

FEX SERIES FIXED FHD SDI + IP ZOOM CAMERA

USER MANUAL PART TWO

VERSION: FEX-SN-M12082018



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Part Two: Network Camera User Manual Network Connection

Before accessing a network camera (also known as IP Camera or IPC) from a PC, you need to connect the network camera to the PC directly with a network cable or via a switch or router.



Use a Shielded Twisted Pair (STP) cable to connect the network interfaces of the network camera and the PC.



Use Shielded Twisted Pair (STP) cables to connect the network interfaces of the camera and the switch or router.

Login

Preparation

After you have completed the installation in accordance with the quick guide, connect the camera to power to boot it. After the camera is booted, you can access the camera from a PC client using Internet Explorer or a Video Management System (VMS).

The following uses Internet Explorer 11 on a Microsoft Windows 10 operating system as an example.

Check before login

- The camera is powered on and connected to the network switch
- The camera's IP address is located within the same subnet as the PC
- The PC is connected to the network switch
- The PC's IP address is located within the same subnet as the camera
- The PC is installed with Internet Explorer 8.0 or higher (Internet Explorer 11 recommended)
- Use default video format setting or set the camera video format to 1080P30 or 1080P25 using RS485 keyboard (Refer to camera setting menu).

Logging In to the Web Interface

The default static IP address of the camera is 192.168.0.13, and the default subnet mask is 255.255.255.0

The following uses Internet Explorer as an example to describe the login procedure.

- 1. Browse to the login page by entering the correct IP address of your camera in the address bar.
- 2. If this is your first time logging in to the camera, follow system prompts and install the ActiveX. You need to close your browser and reopen it again to complete the installation.
- 3. Click Allow to proceed the login process.

NOTE:

• To manually load the ActiveX, type http://IP address/ActiveX/Setup.exe in the address bar and press Enter.



• You may be prompted to update your video player. Follow the "Download" and "Run" prompts to update. This will enable the user to see live video through the web interface



- The default password is used for your first login. To ensure account security, please change the password after your first login. You are recommended to set a strong password (no less than eight characters).
- The camera protects itself from illegal access by limiting the number of failed login attempts. If login fails six times consecutively, the camera locks automatically for tenminutes.
- 4. Enter the username and password, and then click **Login**. For the first login, use the default username **admin** and password **admin**.
 - If you log in with Live View selected, live video will be displayed when you are logged in. Otherwise, you need to start live video manually in the live view window.
 - If you log in with Save Password selected, you do not need to enter the password each time when you log in. To ensure security, you are not advised to select Save Password.
 - To clear the Username and Password text boxes and the Save Password check box, click Reset.

NOTE:

- Forgot Password?
 - A message will pop up, which reads: "Please contact support@bolintechnology.com to reset the password."
 - When emailing <u>Support@bolintechnology.com</u>, please include the MAC address, as shown in the **IP Finder** tool
 - A BOLIN Technology Support representative will provide a temporary password, which can be used to log in to the camera to create a new password.

	VCC-7HD30S-3SMN	15
		English 🗸
Username:	admin	
Password:	•••••	
	✓ Live View ✓ Save Passwor	rd
	LOGIN Reset	

P-HNDER v1.	2.9				_	
	Search Assi	an IP	Но	🎧 me Page	Firmware Upgrade	
~			Camera	Status	Model Name	
Or inp User Name Password	Login					
Information	C 700000 2000					
IP : 19	2.168.0.13					
MAC : 00	:10:F3:43:5C:48					
UUID : 14	19D68A-1DDF-11BF-A10F-0010F3435C48					
SN : 18	0401407					

Introduction to the Web Interface



Live View

🗰 Playback

💏 Setup

- 1. IP Interface Menu
 - Used to navigate between Live View, Playback, and Setup menus, as well as Log Out
- 2. Live Stream Setup panel
 - Used to alter the way the live stream is viewed
 - Used to switch between Main, Sub, and Third streams
 - Contains shortcut to Image Settings interface, where image options can be configured
- 3. Live Stream
 - Where the live video will display
- 4. Video Controls
 - Used to start / stop the live stream
 - Used to control audio levels (input as well as output)
 - Snapshot, Record video, 2-way communication, and
- 5. Camera Control Panel
 - Used for PTZ control, as well as accessing / navigating SDI menu

Controlling the SDI interface from the Web GUI Accessing the SDI Menu

The SDI menu can be accessed on the Control Panel via the Menu button

The menu is navigated by using the directional buttons on the Control Panel.

- Up and Down arrows move between selection options
- The Right arrow is used to confirm a selection

← ← //192.168.0.13/www/	- C Search	₽• ि☆☺●
File Edit View Favorites Tools Help		
🖵 Live View 🚟 Playback 🏟 Setup		€Logout
Proportional: Scale Main Sub Third >EXPOSURE WHITE BALANCE PICTURE LENS PARAMETERS SYSTEM SETUP FUNCTION SETTING SAVE AND EXIT EXIT		MENU WENU Q Q C C C Preset Patrol

How to operate the SDI OSD menu, please refer to the section "Adjusting and Setting with Menus" in this user guide.

Preset tab

The Preset tab is used to access a list of presets that have been configured. A preset can be activated by clicking the arrow next to the preset listing.

Local Settings

Recording

Save

Recording and Snapshot

For more information about creating presets, please see the section called "Preset"

Patrol tab

The Patrol tab is used for activating a patrol that has been configured. For more information about creating patrols, please see the section called "Patrol"

Configuring the camera from the Setup Menu

The Setup menu can be accessed by clicking the Setup button along the top of the screen

The IP menu is divided into tabs. Under each tab is a collection of settings and parameters that the user can configure. Please refer to the list of tabs below



Common

The Common tab has some basic / common information about the camera

Local Settings

- <u>Recording:</u>
 - <u>Subsection by Size</u> Recordings will be catalogued according to size
 - <u>Subsection by Date</u> Recordings will be catalogued according to the date captured
- <u>Subsection Size (MB)</u> Determines the size of each video clip subsection
- When Storage Full:
 - <u>Overwrite Recording</u> Will begin overwriting oldest footage once all space is filled
 - <u>Stop Recording</u> Will cease recording to avoid overwriting recorded footage
- Total Capacity (GB):
 - The total capacity you would like to allocate for this directory to hold
- <u>Local Recording</u>—Determines the video file format (Automatically configured to store AVI files)
- Subsection Size(MB) 30 [10~1024] When Storage Full Total Capacity (GB) 100 Local Recording AVI Recording Folder C:\Users\jon\AppData\Local\Temp\CMRFiles Snapshot Folder C:\Users\jon\AppData\Local\Temp\CMRFiles Stream Settings Stream Buffer Smooth \checkmark

Subsection By Size

 \sim

- **Recording Folder**—This is the directory on the computer where recordings will be saved
- <u>Snapshot Folder</u>—This is the directory on the computer where snapshots will be saved

A/V Streams

The A/V Streams tab is used to configure settings for the compression, format, and data rates for all video and audio streams produced by the camera

Definitions:

- <u>Codec:</u> The encoding standards that are available for use (H.264 / H.265)
- **<u>Resolution</u>**: (WxH) The number of Pixels that make up the width of the image (W) by the number of horizontal lines that make up the height of the image (H)
- <u>Rate Control Options:</u>
 - CBR Constant Bit Rate
 - CVBR Constrained Variable Bit Rate.
 - Frame Rate: Rate at which image frames are captured
- **<u>GOP Length:</u>** Interval at which a key frame is captured within a group of successive pictures within a coded video stream
- <u>Bit Rate:</u> The amount of data transmitted per second. Measured in Kilobits Per Second (Kbps). 1000 kbps = 1Mbps

Video Configuration

video config	uration				
Primary Stream	n	✓ Secondary S	tream	☑ Third Stream	
Codec	H.264 💙	Codec	H.264 V	Codec	MJPEG 🗸
Resolution	1920x1080 🗸	Resolution	1280x720 V	Resolution	640x360
Rate Control	CBR	Rate Control	CBR	Quality	High 🗸
Frame Rate	30 (0~60fps)	Frame Rate	10 (0~30fps)	Frame Rate	10 (0~30fps)
GOP Length	30 (1~120)	GOP Length	10 (1~120)		
Bit Rate	4000 (64~8000kbit/s)	Bit Rate	2000 (64~8000kbit/s)		
Save					

Codec:

- Primary Stream The main stream, viewed by default on the Live screen
 - **Codec Options:**

0

0

- H.264
- H.265
- MJPEG
- **Resolution Options:**
 - 1920x1080
 - 1280x720
- Rate Control Options:
 - CBR Constant Bit Rate
 - CVBR Constrained Variable Bit Rate.
- o **Frame Rate:** Rate at which image frames are captured
- **<u>GOP Length:</u>** Interval at which a key frame is captured within a group of successive pictures within a coded video stream
- <u>**Bit Rate:**</u> The amount of data transmitted per second. Measured in Kilobits Per Second (Kbps). 1000 kbps = 1Mbps
- <u>Secondary Stream</u> The second video stream produced by the camera, this can be disabled by unchecking the box at the top of this stream's settings
 - <u>Codec Options:</u>
 - H.264
 - H.265
 - MJPEG
 - **Resolution Options:**
 - 1280x720
 - 720x576
 - 720x480
 - 640x360
 - 352x288
 - 320x240
 - **Rate Control Options:**
 - CBR Constant Bit Rate
 - o CVBR Constrained Variable Bit Rate.
 - **Frame Rate:** Rate at which image frames are captured
 - **<u>GOP Length</u>**: Interval at which a key frame is captured within a group of successive pictures within a coded video stream
 - <u>**Bit Rate:**</u> The amount of data transmitted per second. Measured in Kilobits Per Second (Kbps). 1000 kbps = 1Mbps
- <u>Third Stream</u>—The third video stream produced by the camera, this can be disabled by unchecking the box at the top of this stream's settings
 - Codec Options:
 - H.264
 - H.265
 - MJPEG
 - **Resolution Options:**
 - 640x360
 - 352x288
 - Quality Options:
 - High, Medium, Low
 - **Frame Rate:** Rate at which image frames are captured

Audio Configuration

This section contains the ability to select the audio compression parameters for both the Audio In (microphone) and the Audio Out

- Audio Compression Options:
 - <u>G.711A</u> Pulse Code Modulation (PCM), often used to decode voice frequencies with regard to Telephony
 - <u>**G.711U**</u> Standard for speech compression and decompression within digital transmission systems
 - <u>**G.722.1**</u> A high quality, moderate bit rate wideband audio coding standard
 - <u>**G.726**</u> A speech codec standard covering the transmission of voice at rates of 16, 24, 32, and 40 Kbit/s
 - <u>MP2L2</u> A type of compression which removes some voice frequency ranges which are not detectable to the human ear
 - o <u>AAC-LC</u> Advanced Audio Coding
- Noise Suppression:
 - Suppression of background noise
- Audio In
 - The ability for the camera to accept audio in via the Audio In jack
- Audio Out
 - o The ability for the camera to encode and transmit audio out through the Audio Out jack

PTZ - Basic Settings

This section contains the section where the Address code and Baud rate can be configured.

Address code: The ID by which the camera is controlled. Often the index position of the camera within a daisy chain

Baud Rate: The rate at which command data is transmitted to the camera. The Baud rate of the camera needs to match the Baud Rate of the source of the command (Keyboard controller, Control software, etc.

Home Position

The first position where the camera will aim upon boot

Once presets have been set up, one of the presets can be selected as the **Home Position**.

The "Return to Home After" setting determines how long the camera will wait before returning to the home position after another preset has been called. This setting is measured in seconds.

Audio Configuration	
Audio Configuration	
Audio Compression	G.711A 🗸
Sampling Rate	8 KHz
Bit Rate	64 (32 ~ 128) Kbp
Noise Suppression	⊖On ●OFF
Audio In	
Audio In	○ On ● OFF
Audio Volume	128 (0~255)
Audio Volume Audio Out	128 (0~255)
Audio Volume Audio Out Audio Out	128 (0~255) ○ On ● OFF

	Add P	rieset		
	ID	Name	Go to	Delet

[None]
30 (1~300)

Preset

Presets are predetermined positions that the user can command the camera to recall quickly.

To add a new preset:

- 1. Use the control panel and image viewer to pan to the desired Pan, Tilt, Zoom, and Focus position
- 2. Click the Add Preset button
- 3. Enter a number for the **Preset ID**
- 4. Enter a name for the preset under the **Preset**
- 5. The table will populate with all of the created presets. These will also appear on the Main page, within the control panel,

Go to

-

-

-

Delete

×

ً⊠

Basic Settings	
Basic Settings	
Address Code	1 (1~255)
Baud rate	9600 🗸
Save	
	Add Preset
d Preset	
Preset ID	[1~255]
Preset Name	

Cancel

Submit

under the **Preset** tab

Name

Preset 1

Preset 2

Preset 3

Patrol

ID

1

2

3

A Patrol is a series of presets, recalled in a given order. This causes the camera to iterate through the series, moving to each preset in the selected order

Add Patrol

Ad

To create a new Patrol

- 1. Click the Add Patrol button
- 2. Enter a name for the **Route Name**
- 3. Click the Add/ Delete buttons to add or delete patrol positions
- 4. Use the dropdown for each patrol position, and select a preset from the list of presets

Add Patrol	Patrol
Route ID 1 v Route Name Patrol 1 x	Add Patrol StopTime 10 (1~120) Setup
Add Delete Preset () [Preset 1] \vee) () 2 [Preset 2] \vee) () 3 [Preset 3] \vee () \vee) () \vee) () \vee Submit Cancel	$1 [Preset 1] \checkmark \not \Rightarrow \not \Rightarrow \qquad 1 \\ \hline \\$

Click the **Submit** button to save. The patrol will appear in the Patrol table. Activate a patrol by clicking the **Play** button

Add Patr	ol	StopTime	10	(1~120)	Setup
ID	Name		Run	Edit	Delete
1	Patrol 1			1	×

Image

Image parameters can be adjusted to control the way the image is captured and displayed

Privacy Zone

The Privacy Zone setting is for adding up to 5 "Masks" of pixels where the image will not be captured.

Each area can be set up by performing the following:

- 1. Check the box next to the "Mask" selectin
- 2. Draw the mask area on the provided image window
- 3. Click the "Set Area" button

Any Privacy Zone can be deleted by clicking the "Del Area" button next to the given Mask.



OSD

There are On Screen display (OSD) sections within the image.

Each OSD section can be individually configured to display configurable data

Any of the 4 areas can be configured to contain one of the following:

• Nothing (OFF) – The area will not be used, and will not display anything



Text Overlay		
Area1	OFF	~
Area2	OFF	~
Area3	OFF	~
Area4	OFF	~

• Date/ Time – The internal Date and Time settings will be used to fill the area

Text Overlay			Live View	III Playback	🗴 Setup
Area1	Date/Time		_		
Area2	OFF 🗸	Propotional : Scale	Main	Sub Third	
Area3	OFF V	2018/10	/12/23:13:	19	
Area4	OFF V				

• **Camera Name** – The user will define a name for the camera.

Camera Name Network Camera Background Translucent Translucent Transparer Text color White Propotional: Scale Main Sub Third Network Camera Area1 Camera Name Area2 OFF Area3 OFF Area4 OFF V	General Settings		
Background ○ Translucent ● Transparer Text color White ∨ Text Overlay Area1 Camera Name Area2 OFF Area3 OFF Area4 OFF	Camera Name	Network Camera	
Text color White V Text Overlay Area1 Camera Name V Area2 OFF V Area3 OFF V Area4 OFF V	Background	O Translucent	Transparer
Text Overlay Area1 Camera Name Area2 OFF Area3 OFF Area4 OFF	Text color	White 🗸	
Text Overlay Area1 Camera Name Area2 OFF Area3 OFF Area4 OFF			
Area1 Camera Name Area2 OFF Area3 OFF	Text Overlay		
Area2 OFF Area3 OFF Area4 OFF	Area1	Camera Name	~
Area3 OFF V Area4 OFF V	Area2	OFF	~
Area4 OFF V	Area3	OFF	~
	Area4	OFF	~

• Logo – An image, such as a company logo can be uploaded to be displayed within the image.

Text Overlay				
Area1	Logo	✓	Browse	Upload

- \circ $\;$ When selecting a file, make sure that it is a .BMP format
- The width is a multiple of 32, and the height is a multiple of 4
- The total pixels should be less than 256
- Click the **Upload** button, and then **Save**. The live view will now show the uploaded image in the selected area

File name: BOLIN LOGO TECHNO	DLOGY -96x36.bmp	 All Files (* Oper 	*) ~ Cancel
	Live View	🗰 Playback	🗱 Setup
Propotional : Scale	✓ Main	Sub Third	

• **Custom Text** – The user will enter the text that they wish to be displayed.

Text Overlay	
Area1	Custom Text V Custom Text ×
Area2	OFF V
Area3	OFF V
Area4	OFF V
	🖵 Live View 🚟 Playback 🔹 Setup
	Propotional : Scale V Main Sub Third
ļ	Custom Text

Network

Basic

The Basic network settings tab is where the user is able to configure the following:

- DHCP options
 - DHCP An IP address will be dynamically assigned to the camera from the gateway (router)
 - $\circ \quad \ \ {\rm Static \ IP-The \ user \ will \ enter \ / \ define \ the \ IP \ address}$
 - PPPoE—Point-to-Point Protocol over Ethernet
- IP Address
- Subnet Mask
- Gateway
- IPV6 settings
- DNS Configurations
- RTMP settings
 - Check the RTMP checkbox
 - Copy and paste the stream URL from the online platform
 - Copy and paste the Stream Key (Also known as the Stream ID) from the online platform.
 - Example below shows where to copy the information from YouTube

TCP/IP	
IPv4 Settings	
DHCP	Static IP 🗸
IP Address	192.168.1.100
Subnet Mask	255.255.255.0
Gateway	192.168.1.1
PPPoE User Name	
PPPoE Password	
IPv6 Settings	
IPv6	
Link-Local	
IPv6 Address	
Address Prefix	64 (0~127)
Default Route	
Router Advertisement	
DNS Configurations	
Primary DNS	102 168 1 1
Secondary DNS	192.168.1.2

Image: Tray Studio BETA I	OFFLINE OFFLINE	Webcome back, BOLIN Still have questions about streamin	Router Focadcast Yourself ^m
YOUR CONTRIBUTIONS	Server URL Intmp://a.rtmp.youtube.com/live2 Stream name/key Reveal	RTMP Curl Url Stream Key	

- Click Save
- Allow a few minutes for the stream to connect. The status on your streaming platform (Such as YouTube) will change to Live. When this happens, the camera is streaming video Live to

NOTE: Similar steps can be followed to stream to any platform that supports RTMP, such as YouTube, Facebook, Twitter, Twitch, etc.)

Port

This section allows the user to specify which ports the camera will use to communicate using the following protocols:

- o HTTP: Default 80
 - HTTP is the protocol used to access the web interface.
 - Changing this port number will require the user to specify the port number when entering the IP address to the web browser.
 - For example, if it is changed to 85, the IP address will need to be entered as follows in order to access the web interface: http://192.168.0.13:85

Port		
Port		
HTTP Port	80]
HTTPS Port	443	
RTSP Port	554]
Save		

- HTTPS: Default 443
 - o HTTPS is the protocol used for making a secure connection to the camera
 - Changing this port number will require the user to specify the port number when attempting to make a secure connection to the camera
 - For example, if it is changed to **425**, the IP address will need to be entered as follows in order to make a secure connection

https://192.168.0.13:425

- o RTSP: Default 554
 - RTSP is the protocol used to pull real-time video over the network (using VLC Player or other network video-compatible software)
 - Changing this port number will change the way the RTSP video can be viewed. Most RTSP streaming software uses port 554 by default, therefore it is not recommended that this port number be changed.
 - Please see the section of this manual titled **RTSP** for more information

FTP

The camera has the ability to behave as an FTP server.

A user can connect to the camera to access internal files via FTP

To allow this camera to act as an FTP server:

- Check the "Enable" checkbox
- Create a password, and enter it into the **Password** field
- Re-type the password into the **Re-Type Password** field

Once this has been enabled, a user can use FileZilla (or some other such FTP client software) to access the camera's files.

FTP	
FTP	
Enable	
Username	adminftp
Password	••••
Re-type Password	••••
Max Connection	10
Save	

RTSP

The camera is capable of providing an RTSP stream

The stream can be accessed with or without the need for Authentication credentials. This is toggled by ticking / unticking the checkbox for **Authentication**

Each stream can be accessed using the **Path**. The URL format is as follows:

rtsp://{ip address}/{path}

Example: rtsp://192.168.0.13/stream1

TSP	Multicast	
Authenti	cation	
Authenti	cation	☑ Enable
Port		554
Stream1		
Enable R	TSP unicast stream	\checkmark
Enable R	TSP stream metadata	
Path		stream1
DSCP		32
Stream2		
Enable R	TSP unicast stream	
Enable R	TSP stream metadata	
Path		stream2
DSCP		32
Stream3		
Enable R	TSP unicast stream	\checkmark
Enable R	TSP stream metadata	
Path		stream3
DSCP		32
Savo		

DDNS

Dynamic DNS is the ability to create a domain name that can be synced to the WAN IP, and then used to access the camera remotely (from outside the LAN where the camera exists)

This assumes that all necessary port-forwarding has been performed on the router(s) and firewall(s) that may exist between the camera and the WAN (Internet).

This is accomplished by:

- 1. Enabling DDNS by ticking the checkbox
- 2. Enter a hostname (Must be unique)
- 3. Select a DDNS server from the drop-down list
- 4. Create a username and Password

NOTE:

This Username and Password are for the **account** that is being created at the selected DDNS server. These are **NOT** the credentials used to log in to the interface of the camera. The credentials used to authenticate into the camera are configured within the **User Management** section.

DDNS	
Enable	
Host Name	ipcamera
DDNS Server	DynDNS 🗸
User Name	
Password	
Re-type Password	
Save	

System

Date/Time

This interface allows the user to configure the date / time settings of the camera

- Time Settings
 - Display Format allows the user to configure the date time format
 - Synchronize with Computer Time Causes the camera to pull the current date and time information from the computer and apply it as the current date and time for the camera
 - Manual Allows the user to manually enter the date and time
- NTP Server
 - DHCP or Manual are options that will cause the camera to access an NTP server (automatically, or via the user's configuration)

Daylight Saving

To configure the camera to automatically adjust for daylight saving:

- Select the Daylight Saving tab along the top of the Date/Time interface
- Set the proper time zone
- Check the Daylight Saving time checkbox, and then enter the dates and times when Daylight Saving time should be activated / deactivated in the Start Time / End Time sections respectively

Time Settings	Daylight saving	
Time Settings		
Display Format	2018/09/15 16:58:52 V Synchronize wi	th computer time
Manual	2016 / 01 / 01 12 : 03 : 30 S	etup
NTP Server		
Time Server	None	
	O DHCP	
	○ Manual	
	tw pool atp org	

Time Settings	Dayligh	t sav	ving						
Time Zone	Asia	``	✓ Taipei		~				
Daylight saving	Enable								
Start Time	Mar	\sim	Second	\sim	Sun	\sim	02	~	o'clock
End Time	Nov	\sim	First	\sim	Sun	\sim	02	~	o'clock
Save									

Maintenance / System Information

The following general information can be found under the System Information tab within the Maintenance section of the web GUI:

Model Name: The specific model of this camera

Firmware Version: The current firmware version running on this device

Serial Number: The serial number of the image module within the camera

MAC Address: The MAC address of the camera's Network Interface Card (NIC)

System Information	Maintenance
Model Name	EV-PTZ-4K-3
Firmware Version	Bol1_01.00.0027
Serial Number	180100013
Mac Address	00:10:f3:43:57:03

Maintenance / Maintenance

The Maintenance tab under the Maintenance section within the web GUI can be used to perform the following functions:

- Update firmware
 - A firmware file can be obtained from BOLIN Technology
 - Click the **Browse** button, and navigate to the file (.bin)
 - Click **Upload**, and allow the camera to load the new firmware
 - It takes a few minutes for the camera to come back online
- Reboot camera
 - This button performs a soft reboot (camera will restart without needing to disconnect power)
- Reset to Default
 - Will reset the camera's settings to factory defaults, except the IP address will not be affected
- Reset to Factory Default
 - Will reset all settings (including the IP address) to factory default

rirmware	Update							
	Choose a bin file	to upgrade camera						
File Name			Browse		Up	load	1	
Reboot Ca	amera							
	Reboot Ca	mera	During reboot	t cam	iera connecti	ion will be lo:	st.	
SystemCo	nfigurations							
	Reset to D	efault	Reset all the c	amer	ra parameter	s to the defa	ult settings except IP add	ire
	Reset to Facto	ry Default	Reset all of the	e can	nera parame	ters to defau	lt.	
	Download L	og File						
Configur a File Name	tionsRestore Choose a backup	file to restore came	era settings Browse		Upload a	nd Restore]	
Configura File Name NOTE: Re: MCU Upd	tionsRestore Choose a backup storing will cause ate	file to restore came	era settings Browse rt.		Upload a	nd Restore]	
Configura File Name NOTE: Re: MCU Upd	tionsRestore Choose a backup storing will cause ate Choose a MCU fi	i file to restore came the camera to resta le to update	era settings Browse		Upload a	nd Restore]	
Configura File Name NOTE: Re: MCU Upd File Name	tionsRestore Choose a backup storing will cause ate Choose a MCU fi	file to restore came the camera to resta le to update	Browse		Upload a	nd Restore date]	
Configura File Name NOTE: Re: MCU Upd File Name NOTE: Up	tionsRestore Choose a backup storing will cause ate Choose a MCU fi	o file to restore came the camera to resta le to update se the camera to res	Browse Browse Browse		Upload a	nd Restore]	
Configura File Name NOTE: Re: MCU Upd File Name NOTE: Up Configura	tionsRestore Choose a backup storing will cause ate Choose a MCU fi date mcu will cau	o file to restore came the camera to resta le to update	Browse Browse tt. Browse		Upload a	nd Restore		
Configura File Name NOTE: Re: MCU Upd File Name NOTE: Up Configura Download	tionsRestore Choose a backup storing will cause ate Choose a MCU fi date mcu will cau tionsBackup a full backup file	o file to restore came the camera to resta le to update se the camera to res of camera settings	Browse Browse		Upload a	nd Restore		
Configura File Name NOTE: Re: MCU Upd File Name NOTE: Up Configura Download	tionsRestore Choose a backup atoring will cause ate Choose a MCU fi date mcu will cau tionsBackup a full backup file Download	o file to restore came the camera to resta le to update se the camera to res of camera settings Now	Browse Browse t. Browse		Upload a	nd Restore		

- Download Log File
 - Should the need arise, the Log File can be downloaded and provided to Technical Support personnel for analysis when troubleshooting
- Download Config File
 - o A configuration file can be downloaded, which stores all of the camera's settings
 - This file acts as a backup for the camera settings
- Upload a config file
 - A configuration file can be downloaded from a camera containing all the IP settings, which acts as a backup
 - This configuration file can be uploaded through this portion of the interface
- Update MCU file
 - o MCU firmware can be obtained from BOLIN Technical Support
 - o MCU firmware can be updated by uploading here

User Management

This interface allows the administrator to create / manage user accounts and passwords

Jser Management											
Jser Management											
Add	Edit Delete										
ID	Username	Level									
0	admin	admin									
1	customer	view									
	Jser Man Add ID 0 1	Jser Management Add Edit Delete ID Username 0 admin 1 customer									

To add a new user:

- 1. Click the Add button
- 2. Enter the username
- 3. Enter the new password in the **Password** field
- 4. Re-enter the password in the Re-type Password field

Add	
User Management	
Username Password Re-type Password Access Level	Admins Views
	Submit Cancel

Log

The Log is where the camera stores all actions that are performed by the camera. The log shows the following data points for each event:

Log						
Filter	Level :	All	✓ Category	: All		
ID	Level	Category	Source	Time	Message	
1	INFO	SETTING	192.168.1.253	2018/09/15 06:18:15	Seting pelco.ptz.move.pan_tilt -> -1063,	^
2	INFO	SETTING	192.168.1.253	2018/09/15 06:18:15	Seting pelco.ptz.move.pan_tilt -> -1063,	
3	INFO	SETTING	192.168.1.253	2018/09/15 06:18:15	Seting stamp -> 0.719226106105610	
4	INFO	SETTING	192.168.1.253	2018/09/15 06:18:15	Seting pelco.ptz.move.pan_tilt -> 0,	
5	INFO	SETTING	192.168.1.253	2018/09/15 06:18:15	Seting pelco.ptz.move.pan_tilt -> 0,	
6	INFO	SETTING	192 168 1 253	2018/09/15 06:18:15	Seting stamp -> 0 1040206005904153	

- 1. ID The data point which identifies each individual event
- Level The urgency level which is used to classify the event. Each event falls into one of the following levels:
 a. System Information (Info) General operations
 - b. Warning Something is operating in an abnormal (though non-critical) manner
 - c. Error An error has occurred
 - d. Critical A critical error has occurred
- 3. Category The descriptor for the data that is affected by the event. This can be classified into the following categories:
 - a. System
 - b. Network
 - c. Event
 - d. Setting
 - e. Other
- 4. Source The IP address that originated the command that generated the recorded event
- 5. Time The date and time when the event occurred
- 6. Message Text-based data describing the action that was taken

Log events can be filtered by level of entry, as well as by Category:

Level :	All	g
	System Information	
vel	Warning	
IFO	Error	
IFO	Critical	4

Category :	All
	System
rce	Network
.168.1.253	Event Setting
.168.1.253	Other 8

Event

Alarm Handler

The Alarm Handler will enable the camera to accept alarms from the physical contacts on the pigtail

Alarm Handler		
Alarm Handler Enable	Alarm Schedule	
Save]

Motion Detection

Based on pixel density & pixel change, motion detection raises an event when motion occurs within the configured area

	Motion Detection	
	Enable Sensitivity	Motion Schedule 100 (0~100)
	Zone1	Set Area Del Area
	Zone2	Set Area Del Area
	Zone3	Set Area Del Area
	Zone4	Set Area Del Area
Q X E	Zone5	Set Area Del Area
	1 [Preset 1] V P P 1	Motion Detection Enable Sensitivity Zone1 Zone2 Zone3 Zone4 Zone5

The Motion Schedule Settings allows the user to configure the days/ hours in which the motion detection is active on the camera

5	0	1	2	3	4	5	6	7	8	9	10	11	12	18	14	15	16	17	18	19	20	21	22	23	5	D	
Man			1 20002 1 20003					12223 5015	8000	112357 102357						23033 22853	10000 10000		20135 73330	10000 50000			2000 2001		s	D	
Tue	21013		1 81832 1 8383		2000 2000	03552 5383	1015	1221G 31533	10500 20100			5060 5063	0000			11000 [[[[[]]	632/3 53333	802013 83333	8331 8333		101017 [[]]]	8000	8000 1993	0000	s	D	
Wed			1				83388 83388		1355	13355								20000 2000		800000 80000	10000 10000		90000 9000	1999089 199938	S	D	
Thu	5760							5333		833							100eros 100eros								s	D	
Fri										88															s	D	
Sat														533											s	D	
Sund	av :	:			Sta	art :		0			:	0		٦	E	nd	:	23			:	59					
	1																										
Mono	day	:			Sta	art :		0			:	0			E	nd	:	23			:	59					
Tueso	day	:			Sta	art :		0			:	0			E	nd	:	23			:	59					
Wend	ine	sda	ay :		Sta	art :		0			:	0			E	nd	:	23			:	59					
Thurs	da	y:			Sta	art :		0			:	0			E	nd	:	23			:	59					
Frida	y:				Sta	art :		0			:	0			E	nd	:	23			:	59					
Satur	day	y:			Sta	art :		0			:	0			E	nd	:	23			:	59					
												Sav	e														
										,				_													

Tampering Alarm

The tampering alar	m is raised when	the camera	image is	tampered
with (i.e. artificiall	y covered, spray p	painted over	r, etc)	

Tampering Aları	n	
Enable	V	Tampering Schedule
Sensitivity	High	~

FTP Upload

FTP Upload transfers a snapshot from the camera to the configured FTP server depending upon selectable conditions

FTP Upload Handler		
FTP Upload Handler	RemoteServer	
Trigger Alarm Detection	Host Address	
Trigger Motion Detection	Port	21 (21, 1025~65535)
Trigger Tampering Alarm	Username	
Trigger Scheduled :	Password	
Save		

SMTP Notification

SMTP Notifications are email messages that are sent to a predefined list of recipients via a preconfigured email account.

The user can define which events will cause each recipient to receive an email

ATP Notification				Recipient Li	st				
om									
igger Alarm Detection				Enable	ID	Email	Alarm	Motion	Tampering
igger Motion Detection					1				
					2				
igger Tampering Alarm					3				
					4				
					5				
ATD Somer					6				
art Addass			_		7				
ost Address	25	(1.65535)			8				
sername	23	(1~0000)	_		9				
assword			=		10				
uthentication	NO_AUTH								
-									

Authentication	NU_AUTH
	SMTP_PLAIN
	LOGIN
	TLS_TTLS
Save	usano ¹⁰⁰ tratratratratratratra

Network Storage

twork Storage Handler	Recipient Setup
nable Trigger Alarm Detection Trigger Motion Detection Trigger Tampering Alarm	Network Storage Status not_mounted Network address
Trigger Scheduled	Login Certificate Username Password
	Network Storage Mount Remove

Storage

SD Record

Please note: on FEX model cameras, the Micro SD card can not be installed after it has been shipped. A custom order is required to purchase FEX cameras with a Micro SD card installed

CD Information

The camera has an SD card slot on the back panel, allowing for an SD card to be inserted and used to record footage. With the camera powered off, insert a supported Micro SD card into the SD Card slot on the back of the camera, and then power the camera on.

If the card has been properly detected, the "SD Information" section will show data about the SD card, indicating that the card is being detected, and is available to be written to

To clear all data from the Micro SD card, the user has the option to click the **Format SD Card** button. This will delete all data from the Micro SD card, and make space on the space on the card available for recording

Currently, the following Micro SD cards are supported:

Brand	Size	Format	Туре	Class	Transfer
					Bus
Kingston	16GB	exFAT	SDHC	10	IU1
Kingston	32GB	FAT32	SDHC	10	IU1
Kingston	32GB	exFAT	SDHC	10	IU1
Kingston	64GB	exFAT	SDXC	10	IU1
Kingston	128GB	exFAT	SDXC	10	IU1
Samsung	32GB	FAT32	SDHC	10	UHS-I (1)
Samsung	32GB	exFAT	SDHC	10	UHS-I (1)
Samsung	32GB	FAT32	SDHC	10	UHS-I (1)
Samsung	32GB	exFAT	SDHC	10	UHS-I (1)
Samsung	64GB	exFAT	SDXC	10	UHS-I (3)
Toshiba	32	FAT32	NA	10	U1
Toshiba	32	exFAT	NA	10	U1

SD Information		
Available	29643 MBytes	Format SD Card
Usage	0% (1 / 29644 MBytes)	
Status	ok	
Overwrite	\checkmark	
Record Type	Video 🗸 MP4 🗸	

	SD Information			
	Available	29555 MBytes	Format SD Card	
	Usage	0% (89 / 29644 MBytes)		
	Status	ok		
	Overwrite	V		
	Record Type	Video 🗸 MP4 🗸		
Message from	webpage			×
Format SD ca	rd, are you sure ?			
Don't let	t this page create r	more messages	OK Cance	el

Once the card has been properly installed, follow these steps to record video to the Micro SD card:

- 1. From the SD Record Handler section, tick the "enable" checkbox
- 2. Select the "Trigger Scheduled" radio button
- 3. For best results, set the schedule so that the camera is set to record all day for each day. This will result in the caemra recording every time the camera is powered on
- 4. The FileName Prefix and Server Path values will change the name of the video file, and the location where the file is saved on the SD Card, respectively

SD Record Handler						
SD Record H	andler					
Enable						
	Trigger Scheduled					

Schedule Settings		Day / Time Inclusi	on Filter			
Schedule1 Schedule2	Start 0 End 0 (0-23) hour Start 0 End 0 (0-23) hour		None	AllDay	Schedule1	Schedule2
ileName Prefix	Schedule Rec	Monday	\circ	۲	0	0
erver Path	videoSchedule	Tuesday	0	۲	0	0
		Wendnesday	0	۲	0	0
		Thursday	0	۲	0	0
		Friday	\circ	۲	\circ	0
		Saturday	0	۲	0	0
		Sunday	0	۲	0	0

Recording Download

When an SD card is installed and configured to record, the web interface offers the option for the recording to be accessed and downloaded

This is accomplished by following these steps:

- 1. Click on the **Recording Download** tab
- 2. Select a beginning date, and an end date using the two date selection boxes
- 3. Click the **Search** button
- 4. Select the recording by ticking the checkbox next to the entry
- 5. Click the **Download** link

Live View		Playback	•	Setup			
Common	Reco	rding [Download				
A/V Streams	Recor	ding Do	wnload				
PTZ	Reco	rdina Tin	ne	2018-12-11	~ 2018-12-11	Search	
Image		5					
Network	Do	wnload					
System		ID	Start Time	•	End Time	Status	
Storage		1	2018-12-1	11 13:54:01	2018-12-11 13:54:01	mp4	Download
SD Record							
RecordingDownload							

A notification will appear at the bottom of the Internet Explorer window, prompting the user to save the file.

Do you want to save Schedule_Rec_20181211_135401_0061.mp4 (30.1 MB) from 192.168.0.13?	Save	-	Cancel	×

Click **Save** to automatically save the file to your computer's default **Downloads** folder, where it can be accessed and played.



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