LC300 and LC300S

CaptureVision Station

User Manual - English



Version LCB021

[Important]

To download the latest version of the Quick Start
Guide, multilingual user manual, software and
drivers, please visit Lumens

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Chapter 1 Safety Instructions

Always follow these safety instructions when setting up and using the product:

1 Operation

- 1.1 Use the product in the recommended operating environment, away from water or sources of heat
- 1.2 Do not place the product on a tilted or unstable surface.
- 1.3 Please ensure the power plug is dust-free prior to usage. Do not insert the product's power plug into a multiplug to prevent sparks or fire.
- 1.4 Do not block the case's slots and openings. They provide ventilation and prevent the product from overheating.
- 1.5 Do not open or remove covers. Doing so may expose you to dangerous voltages and other hazards. Refer all servicing to licensed service personnel.
- 1.6 Unplug the product from the wall outlet and refer servicing to licensed service personnel when the following situations happen:
 - If the power cords are damaged or frayed.
 - If liquid is spilled on the product or the product has been exposed to rain or water.

2 Storage

- 2.1 Do not place the product where the cord can be stepped on as this may result in fraying or damage to the lead or the plug.
- 2.2 Unplug this product during thunderstorms or if the product is going to be unused for an extended period.
- 2.3 Do not place this product or accessories on vibrating equipment or hot surfaces.

3 Cleaning

3.1 Disconnect all cables prior to cleaning. Clean the surface with a dry cloth. Do not use alcohol or volatile solvents for cleaning.

4 Batteries (for products with batteries)

- 4.1 When replacing batteries, please only use the same type of batteries.
- 4.2 When disposing of batteries or products, please adhere to the relevant instructions in your country or region.
- 4.3 Warning

The following situations must be avoided:

- Using the wrong type of battery may compromise the security of the device
- Over-heating or damaging batteries may cause
- Placing the battery in a high-temperature environment may cause an explosion or leakage of flammable liquids or gases;
- Batteries subjected to extremely low air pressure may explode or leak flammable liquids or gases.

■ FCC Warning

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.

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

■ IC Warning

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet appareil numerique respecte les limites de bruits radioelectriques applicables aux appareils numeriques de Classe A prescrites dans la norme sur le material brouilleur: "Appareils Numeriques," NMB-003 edictee par l'Industrie.

■ EN55032 CE Warning

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

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

■ BSMI Warning (label displayed on the bottom of the device)

Warning: To avoid electromagnetic interference, this product should not be installed or used in residential environments



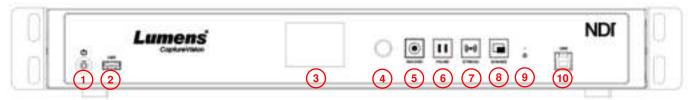
Chapter 2 Package Contents

LC300/LC300S	Power Adapter (DC 19V)	Power Cord	3-PIN to 2-PIN Connector
, ····		Appearance may vary depending on country/region	(Japan only)
USB 3.0 Cable (2M) (Type B to Type A)	RS-232 Connector (x2)	Mounting Metal Plate (x2)	M3 Metal Plate Screw (4x4)
			Come Come Come Come
Cable Holder-1	Cable Holder-2		
2	←		

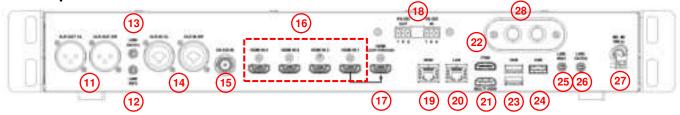
Chapter 3 Product Appearance and Connections

3.1 Product Appearance

■ Front panel



■ Rear panel



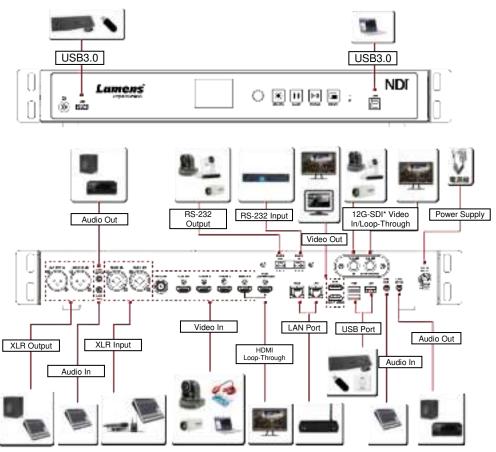
12G-SDI is only applicable to LC300S

No	Name	Function Descriptions
1	Power	Turn the device On/Off
2	USB3.0 Port	To connect keyboard/mouse/USB flash drive/USB camera
3	LCM Screen	Displays PGM screen / LCM menu / message prompts
4	Knob	 Left/Right rotation: Adjust parameters and navigate the menu Press: Perform "confirm" action
5	Record	Start/Stop recording
6	Pause	Start/Pause recording
7	Stream	Start/Stop Video streaming
8	Scenes	Switch the theme scene to the PGM screen. If there are multiple scenes, switch them in order
9	Reset	Reset the device (long press for 3 seconds)
10	USB3.0 Port	Connect the computer to convert PGM audio and video into USB signal for use with video conferencing software Video/Audio source name: Lumens LC300(S) Processor
11	XLR Out	Balanced line output
12	Line In(1)	Line In audio source input
13	Line Out(1)	PGM audio output
14	XLR In	Balanced line input
15	3G-SDI	3G-SDI signal source input
16	HDMI In (4 CH)	HDMI signal source input HDMI 1 supports 4K resolution
17	HDMI Loop Through	Output HDMI 1 video screen
18	RS-232 Port	IN: Control the device through RS-232 OUT: Control the camera through RS-232
19	LAN	Connect to your Local Area Network



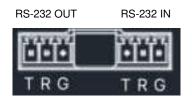
20	WAN	Connect to WAN
21	HDMI 1 Multiview	User interface output; displays the settings menu and video management
22	HDMI 2 Program	Main screen output, displays the recording or streaming screen and applied layout
23	USB 2.0 Port	To connect keyboard/mouse/USB flash drive/USB camera/LC-RC01
24	USB 3.0 Port	remote control panel
25	Line In(2)	Line In audio source input
26	Line Out(2)	Multiview audio output
27	DC IN 19V	DC 19V power connector
28	12G-SDI In/ 12G-SDI Loop-through	LC300S only 12G-SDI signal source output/input

3.2Product Connection



*12G-SDI is only applicable to LC300S

3.3 RS-232 I/O Pin Description



RS-232 IN/ OUT

Function	on
TX+	
RX-	
GND	



Chapter 4 Function Description

4.1 Real-Time Operation Menu

Connect a monitor to the HDMI Multiview port to view the real-time operation menu Connect a keyboard/mouse to the USB port to navigate the menu



No	Icon	Name	Function Descriptions
1	00	Configuration	Change system network settings, recording/streaming encoder settings
2	92 m	Director management	Input signal source selection, audio source management, recording/streaming control, layout selection, and IP camera control
3	B	File management	Conduct the video file content management, including the following functions: upload, download, delete, replay video files
4	Θ	About	Displays the current firmware version and device information
5	NA	Device IP	Displays the device's IP address when connected to a WAN

4.2Webpage Login Interface



No	Item	Function Descriptions
1	User Login Account	Enter user login account (default: admin)
2	User Password	Enter user password (default: admin) ■ For a first-time login, please refer to 4.2.1 Account to change the default password
3	Language	Supporting English/Traditional Chinese/Simplified Chinese
4	Login	Log in to the administrator screen on the website



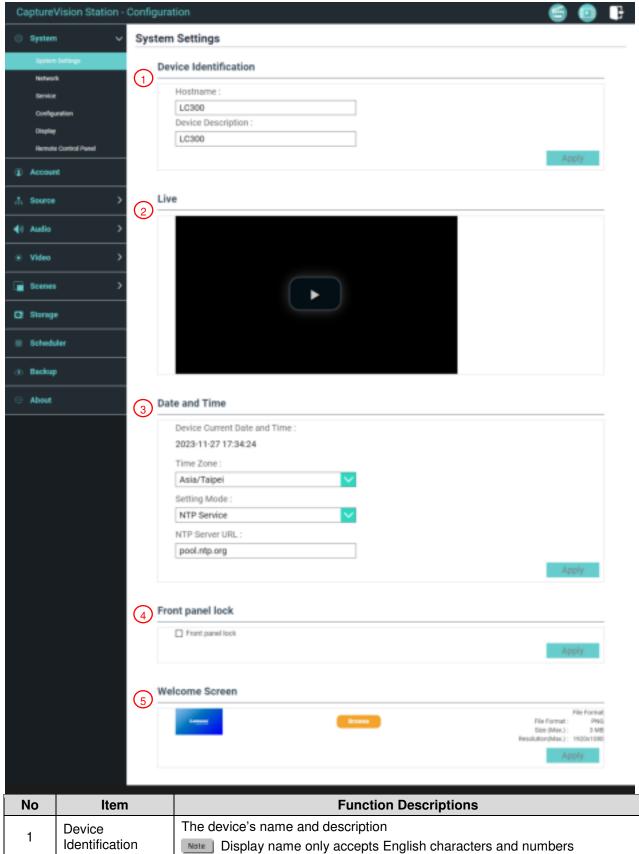
4.3 Parameter Setting

This Section covers the web-based interface. Only the HDMI Multiview provides settings of [System Settings] > [Internet].

4.3.1 System Settings

4.3.1.1 System Settings

Set up the device's basic information, such as date and time



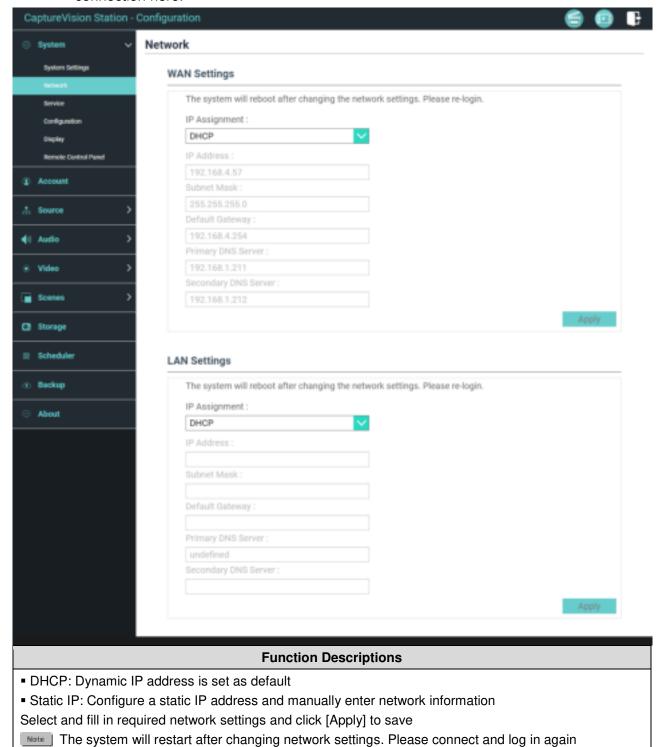


2	Live Streaming	Preview the program (PGM) output in real-time	
3	Date & Time	Supports different time zone settings. Synchronize time with an NTP service (default) and perform a manual set up. Time Zone: Select the correct time zone according to current location Configuration Mode: NTP service: Synchronizes time with a network server Manual Setup: Set time manually	
4	Front Panel Lock	Select to enable Front Panel Lock • After rebooting the device, the front panel buttons will be locked. • To disable this function, log in to the web interface to uncheck this item	
5	Welcome Screen	Customize a welcome image for device 1 Click [Browse] and select a file to upload. A thumbnail will be automatically generated ※File format:	



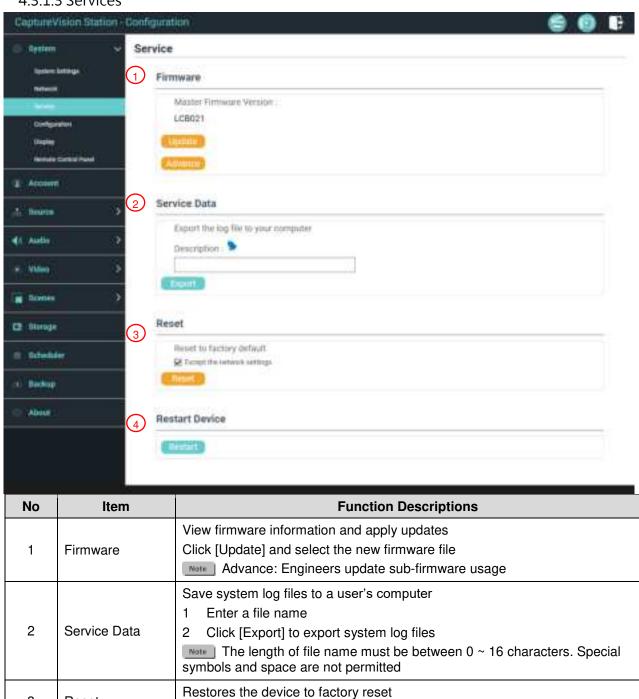
4.3.1.2 Network

The factory setting is DHCP. If you want to use a static IP address, please configure the connection here.





4.3.1.3 Services



Check [Keep Network Settings] and the network settings will be retained



3

4

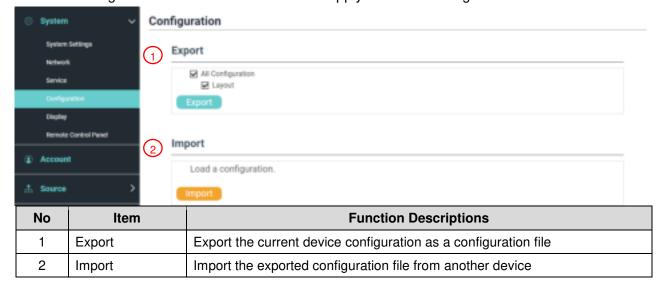
Reset

Restart Device

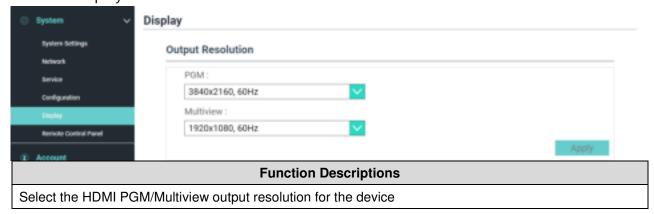
Restart the device

4.3.1.4 Configuration

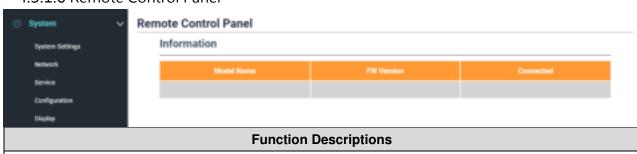
You can export the configuration files of the device to a computer, and import the configuration files to another device to apply the same configuration.



4.3.1.5 Display



4.3.1.6 Remote Control Panel

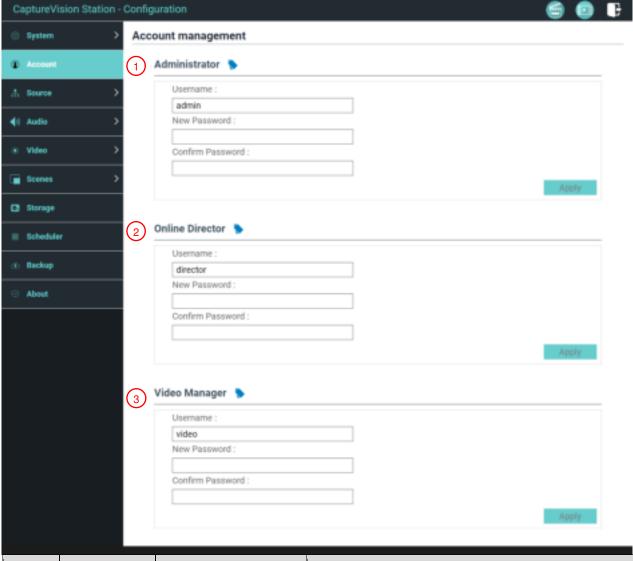


Remote control panel. Display the connection information of LC-RC01 remote control panel (optional). When there is no connection, a blank screen appears



4.3.2 Account

Select one of three user type accounts: modify the username and password for [System Management], [Online Director], [Content Management] roles.



No	Item	Username/Password	Function Descriptions
1	Administrator	admin / admin	High level authority. System management permissions.
2	Online Director	director / director	Manage playback and control basic video settings
3	Video Management	video / video	Manages file storage and video playback

Note

- The length of username must be between 4 ~ 16 characters. {}()'&@~^\$%"|,`:?<>*∀#; symbols, and spaces are forbidden
- The length of password must be between 8 ~ 16 characters. {}()'~^"|,`:?<>*∀; symbols, and spaces are forbidden
- Duplicate usernames are forbidden



4.3.3 Source

4.3.3.1 Physical Video Source Manager



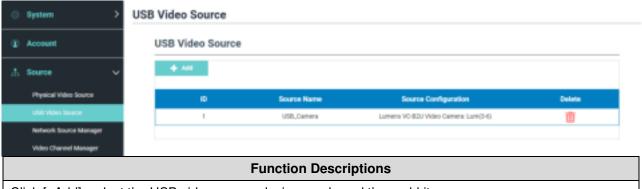
Function Descriptions

Click [Edit] to edit the HDMI signal source name and resolution

■ When using a 3G-SDI input, use Video Input 4

When using a 12G-SDI input (LC300S), use Video Input 1.

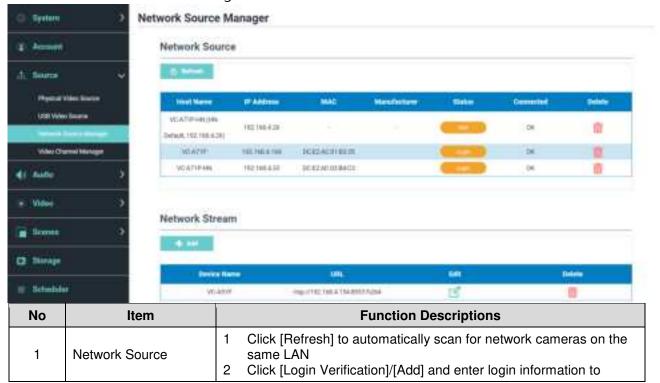
4.3.3.2 USB Video Source



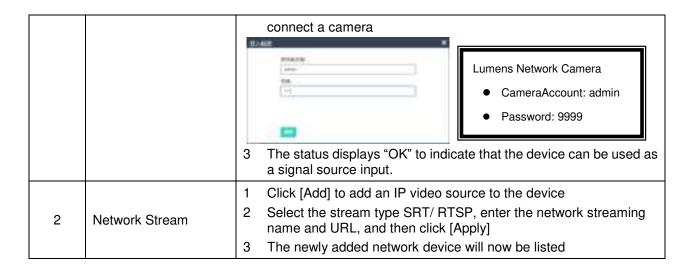
Click [+Add], select the USB video source device, apply and then add it.

Ensure that the USB device is connected to the USB Type A port of the device

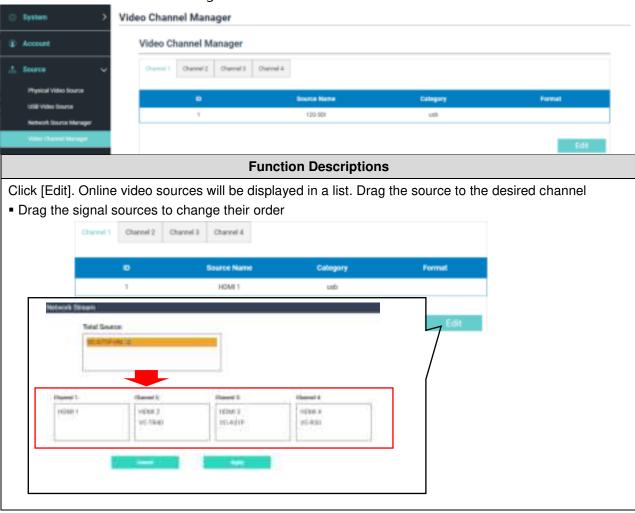
4.3.3.3 Network Source Manager





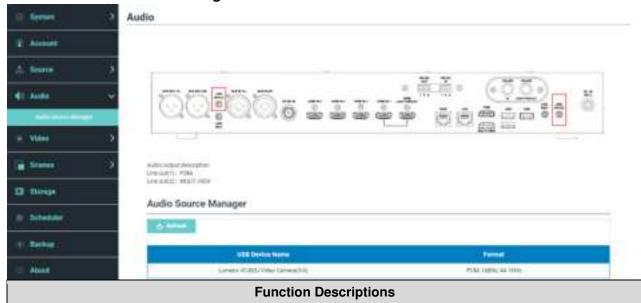


4.3.3.4 Video Channel Manager





4.3.4 Audio Source Manager



Click [Refresh] to search for a USB audio device connected to the LC300

4.3.5 Video

Administrators can choose to record a single PGM (main program out) screen or record up-to 4 video inputs. Each recording can be set with individual encoding settings

4.3.5.1 Encoder Manager

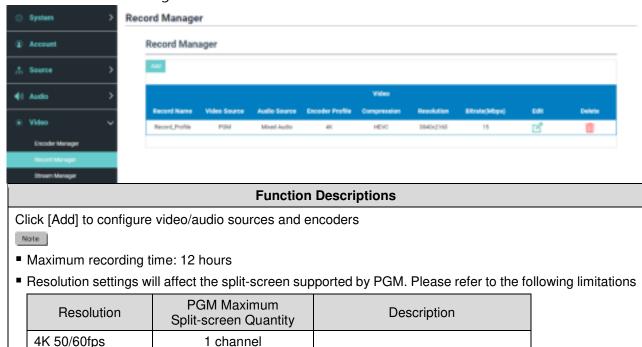


Function Descriptions

Click [Add Encoder Profile] to configure the compression format/resolution/bit rate/audio sampling frequency settings

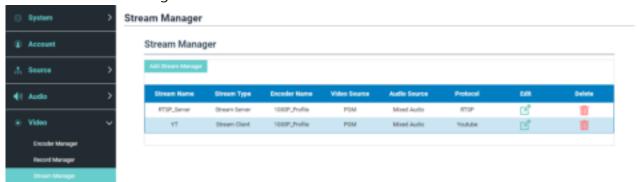


4.3.5.2 Record Manager



4.3.5.3 Stream Manager

1080p 50/60fps



1 PGM channel + 4 input channels

Function Descriptions

Click [Add Stream Manager] to allow users to add stream settings.

5 channels

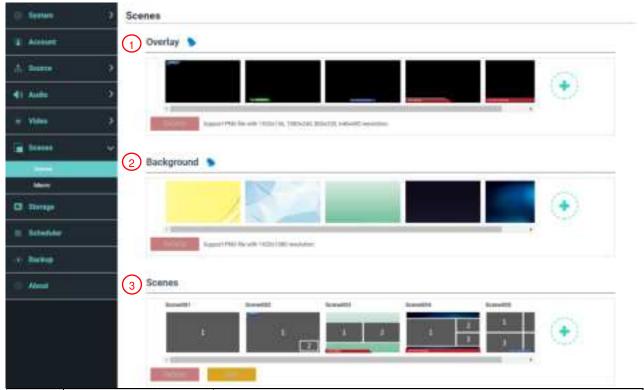
Related settings must comply with streaming protocols and the settings recommended by your streaming server.



4.3.6 Scene

4.3.6.1 Scene

Provides 5 overlay styles, background images, and scenes. You can also add your own styles.



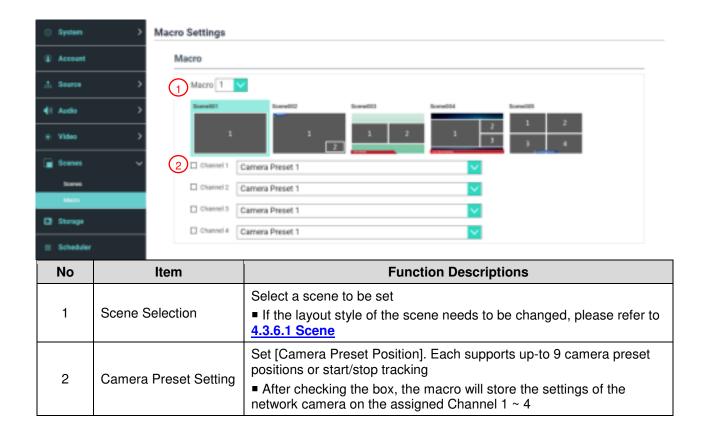
No	Item	Function Descriptions
		Select, upload or delete an image overlay.
		Click [•] to select a file then click [Apply] to upload and apply this overlay style. Click [Delete] to cancel the upload.
1	Overlay	PNG format
		> Supported size: (a) 1920 x 136
		(b) 1080 x 240
		(c) 800 x 320
		(d) 640 x 400
	Background	Select and delete a background image. To upload a file, click [] to select and apply a background image. Click [Delete] to cancel the upload.
2		
		PNG format
		➤ Supported size: 1920 x 1080
3	Scene	Scene incorporates the three elements of "Overlay," "Background Image," and "Production Layout." You can customize up-to 30 scenes.
		Click [] to open scene settings. Enter a scene name and select the required overlay, layout, and background image. Once done, click "Apply".

4.3.6.2 Macro

Supports 9 macros enabling users to quickly switch themes and trigger camera presets.

With the use of the LC-RC01 extension control panel (optional), the [1 \sim 3] buttons on the panel can trigger macro [1 \sim 3] settings.

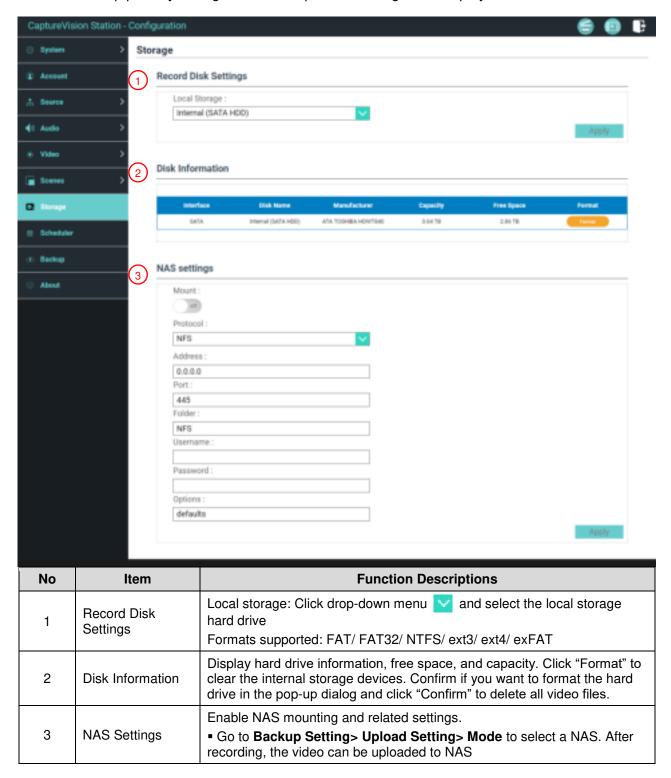






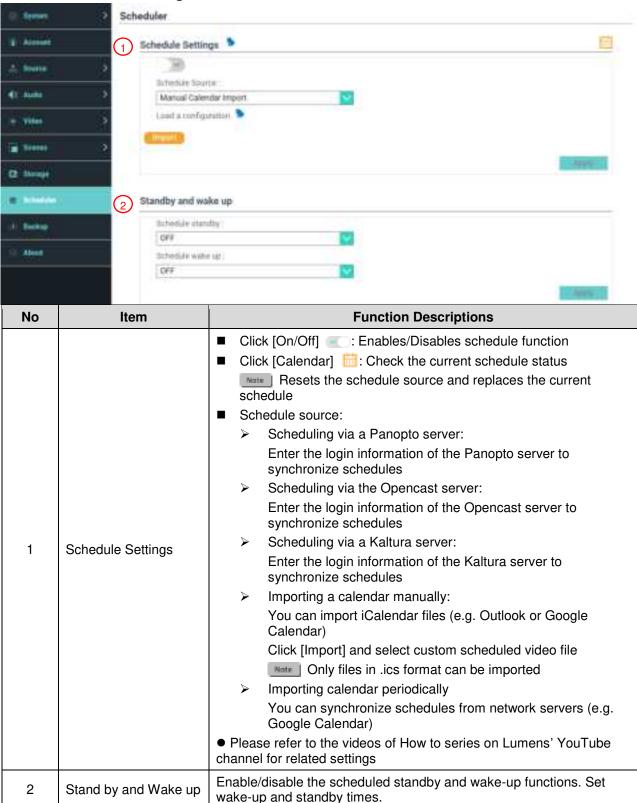
4.3.7 Storage

Set up primary storage and back up / NAS storage and display hard drive information





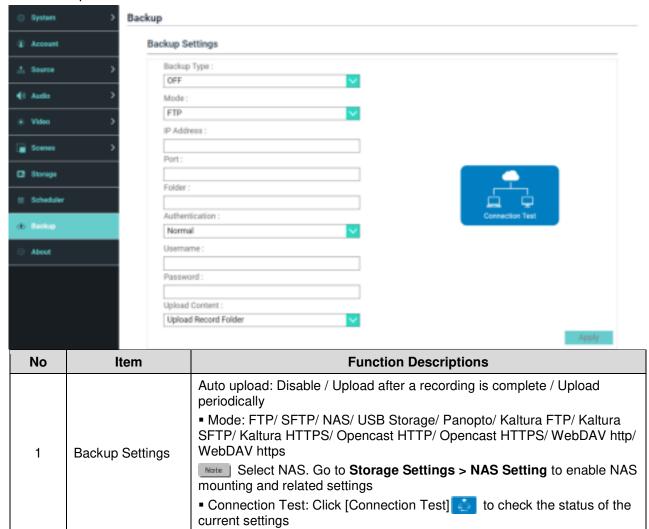
4.3.8 Schedule Setting





4.3.9 Backup

Auto backup service automatically uploads videos to a designated storage. Set the upload destination and test the connection.





4.3.10About

Displays device-related Information: Firmware version, device serial number, and technical support link





4.40nline Director

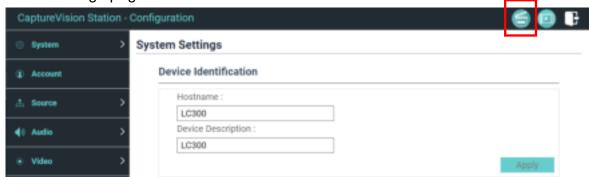
LC300 and LC300S have a built-in Online Director, which allows you to monitor recordings and the output video.

Three login methods below are available:

■ Select Online Director from the HDMI Multiview real-time operation menu



■ Log into the web interface and select the Online Director icon at the upper right corner of the settings page



■ Log into the web interface and use the Online Director account



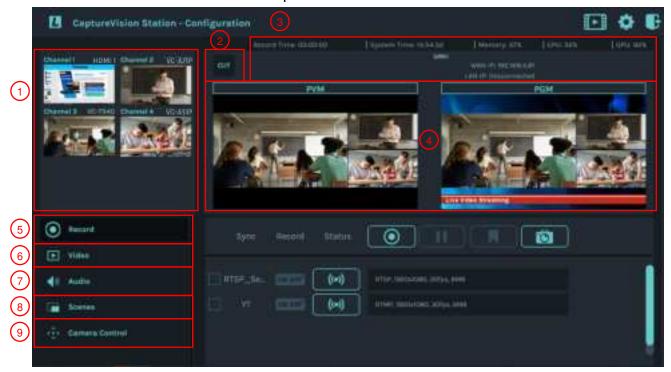
Online Director (Default)

• Account: director

• Password: director

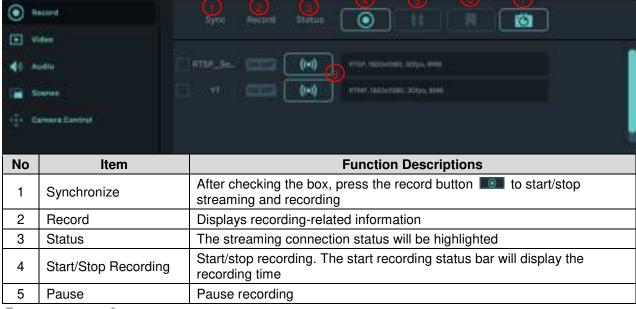


Online Director Function Descriptions



No	Item	Function Descriptions	
1	Channel	Video inputs	
2	CUT	Switch the PVM (preview) screen to the PGM (program) screen	
3	Status	Displays current recording status, hard disk capacity and Internet connection status, etc.	
4	PVM/PGM	Displays the preview (PVM) and program output (PGM)	
5	Record	Start/stop recording; Option for simultaneous streaming	
6	Video	See all available video sources	
7	Audio	Manage the input and output of audio sources; adjust the audio recording volume	
8	Scenes	Quickly select the required production layout, or customize the background and scene style	
9	Camera Control	Control Lumens IP cameras	

4.4.1 REC Record Setting





6	Index	A timestamp can be added after the recording starts	
7	Capture	Capture a photo	
8	Single-channel Stream Button	Stream without starting recording	

4.4.2 Video



Function Descriptions

Preview Channel 1 ~ 4 signal sources screen. Click to select the required output signal source • Please refer to 4.3.3.4 Image Distribution Management for adding video sources.

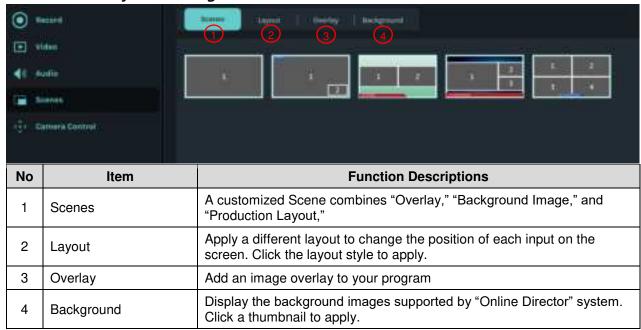
4.4.3 Audio



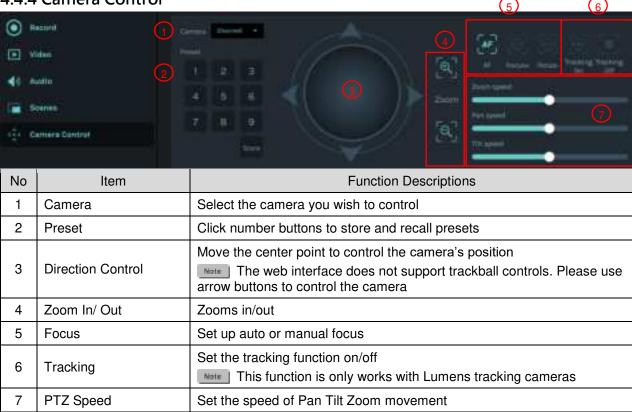
No	Item	Function Descriptions	
1	Set Delay Time	Set an audio delay	
2	Audio Source	Select an audio source	
3	Audio Volume	Displays the current audio volume	
4	Volume Control	Adjust the volume of each audio input	
5	Mute/ Unmute	Mute/ Unmute audio output	
6	+48V phantom Power	Turn On/Off the +48V phantom power	
7	PGM Level	The master volume control changes the main volume of PGM recording/streaming	
	Audio Out Level	■ PGM HDMI: Set the program (PGM) HDMI volume	
8		Mutltiview HDMI: Set the Multiview HDMI volume	
		Line out (2) volume is synchronized with the Multiview HDMI volume	
		■ Line Out (1) & XLR: Sets the volume for Line Out (1) & XLR	
		Note This field adjusts the volume and does not affect the recording/streaming volume	



4.4.3 Scenes Layout Setting



4.4.4 Camera Control

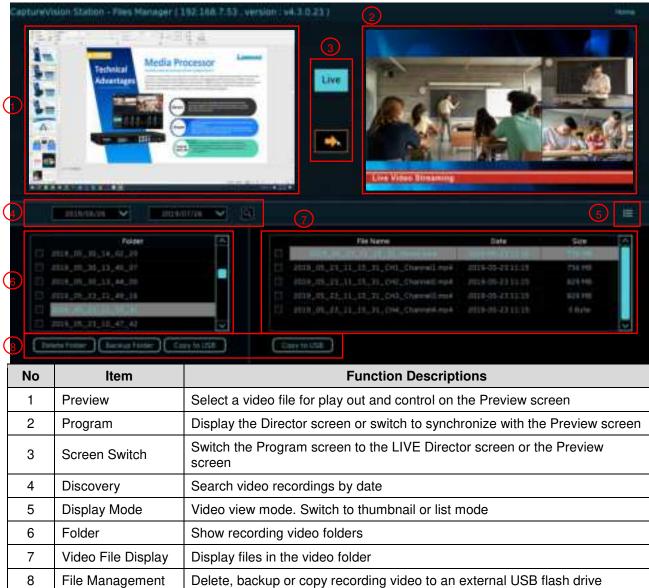




4.5 File Management

Perform the following functions via the file management interface: Upload, download, delete, replay video files and edit recording information.

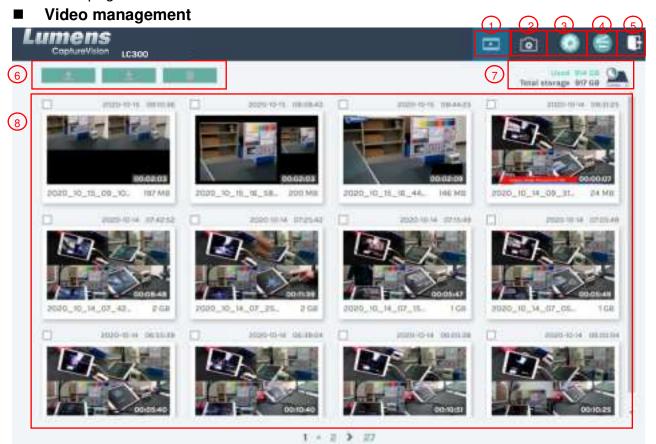
4.5.1 Multiview Output Interface





4.5.2 Webpage Interface

The default web interface page is the system settings page. Click the video management icon on the top-right corner to access the video management page.



No	Item	Function Descriptions
1	Video Management	Click to access the video management page
2	Photo Management	Click to access the picture management page
3	Configuration	Click to access the system settings page Log into the web interface with admin/admin to display the system setting subpage. If you log in the web page with video/video, you can only manage videos and images.
4	Online Director	Click to enter the Online Director page
5	Logout	Click this icon to log out of the web interface
6	File Management	Upload, download and delete selected video files
7	Hard Drive Status	Display the used space and the capacity of the current hard drive
8	Video File Display	Lists information, including file names of recording videos, thumbnails, capacity, and date



■ File Management Description

Uploading

Check the thumbnails of the videos to upload. Click [] and the videos will be uploaded to the location set in Upload Settings. Please refer to [System Management/Upload Settings] for related settings.

Upload Status Description:

Icon	Upload Status	Icon	Upload Status
13	Videos are uploaded successfully	13	Videos are queued for upload
18	Fail to upload videos	•	Videos are uploading

Downloading

Check the thumbnails of the videos to download. Click [] and the videos will be saved as MP4 video files and datasets.

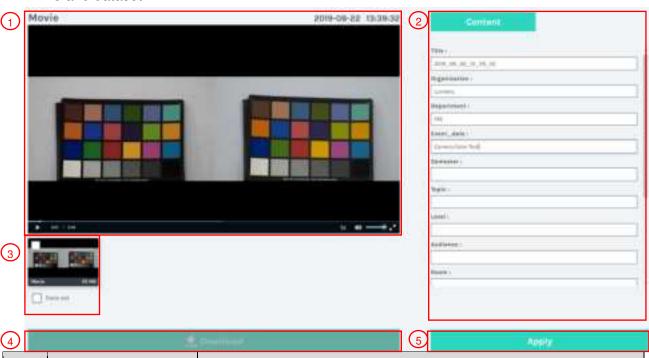
If only video files are needed, you can click the video thumbnails and access video playback page to download only video files.

Delete

Select the thumbnails of the videos to delete. Click [iii] to permanently delete the files.

■ Video Playback

Right-click a video to preview the video, edit the related content data, and download the video file and dataset



\sim	<u> </u>		
No	Item	Function Descriptions	
1	Video Control Window	Playback and control recorded videos	
2	Video Content	Edit and modify video content	
3	Video File and Dataset	Select the video files or datasets to download	
4	Download	Click this button to download the selected video files or datasets	
5	Apply	After editing and modifying the video content, click this button to apply	



■ Photo Management

You can manage the photo files captured by pressing SNAPSHOT. Folders will be named with the shooting date automatically; all photos shot on the same date will be stored in the same folder.

Just like Video Management, you can also upload, download, and delete photos in Photo Management subpage.





Chapter 5 Troubleshooting

This chapter describes problems you may encounter while using LC300 and LC300S. If you have questions, please refer to related chapters and follow all the suggested solutions. If the problem still occurrs, please contact your distributor or the service center.

No.	Problems	Solutions
1.	Boot without power signal	Please confirm that the power cord used is of DC 19V specification
2.	No image output	1. Check the power 2. Check if the input/output device cables are loose 3. Replace the cables and make sure they are not faulty 4. Make sure if the input source is connected to the device correctly 5. LC300/LC300S cannot record video from a HDCP source 6. Confirm whether the machine is in standby mode. Tap any button on the device panel to wake the machine (*Note 1)
3.	The panel buttons are not responding	The panel is non-functional when logging into the system
4.	LC300/LC300S cannot perform camera control after connecting to a camera	Please make sure the dial setting of the Camera Address Selector is 0. The device cannot identify a camera correctly if it is not 0
5.	You have forgotten the web interface administration password	Press the Reset button on the front panel to reset the device (hold press for 3 seconds)
6.	Web interface login failed	Confirm whether the machine is in standby mode. Tap any button on the device panel to wake the machine (*Note 1) Please confirm whether the password is correct. If you forget your password, please refer to Troubleshooting #5.
7.	LC300/LC300S cannot find the camera	Ensure that the camera has been set up using only English letters or numbers. Check [Setting] > [Video] > [Camera ID]/[Camera Location] in the webpage. The device cannot find a machine if you use special characters and spaces. When the device is connected to a switch and the switch IGMP function is on, it will not be able to search for cameras on the local area network. Please disable the IGMP function first and then search for cameras again.
8.	LC300/LC300S supports maximum recording time	The maximum recording time which LC300/LC300S supports is 12 hours. 24/7 recording is not supported.

^{*} Note 1: Standby Mode: Enable via RS232/TCP command.



Addendum 1

■ Frequently used port No.

Port No.	Description	
1935/TCP	Applicable for RTMP push to most platforms, such as YouTube,	
	Vimeo, and Twitch	
80/TCP	Applicable for RTMP push to Periscope	
443/TCP	Applicable for RTMPS push to Facebook	
1935/TCP	Applicable for RTMP push to LinkedIn	
1936/TCP	Applicable for FFF for push to Ellikedin	
2935/TCP	Applicable for RTMPS push to LinkedIn	
2396/TCP	Applicable for Ittivit 3 push to Ellikeum	
	Applicable for platforms with built-in HTTPS security	
443/TCP (HTTPS)	authentication, such as YouTube, Facebook, Ustream,	
	Livestream, and Twitch	
53/UDP (DNS)	Applicable to services of changing DNS IP address	

