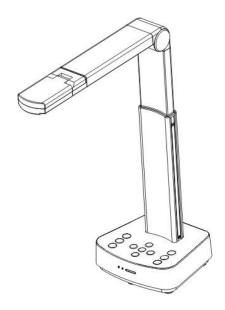
# DC-W80 4K Document Camera

# **User Manual - English**



### [Important]

To download the latest versions of the Quick Start Guide, multilingual user manual, software, driver, etc., please visit Lumens

https://www.MyLumens.com/support



# **Table of Contents**

Copyright Information3			
Chapt	er 1 Safety Instructions4		
Chapt	er 2 Package Contents5		
Chapt	er 3 Product Overview6		
3.	Overview6		
3.	2 Extension angle6		
3.	Notes for Operation		
3.	I I/O functions Introduction7		
3.	Description of LED indicator8		
3.	Relative position of the presenter and document9		
Chapt	er 4 Installation and Connections10		
4.	Machine Size10		
4	2 Installation and setup10		
4.	B Connecting to a computer and use Lumens™ software (Wi-Fi mode)1		
4.4	Connect to a projector, monitor or HDTV (HDMI mode)11		
4.	Connecting to a computer and use Lumens™ software (USB Mode)12		
4.	5 Installing Application Software12		
Chapt	er 5 Start Using13		
5.	Direct Use (HDMI Mode)13		
5	2 Use with Ladibug (Wi-Fi Mode)14		
5.	3 Use with Ladibug (USB Mode)16		
Chapt	er 6 Introductions to Control Panel Buttons17		
Chapt	er 7 Descriptions of Major Functions18		
7.	I would like to automatically adjust the image to have the best		
brig	htness and focusing performance18		
_			

lnf:	· ·	ian	25
Sup	plier'	s Declaration of Conformity 47 CFR § 2.1077 Compliance	
Cha	pter 1	I1 Troubleshooting	34
	10.2	Resolution Switch	33
	10.1	Description of DIP	33
Cha	pter 1	I0 DIP Switch Setting	33
	9.3	Setting DC-W80	30
	9.2	Device Requirements	30
	9.1	Connection Diagram	30
Cha	pter 9	Set DC-W80 as an AP	30
	8.3	Web Page Menu Function Description	21
	8.2	Log in to the web page	20
	8.1	Network connection	20
Cha	pter 8	3 Wi-Fi Connection Setting	20
	7.7	I would like to enlarge a part of the image	19
	7.6	I would like to rotate the image	19
	7.5	I would like to adjust the brightness	18
	7.4	I would like to zoom in/out images	18
	7.3	I would like to turn on/off the lamp	
	7.2	I would like to freeze the live image	18



## **Copyright Information**

Copyrights © Lumens Digital Optics Inc. All rights reserved.

Lumens is a trademark that is currently being registered by Lumens Digital Optics Inc.

Copying, reproducing or transmitting this file is not allowed if a license is not provided by Lumens Digital Optics Inc. unless copying this file is for the purpose of backup after purchasing this product.

In order to keep improving the product, Lumens Digital Optics Inc. hereby reserves the right to make changes to product specifications without prior notice. The information in this file is subject to change without prior notice.

To fully explain or describe how this product should be used, this manual may refer to names of other products or companies without any intention of infringement.

Disclaimer of warranties: Lumens Digital Optics Inc. is neither responsible for any possible technological, editorial errors or omissions, nor responsible for any incidental or related damages arising from providing this file, using, or operating this product.



## **Chapter 1 Safety Instructions**

Always follow these safety instructions when setting up and using the DC-W80 Document Camera:

#### 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 DC-W80 Document Camera. They provide ventilation and prevent the DC-W80 Document Camera 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 DC-W80 Document Camera 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 Installation

2.1 For security considerations, please make sure the standard hanging rack you bought is in line with UL or CE safety approbations and installed by technician personnel approved by agents.

#### 3 Storage

- 3.1 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.
- 3.2 Unplug the product during thunderstorms or if it is not going to be used for an extended period.
- 3.3 Do not place the product or accessories on top of vibrating equipment or heated objects.

#### 4 Cleaning

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

#### 5 Batteries (for products or accessories with batteries)

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

#### ■ Precautions



This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock. Do not remove the cover (or back). No user-serviceable parts inside. Refer servicing to licensed service personnel.



This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.

#### ■ FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### Notice:

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



# **Chapter 2 Package Contents**

DC-W80



Quick Installation Guide

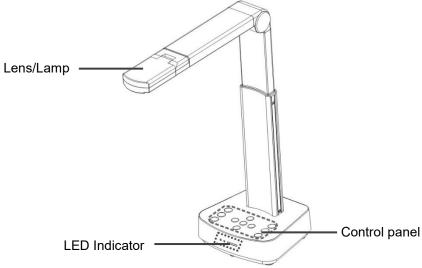




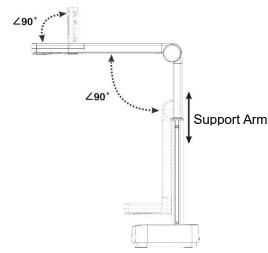


# **Chapter 3 Product Overview**

#### 3.1 Overview



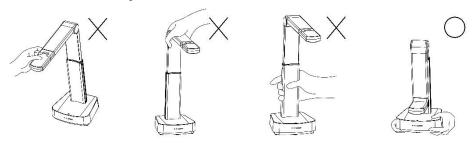
### 3.2 Extension angle



< Caution > Please only operate in the extended angles as illustrated.

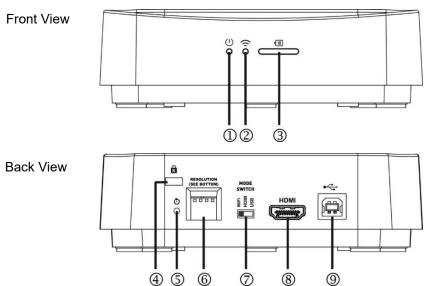
Improper usage may damage the machine.

#### 3.3 Notes for Operation



<Note> When moving the device, do not grasp the front of the lens or the body. Please use both hands to hold the bottom of the device. Handling the device improperly may cause machine failure.

#### 3.4 I/O functions Introduction



NO.	Item	Function Descriptions	
1	Power LED Indicator	Display the status of the machine. Please refer to 3.5  Description of LED indicator	
2	Wi-Fi LED Indicator	Display the status of the Wi-Fi. Please refer to 3.5  Description of LED indicator	
3	Battery LED Indicator	Display the status of the battery. Please refer to 3.5  Description of LED indicator	



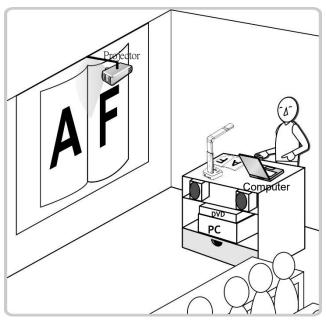
NO.	Item	Function Descriptions	
4	Kensington safety lock	Lock hole of safety lock	
5	Reset Button	Press the button for initialization to reset to original factory settings.	
6	DIP Switch Setting	Adjust the resolution setting. The default is 1920*1080/30 fps. To switch the setting, please refer to Chapter 10 DIP Switch Setting	
7	Mode Switch Button	Switch Modes: Wi-Fi / HDMI / USB	
8	HDMI output port Connect to HDMI output signal source		
9	USB Type-B port	The USB port is for connecting to the USB port of the computer which provides USB signal images and power	

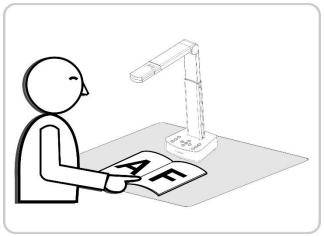
## 3.5 Description of LED indicator

Name		Indicator Status		
Power	(1)	Flickering blue light: Startup in progress, initialization Blue light stays lit: Startup completed Flickering red light: A startup failure or error has occurred Pink light stays lit: Already powered on, indicating low power and need to connect to the USB cable for charging		
Wi-Fi	÷	Blue light stays lit: Switched to the Wi-Fi Mode and the startup is completed  No Light: In another operating mode		
Battery	<b>    </b>	Indicator light is green  After connecting the USB cable and the flickering indicator light will indicate that it is charging  Press "Battery Check" button to display the battery level  Battery level ≥ 75%  Battery level 50% ~ 75%  Battery level 25% ~ 50%  Battery level 3% ~ 25%  Flickering green light ⇒ Battery level < 3%		



# 3.6 Relative position of the presenter and document





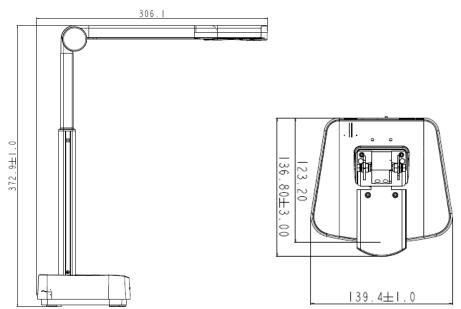
# **Chapter 4 Installation and Connections**

#### 4.1 Machine Size

■ Length x Width x Height: Extended - 306 x 140 x 373 mm

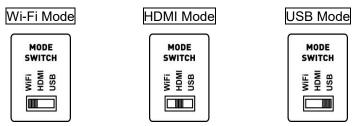
Closed - 137 x 140 x 270 mm

■ Weight: 1.35 kg



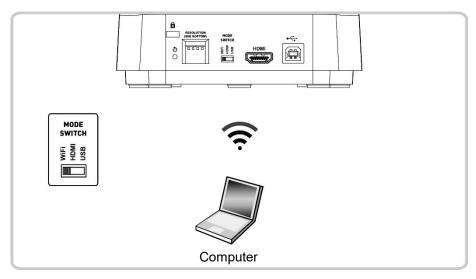
#### 4.2 Installation and setup

- Please set up the DIP switch setting first. Refer to <u>Chapter 10 DIP</u> <u>Switch Setting</u>.
- Please confirm that the product is switched to the desired mode (Wi-Fi/HDMI/USB)



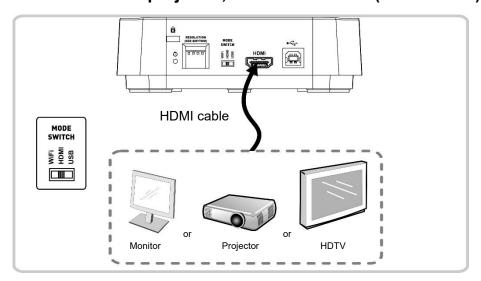


# 4.3 Connecting to a computer and use Lumens™ software (Wi-Fi mode)



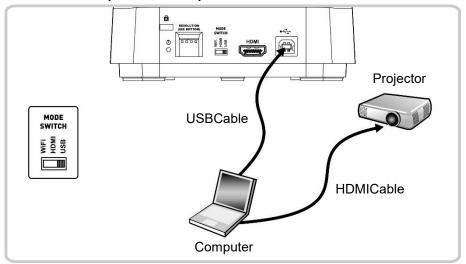
\*\*Please download the relevant software from Lumens website. For more information on the connection method, please refer to <a href="Chapter 8 Wi-Fi Connection Setting">Chapter 8 Wi-Fi Connection Setting</a>.

## 4.4 Connect to a projector, monitor or HDTV (HDMI mode)





# 4.5 Connecting to a computer and use Lumens™ software (USB Mode)



<Remark>Please download the relevant software from Lumens website.

#### 4.6 Installing Application Software

The application software installed on the computer enables you to:

- Control DC-W80.
- Capture and record images.
- > Annotate the image, highlight important details and save it.
- > Support the full screen function.

<Caution>Please download the relevant software from the Lumens website. For installation steps and software operation, please refer to the Ladibug™ 4K software user manual.

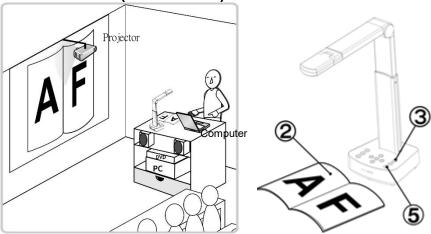
#### 4.6.1 System Requirements

- Windows System: Windows 7 or later
- Chrome system
- Mac System: Mac OS X 10.12 and above



## **Chapter 5 Start Using**

#### 5.1 Direct Use (HDMI Mode)



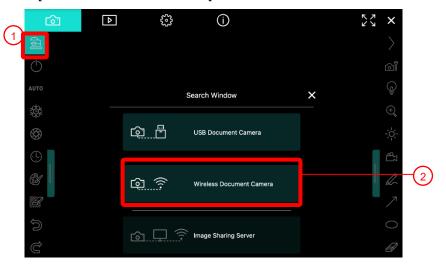
- Charge for a recommended 10.5 hours prior to first-time operation. The device is fully charged when all the power bars are full and the green light is constant on.
- 2. Place an object to be displayed under the camera.
- 3. Turn on the power and adjust the operation mode according to the connection method.
- 4. Adjust the support arm and lens to the appropriate positions.
- 5. Press [AUTO TUNE] Auto button to optimize the image.
- 6. You are ready to teach/present.

#### 5.2 Use with Ladibug (Wi-Fi Mode)

5.2.1 Network Connection

Switch DC-W80 to Wi-Fi mode, and Wi-Fi LED light turns blue. Open the Wi-Fi network list on the computer, and choose [DC-W80\_5G\_XXXXXX] (XXXXXX: last six digits of the MAC address). Enter the connection password (default password: 88889999) to enable the connection.

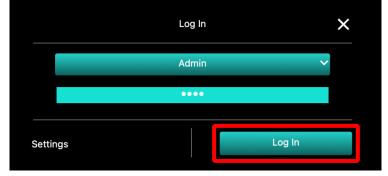
- 5.2.2 Use Ladibug to connect to DC-W80
  - 1. Open Ladibug, click to open the [Search Window], and select [Wireless Document Camera].



2. Click \_\_\_\_,and select a DC-W80 in the list after the search is completed.

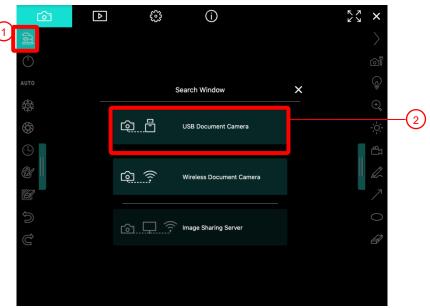


- 3. Log in as an Admin or a Viewer. The default password for Admin is 9999.
- 4. After connecting to DC-W80 by clicking [Log In], you can start using it.



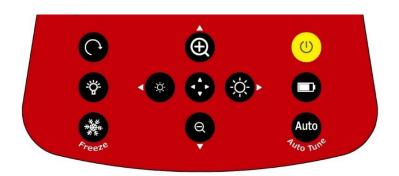
#### 5.3 Use with Ladibug (USB Mode)

- 1. Switch to USB mode, and use a USB cable to connect DC-W80 and the computer.
- 2. Open Ladibug, click to open the [Search Window], and select [USB Document Camera].



3. You can start using DC-W80.

# **Chapter 6 Introductions to Control Panel Buttons**



Icon	Function Descriptions		
U	Turn on and off  ➤ Short press: power on (under stand by)  ➤ Press for 1 second: turn off (under power on)  ➤ Press for 10 seconds: force to turn off		
	Battery level check		
Auto Auto Tune	Automatically adjust the image to have the best brightness and focusing performance		
<b>◄,▶,▲,▼</b>	Left, right, up, down buttons, used for moving in a direction at the partial enlarged mode		
<b>❸</b>	Enable/Disable the partial enlarged mode		
<b>⋄</b> , <b>⋄</b>	Adjust the brightness of the image		
<b>(1)</b>	Zoom in/out images		
•	Rotate image: 0° / 180° /Vertical flip/Horizontal flip / 90° / 270°		
*	LED lamp mode toggle switch: off / brightness 1 / brightness 2 / brightness 3 < Remark>Brightness 3 is the brightest state		
Freeze	Freeze the current image to remain temporarily on the screen. Press again to defreeze		

# **Chapter 7 Descriptions of Major Functions**

## 7.1 I would like to automatically adjust the image to have the best brightness and focusing performance

Press [Auto Tune] for the best brightness and focusing performance.

#### 7.2 I would like to freeze the live image

FREEZE to freeze the current image on the screen. Press again to lift the freeze.

## 7.3 I would like to turn on/off the lamp

The default state of the lamp is **off**, press to turn it on or off. There  $\triangleright$ are three levels of brightness.

#### 7.4 I would like to zoom in/out images

- to zoom in the image.
- to zoom out the image.

#### 7.5 I would like to adjust the brightness

- to make it brighter.
- to make it darker.

## 7.6 I would like to rotate the image

> Press to rotate the image. (The sequence of switching is: 0°/180°/Vertical flip/Horizontal flip/90°/270°)

### 7.7 I would like to enlarge a part of the image

- 1. Press to activate the partial enlarged mode.
- 2. Press [▲], [▼], [◄], or [▶]to move and view the partial enlarged images.
- 3. Press to exit the partial enlarged mode.



## **Chapter 8 Wi-Fi Connection Setting**

#### 8.1 Network connection

- 8.1.1 Switch to the Wi-Fi mode and the Wi-Fi LED indicator will be displayed in blue.
- 8.1.2 Open the wireless network list on the computer.
- 8.1.3 Select the [DC-W80\_5G\_XXXXXX ] (XXXXXX: last 6-digits of the MAC address) in the network list, and input the password for connection (default: 88889999) to start the connection.

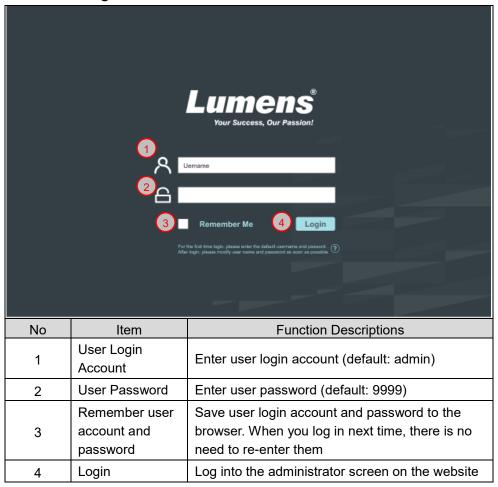
#### 8.2 Log in to the web page

- 8.2.1 Open the web browser and enter the default IP address [192.168.0.1] in the address bar.
- 8.2.2 Enter the login account [admin] and default password [9999], and click Login.
- 8.2.3 After the login, you can do the live preview and configure the settings on the web page.
- <Caution> For a first-time login, please refer to <u>8.3.5 System Information</u> to change the default password

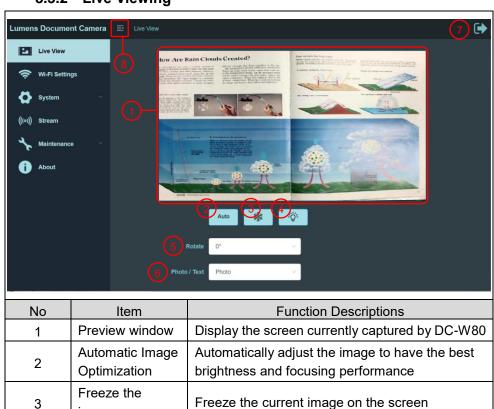


## 8.3 Web Page Menu Function Description

#### 8.3.1 Login Screen



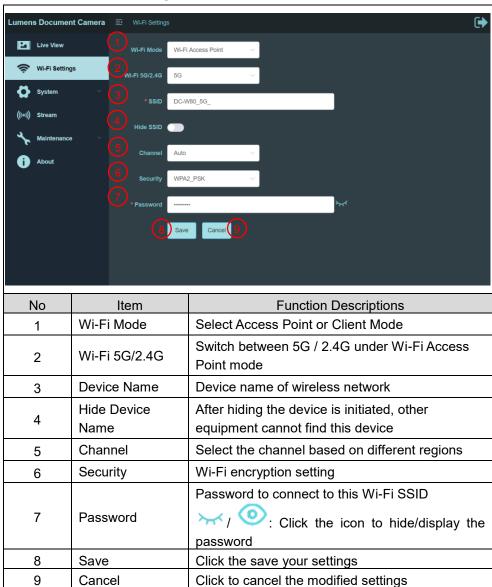
### 8.3.2 Live Viewing



1	Preview window	Display the screen currently captured by DC-W80
2	Automatic Image Optimization	Automatically adjust the image to have the best brightness and focusing performance
3	Freeze the image	Freeze the current image on the screen
4	Lamp mode toggle switch	Click lamp mode toggle switch: off / brightness 1 / brightness 2 / brightness 3
5	Rotate the image	Rotate the image: 0° / 90° / 180° / 270° / Flip / Mirror <remark> 90° and 270° are not available for the 1025x768 resolution.</remark>
6	Image Mode toggle switch	Select Photo/Text/Gray Mode
7	Logout	Log out of the web page
8	Fold/Expand Function Bar	Click to fold/expand the Function Bar on the left

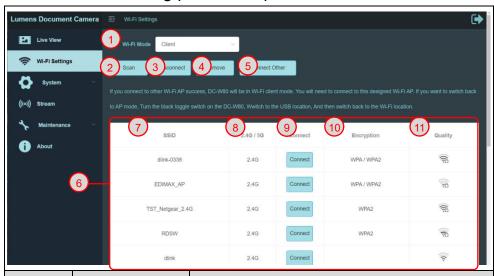


#### 8.3.3 Wi-Fi Setting (Access Point Mode)





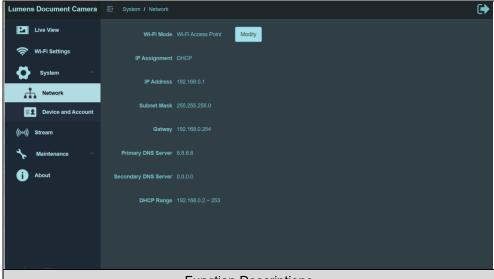
### 8.3.4 Wi-Fi Setting (Client Mode)



No	Item	Function Descriptions		
1	Wi-Fi Mode	Select Access Point or Client Mode		
2	Scan	Scan nearby wireless network devices		
3	Disconnection	Disconnect from current wireless network device		
4	Remove	Remove the selected wireless network device from the list		
5	Connect to Other Wi-Fi Device	Click to show the following window. Enter the SSID and the password of the wireless device to be connected to perform the connection  Connect to other Wi-Fi  * ssiD  * Password  Cancel  Connect		
6	Wi-Fi Device List	Display the currently found Wi-Fi wireless devices		
7	SSID	Device name of the wireless network		
8	2.4G/5G frequency band	Show that the wireless network device is in the 2.4G or 5G frequency band		
9	Connect	Click this button and enter the password of the		

		wireless device to be connected for connection
10	Encryption	The current encryption setting of the wireless network device
11	Signal Status	Show the degree of the Wi-Fi signal

#### 8.3.5 System Information-Network



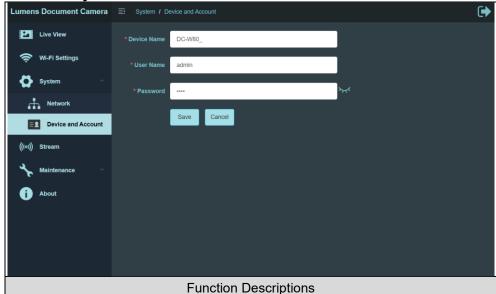
#### **Function Descriptions**

Display the current network setting information of this DC-W80.

Click the [Modify] button, and it will jump to the Wi-Fi settings page, where you can make modifications.



#### 8.3.6 System Information-Device



Display current device name of this DC-W80 and login settings.

You can modify the device name, user name, and password. Click [Save] to store your change, or click [Cancel] to cancel the modified settings.

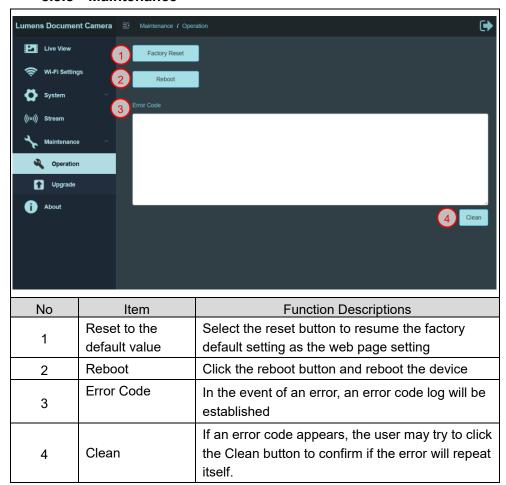


#### 8.3.7 Streaming Parameter



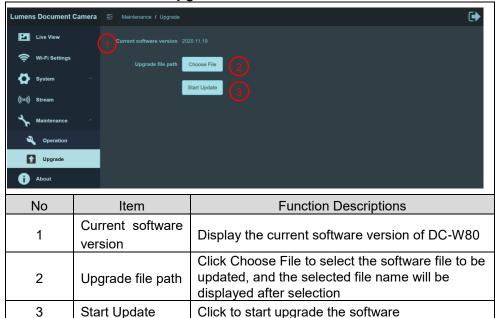


#### 8.3.8 Maintenance





#### 8.3.9 Maintenance-Upgrade



#### 8.3.10 About



#### **Function Descriptions**

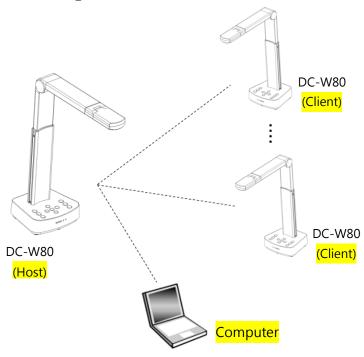
Display the related manufacturing information of this device, including device name, firmware version, MAC address, serial number, and others.



## Chapter 9 Set DC-W80 as an AP

With this connection method, multiple DC-W80s can be controlled via the DC-W80 on the host side.

#### 9.1 Connection Diagram



## 9.2 Device Requirements

- More than two DC-W80s
- One computer
- One router (depends on the network environment)

#### 9.3 Setting DC-W80

#### 9.3.1 Setting the Host DC-W80

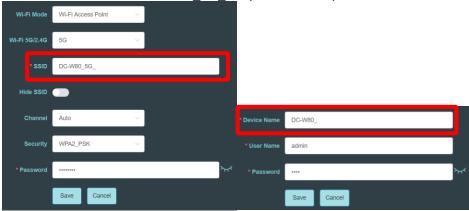
- a. Turn on the host DC-W80
- b. Open the wireless network list, and connect to [**DC-W80\_5G\_XXXXXX**] (XXXXXX: last six digits of the MAC address). Enter the password



- (default password: 88889999) to enable the connection.
- c. Open the web browser and enter the default IP address [192.168.0.1].
- d. Enter the login account [admin] and the default password [9999], and click login.
- e. Enter [Wi-Fi Settings] and [Device and Account] pages to modify [SSID] and [Device Name] of the AP.

SSID: DC-W80\_5G\_ AP (user-defined)

Device Name: DC-W80 5G AP (user-defined)



f. Click [Save] to apply the changes.

#### 9.3.2 Setting Client DC-W80s

- a. Turn on client DC-W80s
   [Note] For initial setting, please turn on only one client DC-W80 at a time.
- b. Open the wireless network list, and connect to [DC-W80\_5G\_XXXXXX] (XXXXXX: last six digits of the MAC address). Enter the password (default: 88889999) to enable the connection.
- c. Open the web browser and enter the default IP address [192.168.0.1].
- d. Enter the login account [admin] and the default password [9999], and click login.
- e. Enter the [Device and Account] page to modify the [Device Name].
   Device Name: DC-W80\_5G\_Client (user-defined)





- f. Go to the [Wi-Fi Settings] page and select the [Wi-Fi Mode] as [Client].
- g. Find the SSID of the AP in the list, and click [Connect] to enter the password.

SSID	2.4G / 5G	Connect	Encryption	Quality
DC-W80_AP_42F31E	5G	Connect	WPA / WPA2	

h. Click [Connect] to enable the connection.

#### 9.3.3 Get Started

- a. Open the wireless network list, and connect to [DC-W80\_AP\_XXXXXX]. Enter the password (default: 88889999) to complete the network connection with DC-W80 AP.
- b. Open Ladibug.
- c. Click to open[Search Window], and select [Wireless Document Camera]
- d. Click to search for a DC-W80 that can be connected. After the search is complete, click on a DC-W80 in the list for connection and start the operation.
- e. To switch to another DC-W80, please open the [**Search Window**] again and click other DC-W80s.

# **Chapter 10 DIP Switch Setting**

## 10.1 Description of DIP

DIP	Function Descriptions	
DIP1 & DIP2	Output Resolution	
DIP3	OFF (Normal mode): 30/25 fps, applicable to <b>general</b>	
	scene	
	ON (High-speed mode): 60/50 fps, applicable to support	
	rapidly changing scene	
	(Only applicable to 1080P)	
DIP4	OFF: 60Hz	
	ON: 50Hz	

### 10.2 Resolution Switch

Resolution	60Hz	50Hz
1920 x 1080	Off On 1 2 3 4  (Default Values)	Off On 1 2 3 4
3840 x 2160	Off On 1 2 3 4	
1280 x 720	Off On 1 2 3 4	
1024 x 768		

# **Chapter 11 Troubleshooting**

This chapter describes problems you may encounter while using DC-W80. 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	Please press the battery level check button to confirm there is still power. Refer to 3.5 Description of LED indicator in this manual. If there is no power left, please charge the device by connecting the USB cable.
2	There is no image output from DC-W80	<ol> <li>Check the power.</li> <li>Check all cable connections. Refer to <u>Chapter 4</u> <u>Installation and Connections</u> in this manual.     </li> <li>Check if DIP switch is properly set. Please refer to <u>Chapter 10 DIP Switch Setting</u> for related settings.</li> </ol>
3	Unable to focus	Probably the document is too close. Press [ZOOM -] on the <b>control panel</b> . Or pull the document away from the lens. And then press [Auto Focus] button.
4	When the device is turned on, the LED floodlight is off.	The default setting of the LED floodlight is "OFF", please use the control panel to set the LED floodlight as "ON".
5	Ladibug™ and other applications cannot be used simultaneously	Ladibug™ and other applications cannot be used simultaneously. Only one application can be executed at a time. Please close the currently running applications and then execute the application to be used.
6	The output image is too bright, too dark, or vague.	Press [AUTO TUNE] button to automatically adjust the image to have the best brightness and focusing performance.
7	The operating steps in the manual are not applicable to the machine.	The operating steps in the manual may be not applicable to the machine due to improvement in functions.  Please confirm the firmware of your machine and go to check for any updated version on the Lumens website.  https://www.mylumens.com/support

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

Manufacturer: Lumens Digital Optics Inc.

**Product Name: DC-W80** 

**Model Number: 4K Document Camera** 

#### 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.

