LC300 and LC300S

CaptureVision Station

User Manual - English



[Important]

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

https://www.MyLumens.com/support



Table of Contents

Copyright Information	3
Chapter 1Safety Instructions	
Chapter 2Package Contents	
Chapter 3Product Appearance and Connections	
3.1 Product Appearance	6
3.2 Product Connection	8
3.3 RS-232 I/O Pin Description	8
Chapter 4Function Description	9
4.1 Real-Time Operation Menu	9
4.2Webpage Login Interface	9
4.3 Parameter Setting	10
4.40nline Director	29
4.5 File Management	33
Chapter 5Troubleshooting	
Addendum 1	



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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.



/ or region

4.2 When disposing of batteries or products, please adhere to the relevant instructions in γ

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

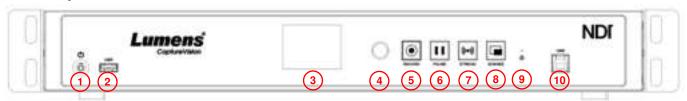
LC300/LC300S	Power Adapter (DC 19V)	Power Cord	3-PIN to 2-PIN Connector
		Appearance may vary depending on country/region	(Japan only)
USB 3.0 Cable (2M) (Type B to Type A)	RS-232 Connector (x2)	Mounting Metal Plate (x2)	M3 Metal Plate Screw (4x4)
			Come Come Come
Cable Holder-1	Cable Holder-2		
-	←		



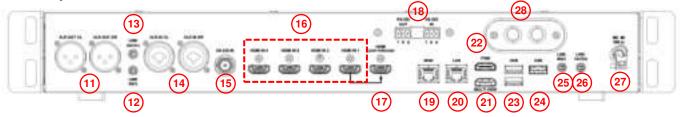
Chapter 3 Product Appearance and Connections

3.1 Product Appearance

Front panel



■ Rear panel



12G-SDI is only applicable to LC300S

No	G-SDI is only applicable to LC300S 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	

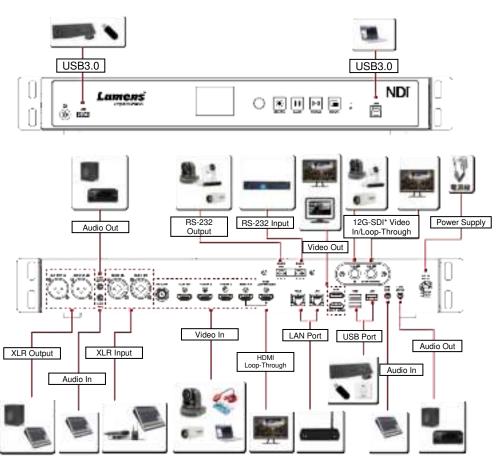


19	LAN	Connect to your Local Area Network
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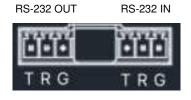
20	WAN	Connect to WAN	
21	HDMI 1 Multiview	User interface output; displays the settings menu and video management	
22	HDMI 2 Program	Main screen output, displays the recording or streaming screen and applied layout	
23	USB 2.0 Port	To connect keyboard/mouse/USB flash drive/USB camera/LC-RC01 remote	
24	USB 3.0 Port	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	Note: LC300S only 12G-SDI signal source output/input	

3.2 Product Connection



*12G-SDI is only applicable to LC300S

3.3 RS-232 I/O Pin Description



RS-232 IN/ OUT

	Function	
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	0	Configuration	Change system network settings, recording/streaming encoder settings
2	975 332	Director management	Input signal source selection, audio source management, recording/streaming control, layout selection, and IP camera control
3	G	File management	Conduct the video file content management, including the following functions: upload, download, delete, replay video files
4	0	About	Displays the current firmware version and device information
5	NA	Device IP	Displays the device's IP address when connected to a WAN

4.2 Webpage Login Interface



No	Item	Function Descriptions	
1	User Login Account	Enter user login account (default: admin)	
2	User Password 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

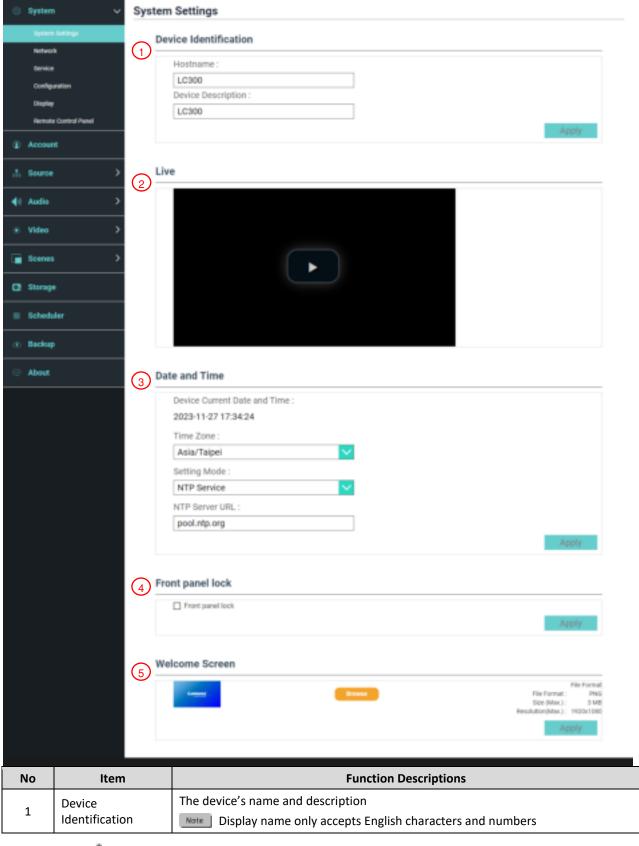
This Section covers the web-based interface. Only the HDMI Multiview provides settings of [System Settings] > [Internet].

4.3.1 System Settings

4.3.1.1 System Settings

CaptureVision Station - Configuration

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



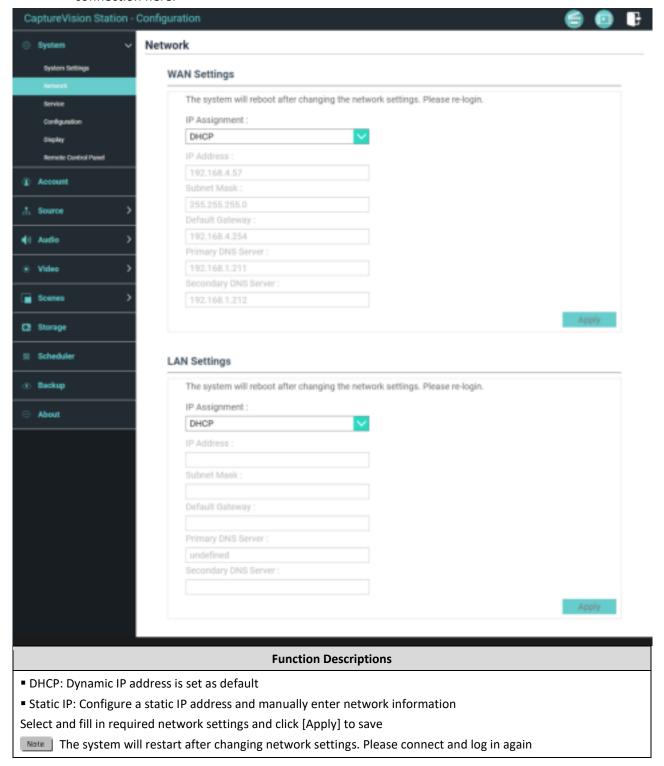


2	Live Streaming	Preview the program (PGM) output in real-time		
		Supports different time zone settings. Synchronize time with an NTP service (default) and perform a manual set up.		
	5 . 0 .	■ Time Zone: Select the correct time zone according to current location		
3	Date & Time	■ Configuration Mode:		
		NTP service: Synchronizes time with a network server		
		Manual Setup: Set time manually		
		Select to enable Front Panel Lock		
4	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		
		Customize a welcome image for device		
		Click [Browse] and select a file to upload. A thumbnail will be automatically generated		
	Welcome Screen	※File format:		
5		> File format: PNG		
		File size (Max.): 3 MB		
		Resolution size (Max.): 1920 x 1080		
		Click [Apply] to save this change. If you need to select another file, click [Cancel] and reselect a file		



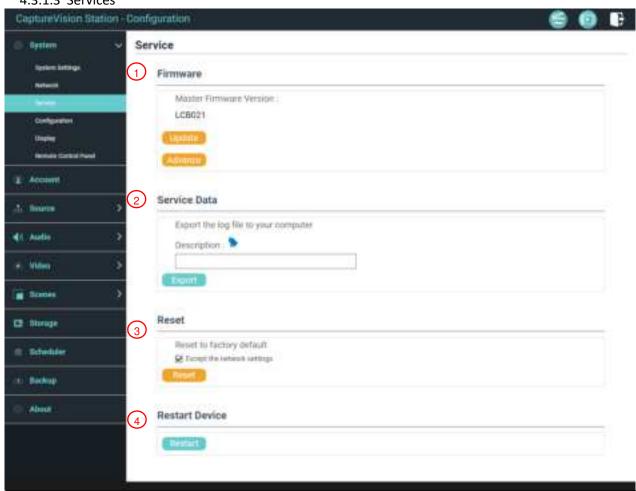
4.3.1.2 Network

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





4.3.1.3 Services

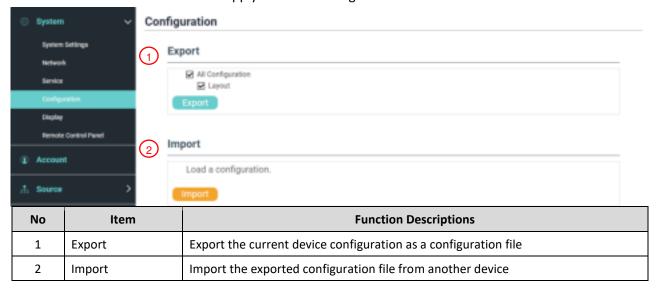


No	Item	Function Descriptions
1	Firmware	View firmware information and apply updates Click [Update] and select the new firmware file Mate Advance: Engineers update sub-firmware usage
2	Service Data	Save system log files to a user's computer 1 Enter a file name 2 Click [Export] to export system log files The length of file name must be between 0 ~ 16 characters. Special symbols and space are not permitted
3	Reset	Restores the device to factory reset Check [Keep Network Settings] and the network settings will be retained
4	Restart Device	Restart the device

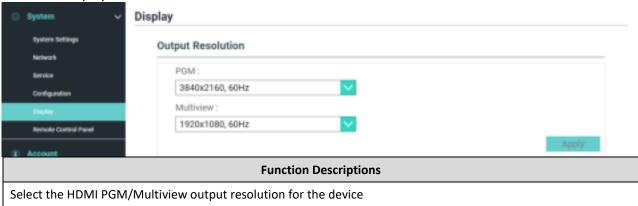


4.3.1.4 Configuration

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



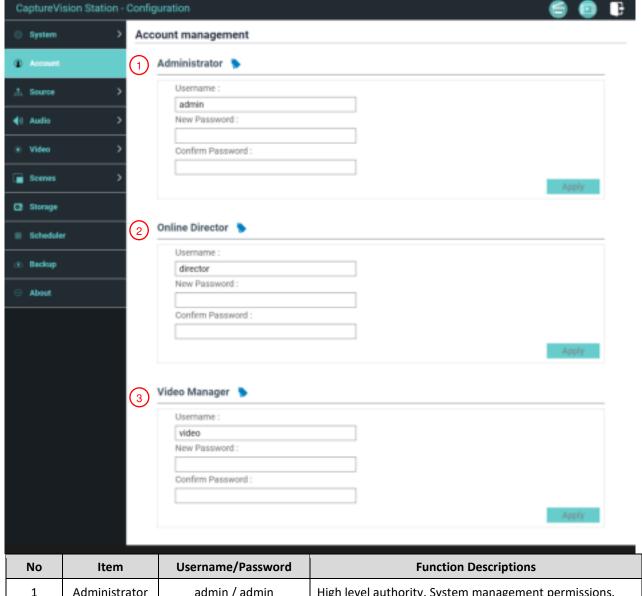
4.3.1.6 Remote Control Panel



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



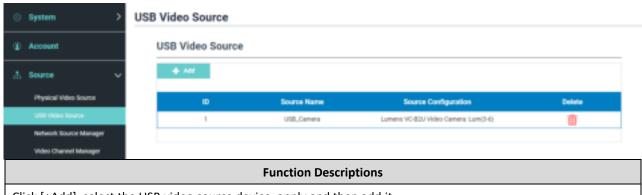
Function Descriptions

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.

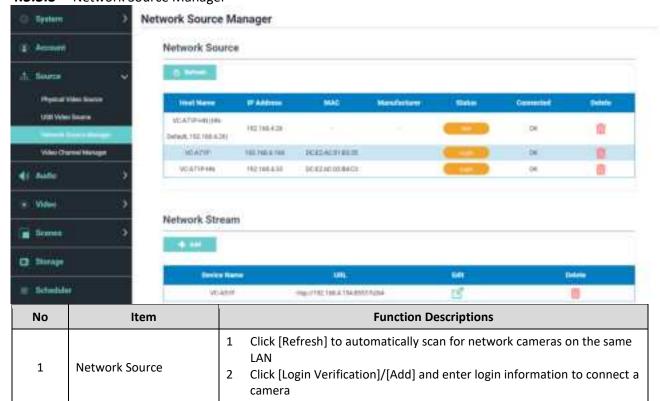
4.3.3.2 USB Video Source



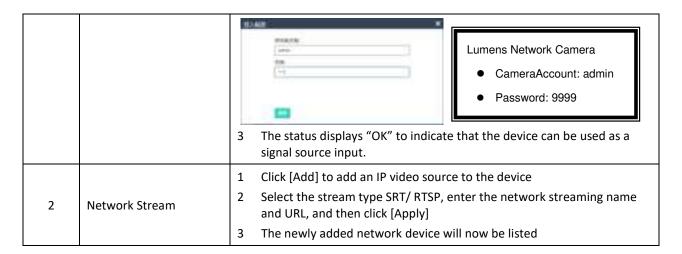
Click [+Add], select the USB video source device, apply and then add it.

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

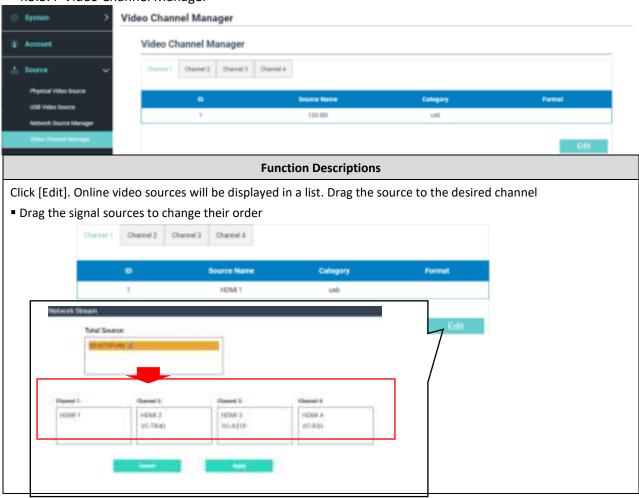
4.3.3.3 Network Source Manager





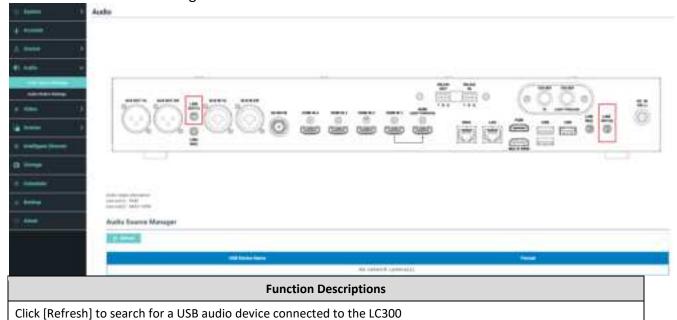


4.3.3.4 Video Channel Manager

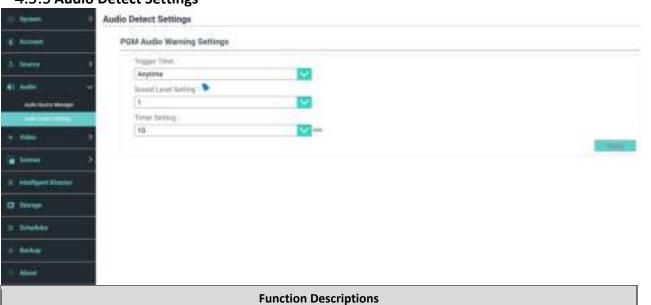




4.3.4 Audio Source Manager



4.3.5 Audio Detect Settings



When the audio volume remains continuously low for a specified period, the LC300 will send an alert.

- 1. **Trigger Time**: Defines when the alert should be activated. (Off / Anytime / Recording or Streaming / Streaming only / Recording only)
- 2. **Sound Level Setting**: Select the volume threshold level from 1 to 6.
- 3.Timer Setting: Choose how long the volume must remain low before triggering the alert: 10 / 15 / 20 / 30 / 45 / 60 minutes

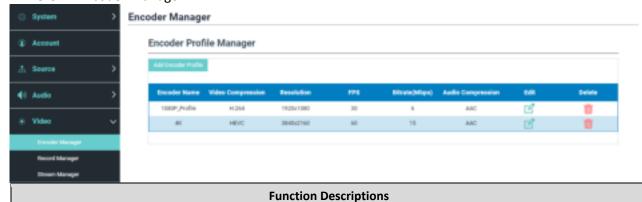


4.3.6 Video

settings

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

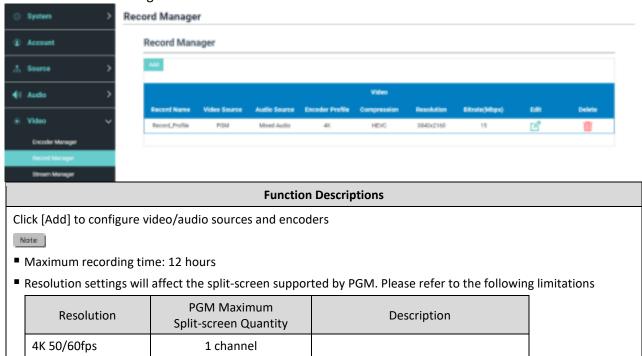
4.3.6.1 Encoder Manager



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



4.3.6.2 Record Manager



4.3.6.3 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

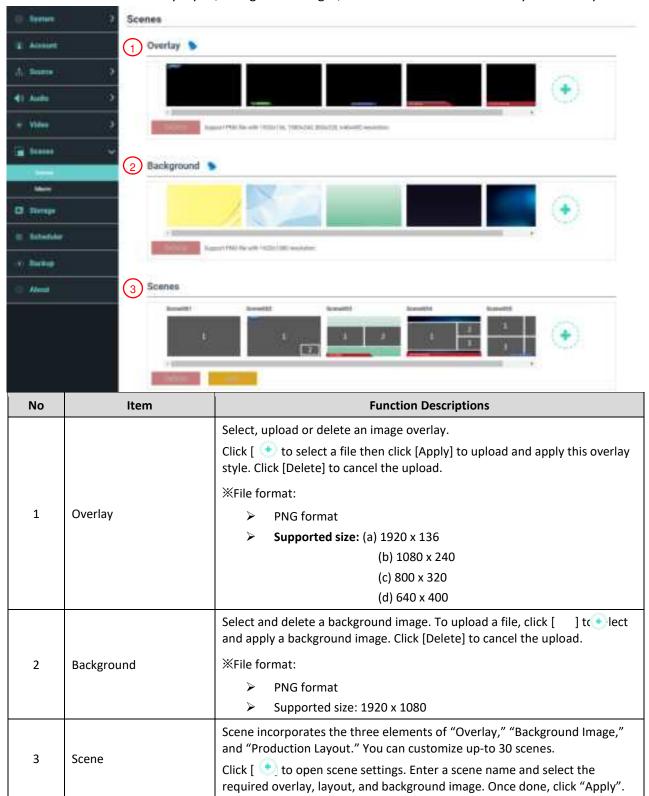
Related settings must comply with streaming protocols and the settings recommended by your streaming server.



4.3.7 Scene

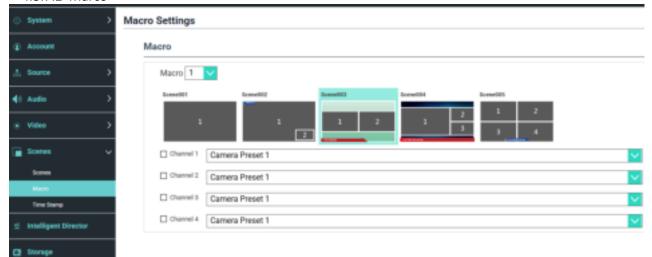
4.3.7.1 Scene

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



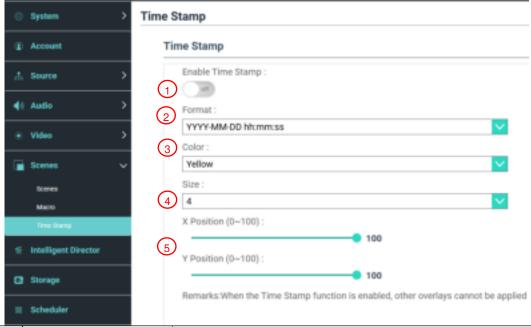


4.3.7.2 Marco



No	Item	Function Descriptions
1	Scene Selection	Select a scene to be set ■ If the layout style of the scene needs to be changed, please refer to 4.3.6.1 Scene
2	Camera Preset Setting	Set [Camera Preset Position]. Each supports up-to 9 camera preset positions or start/stop tracking ■ After checking the box, the macro will store the settings of the network camera on the assigned Channel 1 ~ 4

4.3.7.3 Time Stamp

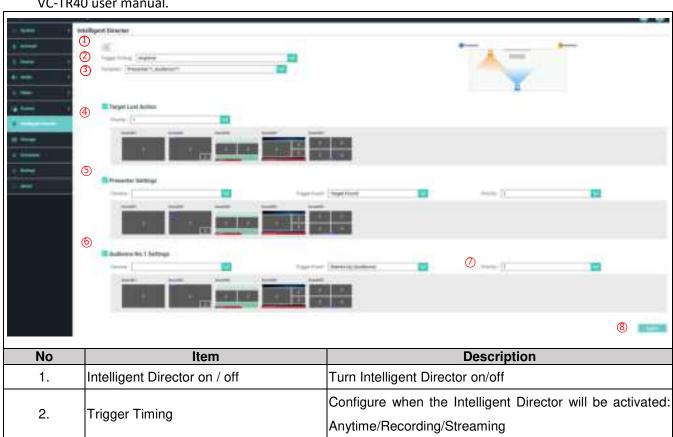


No	<u>Item</u>	Function Descriptions	
<mark>1</mark>	Time Stamp	Enable / Disable Time Stamp	
2	<mark>Format</mark>	Choose the format of the Date and Time	
3	Color	Choose the color: White / Yellow / Black / Red / Blue	
4	<mark>Size</mark>	Choose the size from 1 to 10.	
5	Position	Use the X Position slider and Y Position slider to adjust the coordinates from 0 to 100	



4.3.8 Intelligent Director (For Lumens camera VC-TR40,AT version only)

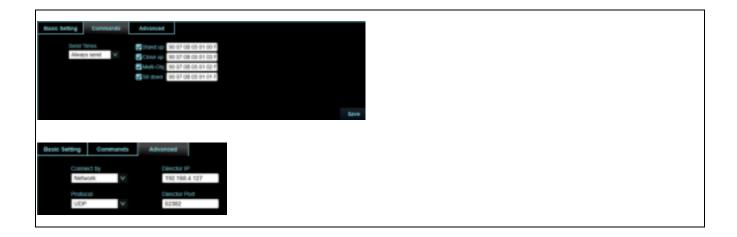
Remark: For more detailed information about the TR40,AT version, please refer to the VC-TR40 user manual.



NO	Item	Description
1.	Intelligent Director on / off	Turn Intelligent Director on/off
2.	Trigger Timing	Configure when the Intelligent Director will be activated:
	Trigger Timing	Anytime/Recording/Streaming
2	Tomplete	Configure how many Presenter/ Audience cameras will
3.	Template	display in the list on the webpage here.
4.	Target Lost Action	Configure which scene will be switched to when all targets are lost from the cameras.
		Configure which scene will be switched to after the
5.	Presenter Camera Settings	tracking target appear or is lost from the Presenter
		camera's field.
		Configure which scene will be switched to after the
6.	Audience Camera Settings	tracking target stands up or sits down in the field of the
		Audience camera.
		Configure which scene will take priority when two events
7.	Priority	are triggered at the same time,
		Remark: Every trigger event needs to be set with a
		different priority rank. If they are configured the same, the
		scenes will not be switched.
8.	Apply	Apply
	·	<u>-</u>

Please remember to complete the Command and Advanced sections' settings on VC-TR40,AT webpage to link the VC-TR40,AT and LC300.

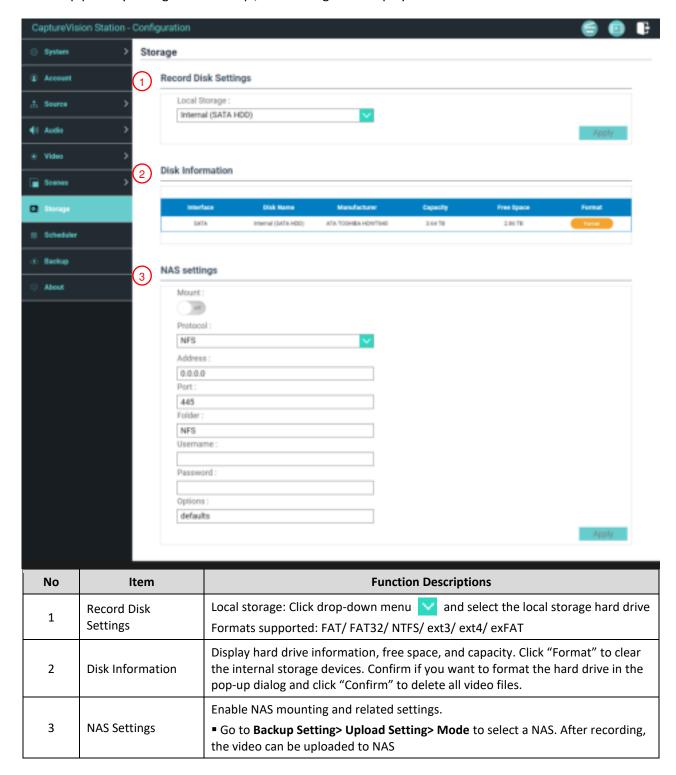






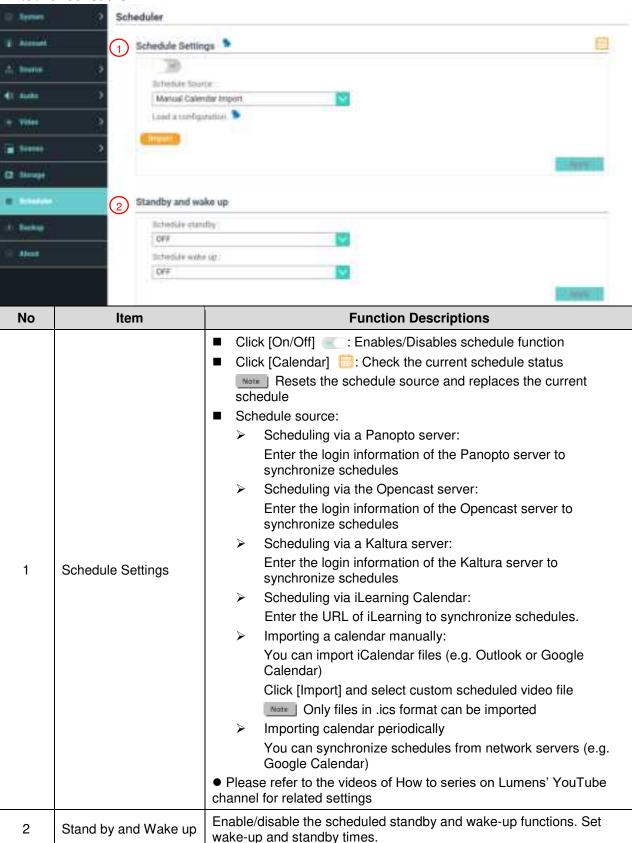
4.3.9 Storage

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





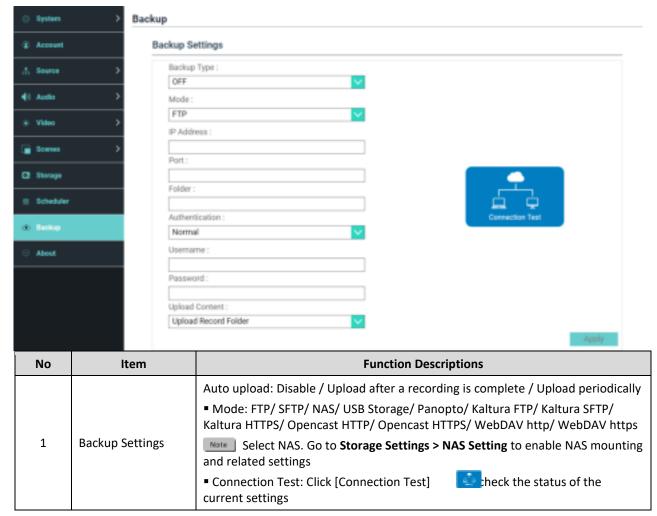
4.3.10 Schedule





4.3.11 Backup

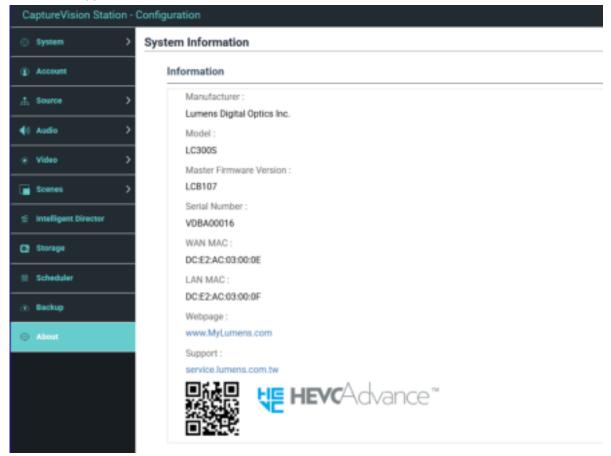
Auto backup service automatically uploads videos to a designated storage. Set the upload destination and test the connection.





4.3.12 About

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





4.40nline Director

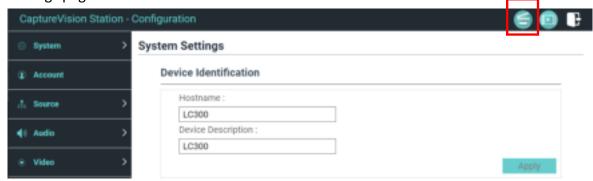
LC300 and LC300S have a built-in Online Director, which allows you to monitor recordings and the output video.

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

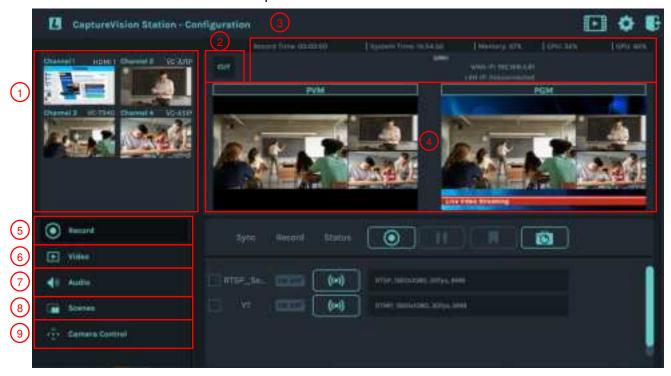


Online Director (Default)

• Account: director

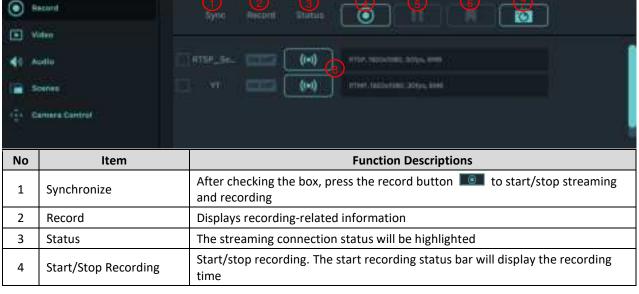
• Password: director

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





5	Pause	Pause recording	
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



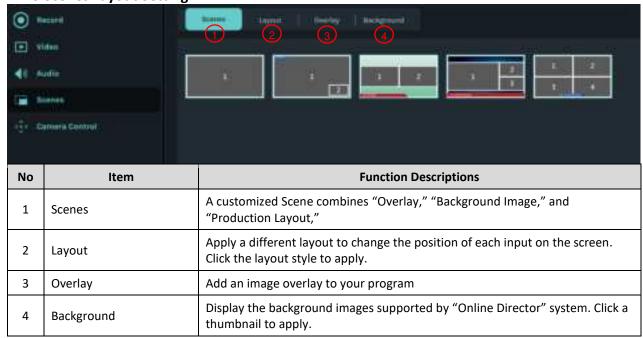
Function Descriptions

Preview Channel 1 ~ 4 signal sources screen. Click to select the required output signal source

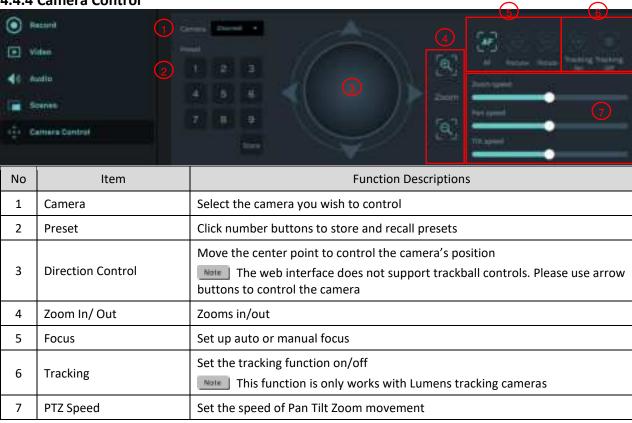
■ Please refer to 4.3.3.4 Image Distribution Management for adding video sources. 4.4.3 Audio No Item **Function Descriptions** Set an audio delay 1 Set Delay Time 2 **Audio Source** Select an audio source 3 Audio Volume Displays the current audio volume 4 Volume Control Adjust the volume of each audio input 5 Mute/ Unmute Mute/ Unmute audio output Turn On/Off the +48V phantom power 6 +48V phantom Power The master volume control changes the main volume of PGM 7 **PGM Level** recording/streaming ■ PGM HDMI: Set the program (PGM) HDMI volume ■ Mutltiview HDMI: Set the Multiview HDMI volume Note Line out (2) volume is synchronized with the Multiview HDMI volume 8 **Audio Out Level** ■ Line Out (1) & XLR: Sets the volume for Line Out (1) & XLR This field adjusts the volume and does not affect the recording/streaming volume



4.4.3 Scenes Layout Setting



4.4.4 Camera Control

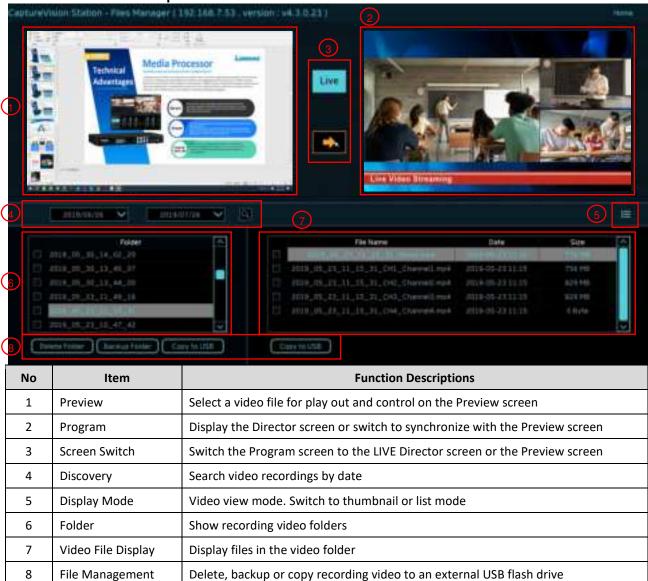




4.5 File Management

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

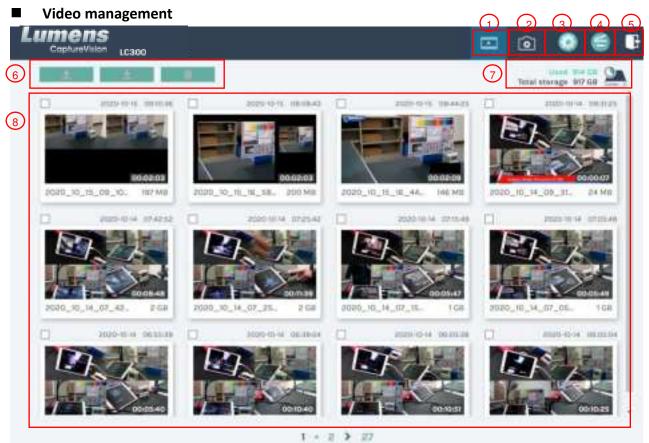
4.5.1 Multiview Output Interface





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 Note 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 [] 1 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
1 €	Videos are uploaded successfully		Videos are queued for upload
18	Fail to upload videos	1	Videos are uploading

Downloading

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

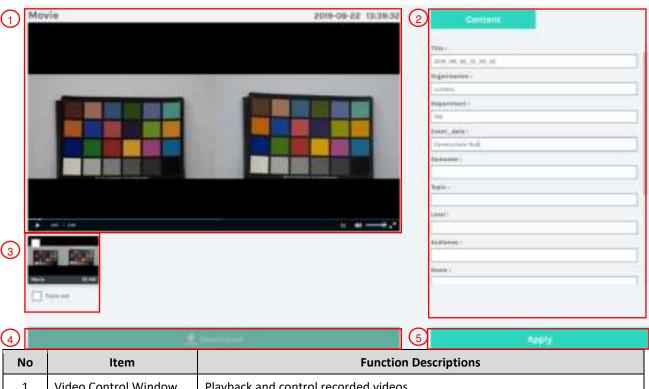
If only video files are needed, you can click the video thumbnails and access video playback page to download only video files.

Delete

Select the thumbnails of the videos to delete. Click [] moremanently 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



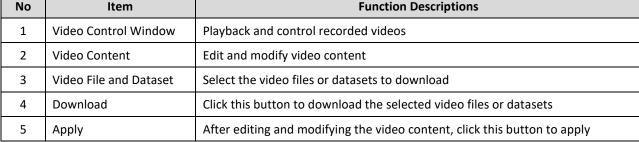




Photo Management

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	ower signal Please confirm that the power cord used is of DC 19V specification.		
2.	No image output	 Check the power Check if the input/output device cables are loose Replace the cables and make sure they are not faulty Make sure if the input source is connected to the device correctly LC300/LC300S cannot record video from a HDCP source 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		
2935/TCP	Applicable for RTMPS push to LinkedIn	
2396/TCP		
443/TCP (HTTPS)	Applicable for platforms with built-in HTTPS security authentication,	
773/101 (111113)	such as YouTube, Facebook, Ustream, Livestream, and Twitch	
53/UDP (DNS)	Applicable to services of changing DNS IP address	

