

LC200

CaptureVision Station

User Manual - English



[Important]

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Chapter 1 Safety Instructions

Always follow these safety instructions when using the product:

1 Operation

- 1.1 Please use the product in the recommended operating environment, away from water or source of heat.
- 1.2 Do not place product in tilted position or unstable trolley, stand or table.
- 1.3 Please clean the dust on the power plug prior to usage. Do not insert the product's power plug into a multiplug to prevent sparks or a fire.
- 1.4 Do not block the slots and openings in the case of this product. They provide ventilation and prevent the product from overheating.
- 1.5 Do not open or remove covers, otherwise it 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 into 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 the product during thunderstorms or if it is not going to be used for an extended period.
- 2.3 Do not place the product or accessories on top of vibrating equipment or heated objects.

3 Cleaning

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

4 Batteries (for products or accessories with batteries)

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

■ 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 :

The 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 numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par l'Industrie.

■ EN55032 CE Warning

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

■ KC Warning

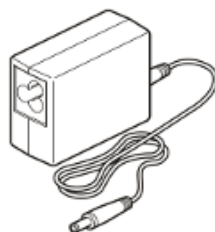
This equipment is Industrial (Class A) electromagnetic wave suitability equipment and seller or user should take notice of it, and this equipment is to be used in the places except for home.

Chapter 2 Package Contents

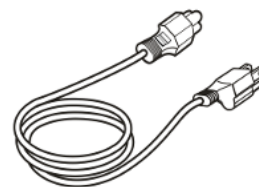
LC200



Power Adapter

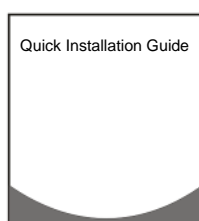


Power Cord

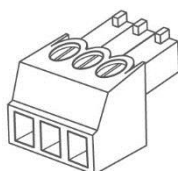


Appearance may vary
depending on country/region

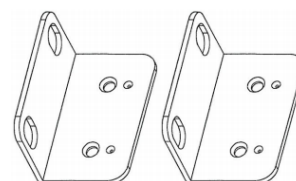
Quick Installation Guide



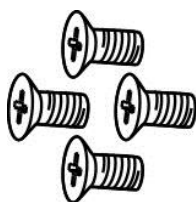
RS-232/RS-485
Connector
(x2)



Mounting Metal Plate
(x2)

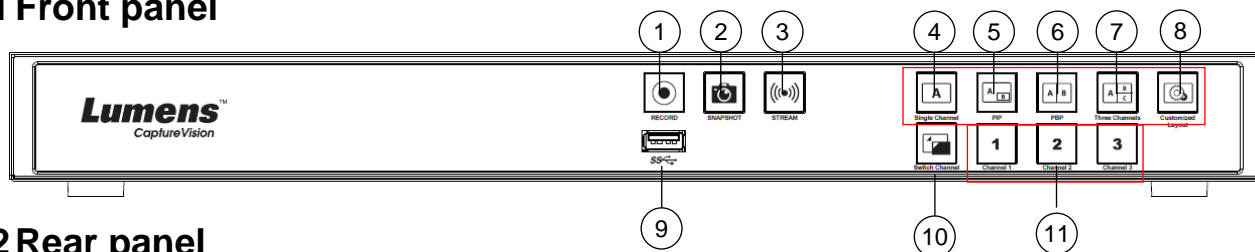


M3x6 Flat Head
Screw(x4)

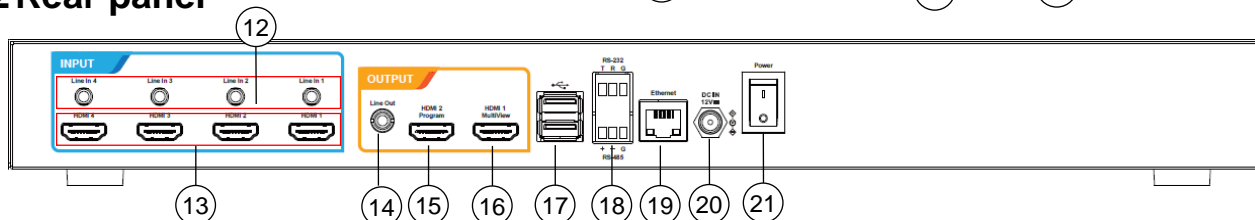


Chapter 3 Product Overview

3.1 Front panel

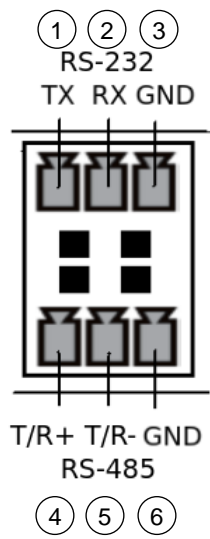


3.2 Rear panel



No	Name	Function Descriptions
1	RECORD	Start/Stop recording
2	SNAPSHOT	Capture a single photo
3	STREAM	On/Off image streaming
4	Single Channel	Display a single channel screen
5	PIP	Switch to PIP display
6	PBP	Switch to PBP display
7	Three Channel	Switch to three-channel display
8	Customize	Customize layout display
9	USB 3.0 Port	USB hard disk interface for storage
10	Switch Channel	Switches between signal sources
11	Channel 1 ~ 3	Quickly switch to CH1/CH2/CH3 signal sources
12	Line In (4 CH)	Line In / Mic In audio input
13	HDMI In (4 CH)	HDMI signal source input
14	Line Out	Allows line audio out to amplifier transfer
15	HDMI 2 Program	Main screen output, display the recording or streaming screen and layout
16	HDMI 1 MultiView	Operation interface output; display the device parameter setting menu and image management
17	USB 2.0 Port	Connect USB keyboard/mouse device operation menu
18	RS-232/RS-485 Port	Control the device through RS-232/RS-485
19	Ethernet	Connecting to LAN
20	DC IN 12 V	DC 12 V power connector
21	Power	On/Off the device power

3.3 RS-232/RS-485 I/O pin description



■ RS-232

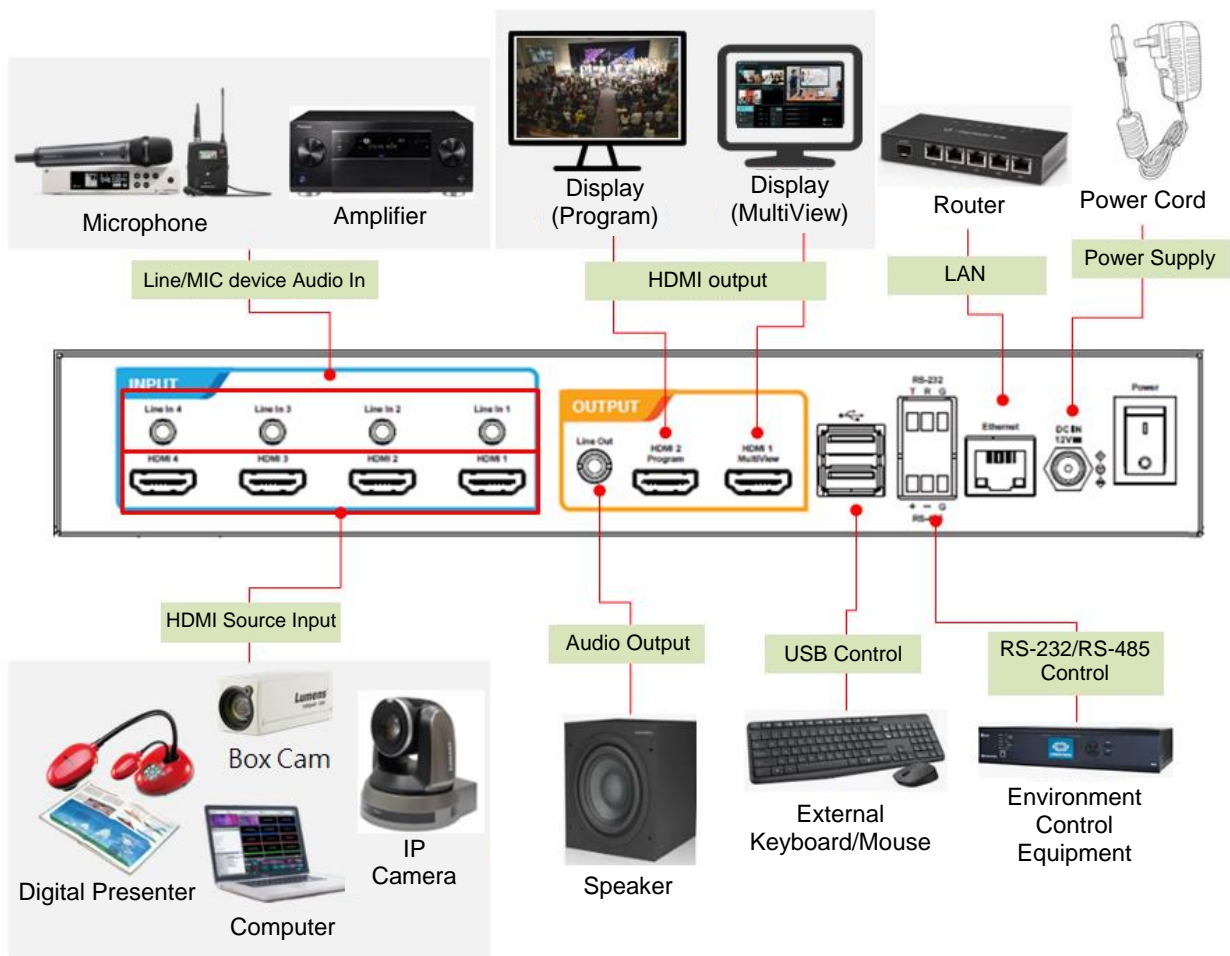
Pin NO.	Function
1	TX+
2	RX-
3	GND

■ RS-485

Pin NO.	Function
4	T/R+
5	T/R-
6	GND

Chapter 4 Instruction for installation

4.1 Product connection diagram

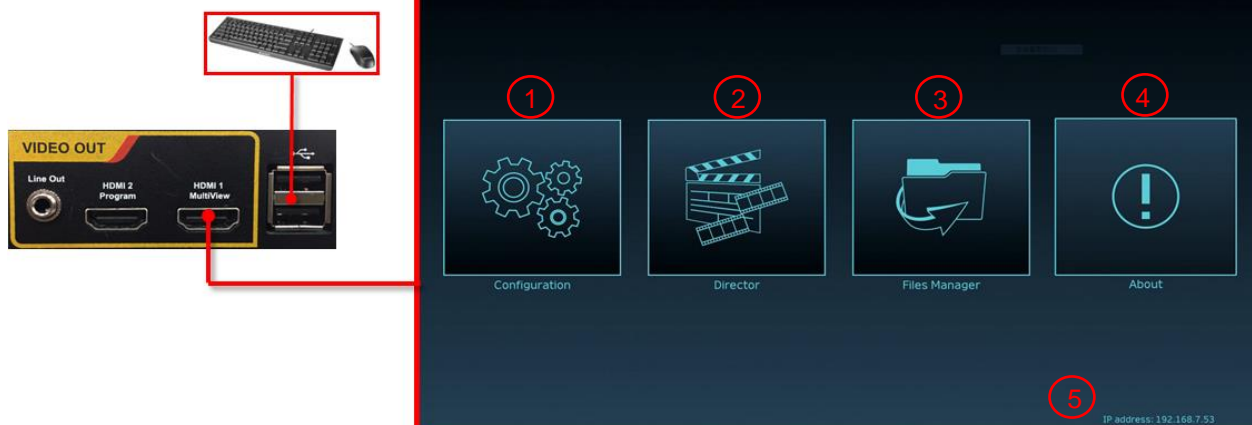






Chapter 5 Function Description

5.1 Real-time operation menu

Connect the HDMI1 MultiView output to the display panel to show the real-time operation menu

Connect the keyboard/mouse through the USB port and use the keyboard/mouse to select the menu settings



No	Icon	Name	Function Descriptions
1		Parameter setting	Perform the system network setting, recording/streaming compress setting
2		Casting Management	Input signal source selection, audio management, recording/streaming control, output version selection, and network video camera control
3		File management	Conduct the video file content management, including the following functions: Upload, download, delete, replay video files
4		About	Display the current firmware version and relevant production information of LC200
5	NA	Device IP	When connecting to the router, the current assigned device IP address will be displayed

5.2 Parameter setting

This Section provides descriptions of the web-based interface to control the display items. HDMI MultiView only provides items of [System Settings] and [Video Settings].

5.2.1 System Settings

5.2.1.1 System Settings

You may set up the device's basic information, initial date and time, and others here.

System Settings

1 Device Identification

Hostname :

 Device Description :

2 Date and Time

Device Current Date and Time :
 2020-10-29 08:02:16
 Time Zone :

 Setting Mode :

 NTP Server URL :

3 Frame Rate Mode

System Frame Rate :

4 Welcome Screen

File Format : PNG
 Size (Max.) : 3 MB
 Resolution(Max.) : 1920x1080

No	Item	Function Descriptions
1	Device Identification	Defines the device name and device description for LC200 ※Display name only accepts English characters and numbers
2	Date & Time	LC200 supports different time zone setting. It can synchronize time with NTP service (default) and manual setup <ul style="list-style-type: none"> Time Zone: Select the correct time zone according to current location Configuration Mode: <ul style="list-style-type: none"> NTP service: Synchronize time with a network server Manual Setup: Set time manually

3	Frame Rate Mode	<p>You can configure the output frame rate at 30/60 fps</p> <p>※If the frame rate setting of LC200 is 60 fps</p> <ul style="list-style-type: none"> ➤ Up to 2 network image inputs are supported ➤ Recording can only be Movie Mode ➤ Streaming video compression format is the same as recording
4	Welcome Image	<p>You can customize a welcome image for LC200</p> <p>1 Click [Browse] and select a file to upload. Once done, a thumbnail will be generated</p> <p>※File format:</p> <ul style="list-style-type: none"> ➤ File format: PNG ➤ File Size (Max.): 3 MB ➤ Resolution Size (Max.): 1920 x 1080 <p>2 Click [Apply] to save this change. If you need to select another file, click [Cancel] and reselect a file</p>

[Remark] You can select different system frame rates in the frame rate mode that affects the supported recording mode and network streaming number. Please refer to the following restrictions on use.

System Frame Rate	Supported Recording Mode	Streaming Video Compression Settings	Network Streaming (IP)		MultiView signal source selection limits	PGM Maximum Split-screen Quantity
			Maximum number of streams supported	Maximum frame rate supported		
FPS30	Mixed Video / Original Source	Full HD 30 FPS HD 30 FPS SD 30 FPS	3 streams	Full HD 30 FPS	IP + HDMI = 4 channels IP ≤ 3 (only CH1~3 available for selection)	4 channels
FPS60	Mixed Video	Full HD 60 FPS	2 streams	Full HD 60 FPS	IP + HDMI = 4 channels IP ≤ 2 (only CH1~2 available for selection)	2 channels

5.2.1.2 Network

The factory reset of LC200 is DHCP. The IP address is assigned by the connecting LAN router. If you want to use a static IP address, please configure the connection here.

System ▾

- System Settings
- Network**
- Service
- Configuration
- Display
- Remote Control Panel

Account

Source >

Video >

Scenes >

Storage

Scheduler

Network

Network Settings

The system will reboot after changing the network settings. Please re-login.

IP Assignment :

IP Address :

Subnet Mask :

Default Gateway :

Primary DNS Server :

Secondary DNS Server :

Apply

No	Item	Function Descriptions
1	Ethernet Setting	<ul style="list-style-type: none"> ■ DHCP: Dynamic IP address as default ■ Static IP: Configure static IP address according to the network and manually enter network information <p>Select and fill in required network setting information and click [Apply] to save the settings</p> <p>※The system will restart after changing network setting. Please connect and log in again</p>

5.2.1.3 Services

System ▾

System Settings

Network

Service

Configuration

Display

Remote Control Panel

Account

Source >

Video >

Scenes >

Storage

Scheduler

Backup

About

Service

1 Master Firmware

Master Firmware Version :
v4.5.0.13

[Update](#)

2 Slave Firmware

Slave Firmware Version :
v19.7.26

[Update](#)

3 Service Data

Export the log file to your computer

Description :

[Export](#)

4 Reset

Reset to factory default

☒ Except the network settings

[Reset](#)

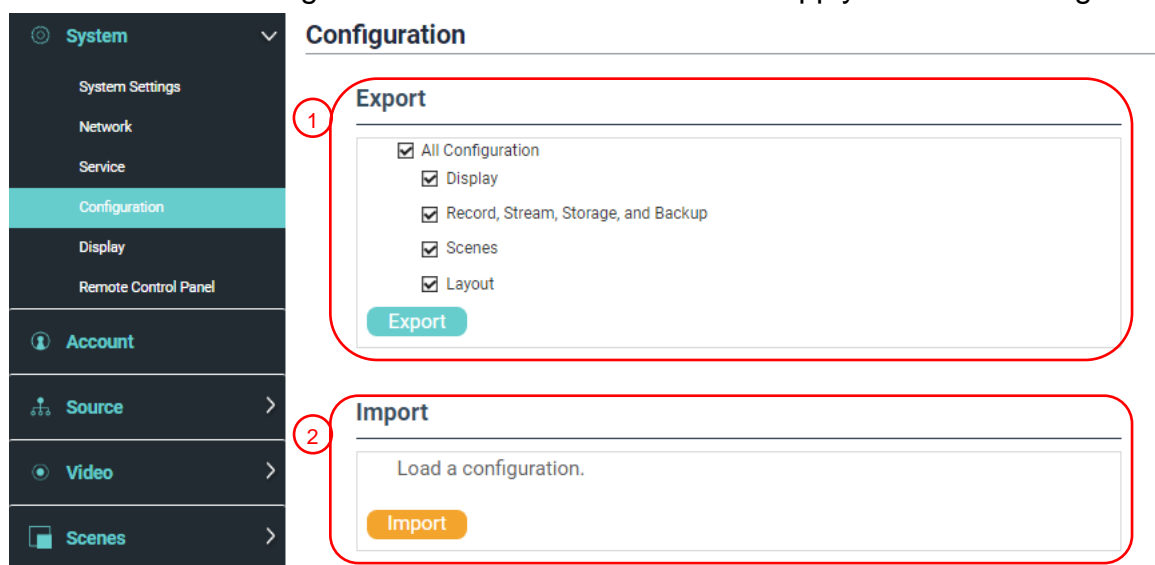
5 Restart Device

[Restart](#)

No	Item	Function Descriptions
1	Main Firmware	Main firmware information and update Click [Update] and select the main firmware file to update
2	Secondary Firmware	Secondary firmware information and update Click [Update] and select the secondary firmware file to update
3	Service History	Saves system log files to user's computer 1 Enter file name 2 Click [Export] to export system log files ※The length of file name must be between 0 ~ 16 characters. { } () ' & @ ~ ^ \$ % " , ` : ? < > * \ # ; symbols, and space are forbidden
4	Reset	Restores LC200 to factory reset ※Check [Keep Network Settings] and the network settings will be remained
5	Restart the device	Restart the LC200

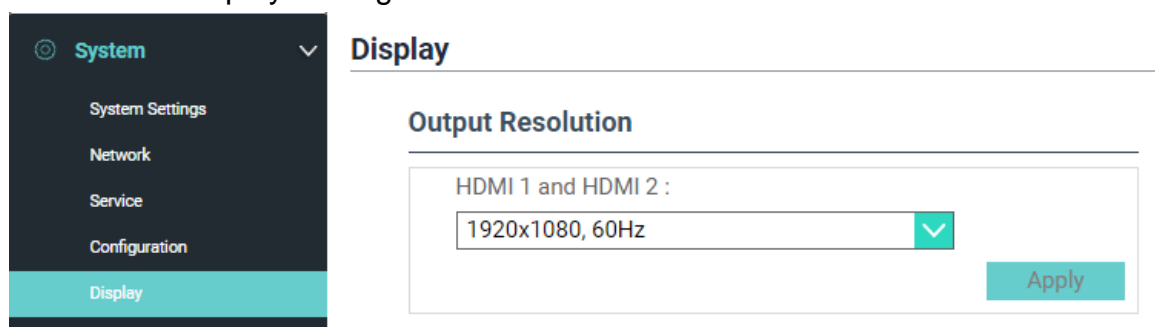
5.2.1.4 Setting File

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.



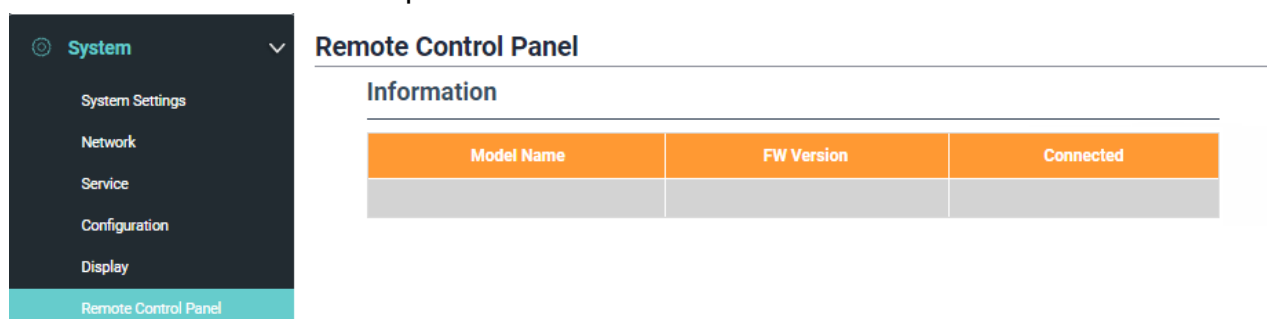
No	Item	Function Descriptions
1	Export	Export the current configuration of LC200 as a configuration file
2	Import	Import the exported configuration files from a LC200 to another LC200

5.2.1.5 Display Settings



No	Item	Function Descriptions
1	Output Resolution	Select a HDMI output resolution on LC200

5.2.1.6 Remote control panel



No	Item	Function Descriptions
1	Remote control panel	Display the connection information of LC-RC01 extension control panel (optional). When there is no connection, a blank screen appears

5.2.2 Account

You can manage accounts for 3 kinds of user mode here: modify the user name and password to [System Management], [Director], and [Content Management].

System >

Account

Source >

Video >

Scenes >

Storage

Scheduler

Backup

About

Account management

1

Administrator

Username :

New Password :

Confirm Password :

Apply

2

Online Director

Username :

New Password :

Confirm Password :

Apply

3

Video Manager

Username :

New Password :

Confirm Password :

Apply

No	Item	Username/Password	Function Descriptions
1	System Management	admin / admin	Sets up the permission of main system management
2	Director	director / director	Manages playback and changes simple basic image settings and the permission of Director
3	Content Management	video / video	Views the permission of file storage and playback

※Note:

The length of user name must be between 4 ~ 16 characters. {}()'&@~^\$%",'':?<>*V#; symbols, and space are forbidden

The length of password must be between 8 ~ 16 characters. {}()'~^"'',':?<>*V; symbols, and space are forbidden

Duplicate username is forbidden

5.2.3 Video Source

5.2.3.1 Network Device Management

No	Item	Function Descriptions
1	Network Camera	<ol style="list-style-type: none"> Click [Refresh] and automatically scan the network cameras in the same LAN Click [Login Verification] and enter login information to connect the camera <div data-bbox="564 1005 1031 1252"> </div> <div data-bbox="1054 1032 1378 1218"> <div>Lumens Network Camera</div> <ul style="list-style-type: none"> Account: admin Password: 9999 </div> Once the status display “OK”, indicating that the image can be set under the signal source input selection.
2	Network Streaming	<ol style="list-style-type: none"> Click [Add] Enter the network streaming name and URL, and then click [Apply] <div data-bbox="619 1424 1222 1738"> </div> The newly added network streaming name will be displayed in the list

5.2.3.2 Video communication source management

System >

Account

Source ▾

Network Device Manager

Video Source Manager

Video >

Scenes >

Storage

Scheduler

Backup

About

Video Source Manager

+ Add

ID	Source	Information	Source Name	Edit	Delete
1	HDMI1	N/A	HDMI1		
2	HDMI2	N/A	HDMI2		
3	HDMI3	N/A	HDMI3		
4	HDMI4	N/A	HDMI4		

No	Item	Function Descriptions
1	Video communication source management	Display the video communication source information for users to edit the source name and order

5.2.4 Video Settings

5.2.4.1 Record Settings

System

Account

Source

Video

Record

Stream

Scenes

Storage

Scheduler

Backup

About

Record

1 Encoder Settings

Recording Mode :

MP4 Mixed Video/ Original Source

Full HD

Resolution : 1920x1080

Average Bitrate : 4 Mbps

FPS : 30

GOP : 30

H.264 Profile : high profile

Audio Bitrate : 256 Kbps

Audio Sample Rate : 48.0 KHz

Video Compression :

Full HD

Preferentially Record to Front USB Flash Drive :

off

Loop Recording :

on

Apply

2 Audio settings

Audio Delay Adjustment :

100 ms

Record File	Audio Source
PGM	PGM Audio
Channel 1	PGM Audio
Channel 2	PGM Audio
Channel 3	PGM Audio
Channel 4	PGM Audio

Apply

3 Recording File Name Setting

Prefix Setting :

Apply

No	Item	Function Descriptions
1	Encoder Settings	<ul style="list-style-type: none"> Recording Mode: You can select MP4 Mixed Video Mode and MP4 Mixed Video/ Original Source Mode <ul style="list-style-type: none"> Mixed Video Mode: Only record the single PGM 4-channel mixed video. Original Source Mode: Can record the single PGM 4-channel mixed video and 4 signal original source Encode Profile: 6 default encoding formats are available to be selected by resolutions and average bitrate (Please refer to the instructions of Encode Profile). You can also set user-defined image quality. Preferentially record to front USB hard drive: Videos or pictures will be preferentially recorded to the USB flash drive which has already been connected to the front USB port. Cycling Record: Enabling the cycle record function can prevent recording error when storage device is full
2	Audio Settings	<ul style="list-style-type: none"> Audio Delay Adjustment: 0 ~ 600 ms

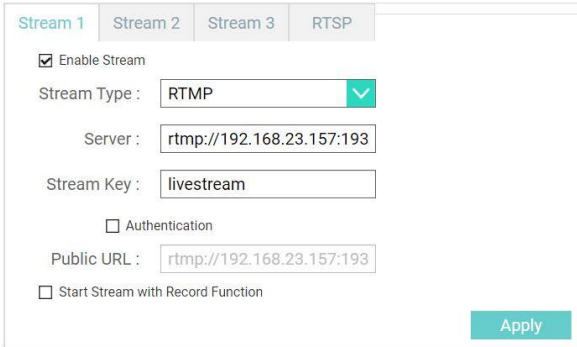
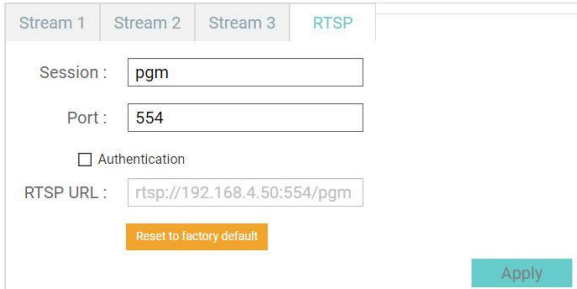
		<p>■ Audio source: Set the audio source for Channel recording files</p> <p>※The selection of non PGM Audio may increase CPU loading.</p> <p>Users may check out CPU information on the Director page of real-time operation menu under MultiView</p>
3	Video File Name Setting	Customizes the prefix name of video file

■ Instruction on Encode Profile

Name	Video Resolution/ABR	Description
Full HD	1080p / 4 Mbps	Dynamic scene; Large film site; Local drive recording
Internet Full HD	1080p / 3 Mbps	General scene, Medium film site, Local drive recording
HD	720p / 2 Mbps	Static scene, Small film site, Local drive recording
Internet HD	720p / 1.5 Mbps	LAN director
SD	480p / 800 kbps	Static scene, LAN director
Mobile network SD	480p / 500 kbps	Director via mobile device
User-Defined	Click [] to open Custom (as shown in the following figure). Once done, click "Save".	

5.2.4.2 Streaming Settings

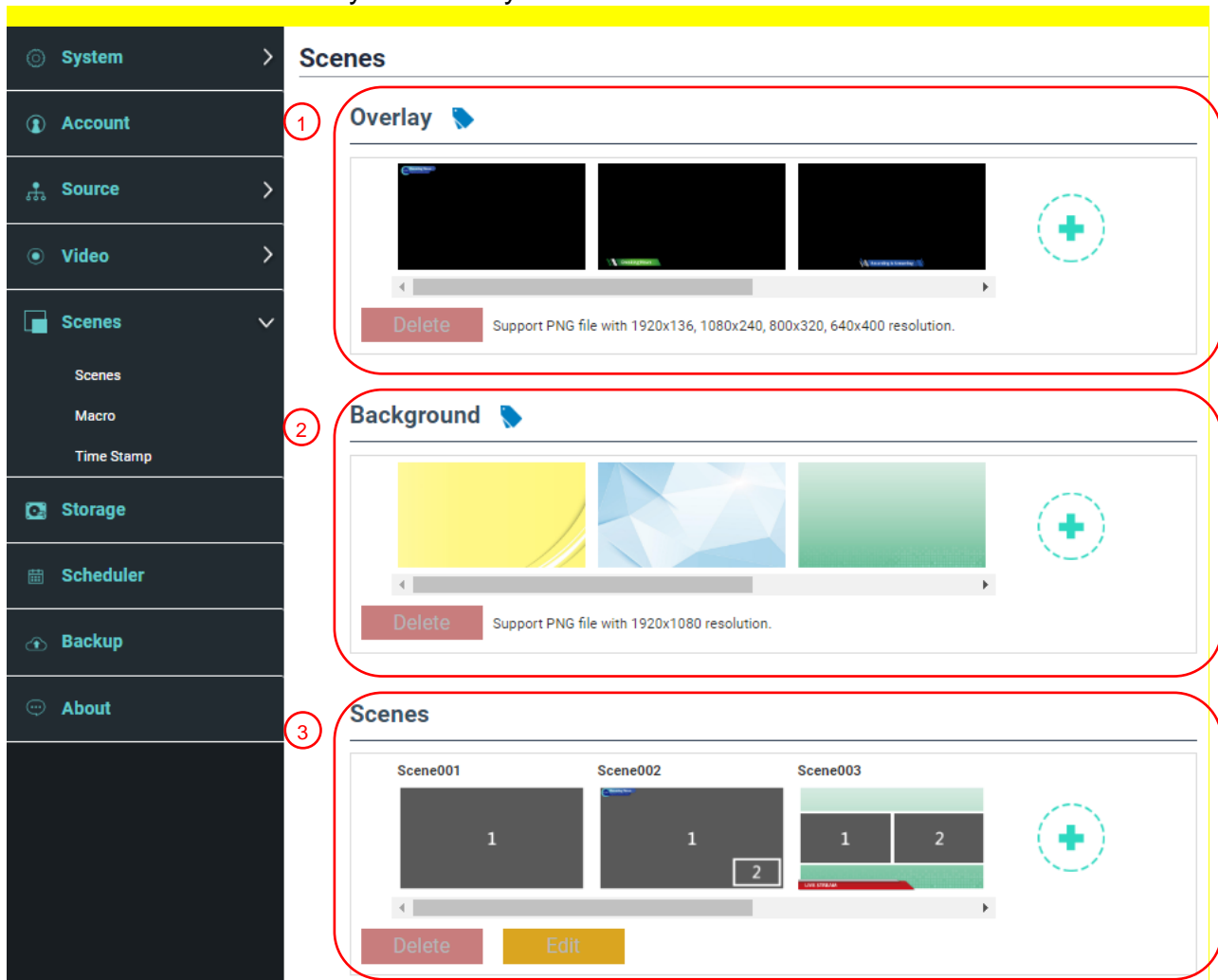
You may change the streaming settings here. Related settings must follow the streaming protocol and the settings recommended by server system support.



No	Item	Function Descriptions
1	Encoder Settings	Encode Profile: 6 default encoding formats are available to be selected by resolutions and average bitrate (Please refer to 5.2.4.1 for the instructions of Encode Profile in Record Settings). You can also set user-defined image quality.
2	Streaming Settings	<ul style="list-style-type: none"> Streaming 1 / Streaming 2 / Streaming 3: You can customize 3 podcast addresses of network streaming Supported streaming type: RTMP / RTMPS / RTP / Youtube / Youtube_Gaming / Facebook Live / Twitch / Smashcast  <ul style="list-style-type: none"> Real Time Streaming Protocol (RTSP): You can customize the real time streaming route of LC200 Default RTSP location: rtsp://LC200_IP_address:554/pgm 


5.2.5 Scene

5.2.5.1 Scene

LC200 provides 5 overlay styles, 5 background images, and 5 scenes. You can also add your own styles.



No	Item	Function Descriptions
1	Overlay	<p>Select and delete overlay style. You can upload files to apply. Click [] and select a desired file from the window. Check the preview image and file name, and click [Apply] to start uploading and applying this overlay style. Click [Delete] to cancel the upload.</p> <p>※File format:</p> <ul style="list-style-type: none"> ➤ PNG format ➤ Supported size: (a) 1920 x 136 (b) 1080 x 240 (c) 800 x 320 (d) 640 x 400
2	Background Image	<p>Select and delete background image. You can upload files to apply. Click [] and select a desired file from the window. Check the preview image and file name, and click [Apply] to start uploading and applying this background image. Click [Delete] to cancel the upload.</p> <p>※File format:</p> <ul style="list-style-type: none"> ➤ PNG format ➤ Supported size: 1920 x 1080

3	Scene	<p>Scene is the integration of “Overlay,” “Background Image,” and “Recording Layout,” which provides the scene made of different background images, layout, and overlay style. You can customize the layout content in 30 scenes.</p> <p>Click [] to open scene settings. Enter the scene name and select the required overlay, layout, and background image. Once done, click “Apply”.</p>
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5.2.5.2 Macro

When used together with LC-RC01 extension control panel (optional), Macro can set scenes and camera preset position.

Macro [1 ~ 3] settings correspond to [1 ~ 3] keys on the extension control panel

System

Account

Source

Video

Scenes

Scenes

Macro

Time Stamp

Storage

Scheduler

Backup

About

Macro Settings

Macro 1

Scene001

Scene002

Scene003

Scene004

☒ Camera Preset

1

Macro 2

Scene001

Scene002

Scene003

Scene004

☒ Camera Preset

2

Macro 3

Scene001

Scene002

Scene003

Scene004

☒ Camera Preset

3

No	Item	Function Descriptions
1	Scene Selection	<p>Select a scene to be set. Each supports up to 30 sets of scene</p> <ul style="list-style-type: none"> If the overlay style of the scene needs to be change, please refer to
2	Camera Preset Position Setting	<p>Set/Cancel [Camera Preset Position]. Each supports up to 9 sets of camera preset position selection</p> <p><Remark> After checking the box, the Marco will preset the settings of the network camera on Channel 1 ~ 4</p>

5.2.5.3 Time Stamp

System

Account

Source

Video

Scenes

Scenes

Macro

Time Stamp

Storage

Scheduler

Backup

About

Time Stamp

1 Enable Time Stamp :

off

2 Format :

YYYY-MM-DD hh:mm:ss

3 Color :

Yellow

4 Size :

4

5 X Position (0~100) :

100

Y Position (0~100) :

100

Remarks:When the Time Stamp function is enabled, other overlays cannot be applied

Apply

No	Item	Function Descriptions
1	Enable Time Stamp	Turn on/off Time Stamp <Remark> When the Time Stamp function is enabled, other overlays cannot be applied
2	Format	Time display format
3	Color	Color setting
4	Size	Font size setting
5	X / Y Position (0 ~ 100)	X: Time Stamp display position (left and right) in the PGM screen 0: The leftmost / 100: The rightmost Y: Time Stamp display position (up and down) in the PGM screen 0: Top / 100: Bottom

5.2.6 Storage Settings

You can set up recording storage, cycle recording, display hard drive information and NAS setting here.

System

Account

Source

Video

Scenes

Storage

Scheduler

Backup

About

Storage

Record Disk Settings

Local Storage :

Internal (SATA HDD)

Apply

Disk Information

Interface	Disk Name	Manufacturer	Capacity	Free Space	Format
SATA	Internal (SATA HDD)	ATA WDC WD10SPZX-22Z	915.89 GB	357.72 GB	Format

NAS settings

Mount :
☐ off

Protocol :
CIFS / SMB

Address :
0.0.0.0

Port :
445

Folder :
SAMBA


Domain name :

Username :



Password :

Options :
defaults

Apply

No	Item	Function Descriptions
1	Recording Hard Drive Setting	Local storage: Click drop-down menu  and select local storage hard drive Formats supported: exFAT/ FAT32/ NTFS
2	Hard Drive Information	Display hard drive information, free space, and capacity. Click "Format" to clear the internal storage devices. Confirm if you want to format the hard drive in the pop-up dialog and click "Confirm" to delete all video files.
3	NAS setting	Enable NAS mounting and related settings. <Note> It is required to go to Backup Setting> Upload Setting> Mode to select NAS. After recording, the video can be uploaded to NAS

5.2.7 Schedule Setting

No	Item	Function Descriptions
1	Schedule Setting	<ul style="list-style-type: none"> ■ Click [On/Off] : Enables/Disables schedule function ■ Click [Calendar] : Check the current schedule status ※Reset schedule source and replace the current schedule ■ Schedule source: <ul style="list-style-type: none"> ➢ Scheduling via the Panopto server: Enter the login information of the Panopto server to synchronize schedules ➢ Scheduling via the Opencast server: Enter the login information of the Opencast server to synchronize schedules ➢ Importing calendar manually: You can import iCalendar files (e.g. Outlook or Google Calendar) Click [Import] and select custom scheduled video file ※Only files in .ics format can be imported ➢ Importing calendar periodically You can synchronize schedules from network servers (e.g. Google Calendar) ※Please refer to the videos of How-to series on Lumens™ website and YouTube channels for related application settings.
2	Cancel Recording	Click [Stop] to stop the current scheduled recording
3	Stand by and Wake up	Enable/disable the scheduled standby and wake-up functions. Set the scheduled time after the functions are enabled.

5.2.8 Backup Setting

LC200 provides auto backup service which can upload videos to a designated space automatically. You can set up upload destination and test the connection here.

CaptureVision Station - Configuration

System Account Source Video Scenes Storage Scheduler Backup About

Backup Settings

Backup Type : OFF

Mode : FTP

IP Address : 192.168.4.37

Port : 21

Folder : LC200


Authentication : Normal

Username : nerb

Password :

Connection Test

Apply

No	Item	Function Descriptions
1	Upload Setting	<ul style="list-style-type: none"> Auto upload: Disable / Upload right after recording completes / Upload periodically Mode: FTP / NAS / SFTP / Kaltura / Panopto / Opencast HTTP / Opencast HTTPS <p><Note> Select NAS. Please go to Storage Settings > NAS Setting to enable mounting and related settings</p> <ul style="list-style-type: none"> Connection Test: Click [Connection Test]  to test if a connection can be created with the current setting <p><Remark> Please refer to the videos of How-to series on Lumens™ website and YouTube channels for related application settings</p>

5.2.9 About

LC200 Device-related Information: Firmware version, device serial number, and technical support link

CaptureVision Station - Configuration

System Account Source Video Scenes Storage Scheduler Backup About

System Information

Information

Manufacturer : Lumens Digital Optics Inc.

Model : LC200

Master Firmware Version : v4.3.0.29

Slave Firmware Version : v19.7.26

Serial Number :

MAC : BC:BA:E1:FF:22:23

Webpage : www.MyLumens.com

Support : service.lumens.com.tw

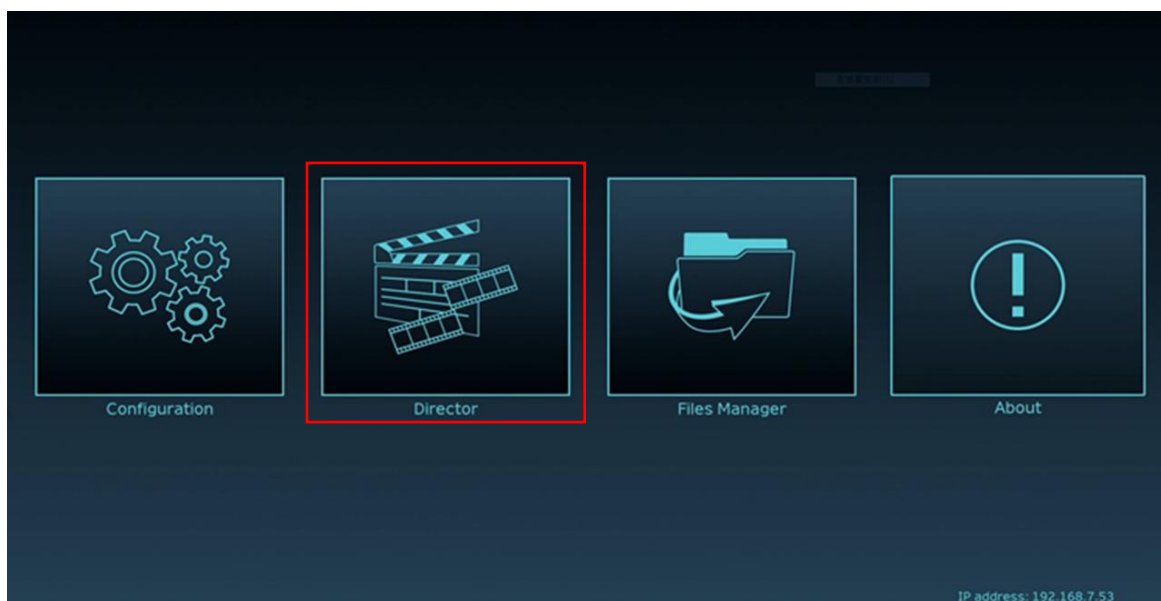
QR Code

5.3 Director

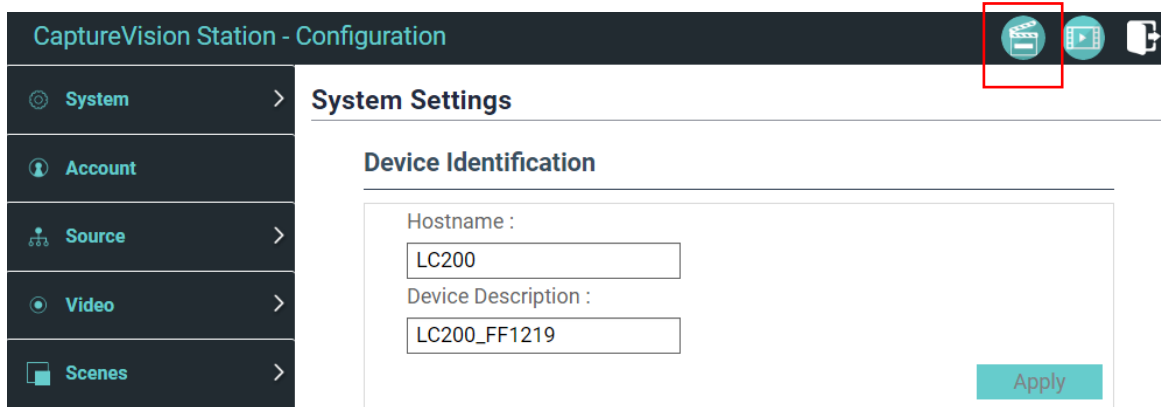
LC200 is built in Director, which allows you to monitor recording and preview the output video from streaming director.

Three login methods below are available:

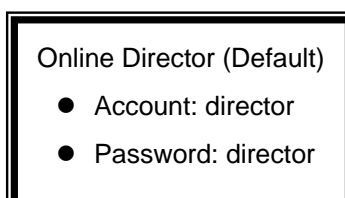
- Select online Director from the HDMI1 MultiView real-time operation menu



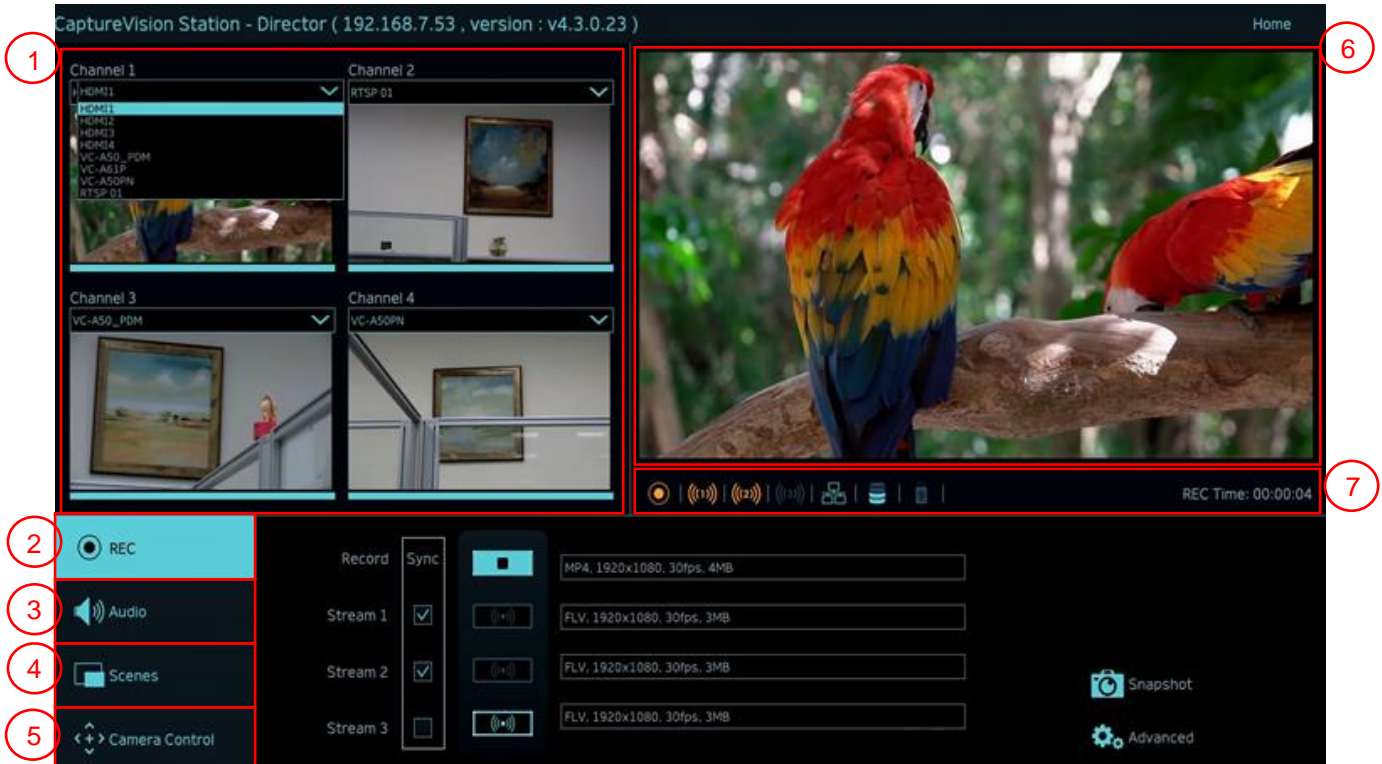
- When login the web page, select the online Director icon at the upper right corner on the configuration setting page



- When login the web page, use the online Director authority account

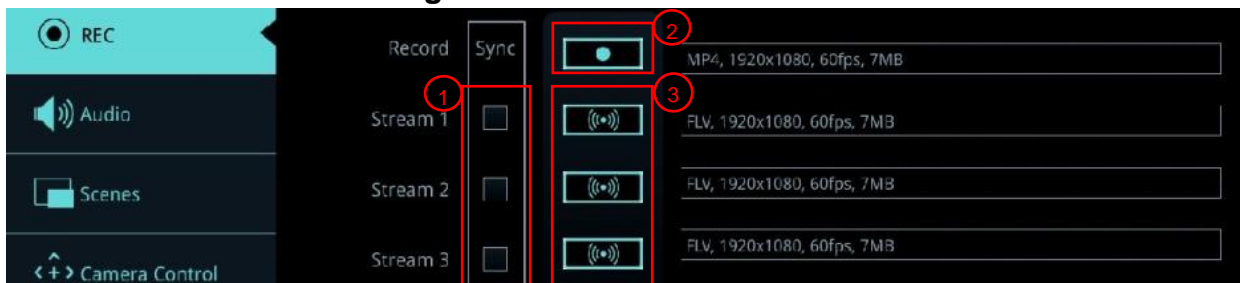



Online Director related feature description as below:



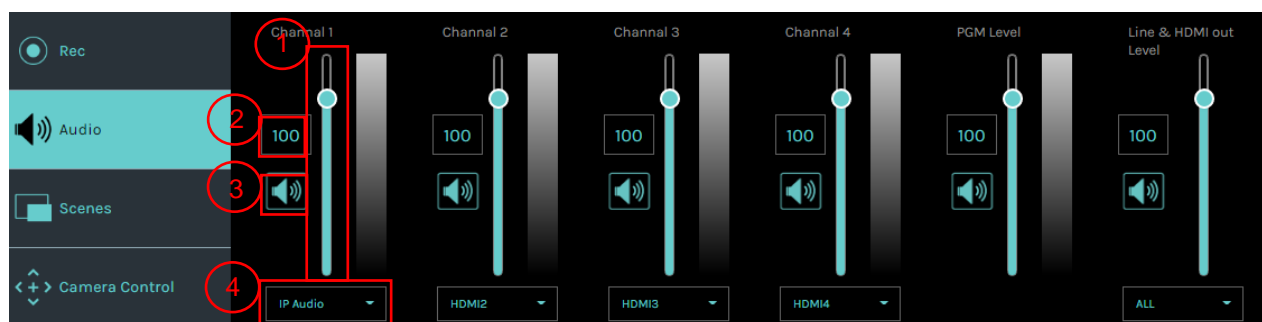
No	Item	Function Descriptions
1	Channel Signal Selection	The drop-down menu of image sources includes 4-channel HDMI source, IP camera, or streaming image
2	REC Record Setting	Start or stop recording; also select whether to synchronously stream or not
3	Audio Source Management	Manage the input and output audio source; adjust the audio volume of the recording
4	Scenes Layout Setting	Fast select the recording layout, or customize the background and scene style
5	Camera Control	Provide the IP video camera PTZ control or simple function settings
6	Main Screen Output	Display the layout of current output screens
7	Recording Progress Bar	Display information of the current status of recording/streaming, such as hard drive capacity

5.3.1 REC Record Setting



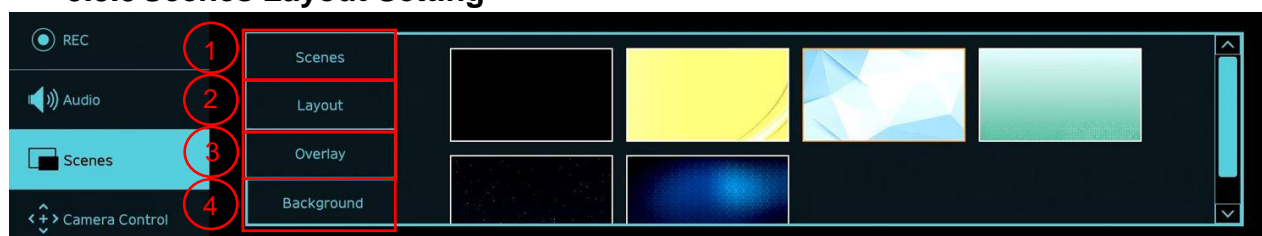
No	Item	Function Descriptions
1	Recording while Streaming	Check stream(s) and click recording button  to start streaming and recording function
2	Recording Button	Record the main screen image
3	Single-channel Streaming Button	Streams right away without starting recording function

5.3.2 Audio Source Management



No	Item	Function Descriptions
1	Volume Control	Adjust the volume of audio input
2	Audio Volume scale	Display current audio volume scale
3	Mute Button	Mute audio output
4	Audio Source Setting	Select a audio source

5.3.3 Scenes Layout Setting



No	Item	Function Descriptions
1	Scenes	Scenes page is the integration of “Overlay,” “Background Image,” and “Recording Layout,” which can perform a series of scene change according to your needs.
2	Layout	Apply a different layout to highlight the screen focus of different channels. Click a desired layout style to apply.
3	Overlay	Select a desired style to apply
4	Background	Display the background images supported by “Director” system. Click the thumbnail to apply

5.3.4 Camera Setting



No	Item	Function Descriptions
1	Camera	Select a desired camera to control
2	Preset Setting and Call	Click number keys to perform preset settings and calls
3	Direction Control Panel	Move the center point to control the shooting direction ※Web pages do not support trackball controls. Please use arrow keys to adjust the screen direction
4	Zoom In/Zoom Out	Zooms in/out the lens
5	Focus Setting	Set up auto or manual focus

6	Backlight Compensation	Enables/disables backlight compensation
7	PTZ Speed Setting	Set up the moving speed of Pan Tilt Zoom

5.3.5 USB/Wireless Keyboard Function

Under the director page, some functions can support USB/ wireless keyboard to control LC200

■ Numeric Keys

Key	Function Descriptions
Enter	Start Recording
0	Stop Recording
1 ~ 9	Call theme 1 ~ 9
*	Start Push
/	Stop Push
-	Reduce PGM audio input volume
+	Increase PGM audio input volume
. Del	Turn on/off PGM audio input

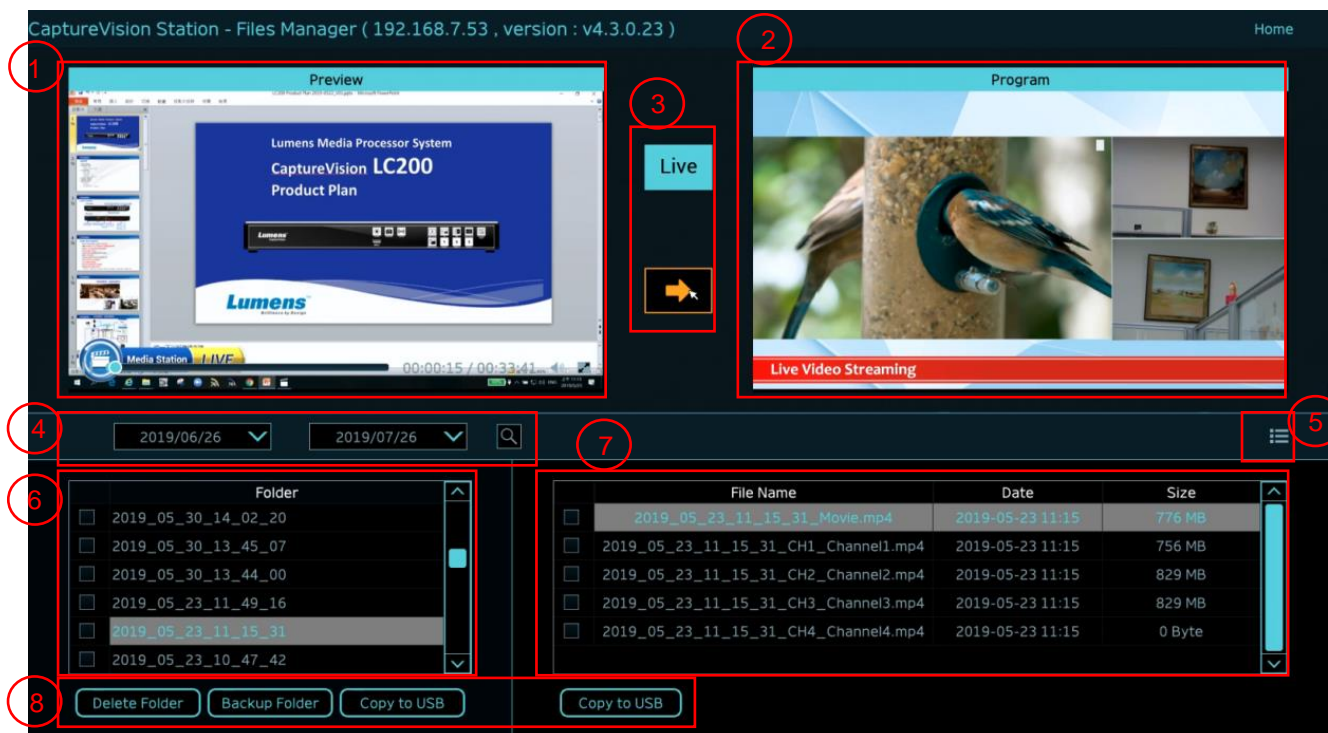


■ Other buttons

Key	Function Descriptions
F1	Macro 1
F2	Macro 2
F3	Macro 3
L	Switch to the next template
S	Switch to the next theme
O	Switch to the next overlay
B	Switch to the next background
M	Turn on/off PGM audio input
C	Capture a single photo (JPEG file)
Space	Stop Recording


5.4 File management

LC200 provides file management feature which can perform the following functions via the file management interface: Upload, download, delete, replay video files and editing recording information.

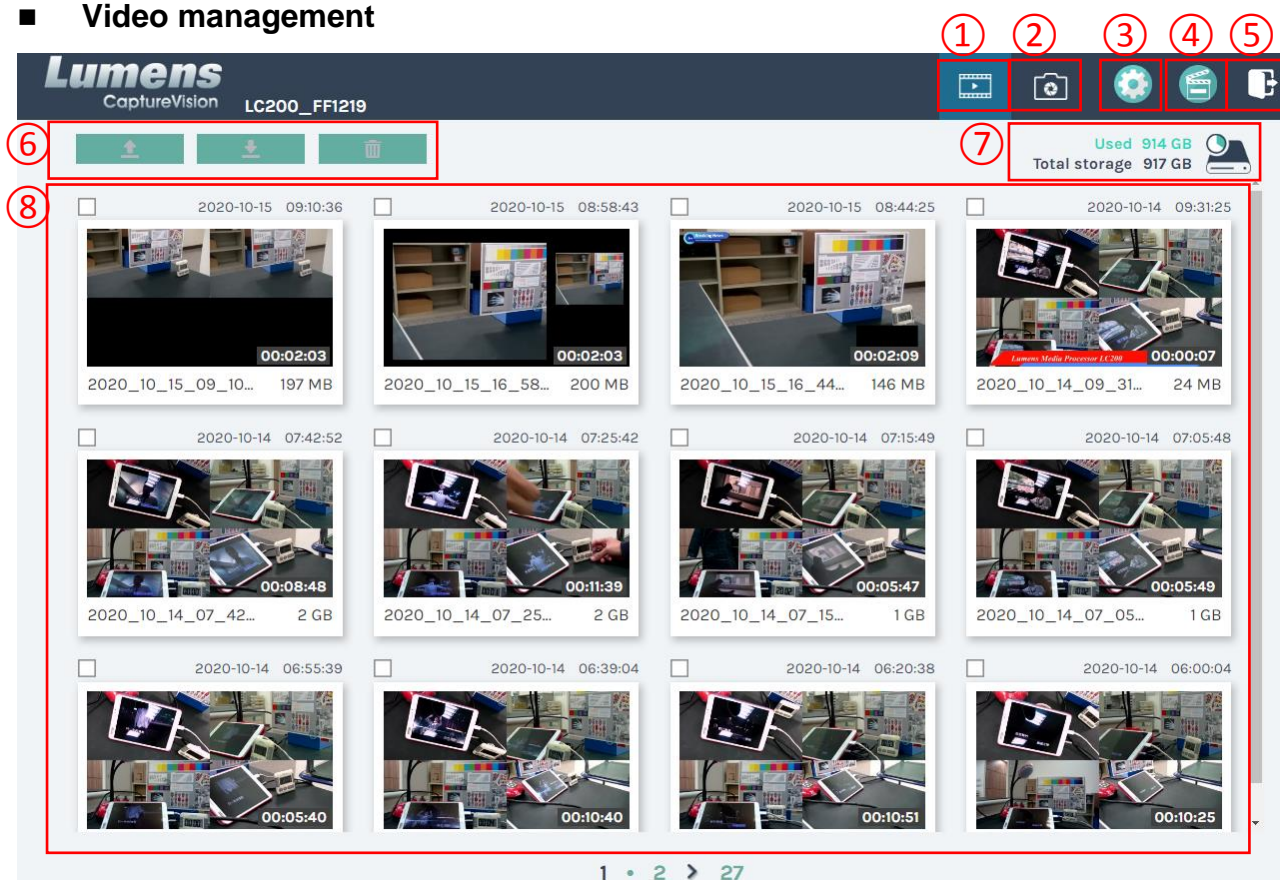


No	Item	Function Descriptions
1	Preview Screen	Click desired video files to play and control on the Preview screen
2	Program Screen	Display the Director screen or switch to synchronize with the Preview screen
3	Screen Switch Button	Switch the Program screen to the LIVE Director screen or the Preview screen
4	Discovery	You can search recording video files by selecting date period on the calendar
5	Display Mode Switch	Video view mode. You can switch to thumbnail mode or list mode
6	Folder Display	Display the recording video folders
7	Video File Display	Display the files in the video folder
8	File Management	Delete, backup or copy recording video to an external USB flash drive

5.4.1 Webpage Interface

The default page after accessing LC200 web page is system setting page. Click the video management icon  on the top-right corner to access video management page.


■ Video management







No	Item	Function Descriptions
1	Video Management	Click to access the video management page
2	Photo Management	Click to access the the picture management page
3	System Settings	Click to access the system setting page ※ Caution: Log in the web page with admin/admin to display system setting subpage If you log in the web page with video/video, you will not find the system setting subpage and you can only manage videos and photos
4	Online Director	Click to enter the Online Director page
5	Logout	Click this icon to log out the web page interface
6	File Management	Upload, download and delete the checked video files
7	Hard Drive Status Display	Display the used space and the capacity of the current hard drive
8	Video File Display	List information, including the 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
	Videos are uploaded successfully		Videos are queued for upload
	Fail to upload videos		Videos are uploading

➤ Download

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

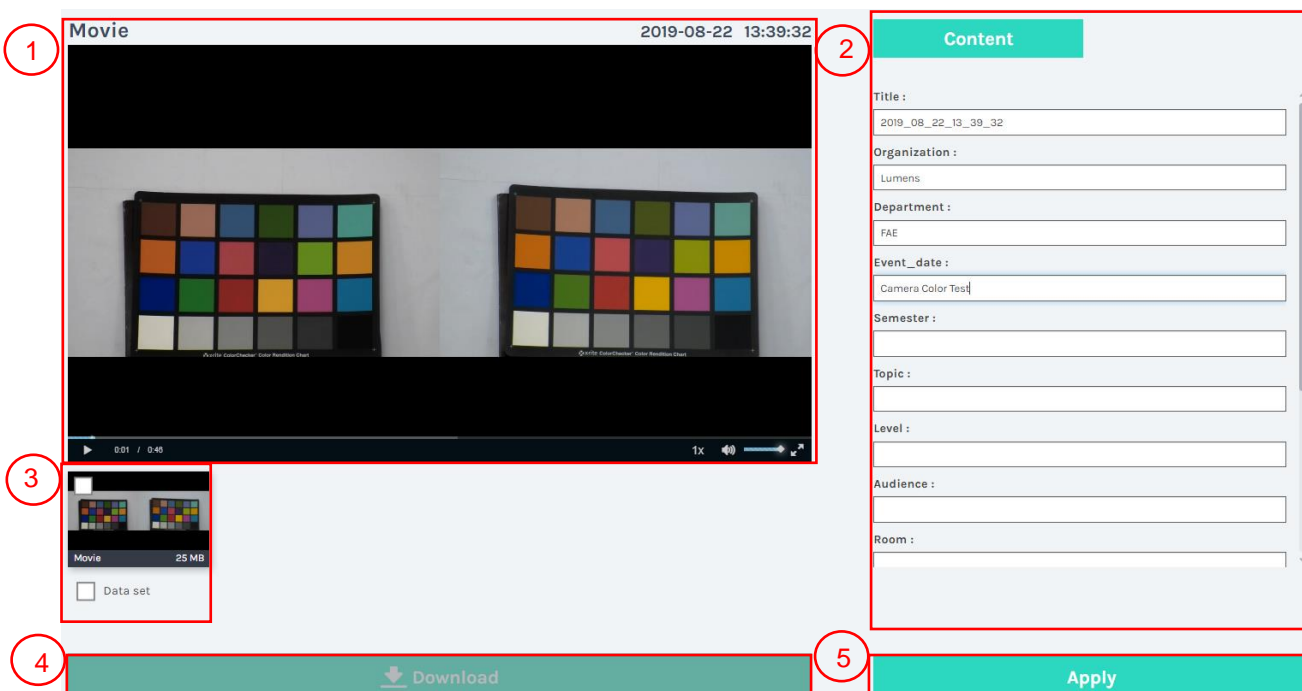
If only video files are needed, you can click the video thumbnails and access video playback page to download the video files only.

➤ Delete

Check the thumbnails of the videos to delete. Click [] and the video files will be deleted for good.

■ Video Playback

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



The screenshot shows the Video Playback interface. Callout 1 points to the video player area showing a color calibration chart. Callout 2 points to the 'Content' sidebar on the right, which contains fields for Title, Organization, Department, Event_date, Semester, Topic, Level, Audience, and Room. Callout 3 points to the video controls at the bottom left, including a play button, progress bar, and volume control. Callout 4 points to the 'Download' button at the bottom center. Callout 5 points to the 'Apply' button at the bottom right.

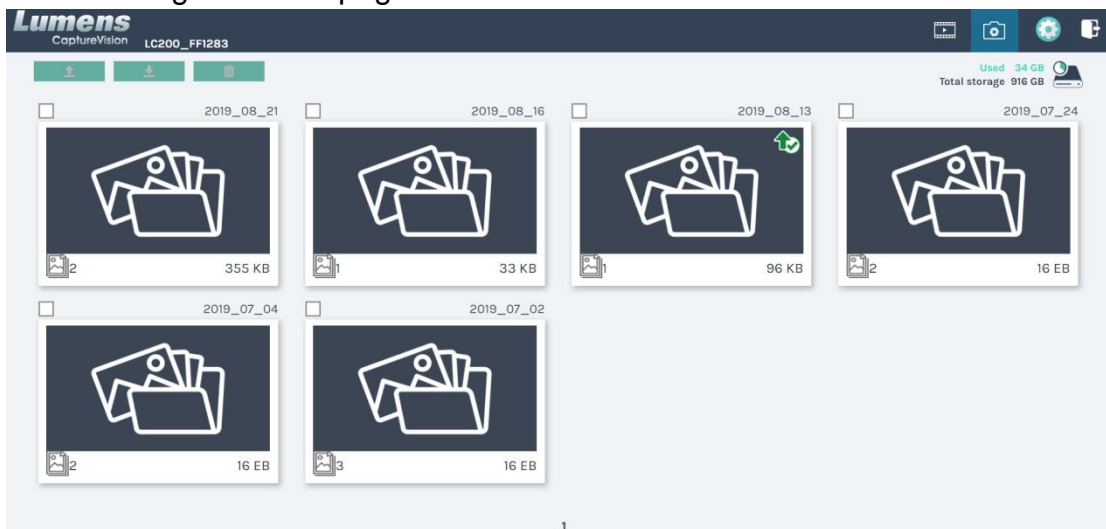
No	Item	Function Descriptions
1	Video Control Window	Play back and control recording videos

2	Video Content	Edit and modify video content
3	Video File and Dataset	Select the video files or datasets to download
4	Download Button	Click this button to download the checked video files or datasets
5	Apply Button	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 in 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 6 Troubleshooting

This chapter describes problems you may encounter while using LC200. If you have questions, please refer to related chapters and follow all the suggested solutions. If the problem still occurred, please contact your distributor or the service center.

No.	Problems	Solutions
1.	Boot without power signal	Make sure you have plugged in the power cord
2.	No image output	<ol style="list-style-type: none"> 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 signal source connects to the device correctly 5. LC200 cannot record video from a video output including HDCP format 6. Confirm whether the machine is in standby mode. Tap any key on the LC200 panel to wake the machine (*Note 1)
3.	The panel keys are not responding	The panel become non-functional when logging into the system
4.	LC200 cannot perform camera control after connecting to a camera	Please make sure the dial setting of Camera Address Selector is 0. LC200 cannot identify camera correctly if it is not 0 
5.	You cannot log in the web page administration interface if you forget the password	If you forget the default password, please press the panel concurrently Snapshot  + Switch Channel  buttons on the panel at the same time for 5 seconds to restore the factory reset
6.	Webpage login failed	<ol style="list-style-type: none"> 1. Confirm whether the machine is in standby mode. Tap any key on the LC200 panel to wake the machine (*Note 1) 2. Please confirm whether the password is correct. If you forget your password, please refer to Troubleshooting #5
7.	Selections of network streaming can not be more than 3 channels.	You can select different system frame rates in the frame rate mode that affects the supported recording mode and network streaming number. Please refer 5.2.1.1 System Settings for the restrictions on use of the system frame rate
8.	Layout Editor software cannot edit the layout	Firmware version 4.4.0.19 or later. When exporting files from LC200, please only click the Layout selection for export <div> Configuration <hr/> Export <hr/> <input type="checkbox"/> All Configuration <div> <input type="checkbox"/> Display <div> <input type="checkbox"/> Record, Stream, Storage, and Backup <div> <input type="checkbox"/> Scenes <div> <input checked="" type="checkbox"/> Layout <div> <div>Export</div> </div> </div> </div> </div> </div> </div>

9.	LC200 cannot find the camera	Please link to the webpage of the camera to make sure that [Setting] > [Video] > [Camera ID] / [Location] in the webpage uses only English letters or numbers. LC200 cannot find the machine if you use special characters and space.
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*Note 1: Standby Mode: Applicable to firmware version 4.4.0.19 or later. Enable through the RS232/TCP command.

Addendum 1

■ Frequently used port No.

Port No.	Description
1935/TCP	Applicable for RTMP podcast to most platforms, such as YouTube, Vimeo, Twitch
80/TCP	Applicable for RTMP podcast to Periscope
443/TCP	Applicable for RTMPS podcast to Facebook
1935/TCP 1936/TCP	Applicable for RTMP podcast to LinkedIn
2935/TCP 2396/TCP	Applicable for RTMPS podcast to LinkedIn
443/TCP (HTTPS)	Applicable to built-in HTTPS platforms with safety certification, such as YouTube, Facebook, Ustream, Livestream, Twitch
53/UDP (DNS)	Applicable to services of changing DNS IP address

Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Manufacturer : Lumens Digital Optics Inc.

Product Name : LC200

Model Number : CaptureVision Station

Responsible Party – U.S. Contact Information

Supplier : Lumens Integration, Inc.

4116 Clipper Court, Fremont, CA 94538, United States

e-mail : support@mylumens.com

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions :

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.