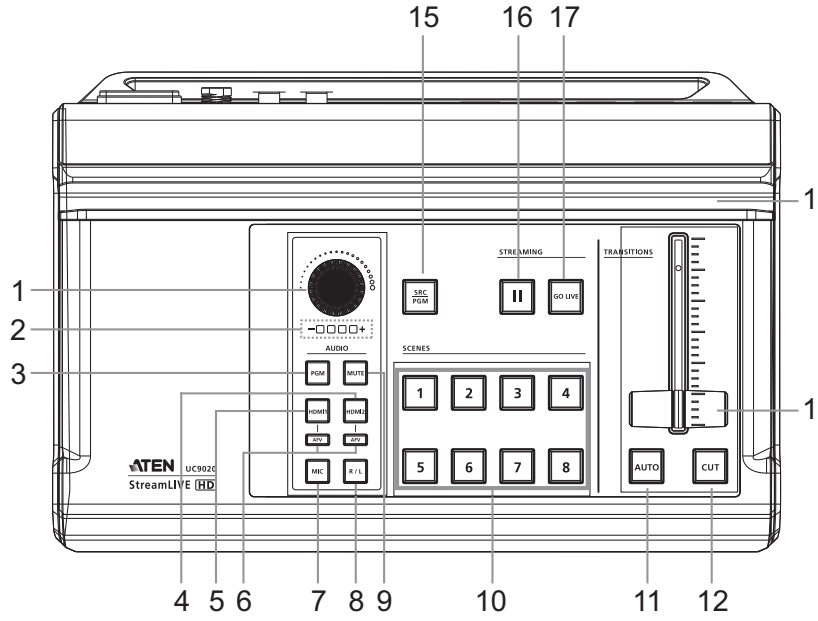
- All-in-one design to simplify streaming workfl ow–Integrates 1080p video capture, video switch, streaming encoder, video converter, video splitter, and audio mixer
- Professional-quality live streaming to global audiences by any CDN platform, with a low entry threshold, even entry-level users can quickly get started
- PC-free and software-free with plug-n-roll capability
- Intuitive app for preview and program monitoring, change video layout in Full Screen/PBP/PIP settings, adding image and subtitles overlays, and smooth scenes transitions for a professional finish
- Storyboard-like management – preset up to 8 scenes for later while streaming and during performances to reduce the need to interact with hardware
- Compact mixer control panel – Switching & mix between multiple video & audio sources with the help of easily identifiable luminous keys
- Fanless and optimized thermal air flow system for quiet operation
- Multitask designed handle-stand to enhance portability and ergonmic comfort angle

System Requirements

- Ethernet connection
- The following iPad with iOS 11 or later
  - iPad Pro (1st gen, 12.9”)
  - iPad Pro (1st gen, 9.7”)
  - iPad Pro (2nd gen, 12.9”)
  - iPad Pro (2nd gen, 10.5”)
  - iPad Pro (3rd gen, 12.9”)
  - iPad Pro (3rd gen, 11”)
  - iPad (5th gen)
  - iPad (6th gen)
  - iPad Air (3rd gen)
  - iPad Mini (5th gen)

Components

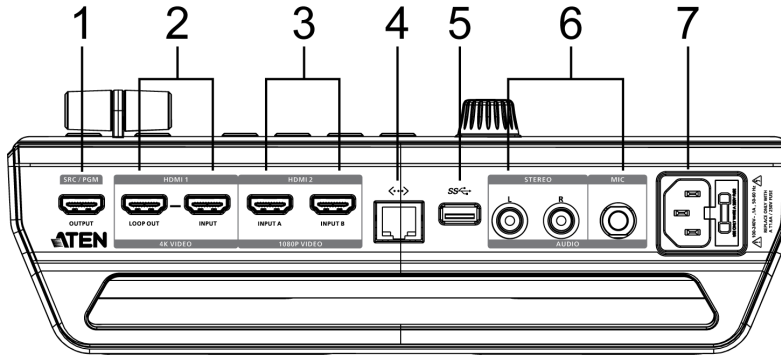
Top View



No.	Component	Description
Audio Section (Controls the audio settings of the system)		
1	Audio Level Control	Controls the volume of the selected audio source.
2	Volume Meter LEDs	The LED reflects the controlled volume. During firmware upgrade, the LED behavior is changed. Refer to *Upgrading the Unit* on page 42 for the LED behavior during firmware upgrade.
3	PGM	Switches to the PGM audio source. The button will light up when switched to this source.
4	HDMI 2 audio source	Switches to the HDMI 2 audio source. The button will light up when switched to this source.
5	HDMI 1 audio source	Switches to the HDMI 1 audio source. The button will light up when switched to this source.
6	AFV	Audio-Follows-Video: Pressing the AFV button will light up. If the video source is selected, the source's audio will also be played.

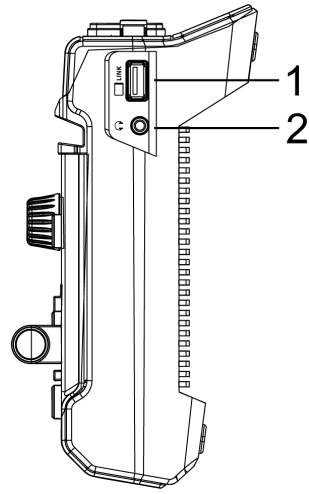
No.	Component	Description
7	MIC	Switches to the MIC audio source. The button will light up when switched to this source.
8	L/R	Switches to the RCA Line In audio source. The button will light up when switched to this source.
9	Mute	Mutes/unmutes the audio the system is currently tuned into. When muting source 1 or 2, AFV will also be turned off.
Video Section (controls the video settings of the system)		
10	Scenes Selector	Selects the current stream (PGM) scene and the preview (PRV) scene. Greenly lit button indicates PRV Preview. Redly lit button indicates PGM Preview.
Transition Control Section (switches the current stream (PGM) scene to the preview (PRV) stream and vice versa)		
11	Auto (transition)	Pressing the **Auto** button will begin the transition after a specified time (0.3-3.0 seconds). Go to the Setting Deck and refer to page 35 on how to modify this specified time.
11	Cut (transition)	The transition happens immediately when you press the **Cut** button.
13	T-Bar (transition)	Slide the T-Bar to start the transition. The scene transition speed depends on how fast you slide the bar. Sliding the T-bar all the way to one end will complete the transition. You can create different effects by sliding it slowly, quickly or even hold it half way.
14	iPad Stand	Allows the iPad to sit in.
15	SRC / PGM View Selector	Pressing the button will switch video source between HDMI source 1, HDMI source 2 and PGM.
16	Pause Stream	Press this button to *pause* streaming.
17	GoLive	Press this button to *start* streaming. Press again to *stop* streaming.

Rear View



No.	Component	Description
1	SRC / PGM Output Port	Programmed (PGM) Video output.
2	4K HDMI Loop Out Port / 4K HDMI Input Port	An HDMI 1 Input source and an HDMI 1 Loop Out.
3	1080P Video Input Port	HDMI 2 Input that can take Video Input A or B. To select A or B, go to *Media* on page 25.
4	Ethernet Port	For Internet connection.
5	USB 3.2 Gen1 Type-A Port	For firmware upgrade.
6	RCA Line In Port / MIC In Port	Connect MIC or audio sources for additional audio effects.
7	AC Power Socket	Powers the unit.

Side View



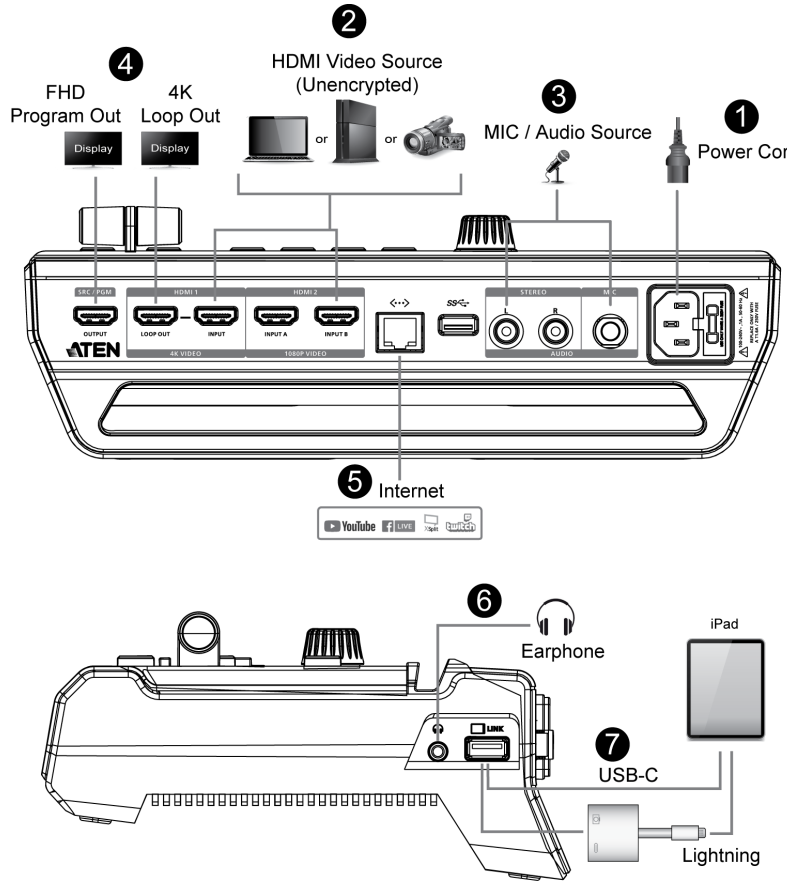
No.	Component	Description
1	iPad Link Port (Data only)	Connects to the iPad for ATEN OnAir app.
2	3.5mm Audio Monitor Jack	Sound output for the preview scene (the greenly lit scene).

Chapter 2
Hardware Setup

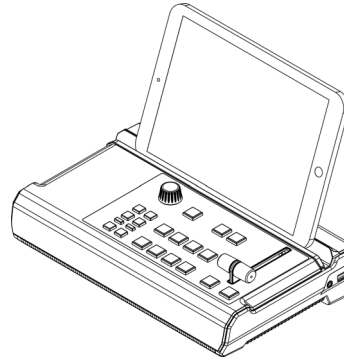
Please review the safety information regarding the placement of this device in *Safety Instructions*, page 45.

Connecting the StreamLIVE™ HD Unit

Follow the steps below to connect the StreamLIVE™ HD to an HDMI source and the host.



1. Power on the unit by connecting the power cord. Wait for the boot-up luminous (scene keys) sequence.
2. Connect the HDMI sources (e.g. PC, gaming console or video recorder)[1].
3. Connect a microphone or any other audio sources.
4. (Optional) Connect the HDMI Output cable if necessary:
   a) Connect the HDMI display to the SRC/PGM Output Port.
   b) Connect the HDMI display to the Loop Out Port.
5. Connect an Ethernet cable for Internet connection[2].
6. (Optional) Connect an earphone to receive sound output for the preview scene.
7. Connect your iPad to the iPad Link Port. Refer to *Connecting iPad* on page 9 for more information.
8. (Optional) Place your iPad onto the iPad stand as shown in the diagram below[4].



Note: 1. The HDMI sources must be unencrypted.

2. Use the connected iPad to configure further network settings for live-streaming.

3. iPad placed on the unit is recommended for viewing only. Hand holding your iPad is still recommended for control.

Connecting iPad

Lightning Connector on iPad

For iPads having lightning connectors, simply connect the Apple Lightning USB 3 Adapter (not included, may need additional purchase) and the USB-A to USB-A cable serially between the UC9020 and your iPad.

If you wish to have the charging function, connect your lightning charging cable to the Apple Lightning 3 Adapter.

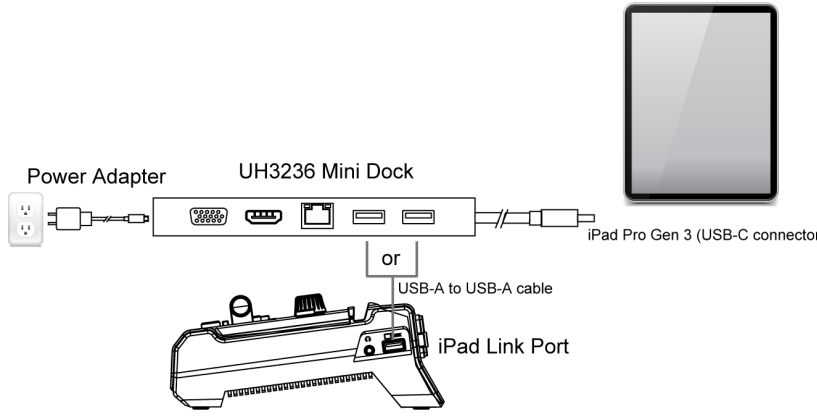
USB-C Connector on iPad

For iPads having USB-C connectors (e.g. iPad Pro Gen 3), simply connect the USB-A to USB-C cable included in the package between your iPad and the UC9020.

Note: The USB-A to USB-C cable included in the package is custom-made for this setup, a general USB-A to USB-C cable will not work.

If you wish to have the charging function, connect an Aten UH3236 mini dock (available for purchase separately) between the iPad and the UC9020, and connect your iPad charger to the UH3236.

An example is shown:



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Chapter 3
ATEN OnAir App & Side Menu

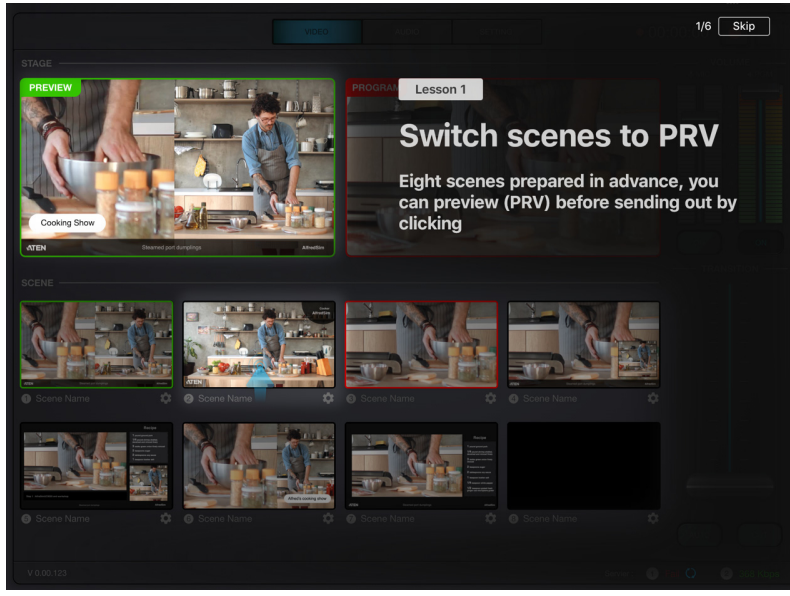
ATEN OnAir App

ATEN OnAir App acts as the central controller for UC9020. The App's design is a control panel where you can monitor program results, edit scenes, setup video and audio stream settings, and many more.

Download the ATEN OnAir App from App Store and install it on your iPad.

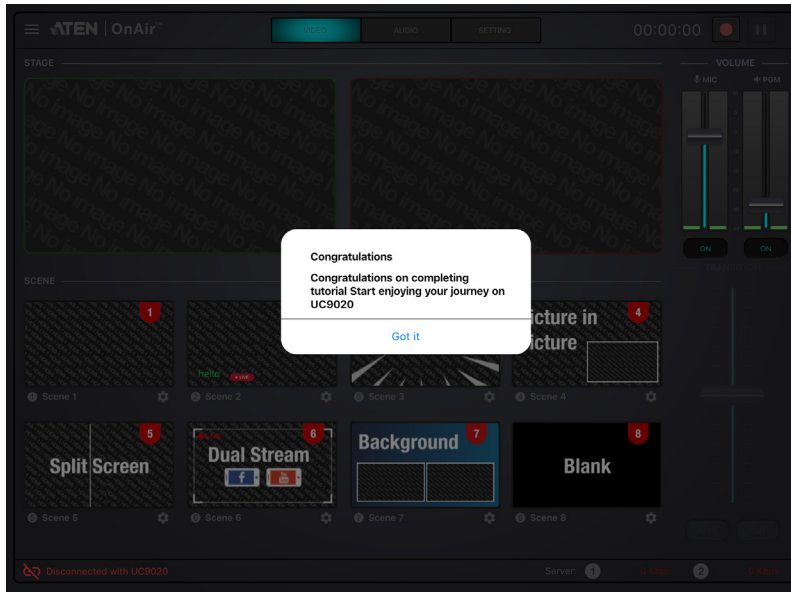
The icon looks like the one below:

Tap to open the ATEN OnAir App and the Tutorial will be prompted for the first time you open the ATEN OnAir App.



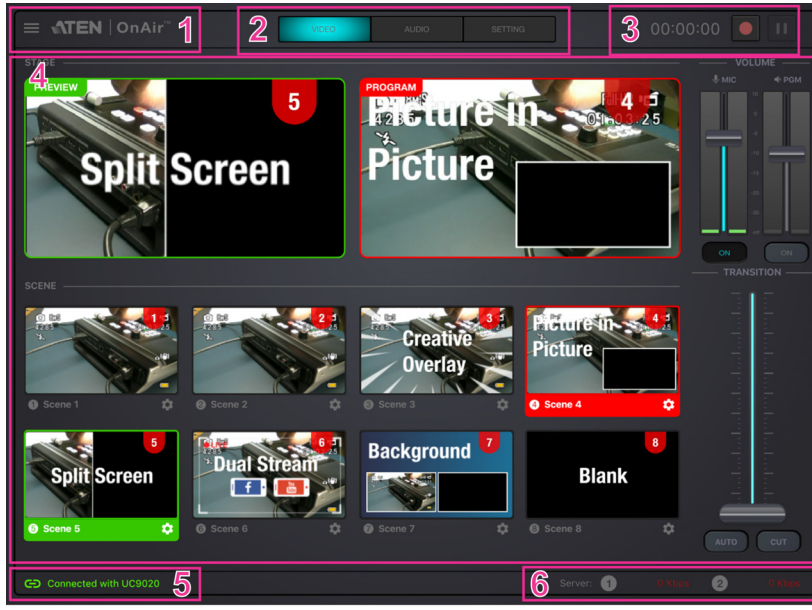
Follow the on-screen instruction as it guides you through the basics of using the ATEN OnAir App with UC9020.

When finished, a message will be shown:



To run the Tutorial again, tap the ☰ icon on the top left corner for the side menu and tap Tutorial.

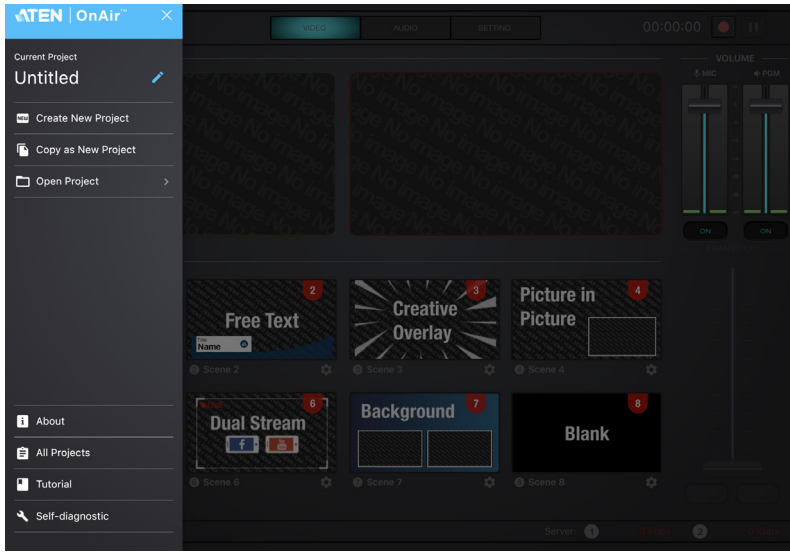
Page Components



No.	Component	Description
1	Side Menu	Tap the icon for the side menu. Refer to *Side Menu* on page 14 for more details.
2	Deck Selector	Tap to select the desired configuration deck. Three decks are available: Video Mixer, Audio Mixer and Setting.
3	GoLive	Tap to start streaming. Tap to pause streaming. The timer on the left shows how long you have been streaming for.
4	Deck Content	The content depends on the selected deck.
5	iPad Link Status	Displays the link status between your iPad and the StreamLIVE™ HD.
6	Network Traffic Status	Displays the network traffic status.

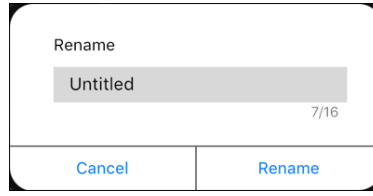
Side Menu

A side menu is available for project management, tutorial, app information and self-diagnostic function. For the side menu, tap the icon on the top left corner.



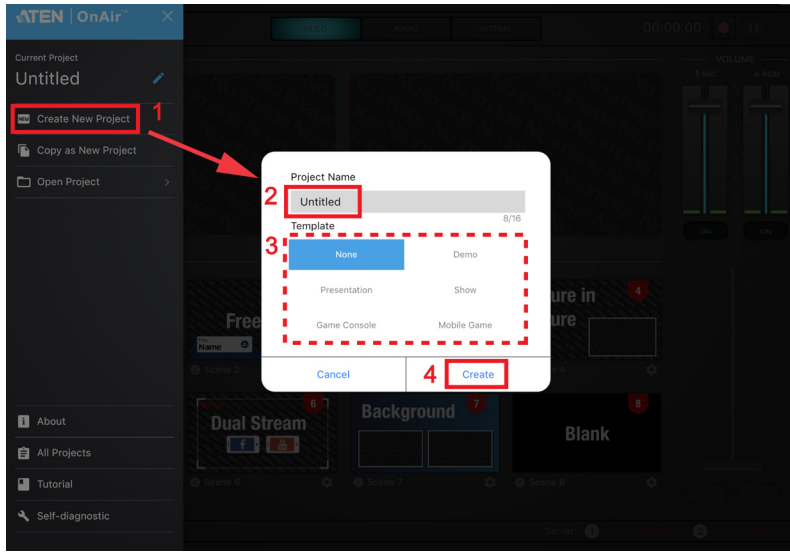
Current Project

Tap the icon to edit the name of your project:



Create Project

1. Tap **Create New Project**.

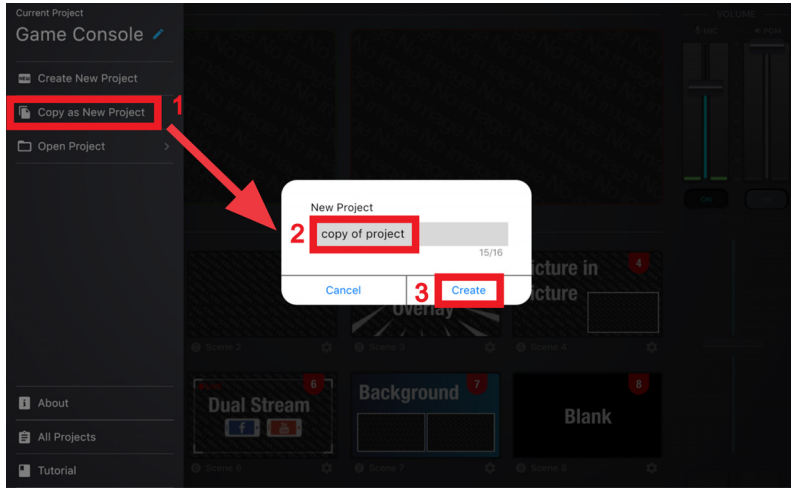


2. Enter a name for the project.
3. (Optional) Select a template. Templates are project settings pre-configured for you if you are unsure how your new project should be.
4. Tap **Create**.

Copy as New Project

If you like the settings of your current project when you are to create a new one, you can use this function copy the settings.

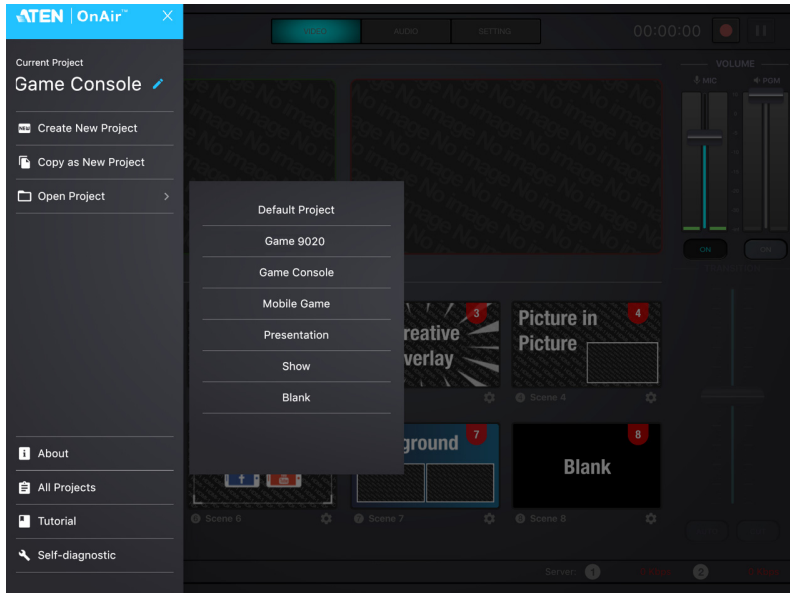
1. Tap **Create New Project**.



2. Enter a name for the project.
3. Tap **Create**.

Open Project

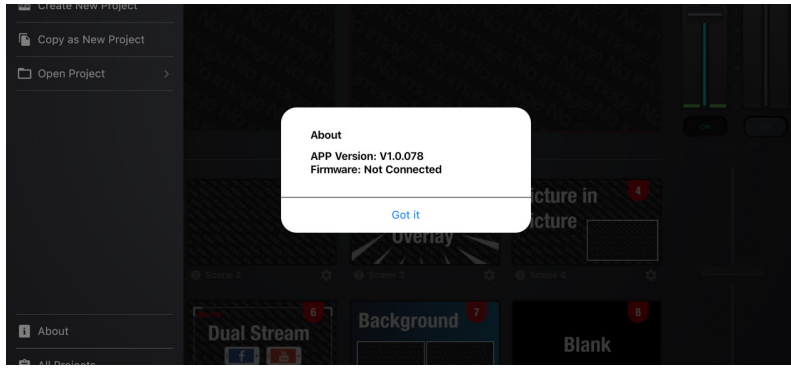
Tap **Open Project** for a list of available projects. An example is shown:



Tap to select the project you wish to use.

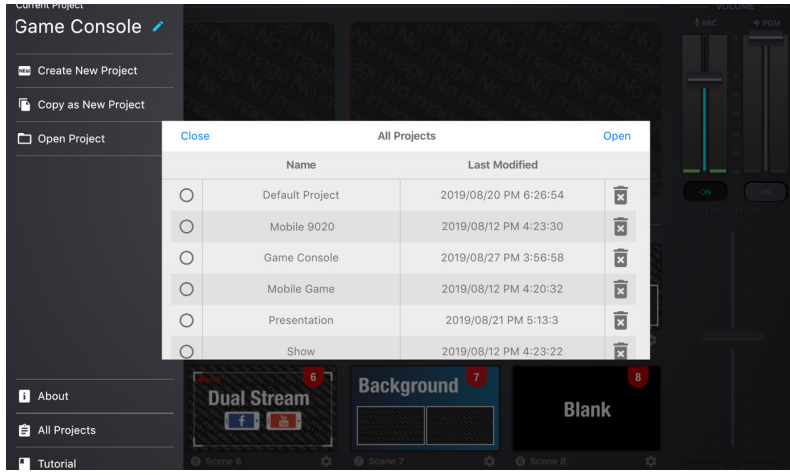
About

Tap **About** for information of the app. An example is shown below:



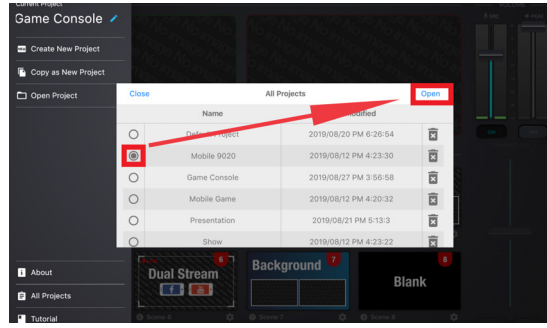
All Projects

For information of the available projects, tap **All Projects**. An example is shown:

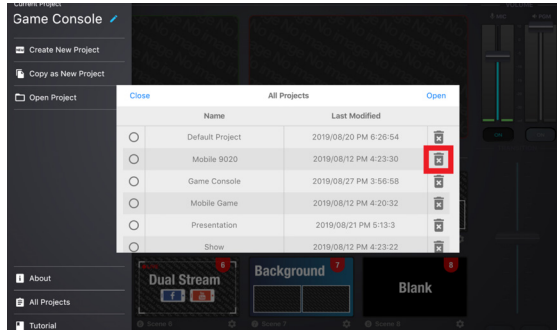


You can also open or delete the projects here.

To open a project, tap to select a project and tap **Open**. An example is shown:



To delete a project, tap the garbage can icon corresponding the project. An example is shown:

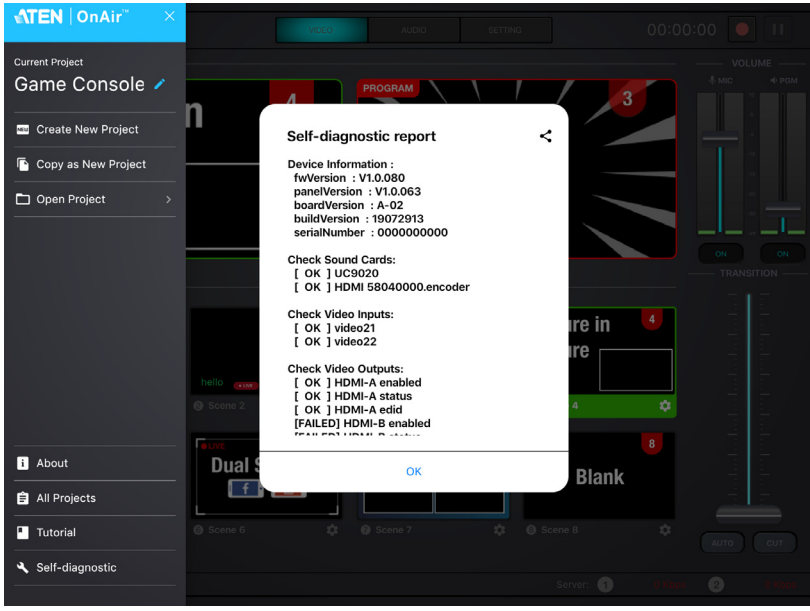


Tutorial

Tap **Tutorial** to go through the tutorial again.

Self-diagnostic

Tap **Self-diagnostic** to self-diagnose for a report. An example is shown:



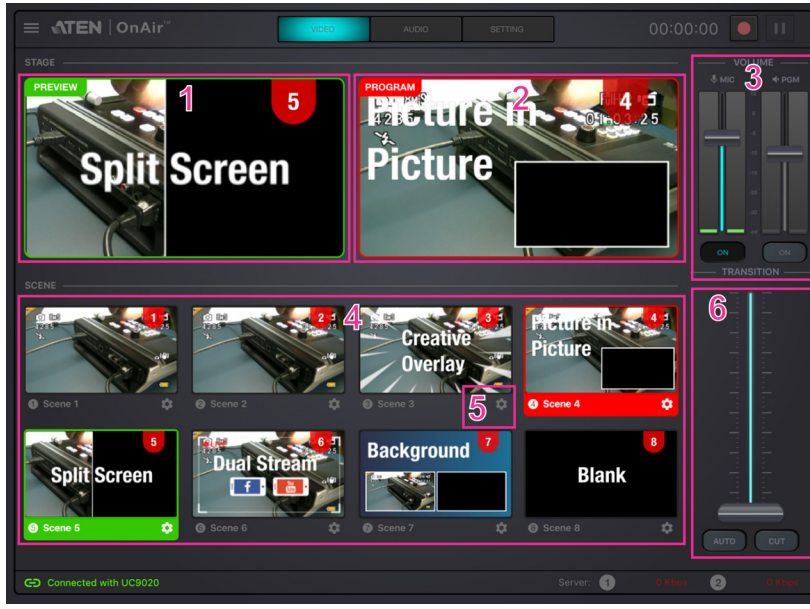
You can tap the < icon to share the report.

Chapter 4
ATEN OnAir App & Video Mixer

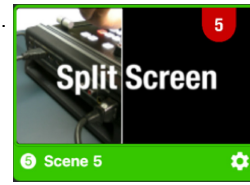
Video Mixer

The video mixer page allows you to preview videos of PRV and PGM, adjust MIC and PGM volume, scene selection and editing, and transition control.

The components of the page is shown below:



No.	Component	Description
1	PRV Preview	The preview scene.
2	PGM Preview	The program scene, or the on-air video output of the system.
3	Volume Control	Tap and drag the volume slider to adjust MIC or PGM volume.

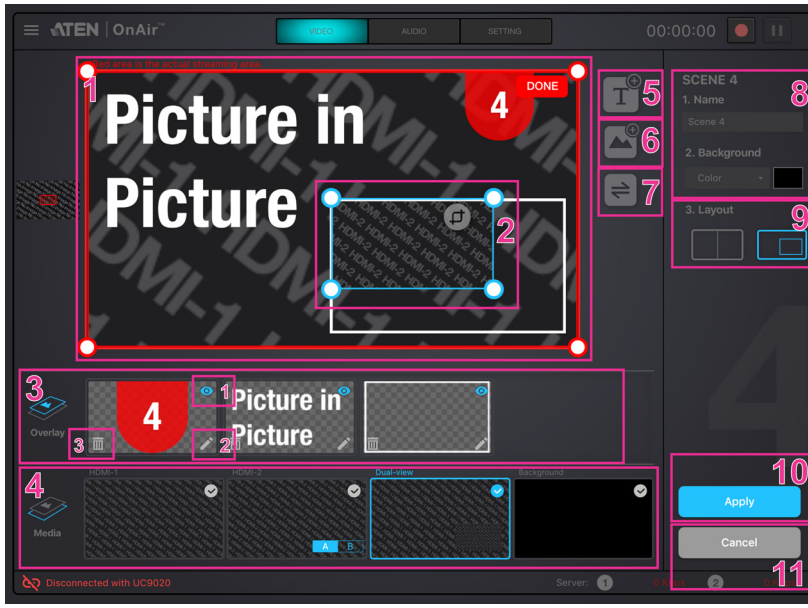
No.	Component	Description
4	Scene Selector	8 scenes are shown here. Green outline scene = PRV Preview. e.g.  Red outline scene = PGM Preview. e.g. Tap a scene to put the scene into the PRV Preview section. To put the scene in PRV Preview to PGM Preview, use the Transition Control (explained below).
5	Scene Editor	You can configure each individual scenes by tapping this icon. Refer to *Scene Editor* on page 24 on how to edit each scene.

No.	Component	Description
6	Transition Control	Controls the switching between the current stream (PGM) scene and the preview (PRV) stream. To switch, 1. slide the transition bar all the way to the top or bottom; or 2. tap the **Cut** button; or 3. tap the **Auto** button. Using the Transition Bar When using the transition bar, the scene transition speed depends on how fast you slide the bar. You can create different effects by sliding it slowly, quickly or even hold it half way. Using the Cut button The transition happens immediately when you tap the **Cut** button. Using the Auto button Tapping the **Auto** button will begin the transition after a specified time (0.3-3.0 seconds). Go to the Setting Deck and refer to page 35 on how to modify this specified time.

Scene Editor

When you tap the icon under a scene in the scene selector region, you can start editing the scene's display.

An example is shown below:



No.	Component	Description
1	Scene Display	This region is how this scene will be displayed. You can configure the components within the region.
2	Resize/Crop tool	Tap to resize/crop the selected item. Refer to *Resize/Crop Tool* on page 26 on how to use this function.
3	Overlay	Edit overlay in this region. You can **Delete**, **Edit**, and **Show/Hide Overlay**. 1. Show/Hide Overlay: Tap to show or hide 2. Edit: Tap to edit 3. Delete: Tap to delete You can also re-order the overlays to determine which overlay is to be displayed on top. Refer to ... for more details.

No.	Component	Description
4	Media	Select the source(s) and how the source(s) are laid out for the scene. 1. Full Screen Mode 2. Select the source of the 1080p video input port (HDMI A or B) 3. Dual View Mode (Picture-in-Picture or Picture-by-Picture) 4. Plain Background
5	Add Text Overlay	Tap this icon to add a text overlay. Refer to *Add/Edit Text Overlay* on page 28 below for more information. To edit the location and size of the overlay, select the overlay in the “Overlay” region and configure in the “Scene Display” region. The added overlay will appear in the “Overlay” region. Up to 30 text overlays (layers) are support per scene.
6	Add Image Overlay	Tap this icon to add an image overlay. Tapping allows you to add an Image Overlay. iPad will flip to the Photos page for you to select an image. Select the image and tap OK. To relocate, tap and hold the overlay to drag. To resize, refer to *Resize/Crop Tool* on page 26. The added overlay will appear in the “Overlay” region. Up to 5 image overlays (layers) are support per scene.
7	Switch Video Source (Dual-View)	During dual-view, tapping this button switches video source position between 1 and 2.
8	Scene Information	This region displays the scene name and background. Tap the field to edit.
9	Dual-View Layout	Tap to select the preferred dual-view (Picture-in-Picture or Picture-by-Picture) layout. You can also resize the dual-view.
10	Apply	Tap this button to apply the configuration into this scene.
11	Cancel	Tap this button to cancel all configurations made in this page.

Resize/Crop Tool

This section describes how to resize or crop any of the components in the "Scene Display" region.

Resize

To resize any component, tap the component (overlay or media) and a resize tool will be visible on the "Scene Display" region. Examples are shown below:

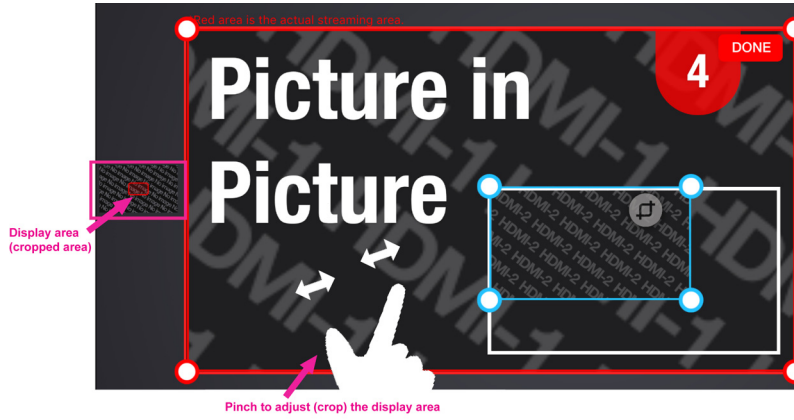
Tap and hold to drag the resize tool to resize the component.

Crop (Media Only)

To resize a media, tap the media. An example is shown:

Tap the Resize/Crop Tool to start the tool.

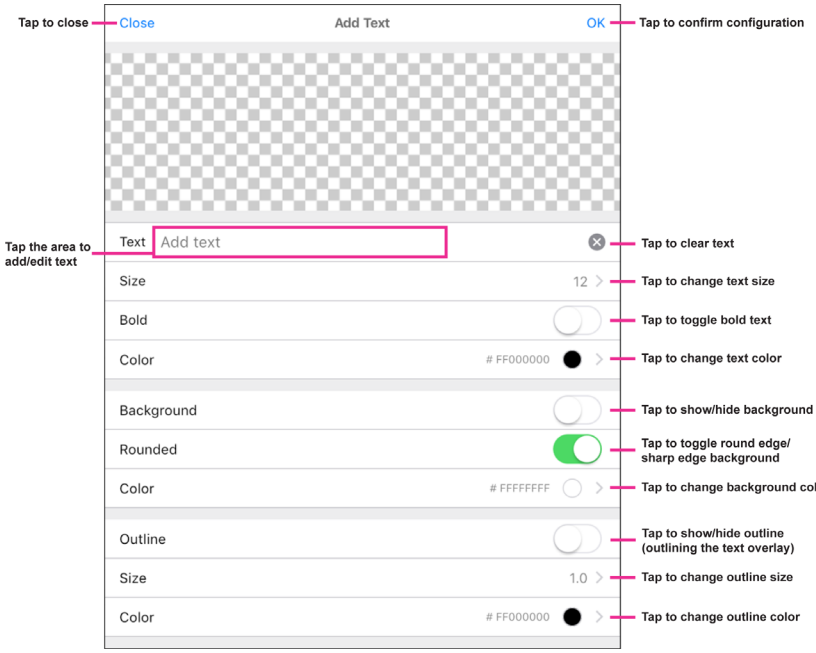
Pinch your finger inward or outward to crop. A small box is on the left of the "Scene Display" region to show the display area (cropped area).



When completed, tap **DONE** on the top right corner.

Add/Edit Text Overlay

Tapping allows you to add a Text Overlay to the scene. A pop-up configuration page and its description is shown below:

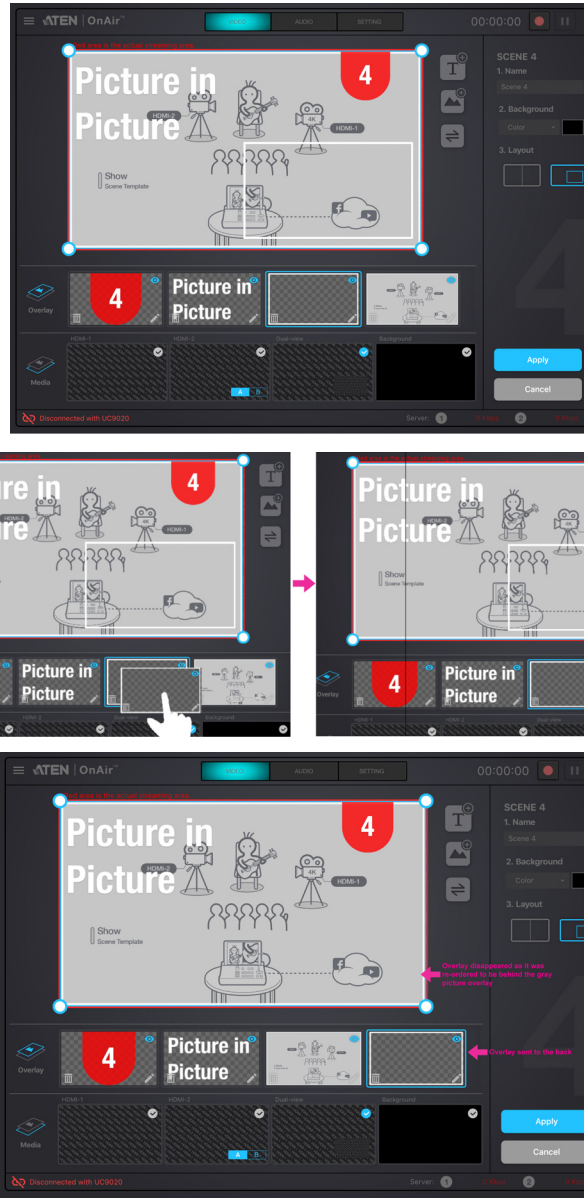


When completed, tap **OK** to save the configuration and return to the previous screen.

To edit the location and size of the overlay, select the overlay in the “Overlay” region and configure in the “Scene Display” region.

Re-order the Overlays

To re-order the overlays, tap and hold the overlay you wish to re-order. The overlay can then be dragged. You can drag the overlay to the place you wish it to be placed within the Overlay region. An example is shown:



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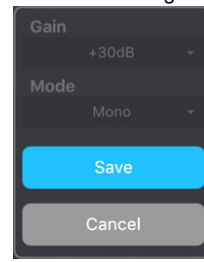
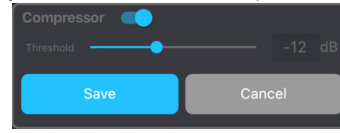
Chapter 5
ATEN OnAir App & Audio Mixer

Audio Mixer

The components of the Audio Mixer deck page is shown below:

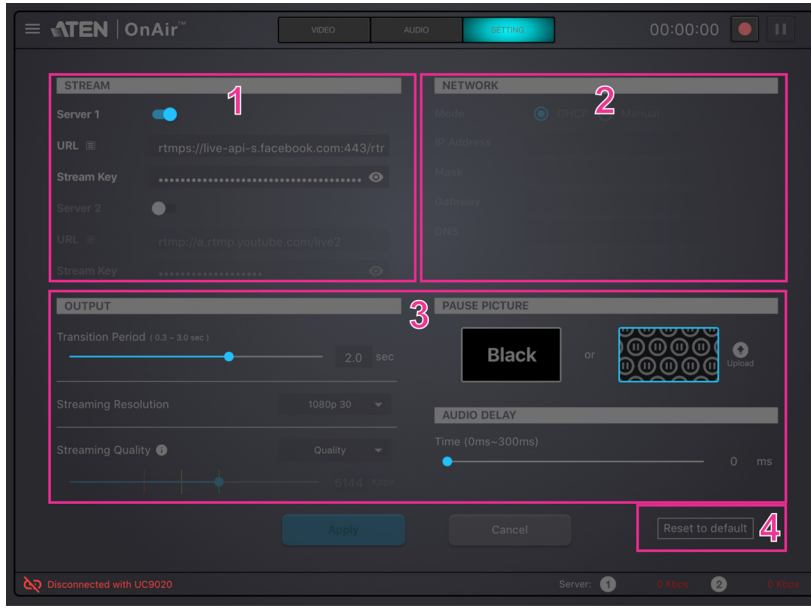
No.	Component	Description
1	Audio Level Control	Slide the volume slider to control the volume of each audio source. ON : The audio is turned off (muted) ON : The audio is turned on (unmuted) Tap **On** to turn on/off the sound for the source.

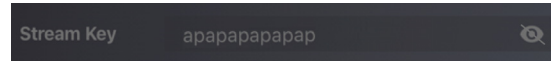
No.	Component	Description
2	HDMI 1 and 2 Audio Control	Audio-Follows-Video ON: Broadcasting the source's video will also play the source's audio. ON: The audio is turned on (unmuted). OFF: The audio is turned off (muted).
3	MIC Gain Control	You can adjust the MIC Gain settings here:  Tap the fields to adjust the options.
4	L/R Balance Control	Tap and hold to drag and control which side of the sound source is to be more emphasized.
5	Master/PGM Level Control	Slide the volume slider to control the volume of Master/ PGM.
6	Master/PGM Compressor	You can adjust the Master/PGM Compressor here:  Tap to enable/disable the compressor function and drag the dial to adjust the threshold.
7	Earphone Level Control	Controls the volume level of the earphone

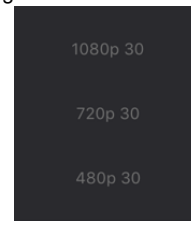
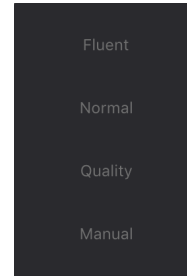
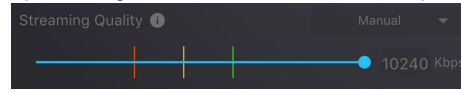
Chapter 6
ATEN OnAir App & Settings

Settings

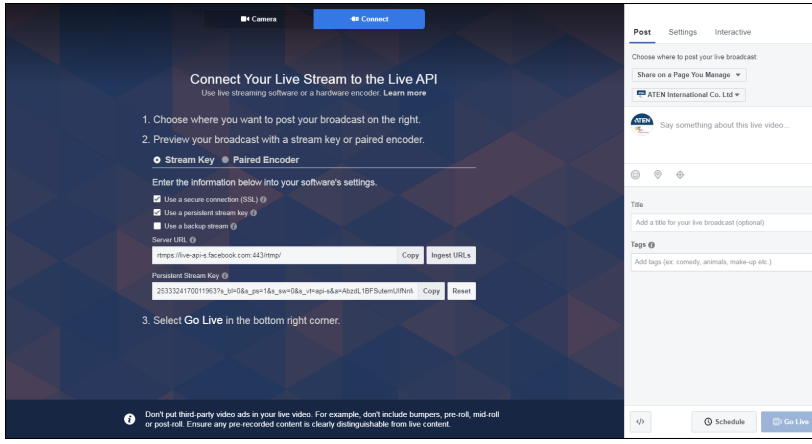
The components of the Setting deck page is shown below:



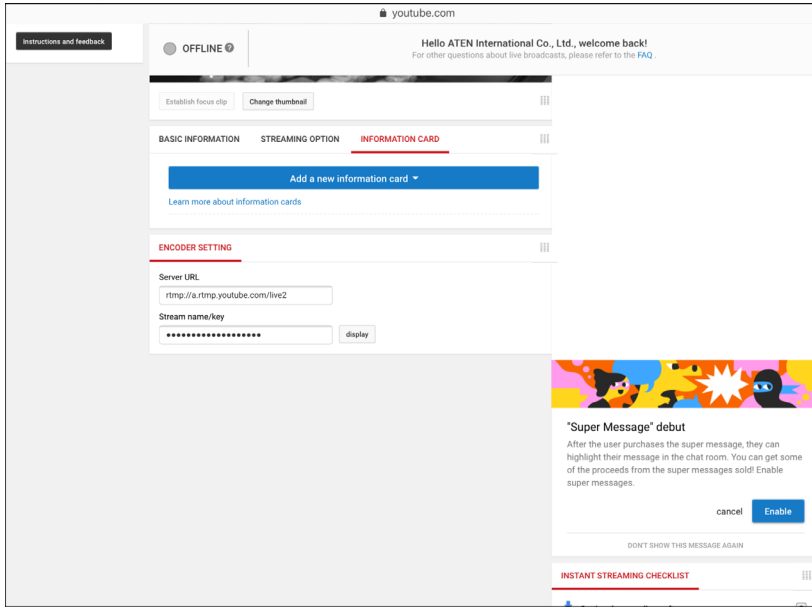
No.	Component	Description
1	Stream Connection Settings	Configure livestream information here: **Server 1** & **2**: : disable stream. : enable stream. You can stream to two platforms simultaneously if you enable both Server 1 & 2. For the stream key field, an eye icon will be shown. Tap to toggle between and : represents invisible stream key. represents visible stream key. An example of visible stream key is shown:  If you wish to paste a copied stream key into the field, make sure it is visible . **URL** and **Stream Key**: Obtain the URL and Stream Key from the platform(s) you wish to livestream on and put them into their corresponding fields. An example URL and Stream Key is shown in *Example Livestream URL and Stream Key (Facebook)* below. Detailed configuration of your livestreaming/video recording software/platform is not within the scope of this user manual, please refer to the software/platform's instruction guide/manual.
2	Network Settings	Choose your preferred network configuration methods. **DHCP**: The network automatically assigns IP address and the corresponding fields. **Manual**: If you are in a place where you are unable to utilize the DHCP method, you will need to get the settings, possibly from IT, and input them into each field here manually.

No.	Component	Description
3	Stream Output Settings	**Transition Period**: This is the scene transitioning delay for the **Auto** button (on the app or on the unit). Choose between 0.3 and 3 seconds. (Refer to *Transition Control* on page 23 for the **Auto** button behavior) **Streaming Resolution**: Select your stream resolution from one of the following:  **Streaming Quality**: Select the quality from one of the following.  If manual is selected, the quality slider will light up and you can tap and drag the slider to a desired stream quality.  **Pause Picture**: Pause picture is the display when the streaming is paused. You can select black, the pause logos, or upload your own custom logo. **Audio Delay**: If you are experiencing audio delays (due to network or other reasons), you can adjust this slider, in milliseconds, to sync the audio with the video.
4	Reset to default	Tap to reset the device to factory default settings.

Example Livestream URL and Stream Key (Facebook)



Example Livestream URL and Stream Key (Youtube)



Chapter 7
Quick Live-Stream Setup

Setup

Before you start live-streaming, you need to setup your live-stream platform on the UC9020.

Setting these up can be on any interface (PC, laptop, tablets, etc.) as long as you are able to get the *Server URL* and *Stream Key*.

This section will therefore take you through obtaining the Server URL and Stream Key, input them into the OnAir app, synchronize the OnAir app with the UC9020 and start streaming using your iPad.

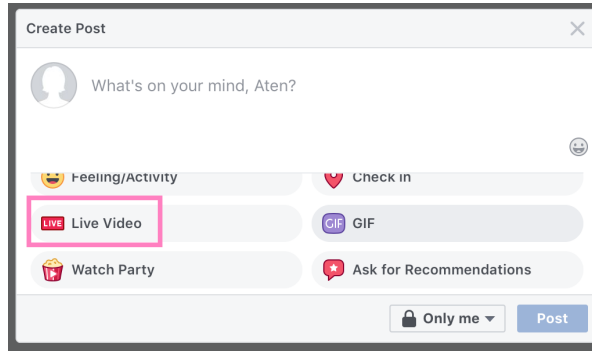
Follow the steps below:

Note: Facebook is the streaming platform example used in the setup steps below.

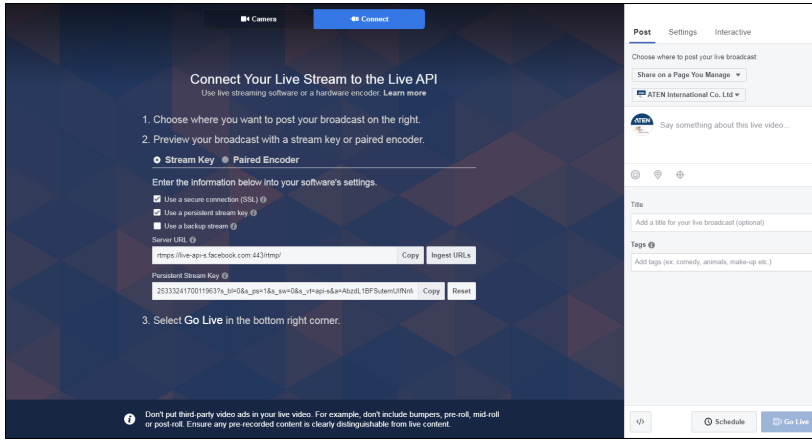
1. On the iPad, open Safari (Internet browser) and go to the Facebook page.

   Note: Make sure your iPad is Internet-enabled and is using desktop mode. If your iPad is always bringing you to the facebook app (or youtube, twitch, etc.), remove it from the system first and install it again later.

2. Log into your account.
3. On the dashboard, locate and tap the **What's on your mind** field.
4. Tap to select **Live Video**.



5. Tap the **Connect** button up top. A page similar to the one below is shown:

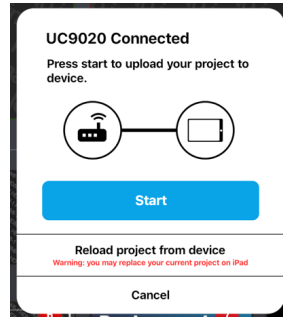


6. Server URL and Stream Key are displayed here. Copy them and enter them into their corresponding fields in the stream settings section under the “Setting” deck of the OnAir app.

Note: 1. Make sure the eye icon in the Stream Key field is shown as to allow you to paste the key.

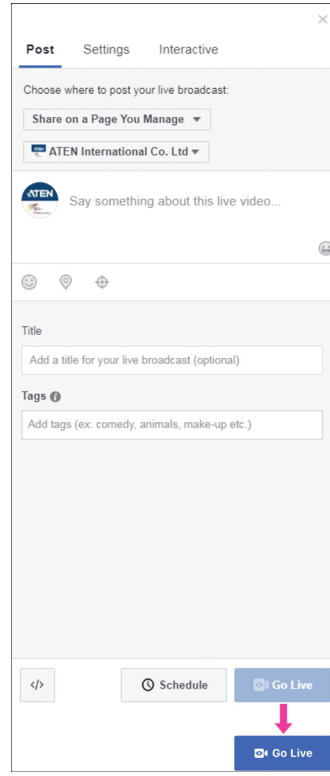
2. It is highly recommended to check the “Use a persistent stream key” checkbox to keep this stream key.

7. Connect the iPad to your UC9020. The OnAir app will ask you about the synchronization option. Tap **Start**.



8. Configure other settings on the OnAir app and press the GO LIVE button on the unit or on the OnAir app:

9. Disconnect iPad from the unit and go to the Facebook **Connect** page. Upon receiving the stream, the **Go Live** button (on the bottom-right of the page) will light up.



10. You can tap **Go Live** to start broadcasting your stream, or you can edit the information here (scope not part of this manual) before you start broadcasting your stream.

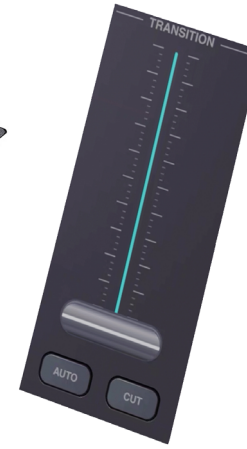
11. Connect your iPad to the unit to control the stream using the OnAir app.

Note: Streaming on other streaming platforms using the unit requires the same information (Server URL and Stream Key), refer to their websites for more information.

During the Live-Stream

During the live-stream, you can:

- Use the transition function (T-bar, Auto button or Cut button) to switch PRV preview image to the PRG preview.



- Press the Pause button to pause streaming.

- Press the GO LIVE button again to stop the stream.
- Edit the video scenes in scene editor, tune audio settings in the audio mixer deck, adjusting audio delays in the settings deck, etc. Tap **Apply** to apply the changes.

Chapter 8
Firmware Upgrade

Preparing the USB Drive

Before upgrading the unit's firmware, prepare a USB drive and put the upgrade file into the USB drive with the following rules:

- A folder named "uc9020_img" must be created in the root menu of the USB drive.
- The firmware upgrade file (*.bin) must be placed in the "uc9020_img" folder.
- The firmware upgrade file should look like the following:

  uc9020_V**x**.**y**.**yyy**

  where x and y combine to indicate its version and

  x = 1-9

  y = 0-9

- The unit will upgrade using the newest firmware.

  For example: The folder includes a "uc9020_V1.0.080" file and a "uc9020_V1.1.102" file, the unit will upgrade using the "uc9020_V1.1.102" file.

Upgrading the Unit

Follow the steps below to upgrade the unit.

1. Plug the prepared USB drive into the USB 3.2 Gen1 Type-A Port.
2. Press the **Cut**, **Pause** (the ❙❙) and **Mute** buttons at the same time.
3. The unit will start the Upgrade Assessment where all the Volume Meter LEDs will blink every 0.5 seconds. Pictorial behavior is shown below:

4. If the assessment succeeds, the unit will start upgrading.

   The Volume Meter LED will start filling in from the negative side every 0.5 seconds. When all the LEDs are filled, they will all dim for 0.5 seconds and start filling in again. Pictorial behavior is shown below:

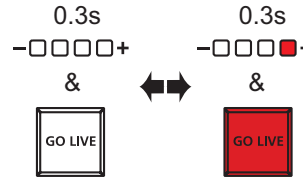
Note: If the upgrade assessment fails, the **GO LIVE** button and the last LED of Volume Meter LEDs will blink every 0.3 seconds. Refer to *Upgrade Assessment Fail* on page 43 for more information.

5. If the firmware upgrade was successful, the first LED of the Volume Meter LEDs will blink every 0.3 seconds. The unit will reboot after some time to complete the process.

Note: If the firmware upgrade fails, the last LED of Volume Meter LEDs will blink every 0.3 seconds. Refer to *Upgrade Fail* on page 43 for more information.

Upgrade Assessment Fail

When the upgrade assessments fail (e.g. when no USB drive is connected or USB drive does not have a firmware upgrade file, etc.), the **GO LIVE** button and the last LED of Volume Meter LEDs will blink every 0.3 seconds.



Press the **GO LIVE** button to return the unit to normal operation and try again from step 1.

Upgrade Fail

If firmware upgrade fails during the firmware upgrade (e.g. disconnected USB drive or power, etc.), the last LED of Volume Meter LEDs will blink every 0.3 seconds.

The unit will reboot after some time and try to upgrade the firmware again.

If it fails again, it will reboot and try again.

When this happens, it is likely that the upgrade file is corrupted. We recommend:

1. Unplug the power and the USB drive from your UC9020.
2. Retrieve the firmware file again and recheck the USB preparation process (*Preparing the USB Drive*).
3. Replug your USB drive.
4. Replug the power. The unit will start the upgrade process after booting up.

If you are still unable to upgrade the unit's firmware, please contact your dealer.

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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.
- 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.
- For continued protection against risk of fire, replace only with the same type and rating of fuse - T1.6A/250V.

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
Video Input	1 x 4K HDMI Type A Female (up to 4K@60, no HDCP support) 2 x HDMI Type-A Female (up to 1080p@60, switcher, no HDCP support
Video Output	1 x 4K Loop-Thru HDMI Type-A Female (up to 4K@60, no HDCP support) 1 x PGM HDMI Type-A Female (up to 1080p@60, no HDCP support)
Video Sampling	4:2:2 8-bit
Color Space	4:2:2 YUV
Video Resolution	**Input Resolution** **HDMI1** VGA: 640x480, 480p: 720x480, SVGA: 800x600, XGA: 1024x768, 720p: 1280x720, SXGA: 1280x1024, WXGA+:1440x900, UXGA: 1600x1200 (RB), WUXGA+:1680x1050, 1080p: 1920x1080, 4K UHD: 3840x2160, 4K DCI: 4096x2160 **HDMI2 A/B*** 480p: 720x480, 720p: 1280x720, 1080p: 1920x1080, VGA: 640x480, SVGA: 800x600 XGA: 1024x768, SXGA: 1280x1024/1360x768, WXGA+:1440x900, UXGA: 1600x1200(RB) *Only the selected port will show video. The other will show non-video photo or graph. **Output Resolution** **SRC/PGM HDMI** 480p: 720x480, 576p: 720x576, 720p: 1280x720, 1080p: 1920x1080 **HDMI Loop-Through** VGA: 640x480, 480p: 720x480, SVGA: 800x600, XGA: 1024x768, 720p: 1280x720, SXGA: 1280x1024, WXGA+:1440x900, UXGA: 1600x1200 (RB), WUXGA+:1680x1050, 1080p: 1920x1080, 4K UHD: 3840x2160, 4K DCI: 4096x2160
	HDCP Support: N/A
	Frame Rate: 60fps

Function	CAMLIVE
Audio Input	HDMI captured input (stereo) 1 x Mic input, 6.5mm jack (dual mono) 1 x Line input, RCA jack
Audio Output	HDMI output (stereo) 1 x Line output, 3.5mm Jack (stereo)
Network Protocol	Multi-Publish to Streaming Server / CDN (RTMP/RTMPS) **Video Encoding** Format: H.264 Bit rate: 512Kbps-10Mbps Color Format: YUV420 Resolution: 1080p30, 720p30, 480p30 **Audio Encoding** Format: AAC Sampling Rate: 48kHz Bit rate: 128kbps
Connection	1 x USB 3.2 Gen1 Type-A Female (Blue) 1 x USB 2.0 Type-A (White) 1 x GbE LAN port
Environmental	
Operating Temperature	0 - 40 ºC
Storage Temperature	-20 – 60 ºC
Humidity	0 - 80% RH, Non-Condensing
OS Support	◆ iPad Pro (3rd gen) with iOS 11 or later ◆ The following iPad with iOS 11 or later (Additional Apple Lightning USB 3 Adapter is required) • iPad Pro (1st gen) • iPad Pro (1st gen) • iPad Pro (2nd gen) • iPad Pro (2nd gen) • iPad (5th gen) • iPad (6th gen) • iPad Air (3rd gen) • iPad Mini (5th gen)
Power	
Maximum Input Power Rating	IEC 60320-1 / C14; 100-240Vac, 1A, 50-60Hz (with T1.6A/ 250V fuse)
Power Consumption	110V:12.9W:80 220V:12.7W:79
Physical Properties	
Housing	Metal
Weight	1.9kg
Dimensions (L x W x H)	28.85 x 19.00 x 9.65 cm^3

Live-Streaming Information

Create a Live Stream with Youtube

You can learn more from Youtube for “Encoder Streaming”

https://support.google.com/youtube/answer/9227510?hl=en&ref_topic=9257984

Or from “Set up your live streaming encoder”

https://support.google.com/youtube/answer/2907883

What is CDN Service?

A content delivery network or content distribution network (CDN) is a geographically distributed network of proxy servers and their data centers. The goal is to provide high availability and high performance by distributing the service spatially relative to end-users. CDNs serve a large portion of the Internet content today, including web objects (text, graphics and scripts), downloadable objects (media files, software, documents), applications (e-commerce, portals), live streaming media, on-demand streaming media, and social media sites.

RTMP/RTMPS and RTSP Protocols

UC9020 supports RTMP/RTMPS protocol but not RTSP.

The Real-Time Messaging Protocol (RTMP) was initially a proprietary protocol for streaming audio, video and data over the Internet between a live stream client and a server. The RTMP protocol has multiple variations.

The Real Time Streaming Protocol (RTSP) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers. The protocol is used for establishing and controlling media sessions between end points.

Other ways to input image overlays

When your iPad is connected to the unit using direct cable link, you can upload images to the iPad directly.

You can also use, and we strongly recommend you do, Apple AirDrop and its Continuity (Enable Handoff) features to upload all necessary data from Apple related products to improve convenience.

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