LC100/LC100N CaptureVision Station

User Manual - English



[Important]

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Chapter 1 Package Contents

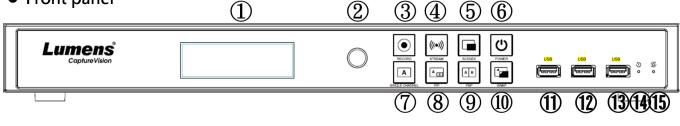
LC100/LC100N	Power Adapter	Power Cord	3-PIN to 2-PIN connector
		Appearance may vary depending on country/ region	(For Japan only)
Quick Installation Guide	RS-232/RS-485 Connector (x2)	Mounting Metal Plate (x2)	Mounting sheet metal screws (M3 x 6 x 4)
Quick Installation Guide			anne(+) anne(+) anne(+) anne(+) anne(+)
Cable holder-1	Cable holder-2		
	÷		



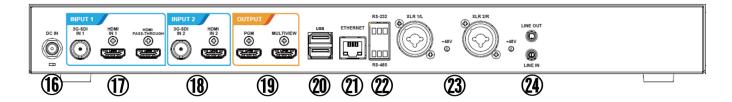
Chapter 2 Product Overview

The LC100/LC100N CaptureVision Station uses the Linux operating system and an ARM architecture processor to provide stable recording services. It supports video recording, mixing and switching from various input signal sources. It enables voice, image, and data in bidirectional transmission through the public network and support pre-scheduled recording and uploading. You can start recording automatically without being on site. LC100/LC100N is widely used in education, corporate meetings, government agencies, etc., for live or recorded environments.

• Front panel



Rear panel



NO	Name	Function Descriptions	NO	Name	Function Descriptions		
1.	LCM	Display Menu and Information	16	DC IN 12V	DC 12 V power connector		
2.	Knob	LCM knob					
		Start/Stop recording			HDMI input 1		
		Press and hold for 3 seconds: Pause Recording	17	17 Input1	■ 3G-SDI input 1 ■ HDMI Passthrough		
3	Record	 Blue LED light: Is connected to power source for recording 					
		Red LED light: Recording in progress		10		HDMI input 2	
		 Blue + Red LED light: Recording paused, press again to resume recording 	18	Input2	■3G-SDI input 2		
4	Stream	On/Off image streaming Blue LED light: Is connected to power source for streaming	19	Output	 PGM: Main screen output, display the recording or streaming screen and layout Multiview: Operation interface output; display 		
		 Red LED light: Streaming in progress, press again to stop streaming 		the settings menu and image management			
5	Scene	Switch templates					
6	Power	On/Off the device power Press and hold for 6 seconds: Force to reboot	20	USB 3.0 port	Supporting the following devices: USB video/audio devices		



7	Single Channel	Display a single channel screen			External storage disk
8	PIP	Switch to PIP (picture in picture)			 Keyboard/mouse device LC-RC01 (optional) USB connection
9	PBP	Switch to PBP (picture by picture)			
10	SWAP	Switch CH1/CH2 signal channels	21	Ethernet	Connect to Ethernet
11	USB 3.0 port	External storage disk			
12	USB 3.0 port	External storage disk			
13	USB 2.0 port	External storage disk	22	RS-232/ RS-485 port	Connect to AV control equipment
14	Factory Reset	Reset all configurations to factory default settings	23	XLR audio in	Connect to a microphone or audio mixer
15	Restart	Reboot the machine	24	Line In/Out	Audio In/Out

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

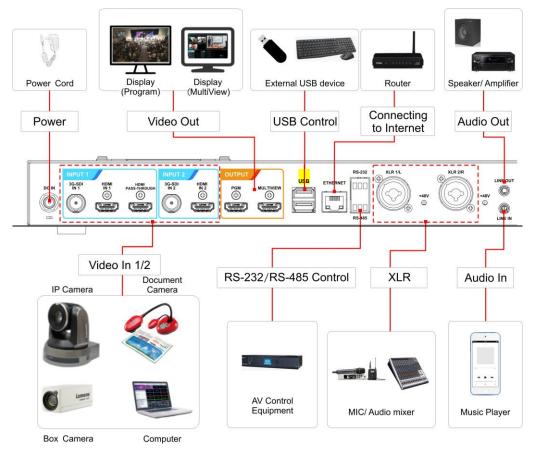
(1) (2) (3) RS-232 TX RX GND
888
888
T/R+ T/R- GND
RS-485 (4) (5) (6)

RS-232		
Pin NO.		Function
1	TX+	
2	RX-	
3	GND	
RS-485		
 RS-485 Pin NO. 		Function
	T/R+	Function
Pin NO.	T/R+ T/R -	Function

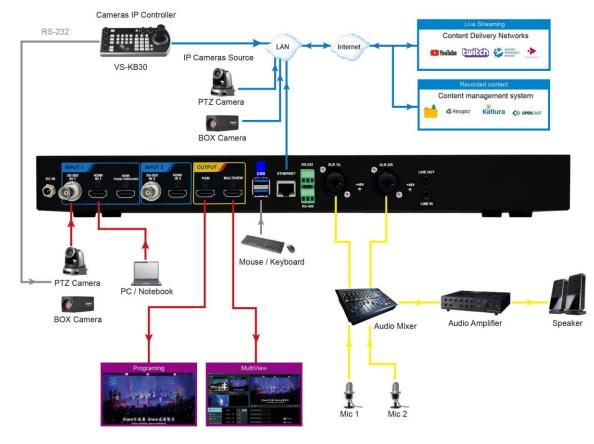
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Chapter 3 Instruction for installation

3.1 Product connection diagram



3.2 Live Streaming Application Diagram





4.1 LCM Screen

4.1.1 Setting Menu

4.1.1 Setting 1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment Values	Function Descriptions
Information	IP/ FW/ Mode/ SN/ MAC		Display the current system information
Video Source	Ch 1/ CH2	 HDMI1 or HDMI2 SDI1 or SDI2 USB Video Source Name 6 Source Name 7 Source Name 8 	Select the video source of CH1/CH2
	PGM Audio Level		Display PGM volume level
Audio Level	PGM Volume	0~125	Set PGM volume
	PGM Mute	Mute/ UnMute	Set PGM Mute on/off
Mode Settings	RC(Record)	Full HD 60/ 50FPS 6Mbps Full HD 30/ 25FPS 4Mbps Full HD 30/ 25FPS 3Mbps HD 30/ 25FPS 2Mbps HD 30/ 25FPS 1.5Mbps SD 30/ 25FPS 800Kbps SD 30/ 25FPS 500Kbps User Defined	Set up the recording encoded format
	ST(Stream)	Full HD 4/ 3Mbps HD 2/ 1.5Mbps SD 800/ 500Kbps User Defined	Set the streaming encoded format
	IP Assignment	DHCP/ Static IP	Set dynamic/static host
	IP	192.168.100.150	IP address
	SM	255.255.255.0	Subnet Mask
	GW	192.168.100.254	Gateway
IP Configuration	DNS1	192.168.1.211	Domain name 1
	DNS2	192.168.1.212	Domain name 2
	Edit	Edit/ Save	Click Edit to modify the relevant IP settings, and then click Save to save the settings
Storage	System Storage		Shows USB or SATA based on the storage location



1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment Values	Function Descriptions
	Remaining appear		Shows the remaining space and
	Remaining space		total space

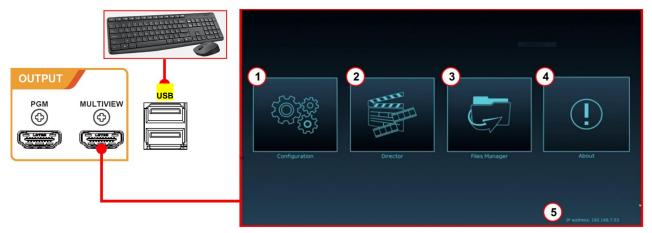
4.1.2 Message Description

Item	Message	Description
1.	USB Disk Insert	USB flash drive or USB HD is inserted into LC100/LC100N
2.	USB Disk Remove	USB flash drive or USB HD is removed from LC100/LC100N
3.	No Storage	There is no HDD or USB disk when recording
4.	No Enough Storage	There is no enough recording space when the recording is activated
5.	Record Error	Recording failure or abnormality when the recording is activated
6.	Update Firmware	FW updating
7.	Front panel lock	Front panel lock is on

4.2 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	lcon	Name	Function Descriptions
1		Parameter setting	Perform the system network setting, recording/streaming encoded setting
2	A A A A A A A A A A A A A A A A A A A	Casting management	Input signal source selection, audio management, recording/streaming control, output version selection, and network video camera control
3	G	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 LC100/LC100N
5	NA	Device IP	When connecting to the router, the current assigned device IP address will be displayed

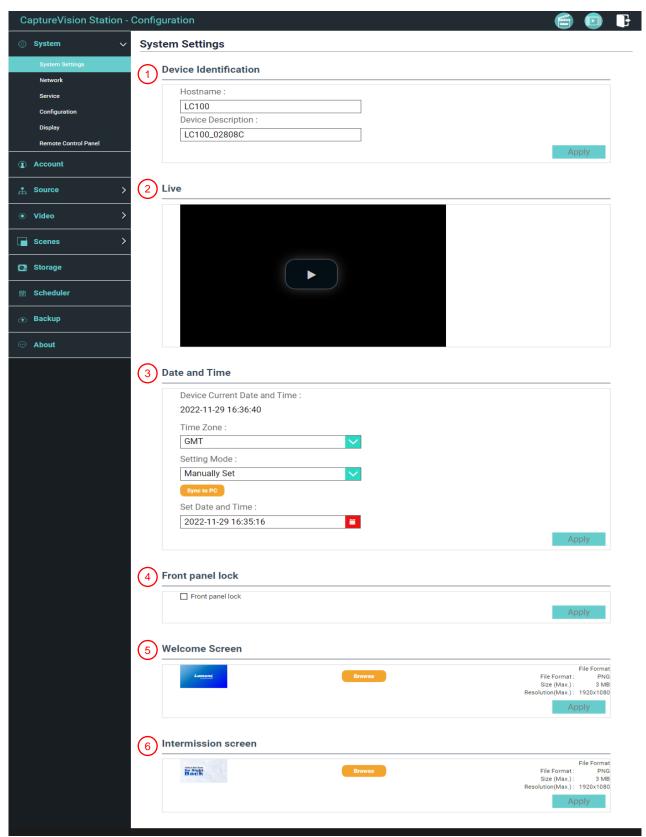


4.3 Parameter setting

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]. **4.3.1 System Settings**

4.3.1.1 System Settings

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





No	ltem	Function Descriptions		
1	Device	Defines the device name and device description for LC100/LC100N		
	Identification	<remark> Display name only accepts English characters and numbers</remark>		
2	Live	Displays the real-time PGM screen		
3	Date & Time	 LC100/LC100N supports different time zone setting. It can synchronize time with NTP service (default) and manual setup Time Zone: Select the correct time zone according to current location Configuration Mode: NTP service: Synchronizes time with a network server Manual Setup: Sets time manually 		
4	Front Panel Lock	After checking the box, no action will be triggered when any front panel button is pressed		
5	Welcome Image	 You can customize a welcome image for LC100/LC100N Click [Browse] and select a file to upload. Once done, a thumbnail will be generated File format: 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 		
6	Intermission Image	 You can customize an intermission image for LC100/LC100N 1 Click [Browse] and select a file to upload. Once done, a thumbnail will be generated File format: File format: PNG File Size (Max.): 3 MB Resolution Size (Max.): 1920 x 1080 2 Click [Apply] to save this change. If you need to select another file, click [Cancel] and reselect a file 		

4.3.1.2Network

The factory setting of LC100/LC100N is DHCP. The IP address is assigned by the router. If you want to use a static IP address, please configure the connection here.

CaptureVision Station - Configuration				
⊘ System ✓	Network			
System Settings	Network Settings			
Network				
Service	The system will reboot after changing the network settings. Please re-login.			
Configuration	IP Assignment :			
Display	DHCP			
Remote Control Panel	IP Address :			
	192.168.4.115			
Account	Subnet Mask :			
🚓 Source >	255.255.255.0			
m oource /	Default Gateway :			
Video	192.168.4.254			
	Primary DNS Server :			
Scenes >	192.168.1.211			
	Secondary DNS Server :			
🖸 Storage	192.168.1.212			
Scheduler				



No	ltem	Function Descriptions				
1	Ethernet Setting	 DHCP: Dynamic IP address as default Static IP: Configure static IP address according to the network and manually enter network information Select and fill in required network setting information and click [Apply] to save the settings <caution>The system will restart after changing network setting.</caution> Please connect and log in again 				

4.3.1.3Services

CaptureVision Station - Configuration				
⊚ System	ervice			
System Settings	1 Firmware			
Network	Master Firmware Version :			
Service	v1.0.0.12			
Configuration				
Display	Update			
Remote Control Panel	Before updating, please make sure you have mounted SATA HDD or USB Storage.			
Account	Advance			
Source >	2 Service Data			
Video	Export the log file to your computer			
Scenes >	Description : 🔊			
💽 Storage	Export			
i and a scheduler and a scheduler and a scheduler a s	3 Reset			
🕤 Backup	Reset to factory default			
😇 About	Except the network settings			
	Reset			
	4 Restart Device			
	Restart			

No	Item	Function Descriptions				
	Main Firmware	Main firmware information and update				
1		Update Select the master firmware file you want to update, and then click				
		[Apply] to update it				
		Advance Engineering mode, for Lumens engineers only				
		Saves system log files to user's computer				
2	Service History	1 Enter file name				
		2 Click [Export] to export system log files				
-						



		<remark> The length of file name must be between 0 ~ 16 characters.</remark>		
		[}()'&@~^\$%" ,`:?<>*∖/#; symbols, and space are forbidden		
	Reset	Restores LC100/LC100N to factory reset		
3		<remark> Check [Keep Network Settings] and the network settings will be remained</remark>		
	Restart the			
4	device	Restart the LC100/LC100N		

4.3.1.4 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.

CaptureVision Station - Configuration				
⊘ System	Configuration			
System Settings	(1) Export			
Network				
Service	 ✓ All Configuration ✓ Display 			
Configuration	Record, Stream, Storage, and Backup			
Display	Scenes			
Remote Control Panel	✓ Layout			
Account	Export			
Source	2 Import			
● Video >	Load a configuration.			
Scenes >	Import			

No	Item	Function Descriptions				
1	Export Exports the current configuration of LC100/LC100N as a configuration					
2	Import	Imports the exported configuration files from a LC100/LC100N to another LC100/LC100N				

4.3.1.5Display Settings

CaptureVision Station - Configuration						
⊘ Syster	System V Display					
	System Settings Output Resolution					
Servic	Service HDMI 1 and HDMI 2 :					
Config	guration	1920x1080, 60Hz				
Displa	ау					
Pomo	to Control Panol					
No	ltem	Function Descriptions				
1	Output Reso	ion Select LC100/LC100N HDMI output: 50Hz/60Hz				



4.3.1.6Extension control panel

CaptureVi	CaptureVision Station - Configuration						
System System Set	≺ ettings	Remote Contr Informatio					
Network Service Configurat	Network		Model Name FW Version (Connected		
No	ľ	tem	Function Descriptions				
1	Extensi panel	on control	Display the connection information of LC-RC01 extension control panel (optional). When there is no connection, the blank appears on the				

information field

4.3.2 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].

CaptureVision Station - Configuration						
⊗ System >	> Account management					
Account	1 Administrator 🔖					
Source >	Username :					
● Video >	admin New Password :					
Scenes >	Confirm Password :					
Q Storage						
B Scheduler						
① Backup	2 Online Director					
💬 About	Username :					
- Fibour	director New Password :					
	Confirm Password :					
	3Video Manager 🔈					
	Username :					
	video					
	New Password :					
	Orafire Deservation					
	Confirm Password :					

No	ltem	Username/Password	Function Descriptions				
1	System Management	admin / admin	Sets up the permission of main system management				
2	Online 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				
Cautio	nl	-					

[Caution]

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



space are forbidden

- The length of password must be between 8 ~ 16 characters. {}()'~^"|,`:?<>*∀; symbols, and space are forbidden
- Duplicate username is forbidden

4.3.3 Video Source

4.3.3.1 Network Device Management

CaptureVision Station - Configuration									
System > Network Device Manager									
Account	Account Network Cameras								
📩 Source 🗸	ti Source V								
Network Device Manager	Host Name	IP Address	MAC	Manufacturer	Status	Connected	Delete		
Video Source Manager	VC-BC701P	192.168.4.96	DC:E2:AC:01:D4:7E		Login	ОК	İ		
• Video >	VC-A61P	192.168.4.46	DC:E2:AC:02:47:27	Lumens	ОК	ок	Ē		
Scenes > 2									
🖸 Storage	Network Stream								
Scheduler	+ Add								
 Backup 		Device Name		URL		Delete			
васкар				No data(s).					
💬 About									

No	Item	Function Descriptions
		 Click [Refresh] and automatically scan the network cameras in the same LAN Click [Login Verification] and enter login information to connect the camera
1	Network Camera	Login Verification × Username: Lumens Network Password: • Account: admin Password: • Password: 9999 VetCome • Password: 9999 VetCome • Password: 9999 VetCome • Password: 9999 Sonce the status display "OK", indicating that the image can be set under the signal source input selection <remark> LC100N only supports the NDI HX2-source camera. If the camera source is NDI HX3, please go to the web page of the camera and set it as the NNDI HX2 output</remark>
2	Network Streaming	 Click [Add] Enter the network streaming name and URL, and then click [Apply] Name: VC-A50P URL: Itsp://192.168.4.50.8557/h264 Cancel Apply The newly added network streaming name will be displayed in the list



4.3.3.2Video communication source management

CaptureVision Station - Configuration					6		
⊘ System	> Vide	eo Source Manage	r				
Account		+ Add					
🚓 Source	~	ID	Source	Information	Source Name	Edit	Delete
Network Device Manager		1	HDMI1	N/A	HDMI1	Ľ	
Video Source Manager		2	HDMI2	N/A	HDMI2	Ľ	
0.111		3	SDI1	N/A	SDI1	Ľ	
• Video	2	4	SDI2	N/A	SDI2	ß	
Scenes	>	5	VIDEOUSB	N/A	VIDEOUSB	ß	
		6	VC-A61P	192.168.4.46	VC-A61P	ß	Ū
Storage							

No	ltem	Function Descriptions
1	Video communication source management	Display the video communication source information for users to edit the source name and order <caution>ID1-4 are fixed as HDMI 1 / HDMI 2 / SDI 1 / SDI 2 (not removable) <remark> Source name supports 2 ~ 16 characters, and can have the English letter/number/blank/underline/- entered</remark></caution>

4.3.4 Video Settings

4.3.4.1 Record Settings

CaptureVision Station -	Configuration		(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c
⊚ System >	Record		
(1) Account	1 Encoder Settings		
* Source >	Recording Mode : MP4 Mixed Video		Full HD 60FPS Resolution 1920x1080 Average Bitrate : 6 Mbps
● Video 🗸	Video Compression :		FPS: 60 GOP: 30 H.264 Profile: high profile
Record	Full HD 60FPS	✓	Audio Bitrate : 256 Kbps Audio Sample Rate : 48.0 KHz
Stream	Preferentially Record to USB Flash Drive :		
Scenes >	Loop Recording :		
O Storage			
Scheduler			Apply
④ Backup	2 Audio settings		
About	Audio Delay Adjustment : 0 ms		
	Record File	Audio Source	
	PGM	PGM Audio	
	Channel 1	PGM Audio	
	Channel 2	PGM Audio	
			Apply
	3 Recording File Name Setting		
	Prefix Setting :		
	L		Apply

No	ltem	Function Descriptions
1	Encoder Settings	 Recording Mode: You can select Movie Mode (MP4) and Movie/Resource Mode (MP4) Movie Mode: Only record the single PGM 2-channel composite screen Movie /Resource Mode: Can record the single PGM 2-channel composite screen and 2 signal source screens Encode Profile: Default recording encoded formats are available to be selected by resolutions and average bitrates (Please refer to the Instruction on 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 and rear USB port Cycling Record: Enabling the cycle record function can prevent recording error when storage device is full
2	Audio Settings	 Audio Delay Adjustment: 0 ~ 600 ms Audio source: Set the audio source for Channel recording files <remark> The selection of non PGM Audio may increase CPU loading.</remark> Users may check out CPU information on the Director page of real-time operation menu under MultiView.
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 - 6 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	Suitable for online live-stream
SD	480p / 800 kbps	Static scene, suitable for online live-stream
Mobile network SD	480p / 500 kbps	You can watch the LC100/LC100N live-stream screen on a mobile device.
User-Defined Click to open User-Defined. Once done, click "Save".		efined. Once done, click "Save".

4.3.4.2Streaming Settings

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

CaptureVision Station -	- Configuration	🖻 🕑
⊚ System >	Stream	
Account	1 Encoder Settings	
🚓 Source >	Video Compression : User Defined	User Defined Resolution : 1920x1080 Average Bitrate : 4 Mbps
● Video ~		GOP : 30 H.264 Profile : high profile
Record		Apply
Stream		
Scenes >	2 Streaming Settings	
Storage	Stream 1 Stream 2 Stream 3 RTSP	
	Enable Stream	
🛗 Scheduler	Stream Type : RTMP 🗸	
	Server : rtmp://0.0.0.0	
📼 About	Stream Key :	
	Public URL : rtmp://0.0.0/	
	Start Stream with Record Function	
		Apply

No	ltem	Function Descriptions		
1	Encoder Settings	Encode Profile: Default recording encoded formats are available to be selected by resolutions and average bitrates (Please refer to <u>4.2.4.1</u> <u>Record Settings_the Instruction on Encode Profile</u>). You can also set user-defined image quality.		
2	Streaming Settings	 Streaming 1 / Streaming 2 / Streaming 3: You can customize 3 push addresses of network streaming Supported streaming type: RTMP / RTMPS / RTP / YouTube / YouTube_Gaming / Facebook Live / Twitch / SRT 		
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Streaming server (RTSP/NDI HX): you can customize the real-time streaming path of LC100/ LC100N Stream Server
 Default RTSP location: <u>rtsp://LC100_IP_address:554/pgm</u>

4.3.5 Scene

4.3.5.1Scene

LC100/LC100N provides 5 overlay styles, 5 background images, and 5 scenes. You can also add your own styles.

CaptureVision Station -	- Configuration
⊚ System >	Scenes
Account	0verlay s
🖕 Source >	
• Video >	
📄 Scenes 🗸 🗸	Delete Support PNG file with 1920x136, 1080x240, 800x320, 640x400 resolution.
Scenes Macro	2Background
Time Stamp	
O Storage	
i Scheduler ∃	Delete Support PNG file with 1920x1080 resolution.
Backup	3 Scenes
💬 About	3 Scenes
	Scene001 Scene002 Scene003 Scene004 Scene005
	Delete Edit

No	ltem	Function Descriptions
1	Overlay	For overlay style setting, you can adjust the order by dragging the mouse left and right. Users can upload their own files for application. 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. Supports 30 groups of overlay styles
		 File format: PNG format Supported size: 1920 x 136 /1080 x 240 / 800 x 320 / 640 x 400
2	Background Image	For background image setting, you can adjust the order by dragging the mouse left and right. Users can upload their own files for application. 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. Supports 9 groups of background images File format: PNG format Supported size: 1920 x 1080
3	Scene	Scene is the integration of "Overlay," "Background Image," and
Lum	iens °	"Production Layout," which provides the scene made of different

background images, layout, and overlay style. You can customize the layout content in 30 scenes.Click [•] to open scene settings. Enter the scene name and
select the required overlay, layout, and background image. Once
done, click "Apply".

4.3.5.2Macro

Use together with LC-RC01 extended control panel (optional) to set scene/preset position setting, camera start and stop tracking.

CaptureVision Station - Configuration Macro Settings System Account Macro 1 Scene004 Scene002 Scene003 Scene005 🚓 Source 1 • Video 2 Channel 1 Scenes Camera Preset 1 Scenes Channel 2 Camera Preset 1 Time Stamp Macro 2 🖸 Storage Scene001 Scene003 Scene004 Scene005 B Scheduler 2 Backup Channel 1 Camera Preset 1 👳 About Channel 2 Camera Preset 1 Macro 3 Scene001 Scene002 Scene003 Scene004 Scene005 Channel 1 Camera Preset 1 Channel 2 Camera Preset 1

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

No	ltem	Function Descriptions
1	Scene Selection	 Select a scene to be set. Each supports up to 30 sets of scene If the overlay style of the scene needs to be change, please refer to 4.3.5 Scene
2	Camera Preset Position Setting	Supports 9 groups of preset position setting, camera start and stop tracking <remark></remark> After checking the box, the Marco will proceed the setting of the network camera on Channel 1 ~ 2.



4.3.5.3Time Stamp

CaptureVision Station -	Configuration	6
⊙ System >	Time Stamp	
Account	Time Stamp	
• Source >	Enable Time Stamp :	
• Video >	2 Format :	
Scenes V	YYYY-MM-DD hh:mm:ss	
Scenes	Yellow	
Macro	A Size :	
O Storage	5 X Position (0~100) :	
⊞ Scheduler	100 Y Position (0~100) :	
⊕ Backup	100 Remarks:When the Time Stamp function is enabled, other overlays cannot be applied	
💬 About	Remarks, when the time stamp function is enabled, other overlags callified be applied	Apply

No	ltem	Function Descriptions
1	Enable Time Stamp	Turn on/off Time Stamp <remark></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

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4.3.6 Storage Settings

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

CaptureVision Station - Confi	iguration					🛛 🖆 🖻 🕞
⊚ System > Sto	orage					
Account	Record Disk So	ettings				
Source >	Local Storag					
Video						Apply
Scenes >	Disk Informati					
Storage		on				
i Scheduler and a scheduler a	Interface	Disk Name	Manufacturer	Capacity	Free Space	Format
 Backup 	SATA	Internal (SATA HDD)	ATA WDC WD10SPZX-2	931.48 GB	566.27 GB	Format
🐵 About						
(3	NAS settings					
	Mount :					
	off					
	Protocol :					
	CIFS / SMB		\sim			
	Address :					
	0.0.0.0					
	Port :					
	445					
	Folder :					
	SAMBA					
	Domain nam	e :				
	Username :					
	Password :					
	Options :					
	defaults					
	SMB Version	:				
	SMB2		\sim			
						Apply

No	Item	Function Descriptions
		Local storage: Click the drop-down menu 🔽 and select SATA HDD or
		USB HD for the local storage hard drive
	Recording Hard	Please refer to 2. Hard Drive Information below for formatting the hard
1	e e	drive.
	Drive Setting	<remark> Formats supported: exFAT/ EXT4</remark>
		<caution>To ensure proper storage and playing of recorded files, please</caution>
		remove the USB flash drive 30 seconds after the recording is finished
	Hard Drive	Display hard drive information, free space, and capacity. Click "Format" to
2	Information	clear the internal storage devices. Confirm if you want to format the hard
	Information	drive in the pop-up dialog and click "Confirm" to delete all video files.
		Enable NAS mounting and related settings.
3	NAS setting	It is required to go to Backup Setting> Upload Setting> Mode to select
		NAS. After recording, the video can be uploaded to NAS.



4.3.7 CMS Setting

CaptureVision St	tation - Configura	ition	
System	> CMS Se	ettings	
Account	СМ	IS Settings 🜎	
the Source	/	rice Name :	
Video	>	200_0410E0	
Scenes	\rightarrow (1)	Server Type : Kaltura	
Storage		Authentication Method :	
		Account Secret Method	
CMS Settings		URL :	
Scheduler		Partner ID :	
 Backup 	>	Username :	
👳 About			
		Password :	
		Mode :	
		HTTPS	
		Port :	
		Authentication :	
		Normai	Deregiente Device
		off Scheduler	
		off Backup	
No		ltem	Function Descriptions
			1. Server Type: Kaltura / Panopto / Opencast
			Choose the appropriate type, then enter the login information to
			enable the LC100 to synchronize scheduling data with the
			corresponding server.
			corresponding server.
			2. Connection Test:
1	CMS S	ettings	2. Connection Test:
			Click [Connection Test]
			successfully establishes a connection.
			For detailed configuration support, please contact Lumens technical
			support.

4.3.8 Schedule Setting

CaptureVision Station - Con	nfiguration) 🖸 (
	cheduler	
Account	Schedule Settings S	
Source >		
• Video >	Schedule Source : Manual Calendar Import	
Scenes >	Load a configuration. 📎	
C Storage	Import	
Scheduler		Apply
① Backup	2 Recording Interruption	
. About	Cancel ongoing recording task :	Stop
		Stop
	3 standby and wake up	
	Schedule standby : OFF	
	Schedule wake up :	
	OFF V	Apply
		трру
Lumens	S [®]	

No	Item	Function Descriptions		
1	Schedule Setting	 Click [On/Off] : Enables/Disables schedule function Click [Calendar] : Check the current schedule status: <remark> Reset schedule source and replace the current schedule</remark> Schedule Source > Importing calendar manually: You can import iCalendar files (e.g. Outlook or Google Calendar) Click [Import] and select custom scheduled video file <remark> Only files in .ics format can be imported</remark> > Importing calendar periodically You can synchronize schedules from network servers (e.g. Google Calendar) <remark> Please refer to the videos of How to series on Lumens™ YouTube channel for related application settings</remark> 		
2	Cancel Recording	Click [Stop] to stop the current scheduled recording		
3	Stand by and Wake	Enable/disable the scheduled standby and wake-up functions. Set the scheduled time after the functions are enabled		



4.3.9 Backup Setting

LC100/LC100N provides an automatic backup service which can upload videos to a designated location.

CaptureVision Stati	on - Configuration			6
⊚ System	> Backup			
Account	Backup Settings			
ats Source	> Backup Type :			
• Video	Backup After Recording Mode :	✓		
Scenes	> NAS Upload Content :	✓	Connection Test	
C Storage	Upload Content : Upload Record Folder			
💩 CMS Settings				Apply
Scheduler				
 Backup 	~			
Backup1				

No	ltem	Function Descriptions		
1	Backup Setting	 Backup Type: Back up after recording / Schedule daily backup Mode: FTP / NAS / SFTP / USB storage / WebDAV <remark> To select NAS, please go to Storage Settings > NAS Setting to enable mounting and related settings.</remark> Connection Test: Click [Connection Test] to verify if the current configuration successfully establishes a connection. <remark> Please refer to the videos of How to series on Lumens™ YouTube channel for related application settings</remark> 		

4.3.10 About

LC100/LC100N Device-related Information: Firmware version, device serial number, and technical support link

Capturevision Statio		
⊚ System	> System Information	
Account	Information	
th Source	Manufacturer :	
Video	Lumens Digital Optics Inc. Model :	
Scenes	> LC100	
Storage	Master Firmware Version : v1.1.0.29	
A CMS Settings	Serial Number : VC5A02242	
Scheduler	MAC :	
👁 Backup	> DC:E2:AC:02:80:C2 Webpage :	
	www.MyLumens.com	
	Support : service.lumens.com.tw	



4.4 Online Director

LC100/LC100N is built in Director, which allows you to monitor recording and preview the output video from streaming director.

Three login methods below are available:

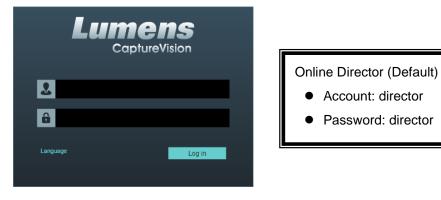
Select online Director from the HDMI1 MultiView real-time operation menu



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

CaptureVision Station -	Configuration			ŀ
⊚ System 🗸 🗸	System Settings			
System Settings	Device Identification			
Network				
Service	Hostname :			
Configuration	LC100			
Display	Device Description : favaild hostrame.			
Remote Control Panel	LC100_028039			
	Invalid description	Appl	y	
Account		_		

• When login the web page, use the online Director authority account.





Online Director related feature description as below:

1	USB Video Nothing selecte Nothing selecte		Channel 2		6
2	• Rec		Record	nc	B Live
3	I N) Audi		Stream 1	(((*))) RTMP, 1920x1080, 30fps, 4M	Intermission
4	Scer	nes	Stream 2	(((•))) RTMP, 1920x1080, 30fps, 4M	18
5	<÷> Cam	iera Control	Stream 3	(((•))) RTMP, 1920x1080, 30fps, 4M	IB Snapshot
-	No	Ite	em	Functio	n Descriptions
	1	Channel S Source Se		Prop down to select the image si	gnal source
	2	REC Reco	ord Setting	Start or stop recording; also selector	ct whether to synchronously stream or
	3	Audio Sou Managem		lanage the input and output auc olume	lio sources; adjust the audio recording
	4	Scenes La Setting	ayout	ast select the required production and scene style	on layout, or customize the background
Ī	5	Camera C	ontrol	Provide IP video camera/ PTZ co	ontrol
Ī	6	Main Scre	en Output	Displays the program out video	
	7	Recording Bar	Progress		rding status and hard disk capacity Status Icon Description for details

4.4.1 Icon Description of Status Display Bar

	Off	On	Error	
Network				
Record				
Streaming 1 / 2 / 3	(((1)))	((1))	((1))	
	Off	On	Fail to write in	Storage is full
Hard Drive (SATA HDD)	()))	SATA	SATA	9



Hard Drive (USB)		USB	USB	0
USB Device	ψ	ψ	Ψ <mark>ο</mark>	te
	Operation Invalid	Snapshot Fail		
Others	0	O		

4.4.2 REC Record Setting

Image: Stream 1 Stream 1 Image: Stream 2 Stream 2 Image: Stream 3 <	• Rec	Record	Sync		4 🔳 🕨 Live
Scenes Stream 3 Image: Control RTMP, 1920x1080, 30fps, 4MB Image: Control Image: Control	الله Audio الله الم	Stream 1		(((+))) 3 RTMP, 1920x1080, 30fps, 4MB	Intermission 6
Camera Control Stream 3 ((1)) RTMP, 1920x1080, 30fps, 4MB Snapshot Snapshot	Scenes	Stream 2		(((*))) RTMP, 1920x1080, 30fps, 4MB	
	< + > Camera Control	Stream 3		(((+))) RTMP, 1920x1080, 30fps, 4MB	

No	Item	Function Descriptions
1	Recording while Push	After checking the box, press recording button to start push and recording function
2	Enable/Stop/Pause	Enable/Stop Recording
	Recording	E Pause/Keep Recording
3	Single-channel Push Button	Push right away without starting recording function
4	Index	Timestamp can be added after the recording starts
5	Live image	Switch to live image
6	Intermission screen	Switch to intermission screen
7	Photo Capture	Capture a photo

4.4.3 Audio Source Management

	Input 2	xlr	Line in & USB	PGM Level	Line & HDMI out Level
(1)) Audio	100	100 Phantom power +48V	100	100	100
Scenes 3	()				()
Camera Control	HDMI / SDI 🗸	Line Level	Line-in 🗸		All -

No	ltem	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 an audio source			
5	XLR 48V Phantom	Turn on/off 48V Phantom Power			
	Power				
Lu	Lumens				

4.4.4 Scenes

Rec 1 Scenes Image: Scenes Scenes Scenes Scenes Overlay Image: Scenes Scenes<				
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 the layout style to apply.		
3	3 Overlay Select a desired style to apply			
4	Background	Display the background images supported by "Director" system. Click the thumbnail to apply		

4.4.5 Camera Setting

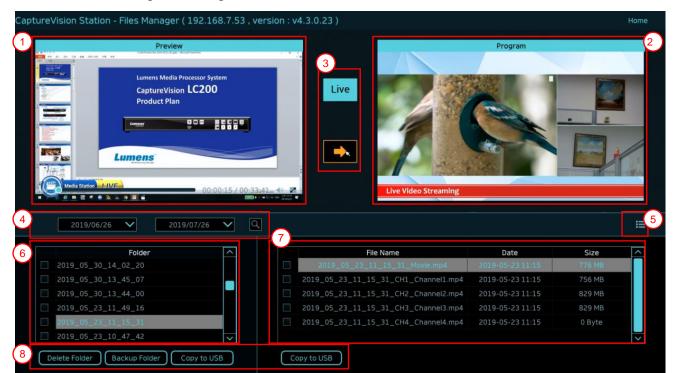
Rec	Camera 🗾 👻	3	4	5	6 6
2 س())) Audio			Zoom	AF/ MF Focus+	Focus- On Off
Scenes	4 5 6 7 8 9		Θ	zoom speed 6 🔵	7
Camera Control	Store		Т	'ilt speed 6 🔵	

No	Item	Function Descriptions		
1	Camera	Select a desired camera to control		
2	Preset Setting and Call	Click number buttons to perform preset setting and calls		
		Move the center point to control the shooting direction		
3	Direction Control Panel	<remark> Web pages do not support trackball controls. Please use</remark>		
		arrow buttons 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	Tracking Setting	Set the tracking function on/off		
		<remark> Only tracking camera is supported.</remark>		
7	PTZ Speed Setting	Set up the moving speed of Pan Tilt Zoom		

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4.5 File management

LC100/LC100N 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.

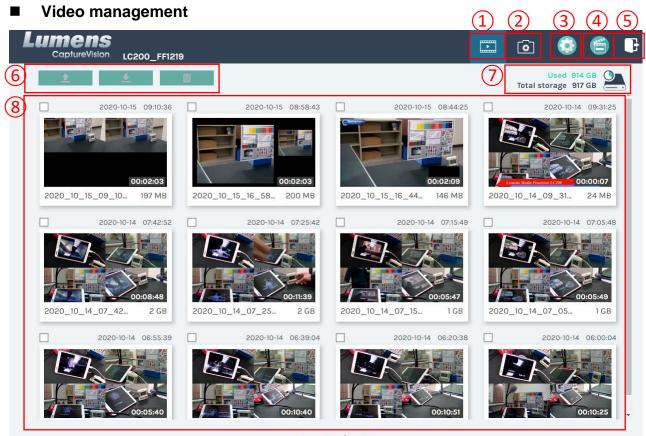


No	ltem	Function Descriptions
1	Preview screen	Click desired video files to play and control on the Preview screen
2	Program screen	Display the Director screen or switch to synchronize with the Preview screen
3	Screen Switch Button	Switch the Program screen to the LIVE Director screen or the Preview 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

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4.5.1 Web Page Interface

The default page after accessing LC100/LC100N web page is system setting page. Click the video management icon on the top-right corner to access video management page.



1 • 2 > 27

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	System settings	Click to access the system setting page <note></note> 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	lcon	Upload Status
	Videos are uploaded successfully		Videos are queued for upload
12	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 the video files only.

> Delete

Check the thumbnails of the videos to delete. Click [11] and the video files will be deleted permanently.

Video Playback

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

1	Movie 2019-08-22 13:39:32	Content
		Title : [2019_08_22_13_39_32] Organization : Lumens Department : FAE Event_date : Camera Color Test Semester :
3	051 / 0.45 1x 40	Topic :
(4)	Download	Apply

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

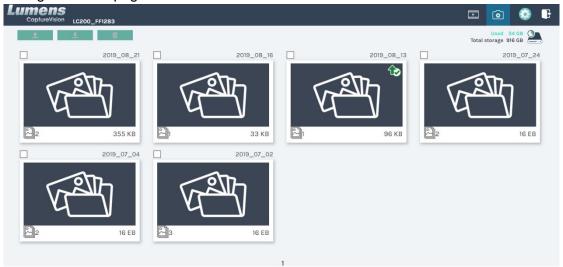


4	Download Button	Click this button to download the checked video files or datasets
5	Apply Button	After editing and modifying the video content, click this button to apply

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 5 Troubleshooting

This chapter describes problems you may encounter while using LC100/LC100N. 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	 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 signal source connects to the device correctly Confirm whether the machine is in standby mode. Tap LC100/LC100N Power button to wake the machine Check if HDCP is activated on the video output of the source. If it is, the LC100/LC100N cannot display the video input.
3.	The panel buttons are not responding	Confirm [System Settings] > [System Settings] > [Front Panel Lock] function setting on the web page, and turn off (uncheck) the front panel lock to use the front panel operation
4.	LC100/LC100N cannot perform camera control after connecting to a camera	Please make sure the dial setting of Camera Address Selector is 0. LC100/LC100N 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 Reset button on the panel to restore the factory setting
6.	Webpage login failed	 Confirm whether the machine is in standby mode. Tap LC100/LC100N Power button to wake the machine Please confirm whether the password is correct. If you forget your password, please refer to Troubleshooting #5
7.	LC100/LC100N cannot find the camera	 Please link to the web page of the camera to make sure that [Setting]> [Video]> [Camera ID]/[Camera Location] in the web page uses only English letters or numbers. LC100/LC100N cannot find the machine if you use special characters and space. When the LC100/LC100N is connected to a switch and the switch IGMP function is on, it will not be able to search for cameras in the local area network. Please disable the IGMP function first and then search for cameras again LC100N only supports the NDI HX2-source camera. If the camera source is NDI HX3, please go to the web page of the camera and set it as the NNDI HX2 output.
8.	Recording to a USB storage device. The video file of the USB flash drive cannot be played normally	 Confirm USB flash drive format. The supported formats are: ex FAT/ EXT4 Please use LC100/LC100N for formatting, please refer to <u>4.3.6 Storage Settings - Hard Drive Information</u> To ensure proper storage and playing of recorded files, please remove the USB flash drive 30 seconds after the recording is finished



Chapter 6 Safety Instructions

Always follow these safety instructions when setting up and using the LC 100 CaptureVision Station:

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 the product on a tilted 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 the 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 this product during thunderstorms or if it is not going to be used for an extended period.
- 2.3 Do not place this 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.

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.

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

Warning to users:

This is a Class A information technology product which may cause radio frequency interference when used in a residential environment, in which case the user will be required to take certain appropriate measures.



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 1936/TCP	Applicable for RTMP push to LinkedIn
2935/TCP 2396/TCP	Applicable for RTMPS push to LinkedIn
443/TCP (HTTPS)	Applicable for platforms with built-in HTTPS security authentication, such as YouTube, Facebook, Ustream, Livestream, and Twitch
53/UDP (DNS)	Applicable to services of changing DNS IP address



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Supplier's Declaration of Conformity 47 CFR § 2.1077 Compliance Information

Manufacturer : Lumens Digital Optics Inc. Product Name : LC100/LC100N 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.

