User Manual

Full HD IR Mini Dome



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1. Safety Instruction

Thank you for purchasing this Network Camera. This user manual includes instructions for using and managing the camera on your network. Updated versions of this document will be posted to our company website as they become available. The latest version of this user manual can also be found on the Installation CD accompanying this product, along with user manuals in other languages.

1.1 Safety Notices

Before you use this product

This product has been designed with safety in mind. However, the electrical products can cause fires which may lead to serious body injury if it is not used properly. To avoid such accidents, be sure to heed the following.

Legal Caution

Video and audio surveillance can be forbidden by laws that vary from country to country. Check the laws in your local region before using this product for surveillance purposes.

Don't open the housing

Don't try to open the housing or remove the covers which may expose yourself to dangerous voltage or other hazards.

Don't use the accessories not recommend by the manufacturer

Heed the safety precautions

Be sure to follow the general safety precautions and the "Operation Notice."

Operation Notice - Operating or storage location

Avoid operating or storing the camera in the following locations:

- Extremely hot or cold places (Operating temperature: -10 °C to + 50 °C [14 °F to 122°F])
- Exposed to direct sunlight for a long time, or close to heating equipment (e.g., near heaters)
- Close to water (e.g. near a bathtub, kitchen sink, laundry tub)
- Close to sources of strong magnetism
- Close to sources of powerful electromagnetic radiation, such as radios or TV

transmitters

• Locations subject to strong vibration or shock

In case of a breakdown

In case of system breakdown, discontinue use and contact your authorized dealer.

In case of abnormal operation

- If the unit emits smoke or an unusual smell.
- If water or other foreign objects enter the cabinet.

• If you drop the unit or damage the cabinet:

-Disconnect the cable and the connecting cables.

-Contact your authorized dealer or the store where you purchased the product.

Transportation

When transporting the camera, repack it as originally packed at the factory or in materials of equal guality.

Ventilation

To prevent heat buildup, do not block air circulation around the device.

Cleaning

• Use a soft, dry cloth to clean the external surfaces of the device. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry.

• Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface.

1.2 Electromagnetic Compatibility(EMC)

FCC Statement

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. The 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, it 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 of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between 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.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

2. Overview



2.1 Full HD IR Mini Dome Features and Specifications Full HD IR Mini Dome Features

- Full HD 1080p
- 1/2.8" Sony Exmor CMOS sensor
- H.264 and Motion JPEG compression
- 30 fps at 1920 x 1080
- 3.6mm, F1.8 megapixel fixed lens
- True day & night with automatic removable IR-cut filter
- Smart IR 10m
- Corridor mode
- ROI (region of interested)
- Two-way audio and built-in microphone
- 1 x alarm input, 1 x alarm output
- Tampering detection
- RTC with built-in battery
- · Screwless 3-axis angle adjustment for easy installation on wall or ceiling
- IK08 vandal-proof
- IP66 weatherproof with optional outdoor kit
- SSL v3 advanced HTTPS encryption
- Supports Firefox, Safari and Mac OS
- Supports Samba network storage
- Multi-lingual user interface
- ONVIF 2.3 and Profile S compliant
- Free 64 channels CamGraba2.0 NVR software
- Supports True Plug and Play Cloud Solution

Full HD	IR Mini	Dome	Specifications
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Model Name	Full HD IR Mini Dome
Description	2MP IR Mini Dome
Image Sensor	SONY 1/2.8" CMOS
Max Resolution	1920 x 1080 (Full HD 1080p)
	H.264
Video Compression	MJPEG
Multi-stream Support	4
Max Frame Rate	30 fps @ 1920 x 1080
Lens	3.6 mm, F1.8
Angle of View	81° horizontal
	0.05 lux @ F1.8 (color)
Min illumination	0.001 lux (B/W)
	0 lux (IR LED on)
Audio Support	Тwo-way
	Built-in mic, line in & out
PoE	PoE 802.3af (Class 1)
	12V DC, 1A
Local Storage	Micro SD
Alarm in-/outputs	1/1
Dimensions	φ115 x 70 mm
Motion Detection	Yes
Audio Detection	Yes
Security	Multi-level passwords
	HTTPS encryption
Supported Protocols	Bonjour, TCP/IP, DHCP, PPPoE, ARP, ICMP, FTP, SMTP, DNS,
	NTP, UPnP, RTSP, RTP, HTTP, TCP, UDP
Video Management Software	64 channels CamGraba2.0 NVR software included

2.2 Full HD IR Mini Dome Package Contents

You should find the following items in the packaging of your product.

- Network dome camera
- Quick installation guide
- Installation CD
 - -CamGraba2.0 NVR software
 - -Intelligent IP Installer
 - -User manual

- -Language packs
- Mounting and connector kits
- Alignment sticker
- Activation code
- Focus Adjustment
- Plastic mounting plate
- L-type bracket (optional)
- Outdoor junction box (optional)

If any items are missing, contact your dealer.

2.3 Minimum System Requirement

Your computer hardware should meet or exceed the following specifications:

Item	Requirements
CPU	Minimum Intel® Cord 2 Duo or higher(Core i3 or above is
	recommended)
Graphic Card	256MB RAM graphic cards(or equivalent on-board graphic cards)
RAM	Minimum 1GB or RAM(2GB or above is recommended)
Operating System	Window 2000, 2003, XP, Vista or Windows 7
	Mac OS Leopard10.5
Web Browser	Internet Explorer 6 or later

Note:

• If using Windows 98 or Windows ME, please install IP Installer before using WEB UI to ensure the system runs normally.

• If not able to view the recorded video file, please install Xvid codec while installing Intelligent IP Installer. (For Windows 98, ME or 2000 server, the codec might not work properly. Please download Xvid codec 1.0 from the internet.)

• Please keep updating the latest Windows software and service package. (Ex: Net Framework, Windows Media Player, Enhance ActiveX Security)

3. Web Interface Main Menu

The Live View Page



Toolbar	Function		
	Click this button to take you back to the camera home page where you		
	can live view the vide		
	Click this button to open the administrator		
	menu page, which can set up all the	O Information	
	configuration	Basic Setup	
		Live View	
		O Playback	
		© Event	
		O System	

	Click this button to pause or resume from pause the live video stream.		
	The function is also available in VLC mode when you use non-IE browser		
0	Clicking this button will stop the video stream and the video display		
	turns black (off). The function is also available in VLC mode when you		
	use non-IE browser		
0	Click on the Record button, if you wish to record the live video to your		
	computer's hard drive. When selected, a prompt will request you to		
	specify the folder in which you want to store the video.		
	Click OK to begin the recording. The Record button starts flashing,		
	indicating that the recording is active. Click it again to stop the		
	recording.		
	Note: This function is only available in MS Internet Explorer on Windows		
	systems.		
0	Use this button to take a snapshot of the video. Clicking the button		
9	opens up a window showing the captured frame. Save the image by		
	clicking on the Save Image button.		
	The function is also available in VLC mode when you use non-IE browser		
0	The digital zoom function allows magnification of certain areas of the		
0	video. After you click on the magnification icon, a window appears as an		
	overlay on top of the image.		
	See below.		
	You can drag the box over the		
	image, and you can adjust the		
	magnification by moving the CamGraba 2.0		
	slider toward "T" (tele-zoom)		
	or "W" (wide-angle). The		
	more you move the slider		
	toward "T," the further you		
	zoom in and details appear		
	larger. It is normal behavior that the image quality is reduced when		
	using the digital zoom function.		
	Digital Zoom is only available in MS Internet Explorer Web browsers.		
	Note: This function is only available in MS Internet Explorer on Windows		
	systems.		
	Click this button to view the video in full screen mode. In full screen		
	mode, the video is stretched to fit the entire screen and all control		
	graphics and window elements are no longer displayed. To return from		
	full screen mode, press the ESC key on your keyboard. You can also		

	right- or left-click any part of the image with your mouse.			
	The function is also available in VLC mode when you use non-IE browser			
Live View	Returns the user to the main live video page.			
	Click this button and the client settings dialog will open.			
Client Setting	Profile- Select your preferred			
	profile from the drop-down list.	Profile Profile1 V		
	The network camera can store	View Size Fit Screen V		
	different profiles that provide Protocol HTTP			
	different video settings. You can			
	define these profiles in the administrator menu, e.g, one profile is for			
	low bandwidth environment whereas another profile is for maximum			
	quality.			
	View Size- There are two choices here. "Fit Screen" will keep the video			
	small so that it will always fit into the view port of the live video page.			
	"Full Screen" is actually not full screen at all, but it displays the video			
	stream at it's original size. So, if you select a profile that displays			
	1080p contents and select full screen for the view size, the video will be			
	rendered at 1920 x 1080 pixels on your screen.			
	Protocol- Select the transfer protoc	col here.		

4. Setting_Information

The camera's administrator menu allows you to configure all aspects of your network camera. This page provides a complete overview of the status of your network camera.

X	rmation	
	oduct Information	
ic Satur	oduct Name	2M IR Mini Dome IP Camera, PoE
e View Fin	mware Version	M2.0422
yback ent Fin	mware Date	Tue Apr 22 16:50:22 CST 2014
	wif Version	2.30
MA	C Address	00:18:FE:04:E2:B3
Da	te Time	2014-06-17 15:16:01
Ba	ndwidth Usage	Receiving = 120 kbps transmitting = 8kbps
-Se	curity	
	leo Connection	0
	count	2
	onymous Viewer	Enabled
	TPS	Disabled
IP	Address Filter	Disabled
In	age age Rotated:None, deo Clip Format:	
Im Vi Da IR IR IR	age Rotated:None, deo Clip Format: y / Night Cut Filter Mode: Cut Filter Swite Cut Filter Three	Frofilel, :Auto, ch Delay:10s,
Im Vi Da IR IR IR IR IR IR IR IR IR	age Rotated:None, deo Clip Format: y / Night Cut Filter Mode: Cut Filter Swit:	Frofilel, :Auto, ch Delay:10s,
Im V1 Da IR IR IR IR IR IR IR	age Rotated:None, deo Clip Format: y / Night Cut Filter Mode: Cut Filter Swite Cut Filter Thre: Mode:Auto,	Frofilel, :Auto, ch Delay:10s,
Im Vi Da IR IR IR IR IR IR IR Vi	age Rotated:None, deo Clip Format: y / Night Cut Filter Mode: Cut Filter Switc Cut Filter Switc Cut Filter Thre: Mode:Auto, Level:100 ent List me En	Profilel, :Auto, ch Delay:10s, shold:16-37, * abled Trigger Action * Schedule
Im Vi Da IR IR IR IR IR IR IR Vi	age Rotated:None, deo Clip Format: y / Night Cut Filter Mode: Cut Filter Swite Cut Filter Thre: Mode:Auto, Level:100 ent List	Profilel, :Auto, ch Delay:10s, shold:16-37, * abled Trigger Action * Schedule
Im Vi Da IR IR IR IR IR IR IR IR IR I * 1	age Rotated:None, deo Clip Format: Cut Filter Mode: Cut Filter Switc Cut Filter Three Mode:Auto, Level:100 ent List me En item has been co	Profilel, :Auto, ch Delay:10s, shold:16-37, abled Trigger Action * Schedule ontained.
Im V1 Da IR IR IR IR IR IR IR I I I I I I I I I	age Rotated:None, deo Clip Format: Cut Filter Mode: Cut Filter Switc Cut Filter Switc Cut Filter Three Mode:Auto, Level:100 ent List me En item has been co D1/2=Digital Outp S=SMTP notificati	Profilel, :Auto, ch Delay:10s, shold:16-37, abled Trigger Action * Schedule ontained.
U U U U U U U U U U U U U U U U U U U	age Rotated:None, deo Clip Format: Cut Filter Mode: Cut Filter Mode: Cut Filter Thre: Mode:Auto, Level:100 ent List me En item has been co D1/2=Digital Outp S=SHTP notificati N=Network Storage	Profilel, :Auto, ch Delay:10s, shold:16-37, abled Trigger Action * Schedule ontained.
Im Vi Da IR IR IR IR IR IR IR IR IR IR IR IR IR	age Rotated:None, deo Clip Format: Cut Filter Mode: Cut Filter Mode: Cut Filter Thre: Mode:Auto, Level:100 ent List me En item has been co D1/2=Digital Outp S=SHTP notificati N=Network Storage	Profilel, :Auto, ch Delay:10s, shold:16-37, abled Trigger Action * Schedule ontained. put 1/2, F=FTP Upload, ion, B=HTTP notification, a, SD=SD Card 38, HTTP Port:80

5. Setting Basic Setup

The basic setup allows you to manage the user accounts of your network camera, define the network parameters, set up the date and time settings and most importantly, the video settings.



Information Basic Setup Account	Account List User Name Viewer Mode	
Network Date Time Video Audio Live View Playback Event System	admin Administrator	http://192168.1.10/basic_account_settin. Account Setting User Name Password Re-type Password Role Viewer Viewer
	Add Edit Remove Anonymous Setting Anonymous Viewer Disabled	Save Cancel

5.1 Account

The network camera allows the creation of different user accounts with different levels of access to the camera. There are three main user levels. The Viewer account only allows viewing the live video page of the camera. The Operator account allows viewing the live video as well as changing the image setup settings, such as brightness, contrast, etc. Only the Administrator account has full access to all camera settings, including the Settings menu. You can define up to nine additional user accounts. The user name and password must be between 4 and 16 characters in length. For each account you can also specify different user authority (Viewer, Operator or Administrator).

Account List:

Click the Add button to create a new user account. A popup window will open up. Here you type in a user name and a password for the new account. Also, you must define the role of the new user account. Click Save to create the new user account. Highlight an account to either

edit or remove it. Note that the admin user account cannot be removed.

Anonymous Settings:

Enabling this will allow any user to view the live video from the camera live video page without entering a user name or password. If you do not want to allow this to happen, be sure to set this option to "Disabled."

5.2 Network

On this page you can define the network settings of the camera. By default the camera is set up to automatically obtain the necessary IP information from the DHCP server (e.g., the router) in your network. You can, however, set up the IP address and related settings manually.

5.2	.1	TCP/I	Ρ

	TCP/IP PPPOE
 Information Basic Setup Account Network Date Time Video Audio 	Internet Protocol Version 4 (TCP/IPv4) MAC Address 00:1B:FE:04:32:4A © Obtain an IP address automatically (DHCP) O Use the following IP address © Obtain DNS server address automatically
 Live View Playback Event System 	Use the following DNS server address Internet Protocol Version 6 (TCP/IPv6) IP Address fe80:0000:0000:021b:feff:fe04:324a / 64
	HTTP HTTP Port 80 (1124 ~ 65534)

Internet Protocol Version 4(TCP/IPv4):

MAC address- MAC address stands for Media Access Control address. This is the unique hardware address of the camera's network interface.

Obtain an IP address automatically (DHCP)- This is the default setting. In this mode the camera obtains the IP information from the DHCP server in your network. **Use the following IP address-** Activate this option in order to assign a static IP address to the camera. You need to enter a valid IP address, subnet mask and default gateway address in the corresponding fields.

Obtain DNS server address automatically - automatically use the DNS server settings provided by the DHCP server.

Use the following DNS server address- When you disable DHCP, you also need to provide the camera with valid DNS settings. The Primary DNS server must be filled out. It is often the same IP address as the Gateway address.

Internet Protocol Version 6(TCP/IPv6):

IP address- The IPv6 IP address of camera is automatically assigned by

converting the MAC address of the IP camera. User is not able to modify it.

HTTP:

HTTP port number- The default value is 80 and normally there is no need to change it. If you decide to change the http port to a different value; e.g., 1024, you need to do two things:

First, after saving the settings you need to reboot the camera via the System -> Initialize menu.

Secondly, after the reboot is completed you need to connect to the camera using the URL http://camera_ip:portnumber.

 Information Basic Setup Account Network Date Time Video Audio Live View Playback Event System 	TCP/IP PPPOE PPPOE On O Off Authentication Type PAP IP Address 0.0.0.0 User ID	
--	---	--

5.2.2 PPPoE

PPPoE is the most common form of connection for DSL-based Internet service.

You can use this function to connect the camera directly to a DSL modem. A common application for this is where the network camera is installed in a remote location where no network is present. In the location is a DSL Internet connection (DSL modem), but no router or any other network infrastructure. You can connect the camera to the DSL modem and enter your DSL account information in the fields below.

PPPoE:

PPPoE- On

Authentication Type-Select PAP or CHAP

IP address- Displays the current IP address obtained from the Internet Service Provider (ISP). It displays 0.0.0.0 if the camera is not connected to the Internet via PPPoE.

User ID- Enter the user ID for your DSL service here. The user ID has been given to you by your ISP.

Password- The password for the DSL account goes here. Re-type the password in the field below.

DNS Server- Typically, your ISP will send DNS Server information to the camera when it connects. Some ISPs, however, require entering specific DNS servers manually. In that case you can activate the option "Use the following DNS server address" and enter the primary and secondary DNS servers in the fields below (not shown on the screen shot).

5.3 Date Time

ormation		
ic Setup	Current Date/Time	
count	Current Date/Time	2014-11-21 14:56:03
twork	PC Clock	2014-11-21 14:56:03
te Time	Date/Time Format	yyyy-mm-dd hh:mm:ss 🗸
idio		
View	Synchronization Meth	od
yback	O Keep Current Setting	9
nt	O Synchronize with clie	ent PC
tem	O Manual Setting	
	Synchronize with NT	P
	• Use the following	NTP server address
	server 1 pool	.ntp.org Test
	server 2 1.po	ool.ntp.org Test
	server 3 2.pd	ol.ntp.org Test
	server 4 3.po	ol.ntp.org Test
	Time Zone	
	Time Zone	
	(GMT+08:00)Taipe	ei 🗸 🗸
	Daylight Saving Time	0- 0-#

On this page you can define the time settings of the camera.

Current Date/Time:

Current Date/Time- Displays the camera's current time.

PC Clock- This is the date and time of the computer you are currently using to connect to the camera.

Date/Time Format- The format determines how the date/time is displayed on the live video.

Synchronization Method:

Keep current setting- You don't want to change the date and time.

Synchronize with client PC- It means to adjust the camera time to your PC. Be aware of the fact that this option sets the time only one time. From that point forward, the camera time will start to differ from your PC time as time progresses, and occasional re-synchronization will be necessary.

Manual Setting- Lets you manually enter the time and date. As with the previous option, the camera's time will become inaccurate as time passes and you will need to re-synchronize the time periodically.

Synchronize with NTP- This option is the recommended setting. In this mode, the camera will synchronize its time settings based on the interval setting (ranging from once per hour to once per day). The camera obtains the time from the NTP server. You can use the default value unless your camera is not connected to the Internet, or if a firewall in your network blocks the outgoing NTP request of the camera. Select "Manual" and you can enter a different NTP server; e.g., a server in your local network.

Time zone:

Time zone- Select the correct time zone for your location.

Daylight Saving Time- You can define the range of Daylight Saving Time by activating this option. The camera will adjust the time (move the clock forward or backward by one hour) depending on the programmed start and end time. If your camera is not equipped with this feature, you can adjust the time zone manually for Daylight Saving Time.

5.4 Video

The following three menus: Video Setting, Profile and Day/Night, allowing defining all video-related parameters. Note that the Day/Night option as well as other parameters may not be available on all models.

5.4.1 Video Setting

Information	Video Setting Profile Day / Night
Basic Setup	Rotated
Account	Mirror/Flip None 🔻
Network Date Time	Image Rotated 0 V
Video	Image
Audio	Video Clip Format Profile1 •
C Live View	Snapshot Format Profile1 V
© System	Overlay
0.070.000	Overlay Time Stamp 🔻
	Text Color White 🔻
	Background Color Black •
	Display Position Top Bottom
	Privacy Mask
	Name Status
	No item has been contained.
	Add Edit Remove
	Save Cancel

Rotated

Mirror/Flip- Allows to flip, mirror or mirror/flip the image.

Image Rotated- Allows to 90° , 180° , or 270° , rotating the image. You can select 90° or 270° for Corridor Mode.

Image

Video Clip Format- Select which video profile the camera should be using for video clips it records in such as the network storage device, or SD card.

Snapshot Format- Select the video profile used for snapshots (e.g., for JPG upload to a FTP server).

Overlay:

Time stamp- Display the time & date on OSD.

Title- You can input the text on OSD. Title & time stamp- Display the text, time & date on OSD.

Overlay	
Overlay	None
	Time Stamp
	Title
	Title & Time Stamp

Privacy Mask:

Privacy masking is the ability of the camera to back out (censor) certain parts of the live video. Example: The camera is installed in your company; for example, overlooking the warehouse. In one corner of the warehouse is the break room, where the employees go for their lunch breaks. In many countries it is not permitted to monitor the workers during their break. To

comply with laws and regulations, you can define a privacy mask in the break area to ensure that this area is not being monitored or recorded by the camera.

Click "Add" to create a new privacy mask. As you can create multiple masks, you need to provide a name for the mask, and you can define which color you want to overlay to be. Finally, set the status to "Enabled" and click "Save" to create and activate the privacy mask.



5.4.2 Profile

	Video Setting Profile Day / Night	Shttp://192168.1.10/basic_video_profile_pop.htm?
nformation asic Setup Account Network Date Time Video Audio ive View Iayback vent ystem	Stream Profile Mame Description Profile1 profile2 12 123 Add Edit Remove	Profile Description Profile Name Profile Description Video Setting Encoding H264 M206 Profile Profile Profile Profile Maximum frame rate 30 Quality Proved Quality Detailed MaxBitRateFormat 6M © Fixed Bitrate
		Audio Setting Audio Stream On ✓ Current Audio Setting Audio Mode Full Duplex Audio Input Odb / g.711_u-law Audio Output 6db

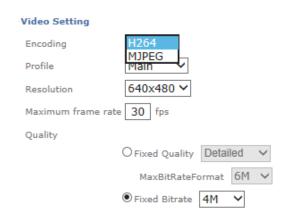
The network camera allows the creation of video streaming profiles. For each profile you can define the video resolution, the viewing area and the video codec that is to be used.

Click "Add" to create a new profile, "Remove" to delete a profile or "Edit" to modify an existing profile.

Video Setting:

reasons.

Encoding- Your network camera can encode video in two different formats. H.264 is the most advanced and efficient codec delivering excellent image quality and a small video stream size at the same time. Normally, this is your preferred choice. However, you can also select MJPEG, e.g., for compatibility



Profile- Encoding applications offer you the choice between Main and Baseline profiles. Main is more complex than baseline, and produces a broadcast quality output.

Resolution- Here you define the video resolution for the profile. Which choices you have depend on your camera model. Some HD models offer image resolutions of up to 1920 x 1080 pixels whereas standard definition cameras are limited to 320 x 240 pixels.

Maximum frame rate- Type in the number of frames the camera should generate per second of video. The higher the value, the smoother the video, but the more bandwidth is going to be required. Valid entries are 1 to 30.

Quality- You can control the image quality of the video by selecting "Fixed Quality" (or refers to VBR) and defining the image quality by selecting one of the following values "Medium," "Standard," "Good," "Detailed", "Excellent" and "Customize". Or you can choose to specify the bit rate (fixed Bitrate or CBR) of the video the camera must not exceed. In this mode the camera varies the image quality automatically to not exceed the specified maximum. With setting fixed quality plus maximum bitrates, the camera would try to meet the quality requirement without exceed the certain bitrates.

Audio Setting:

Audio Steam- You can select "On" or "Off"

Audio Setting

Audio Stream	On 🗸
Current Audio Setting)
Audio Mode	Full Duplex
Audio Input	0db / g.711_u-law
Audio Output	6db

5.4.3 Day/Night

Information Basic Setup	Video Setting Profile	Day / Night
Account	IR Cut Filter Mode	Auto 🔻
Network	IR Cut Filter Switch Delay	10 V Sec
Date Time Video	IR Cut Filter Threshold	10 Dark (Bright 20
Audio	IR Mode	Auto 🔻
Live View	Smart IR	off 🔻
Playback	IR Level	100 Dark Bright
Event		0
System		Save Cancel

Some network cameras are equipped with active IR LEDs providing the

ability to capture video in complete darkness. Note, that if your camera is not equipped with IR LEDs, this menu will not be available. Also note that some menu items will vary depending on your camera model.

Infrared cut-off filters are designed to reflect or block mid-infrared wavelengths while passing visible light. They are often used in network video cameras to block IR due to the high sensitivity of many camera sensors to near-infrared light. With the filter in place before the image sensor, the camera will not be able to pick up IR light, but it generates true color video. Once the IR cut filter is removed, the camera becomes IR light sensitive and will generate a black and white image – and it does that even in complete darkness if the IR LEDs are active.

Day/Night:

IR Cut Filter Mode-

Auto-- The camera decides when to remove the IR cut filter based on the IR Cut Filter Threshold you can specify. The

switch delay ensures that the camera only

IR Cut Filter Mode



switches the IR Cut Filter after the specified amount of time has passed.

Night Mode-- This is the opposite of the day mode. If this mode is enabled, the camera always removes the IR cut filter. As a result, the camera will always be IR sensitive, regardless of the actual light levels, and the image will be rendered in B/W mode. Using night mode in day light conditions is not recommended as it leads to a poor image quality with false and washed out colors.

Day Mode-- In this mode the camera does not remove the IR Cut Filter from the image sensor regardless of any other settings. So only visible light will pass through and the image will be in color mode

Schedule-- Select this option, if you wish to control exactly when you want the camera to engage the night mode. You can use the internal scheduler to define a time pattern for each day of the week, e.g., no night mode on the weekends, but night mode from MON to FRI from 21.00 hours to 06.00 hours. The scheduler is explained in detail later on.

IR Cut Filter Switch Delay- For user to define the time duration (how many seconds) between IR being turned on or off from the current status.

IR Cut Filter Threshold- Here we use an example to explain how IR cut filter threshold works. If you set Dark as 30 lux and Bright as 70 lux, that means when luminance is less than 30 lux, the camera switches to night mode(B/W), and when luminance is more than 70 lux, the camera switches to day mode(color), if the luminance is between 30 lux and 70 lux, the camera stays in current mode.

IR Mode-

Auto-- This ensures that the IR lights go on IR Mode whenever the IR cut filter has been removed.

Active-- Keeps the IR LEDs illuminated

regardless of the state of the IR cut filter. To

IR Level

ensure maximum life of the IR LEDs, this option shouldn't be used, unless your camera is installed in a dark environment which requires IR lighting at all times. **Inactive--** When this is selected, the camera will never active its IR LEDs, even if the night mode is enabled (the IR Cut Filter has been removed). If you have your own 850nm IR lighting in place already, then you will not need to use the camera's integrated IR LEDs and can therefore turn the IR LEDs off.

Schedule-- Select this option, if you wish to control exactly when IR LED turning on and off by following a certain schedule setting

Smart IR-Select on or off

IR Level- Use this to

control the lighting

pattern of the IR

LEDs. Some models allow you to control the center of the image ("spot") independently from the outer areas. If you want a more evenly lit image, reduce the spot level close to 0 and set the wide level to 100. If you want to focus on the center of the image instead of its surroundings, you raise the spot value and lower the wide value. If you set IR level as 100, the cover distance of IR light is the farthest; if you set IR level as 50, the strength of IR light is 50% less.





5.5 Audio

Information	Audio Setting
Basic Setup Account Network Date Time Video Audio Live View Playback	Audio Input Audio Input Type Internal Mic Audio Input Gain 0 Audio Encoding 0.711_u-law Audio Output Audio Output Gain +6
) Event) System	Save Cancel

Audio Input:

Audio Input Type-"Internal Mic" or "External Line In"

Audio Input Gain- Select the microphone input gain value you wish in the drop-down menu, and based on your region to select the proper codec and save all setting.

Audio Input		
Audio Input Type	Internal Mic	~
Audio Input Gain	0 🗸	
Audio Encoding	g.711_u-law g.711_a-law	

Audio Encoding-

g.711 u-law-- One codec for "Computer Audio", used in North America & Japan areas.

g.711 a-law-- Another codec for "Computer Audio", used in Europe and the rest for the world.

Audio Output:

Audio Output Gain- Select the speaker output gain value you wish in the drop-down menu and save it.

Note: The camera does not support echo cancelling, using the full duplex mode may cause audio feedback.

6. Setting Live View

The Live View menu provides access to the video settings, which are exactly the same as described in the last section 5.4 & 5.5. It also provides access to advanced image settings and allows configuring the view areas that we discussed in the previous section. Note that depending on your camera model, the options on the screen may differ from the screen shots in this user manual.

6.1 Video

The same as described in the last section 5.4.

6.2 Audio

The same as described in the last section 5.5.

6.3 Camera Setting

Information
Basic Setup
Live View
Video
Audio
Camera Setting
Playback
Event
System

6.3.1 Image Setting

×	Image Settings ROI
rmation c Setup	r Image Enhancement
View	Show Video Video
eo	Brightness 50 Saturation 50
lio nera Setting	Contrast (60 Sharpness (50)
back	Default
e	Default
em	White Balance
	Color Tone Cool Warm 0
	Auto White Balance Auto V
	Exposure Setting
	Exposure Frequency 60 V
	Note: Indoor model set 30Hz or 60Hz / Outdoor model set Auto
	Automatic Exposure 50
	Exposure Time 1/120 Sec. (Min.) ~ 1/30 Sec. (Max.)
	Gain 1 VX (Min.) ~ 32 VX (Max.)
	Low Light Behavior On Off
	Backlight Compensation Off ~
	Default
	Wide Dynamic Range
	Mode Off V
	□ Noise Reduction
	Mode Auto V
	Level 15
	3D Denoise Mode On V
	Save Cancel

Image Enhancement:

The image enhancement controls consist of standard video settings, which you know from a great variety of products. Click on "Video" to see the camera live video while you adjust the settings to your liking.

White Balance:

Color Tone- Choose between "Real," "Cool" or "Warm". Normally you want to set this to "Real" as it provides the best representation of natural colors.

Auto White Balance- This parameter controls how the camera interprets colors. You

can choose from the following values: "Auto," "Hold Current", "Fluorescent," "Incandescent," "Sunny," "Cloudy", "Sun Shade" or "Manual" You should select the value that best represents the environment the camera is installed in. You can also leave the default value "Auto," as it typically delivers very good results.

Exposure Setting:

Exposure Frequency- There are four values: "Auto," "50Hz," "60Hz" and "Hold Current." If your camera is installed so that it's facing outside, you should select "Auto." If your camera is installed indoors, you must select the appropriate light frequency (either 50 or 60 Hz; e.g., in the US select 60 Hz, in Germany, Poland or Italy select 50 Hz). The hold current option fixes the current exposure settings.

Automatic Exposure- You can manually set the exposure value, which ranges from 0-100 (dark to bright). The default value is 25 and typically provides good results. **Exposure Time-** You can define the minimum and maximum exposure time of the camera's shutter here. We recommend using the smallest exposure time (e.g., 1/10000 sec) for the min value as it ensures the camera will generate crisp images during day time conditions in which even moving objects appear sharp and in focus. As for the max value, the bigger the value, the longer the camera keeps the shutter open in low light conditions allowing more light to fall onto the image sensor. As a result, the camera can capture images even in very dark environments. The downside is that moving objects will appear blurred as the move while the camera's shutter is open.

Gain- The camera is equipped with an electronic gain mechanism which helps capture image in dark conditions. The higher the gain, the brighter the image, but the downside is that the image contains more noise.

Low Light Behavior- When enabled, this opens allows additional control over the camera when it is running in night mode.

Backlight Compensation (BLC)- In images where a bright light source is behind the subject of interest, the subject would normally appear in silhouette. BLC allows the camera to adjust the exposure of the entire image to properly expose the subject in the foreground. The resulting image may appear overexposed in the background; however, the object of interest is now properly lit.

White Dynamic Range:

WDR stands for Wide Dynamic Range and allows the network camera to capture video in areas with high contrasting objects; e.g., extremely bright and extremely dark. Activate WDR by setting it to "Auto" and then adjust the level that controls the amount of WDR enhancement.

Noise Reduction:

Your camera features a noise reduction algorithm, which helps reduce the graining in the video, which occurs under low light conditions. Set this parameter to "Night Mode" to only

26

activate noise reduction when the camera is operating in night mode. You can also select "Schedule", "On" (activates noise reduction permanently) or "Off" (deactivated noise reduction permanently).

3D Denoise

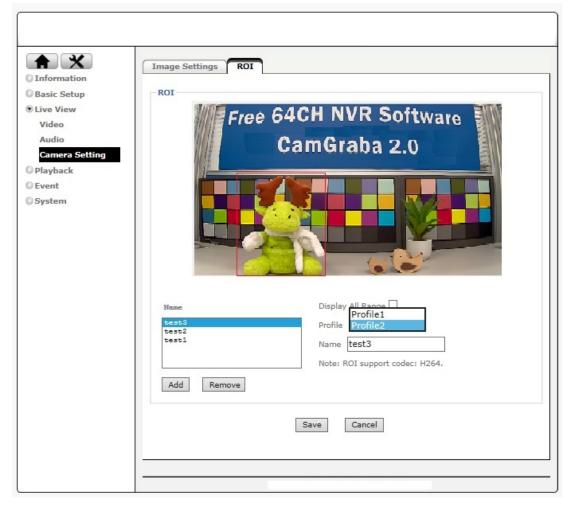
On 🗸

Mode

3D Denoise:

To improves video noise reduction to deliver sharper, more accurate images.

6.3.2 ROI



ROI is an application for strengthening the image clarity in key regions of a scene. Please refer to the picture above. The framed regions are clearer than the other region. First, please fill in a name and click "Add", and then you'll see a rectangle frame on the live-view screen. Select a region which you want the view to be clearer, and then click save. If you want to see the regions you have set, please click Display All Range.

Note: For each profile, the ROI sets are limited to 3, and ROI only support codec H.264.

7. Setting_Playback

The network camera offers an integrated playback feature, from a network storage server or the optional SD storage card.



7.1 Network Storage

In the event settings (see section 8) you can define a local network storage drive (NAS) as a location for the camera to save videos. The video player allows locating recordings quickly and conveniently on the network storage drive and play back the files right in your web browser.

		-
★ ×	Network Storage	
Basic Setup	Recording List	
Live View	Please add network storage server first	٦
Playback		_
Network Storage		
Local Storage		
Event		

There are two folders: "Event" which is for event-triggered recordings, e.g., motion detection alerts, and "Schedule" which contains recordings that the camera recorded if scheduled recording is enabled.

cording List		
C smers001BFE041FF1/		
Folder	File Name	Size
Event/		
Schedule/		

Refer to the section 8 "Event" for more details on the setup.

IPC smers001BFE041FF1/		
		Folder
/		
20130314/		
20130315/		
20130321/		

Above: Each day has its own folder.

IPC smers001 BFE041 FF1/		
/		
13/		
14/		
16/		
17/		
18/		
19/		
22/		

Above: Each hour of the day has its own folder.

IPC amera001BFE041FF1/		
Folder	File Name	Size
/		
	551397_video20130314175349_MD.avi	5.01MB
	551397_video20130314175449_MD.avi	5.01MB

Above: Individual videos can be played back by selecting them and clicking the play button.



Above: Playback of one event recording in the web browser (MSIE only).

Item	Description
5	Move one folder up
69	Refresh the view
	Delete the selected file
Ø	Select all items in the folder
	Playback the selected video
ł	Download selected item to your computer's hard drive.

7.2 Local Storage

Information	Local Storage		
Basic Setup	- Recording List		
	provide a second design of the		1
Live View	IPCamers001BFE041FF1/		
Playback	5 4 2 5 6 6 6		100 million (100 million)
Client PC	Folder	File Name	Size
Network Storage		Gate_2013_08_23	1025.68MB
		PlayGround_2013_08_23	1025.84MB
Local Storage		Hallway_2013_08_23	1025.74MB

If your camera is equipped with a local storage option (recording on an SC card) you can access the recordings from here. It functions similarly to the access of files on the network storage device.

Information	Local Storage
Basic Setup	Recording List
CLive View	IPCamera001BFE03E93B/
Playback	
Client PC	Folder
Network Storage	Event/
Local Storage	Schedule/
System 3	

8. Setting Event

Your network camera supports so-called events. When an event occurs, you can have the camera perform an action, e.g., record a video to a remote location. This section describes how to set up event servers, events, motion detection and the scheduler.



8.1 Event Server

First you need to set up an event server, or multiple event servers.

8.1.1 Event Server

	Event Server SD Card	🌀 http://192168.1.10/ - Server Configuration - Internet Explorer	0 ×
Basic Setup	Event Server	General	~
Live View	Same Protocol	Name	
Playback	No item has been contained.		
Vent Event Server Event List Motion Detection Tampering Detection Schedule System	Add Edit Remove *Hetwork storage server can only b	Re-type Password	
		Passive Mode On On Of Test Media Setting Available memory buffer 50700 / 51200 KB Attached Type Snapshot ♥ Send O Pre-event Image [0~7] Send Pre-event Image [0~7] Image File Name Suffix O None © Date Time	

Click "Add" to create a new event server.

Add a FTP Server

General:

Name- Provide a name for the server.

Server Setting:

Server Type- Select "FTP"

Network Address- Type in the address of

your FTP server.

Server Setting	
Server type	FTP 🔹
Network Address	FTP SMTP
Server Port	HTTP Network Storage
Upload Path	
User Name	
Password	
Re-type Password	
Passive Mode	💿 On 💿 Off
	Test

Server Port- Leave at 21, unless your FTP server uses a different port.

User Name and password- Provide valid login credentials for the FTP server.

Passive Mode- Select "On" if your FTP server utilizes passive FTP, which is the most common method.

Test- Press on Test button to make sure the FTP server information is all correct.

Add a SMTP Server

Server Setting:

Server Type- Select "SMTP." Mail Server- Type in the address of your mail server. Server Port- Adjust the server port if necessary. Port 25 is standard, but your server may be using different values (not so uncommon these days as an anti-spam measure).

	Server Setting	SMTP -
	Mail Server	
r	Server Port	25 (1~65535) 🔲 SSL
r	Authentication	🖲 On 🏽 Off
	Send mail from	
	Send test mail to	
C		Test

Authentication- If your mail server requires authentication in order to send email, and most servers do these days, set authentication to "On" and define the type of authentication below.

User Name and password- Provide valid login credentials for the email server. Send mail from- The camera will use this address as its own email address. This email address does not necessarily need to be a valid address.

Send test email to- Enter the email address to which you want the camera to send the images and click on Test. If the test succeeds you can provide the information for the

media settings and click "Save". The actual target email address is defined when you set up an event in the next section.

Add a HTTP Server:

A HTTP server can be used by the camera to trigger a script on a remote server if an event occurs. User name, password and proxy fields are all optional.

Server Setting	
Server type	НТТР ▼
URL	http://
Port	80
User ID	
Password	
Re-type Password	
Proxy Address	
Proxy Port	
Proxy User Name	
Proxy Password	
	Test

Adding a Network Storage:

Server Type- Select "N	5	
Type- Select a valid	Server Setting	Network Storage 🔻
type for your		Windows Network (SMB/CIFS) 🔻
network storage	Type Network Storage Location	
(either Windows SMB	(for example: \\my_nas\folder)	
or Linux NFS).	Workgroup	
Network Storage	User Name	
Location- Enter the	Password	
address of your local	Re-type Password	
storage server as	Create Folder	
shown on the right.		Test

User Name and password- Provide valid login credentials for the network storage server.

Create Folder- Type in a folder name in which you want the camera to store files. This field is optional.

Test- Press on Test button to make sure the NAS information is all correct.

Media Settings:

Here you define what kind of media you wish to upload (snapshot, video), how many images pre and post event you wish to upload, the image file name and the suffix.

8.1.2 SD Card

If you want to record video footage on a local SD card, you first must insert the SD card (see hardware installation guide for details), and then you must set the Memory Card to "on" and format the card by clicking "Execute."

Noted: Only FAT32 is supported, please do not format the SD card to other format.

Noted: Please power off the camera before taking off memory card.

9 Information 9 Basic Setup 9 Live View 9 Playback 8 Event	SD Card Memory Card On Off Format Execute	
Event Server Event List Motion Detection Tampering Detection Schedule	Save Cancel	

8.2 Event List

Now that we have created an Event Server, we can proceed with setting up actual events.

8.2.1 Event List

		Sevent Configuration - Internet Explorer
		http://10.0.50.64/event_list_setting.htm
O Information	Event List Scheduled Recording	General
Basic Setup	Event List	Name
Live View	Name Enabled Trigger	Event On O off
Playback	No item has been contained.	
Event		Trigger
Event Server		Triggered by Motion Detection
Event List		Set min time Digital Input 0 Sec
Motion Detection Tampering		Periodical
Detection		Detection Area
Schedule		Detection Type Start V
System	Add Edit Remove * D1/2=Digital Output 1/2, F=FTP Uplos	Please Configure Motion Detection
	 DI/2=Digital Output 1/2, F=FTP Oplos S=SMTP notification, H=HTTP notifics N=Network Storage, SD=SD Card 	
	A-Betwork Storage, 3D-3D Card	
		Activate Digital Output
		Schedule
		© Always
		Oschedule Working_Day V
		Please Configure Schedule
		Save Cancel
		Save Cancer

Click on the "Add" button to begin.

Trigger:

You need to specify the trigger type. The drop-down list below shows the available options. Note that depending on your camera model, the options will vary.

Motion Detection- The camera monitors the video image for

		_
Triggered by	Motion Detection	
Set min time	Motion Detection Tampering Detection Digital Input Periodical	0 Sec
Detection Are	ā	
Detection Typ	e Start ✓	
Please Configu	re Motion Detection	

movements and triggers an alert when it detects motion. Motion detection needs to be configured first for that to work.

Tampering Detection- The camera can detect if it's being tampered with, e.g., if someone covers the lens, and triggers an alert when this happens. Tampering detection needs to be configured for that to work.

Digital Input- If your camera is equipped with digital inputs (see hardware installation guide), then you can use them as a trigger mechanism. A common example would be to use 3rd party motion detection sensors that trigger the camera to start a recording.

Periodical- This trigger type can be used if you want the camera to perform the same action over and over again, based on a time period. A typical application would be to have the camera refresh an image on your web site every 60 seconds.

Action:

After you have selected the tripper type, you now have to define the action(s). In other words, what do you want the camera to do if the event occurs?

Send Image				
Type	Media			
Event Server	or <u>SD Card</u>			
n				
HTTP Server				
Output				
t1				
	Event Server	e <u>Event Server</u> or <u>SD Card</u> n e <u>HTTP Server</u> Output		

Send Image- Instructs the camera to send out images. When selected, you need to specify whether you want to use FTP, network storage or SD card. You may need to set up these servers first (see previous section) in order to use them here.

Send Notification- This action type uses the HTTP event server. You can use this to have the camera trigger a script on a server.

Activate Digital Output- If your camera is equipped with digital outputs, then you can use them to perform an action. You can specific how long you want the camera to trigger the event once you have selected Digital 1.

Schedule:

Here you can define when you want this action to be active. You can choose between "Always" or a schedule that you have defined (see "Schedule" a few pages down).

8.2.2 Scheduled Recording

1nformation	Event List Scheduled Recording	
Basic Setup	Scheduled Recording	
Live View	Name Enabled Trigger	Action Schedule
Playback Event	No item has been contained.	Mttp://192168.1.10/ - Scheduled Configuration - I
Event Server		
Event List		General
Motion Detection Tampering		Scheduled ® On O Off
Detection		Scheduled @On COff
Schedule System	Add Edit Remove	1.00
System	Add Eoit Remove	Action File Size 10 (1~50 MB)
		Event Server
		Event Server Please Configure Network Storage or Local Storage
		Network storage server can only be added once.
		Schedule
		Always
		O Schedule Working_Day V
		Please Configure Schedule
		Save Cancel

Schedule Recording:

This feature is allowing the camera to record the video by following a certain schedule such as always record or record the video during the weekend.

Action:

Define each recorded video file size to save.

You can choose to store the video to NAS or SD card, which need to be pre-configured in event server.

8.3 Motion Detection

* ×	Motion Detection	
O Information		
O Basic Setup	Motion Detection	S1001
O Live View	Free 64CH NVR Software	- 3
Playback Event	CamGraba 2.0	
Event Server	Califoratia 2.0	E
Event List		
Motion Detection		
Tampering		
Detection		
© System		
	Name Display All Range	
	No item has been contained. Name	
	Threshold 50	
	Sensitivity 50	
	Add Remove	
	Save Cancel	

The network camera is able to monitor the video footage for movements and trigger an alert if motion has been detected. This motion detection does not utilize passive infrared, but instead it relies on a frame by frame comparison of the video footage the camera captures. You can define more than one motion detection area. The example above shows that so-called hotspot has been created for the area of the window. When you set up an event for motion detection, you can select which motion detection area you wish to monitor. Threshold and sensitivity will need to be set up so that you don't miss important events and are not flooded by false alarms either. Finding the right values will require some trial and error. There are no standard values that simply "will work" as it depends very much on the actual location and light levels. Generally speaking, increasing the sensitivity while lowering the threshold will generate more false alarms but it ensures that you will not miss an important event. Doing the opposite will of course have the opposite effect: Fewer false alarms at an increased risk or missing an important event.

8.4 Tampering Detection

	Tampering Detection
Information	
Basic Setup	Tampering Detection
Live View	Tampering Detection On O Off
Playback	Trigger Duration 10 Sec (5 ~ 900)
Event	
Event Server	Course Course
Event List	Save Cancel
Motion Detection	
Tampering Detection	
Schedule	
System	

If the image of the camera is obstructed, e.g., because someone covers up the lens or moves the image out of focus, the camera notices this and generates a trigger alert. You can define how long you want the alert state to remain active after the event has occurred.

8.5 Schedule

Information Basic Setup	Schedule List	
) Live View) Playback) Event Event Server Event List	Name Working_Day Weekend Night_Mode	- 0 -
Motion Detection Tampering Detection Schedule	General Name	
	- Schedule Start Time 00 ♥ : 00 ♥ - End Time 24 ♥ : 00 ♥ Mon (Empty) ♥ Add Remove 0 1 2 3 4 5 6 7 0 9 10	11 12 13 14
	Tue (Empty) V Add Remove	>

The Network Camera supports event trigger actions that can be based on a schedule. This can be used, as an example, to only activate motion detection between 9 pm and 6 am during business days and around the clock on the weekends. You can set up individual schedules for

each event type, so that motion detection is activated between 7 pm and 7 am, but tampering detection is only activated between 10 pm and 4 am.

Depending on your camera model, the screen layout will vary slightly.

Name Working_Day Weekend Night_Mode

There are three default schedules which you cannot delete, but you can modify them.

You can create a new schedule by clicking "Add."

Start Time 00 🔹 : 00 🔹 - End Time 24	•: 00 •
Mon 08:00-17: ▼ Add Remove	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Tue 08:00-17: Add Remove	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Wed 08:00-17: Add Remove	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Thu 08:00-17: Add Remove	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Fri 08:00-17: • Add Remove	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Sat (Empty) Add Remove	
Sun (Empty) - Add Remove	
Use the same time schedule every day.	

First you need to provide a name for the schedule (not shown on image). Then select a start and end time and click on "Add" for the day of the week the schedule is supposed to be active. As soon as you add a schedule, the timeline turns red, indicating the active schedule. If the schedule is the same for every day of the week, you can activate the option "Use the same time schedule every day."

9. Setting System

The system menu provides access to a variety of system settings of your network camera.



Basic Setup
Live View
Playback
Event
System

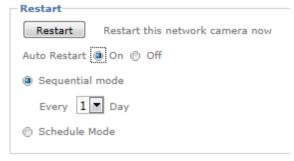
Maintenance Date Time Security Network Basic Network Advanced Digital I/O LED System Log

* ×	Maintenance
Information	
Basic Setup	Restart
Live View	Restart Restart this network camera now
Playback	Auto Restart O on Off
Event	
System	
Maintenance	Backup / Restore
Date Time	Default Restore all setting except:
Security	TCP/IP Date Time
Network Basic	Backup Backup the configuration of this network camera
Network Advanced	Restore III
Digital I/O	Nesure
LED	Restore configuration to this network camera from chosen file:
System Log	
	Firmware Upgrade
	Firmware Upgrade 滚斑
	Upgrade firmware to this network camera from chosen file:
	T Language
	Upload 演覽
	Upload language pack to this network camera from chosen file:
	Save Cancel

9.1 Maintenance

Restart:

You can restart the network camera by hitting the restart button. Set Auto Restart to "On" if you wish to reboot the camera automatically, and then you specify the reboot mode. Select "Sequential mode" and specify after how many days of uptime you want the camera to reboot. Select "Schedule Mode" to control when the reboot is to occur in a much more detailed way.



Backup/Restore:

Default - Click this button to restore the default settings in this camera. You can choose to exclude the IP and date & time settings.

Backup- This function allows saving the current configuration of the camera to a file on your computer's hard drive. Saving the configuration is useful in case you ever want to reload a specific configuration; e.g., in order to set up another camera of the same model and firmware version with the exact same configuration. Since the IP address

configuration is also part of the setting date, you must be careful not to restore the same settings to two or more cameras when all of them are connected to the same network. Otherwise, you would be creating an IP conflict in your network.

Restore- With this function, you can reload a previously saved configuration back into your camera. Click Browse to locate the configuration file and OK to begin the process. The camera will perform a reboot at the end of the procedure and the new settings will become effective.

Firmware Upgrade:

From time to time, there will be a new firmware version available for your camera. New firmware versions can enhance the functionality of the camera, or they can fix problems. Before you begin, make sure that you have obtained a proper firmware from the web site. If you are not 100% sure about this, do not proceed. Instead, contact the technical support team to verify the firmware version. Also, do not perform the upgrade from a computer that is connected to the network wirelessly, as the connection is inherently less stable than a cable-based connection. If you have the correct firmware file, make sure that you un-compress the ZIP file first (if the firmware file is an archive) and you end up with a file that has an extension *.bin. Click on Browse and select the *bin file. Click on OK to begin the upgrade process.

Language:

You can replace the language in the user interface of your network camera. On the Installation CD are different language files starting with "LNG_" and ending with ".lang." Click on Browse, select the language you wish to install and then click on OK to begin the process.

9.2 Date Time

	Date Time			
nformation	Current Date/Time			
Basic Setup Live View	Current Date/Time 2014-11-21 15:50:51			
live View Nayback				
vent	PC Clock 2014-11-21 15:50:51			
System	Date/Time Format yyyy-mm-dd hh:mm:ss V			
Maintenance				
Date Time	Synchronization Method			
Security	O Keep Current Setting			
Network Basic	O Synchronize with client PC			
Network Advanced	O Manual Setting			
Digital I/O	Synchronize with NTP			
LED				
System Log	Use the following NTP server address			
	server 1 pool.ntp.org Test			
	server 2 1.pool.ntp.org Test			
	server 3 2.pool.ntp.org Test			
	server 4 3.pool.ntp.org Test			
	server + s.poor.ncp.org			
	Time Zone			
	Time Zone			
	(GMT+08:00)Taipei			
	Daylight Saving Time O on ® Off			

Refer to section 5.3

9.3 Security

Viewer Mode Administrator		
Administrator		
Remove		
v holdesi		
Ababied -		
0		

9.3.1 Account

Refer to 5.1

9.3.2 IP Address Filter

* X	Account IP Address Filter HTTPS	
 Information Basic Setup Live View Playback Event System Maintenance Date Time Security Network Basic Network Advanced Digital I/O LED System Log 	General Setting IP Address Filter Disabled ✓ IP Address Filter Filter Type Allow Deny IP Address Range No item has been contained.	
	Add Edit Remove Save Cancel	

Once you enabled it, the listed IP address are allowed or denied access to the network camera. Add the IP address that you'd like to allow or deny, select allow or deny from the list and save it.

9.3.3 HTTPS

	Account IP Address Filter HTTPS
Information	Create / Install
Basic Setup	Create self-signed certificate
Playback	create sen-signed certificate
System	Installed Certificate Subject Name
Maintenance Date Time Security	No Certificate Installed. Properties Remove
Network Basic Network Advanced Digital I/O LED System Log	HTTPS Connection Policy Administrator HTTP V Operator HTTP V Viewer HTTP V Set Policy

Secure Sockets Layer (SSL) is a cryptographic protocol that provides security for communications over networks such as the Internet.

HTTPS is a URI scheme used to indicate a secure HTTP connection (SSL encrypted). It is syntactically similar to the http:// scheme that is normally used for accessing resources using HTTP. The differences are that SSL-encrypted connections always begin with https:// instead of http://. HTTPS connections use TCP port 443 by default, compared to standard HTTP connections, which use port 80.

Create & Install:

Create a self-signed certificate for HTTPS to recognize.

Installed Certificate:

Display or remove the properties of the installed certificate.

HTTPS Connection Policy:

Set HTTPS connection policy for different level of users.

To use the HTTPS encryption, please set up "Create self-signed certificate" for the first time you use the HTTPS function, and then set up the connection policy for different users. Note: When enable HTTPS with RTSP on mode, the IP Camera only protect the setting such as username and password and do not protect video and audio. When enable HTTPS with RTSP off mode, the IP Camera will protect all setting including video and audio.

	TCP/IP PPPoE
Basic Setup	Internet Protocol Version 4 (TCP/IPv4)
Account	MAC Address 00:1B:FE:04:32:4A
Network	Obtain an IP address automatically (DHCP)
Date Time	O Use the following IP address
Video	Obtain DNS server address automatically
Live View	O Use the following DNS server address
Playback	o de the following this server address
Event	Internet Protocol Version 6 (TCP/IPv6)
System	IP Address fe80:0000:0000:0000:021b:feff:fe04:324a / 64
	HTTP HTTP Port 80 0 (1124 ~ 65534)
	Save Cancel

9.4 Network Basic

9.4.1 TCP/IP

Refer to section 5.2.1

9.4.2 PPPoE

Refer to section 5.2.2

9.5 Network Advanced

9.5.1 RTSP

Information Basic Setup Live View Playback Event	RTSP UPnP Bonjour DDNS General RTP Port Range 5000 (1124 ~ 65435) ~ 7999 (1223 ~ 65534) RTSP Port Image State Image State (1124 ~ 65534)
System Maintenance Date Time Security Network Basic Network Advanced Digital I/O	RTSP Configuration Profile Name Profile1 ♥ Profile video.pro1 Authentication Disabled ♥ Save Cancel
LED System Log	

General:

RTP Port Range- The default value of port range is 5000 ~ 7999 and can be changed from 1124 to 65534.

RTSP Port- RTSP stands for Real Time Streaming Protocol. RTSP is supported by most media clients, such as Real Player, VLC and QuickTime. If you only plan to view the camera video with your Web browser or with one of the provided software utilities, you do not need to activate this option. The default value is 554 and can be changed from 1124 to 65534.

RTSP Configuration:

This option allows you to set up the URL for each profile and define whether or not you want to enable or disable authentication. By default, the video URL and profile number are related, e.g., profilex = video.prox, but you change it any way you like. Based on the default URLs, access to the RTSP streams would be done like this:

rtsp://camera_address:554/video.pro1

rtsp://camera_address:554/video.pro2

rtsp://camera_address:554/video.pro3

rtsp://camera_address:554/video.pro4

If authentication is enabled, the URLs will change as follows:

rtsp://username:password@camera_address:554/video.pro1

[...]

rtsp://username:password@camera_address:554/video.pro4

9.5.2 UPnP

Information Basic Setup	UPnP	
Live View	UPnP On Off	
Playback	Turn On UPnP port forwarding	
Event	HTTP Port 80 (1124 ~ 65534)	
System	SSL Port 443 0 (1124 ~ 65534)	
Maintenance		
Date Time	RTSP Port	
Security Network Basic	Device Name D4211 2M IR Mini Dome	
Network Advanced		
Digital I/O	Save Cancel	
LED		
System Log		

UPnP stands for Universal Plug and Play. A UPnP-enabled device, such as your network camera, announces its presence in the local network to other computers that support UPnP as well. The operating systems Windows XP, Windows Vista and Windows 7/8 support UPnP. When the network camera is connected to the network, Windows will alert the computer user of the presence of the new device (a new icon will be added to your My Network Places folder) and lets the user connect to the device instantaneously.

Furthermore, UPnP has the ability to instruct the router or firewall to open certain ports, so that a party from the outside world can contact a device on the local network, such as the network camera.

UPnP port forwarding is not supported by all routers, however. So, depending on your router or firewall, you may or may not be able use this function, also, opening ports in any router or firewall increases the risk of an intruder successfully breaking in to your network. UPnP automates this task and leaves it to the devices to negotiate which ports to open. Since this is done without any form of authentication, enabling UPnP port forwarding in your router is not necessarily a good idea in a security-sensitive environment. You can always open individual ports in your router or firewall manually.

In the camera UPnP is enabled by default. UPnP port forwarding is disabled by default. When

you enable UPnP port forwarding, the screen will reveal additional options. These are the ports the camera will instruct the router to open. Depending on the camera model, you may see different ports. The new H.264 Megapixel cameras have a simpler port model and require fewer ports than the other models. Normally there is no need to change any of these ports, unless you know that a port is already in use by a different device or application.

9.5.3 Bonjour

Event System Maintenance Date Time Security Network Basic Network Advanced	Information Basic Setup Live View	Bonjour Bonjour I O Off
System Maintenance Date Time Security Network Basic Network Advanced	Playback	Device Name Zavio-00:1B:FE:05:27:53
Security Network Basic Network Advanced	System Maintenance	Save Cancel
Network Basic Network Advanced		
Network Advanced		
	Digital I/O	
LED		
System Log	System Log	

UPnP Bonjour is a service that, just like UPnP, helps to find the network camera on the network. Bonjour is available for Windows, but is more commonly used for MacOS..

Bonjour:

Bonjour On- Enables the service (on by default).

Bonjour Off- Disables the service

Device name- Enter the name of your camera here. This is the name the Bonjour service will display. If you have more than one camera installed in your network, this is an easy way to differentiate among the cameras.

9.5.4 DDNS

nformation	RTSP UPnP E	lonjour DDNS
Basic Setup	DDNS	
ive View	DDNS On O off	
layback	Server Name	http://www.dyndns.org
event	User ID	
System		
Maintenance	Password	
Date Time	Re-type Password	
Security	Host Name	
Network Basic	Periodical Update	Auto
Network Advanced	Periodical opuate	
Digital I/O		O Periodical 5 Y min
LED		
System Log		Save Cancel

If you are not planning on connecting to the network camera over a remote connection, but only in your local network, you can skip this section.

Dynamic DNS is a network service that provides the capability for a networked device, such as a router or computer system, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured host names, addresses or other information stored in DNS.

In simpler terms: Users of private Internet services are often faced with a problem: The ISP typically changes the IP address assigned to the user based on a time interval. This may be as often as once every 24 hours or as seldom as once every 30 days. For the average user this is not a problem. However, if you want to be able to connect to the local camera (e.g., in your house) from a remote location (e.g., the office), you need to know under which Internet address the camera can be reached. However, you don't know what the current Internet IP address is. So you are beginning to see the problem.

DDNS solves this problem by allowing you to create a domain name for your home network, which you can always use to access the camera. To use the DDNS function, you will need to do the following two things.

First, create a DDNS hostname with a DDNS service provider

Secondly, set up a DDNS client in the home network that contacts the DDNS service provider and updates the IP information.

If the router in your home network is equipped with a DDNS client, we recommend using the router instead of the camera. Most SOHO routers are equipped with a DDNS client and since the router is in direct control of handling the Internet connection, it's the device best suited

for the DDNS task.

Server Name- Select the DDNS provider of your choice. In our example we use no-ip.com.

User ID- Enter the same user name here that you use to log in to your account settings on www.dyndns.org. Do not enter your DSL user account information here.

Password- Enter the password for your no-ip.com user account here. Re-type the password in the field below.

Host name- You need to enter the full host name that you have created in your no-ip.com account here.

Periodic Update- You can either specify the time in minutes after which the camera will update its IP information with the DDNS provider, or you can leave the setting as "Auto", which is recommended.

Click "Save" to activate the settings. Reboot the camera to activate the DDNS settings. After a reboot you may need to wait for a few minutes before you can access the camera with the new domain name.

9.6 Digital I/O

Live View Port Normal Current Status Playback Input 1 open circuit open circuit Event Output 1 open circuit open circuit System Output 1 open circuit open circuit Baintenance Save Cancel Date Time Save Cancel Security Network Basic Network Advanced	Live View Port Normal Current Status Playback Input 1 open circuit open circuit Output 1 open circuit Output 1 open circuit Output 1 open circuit Save Cancel Save Cancel Date Time Security Network Basic Network Advanced Digital I/O	Information Basic Setup	Digital I/O			
Event Output 1 open circuit open circuit System Maintenance Save Cancel Date Time Save Cancel Security Network Basic Network Advanced	Event Output 1 Open circuit V open circuit Advanced Digital I/O			Normal	Current Status	
Maintenance Date Time Security Network Basic Network Advanced	System Maintenance Date Time Security Network Basic Network Advanced Digital 1/0	Playback	Input 1	open circuit	✓ open circuit	
System Maintenance Date Time Security Network Basic Network Advanced	System Maintenance Date Time Security Network Basic Network Advanced Digital 1/0	Event	Output 1	open circuit		
Date Time Security Network Basic Network Advanced	Date Time Save Cancel Security Network Basic Network Advanced Digital I/O	System			op on on one	
Security Network Basic Network Advanced	Security Network Basic Network Advanced Digital I/O	Maintenance		,		
Network Basic Network Advanced	Network Basic Network Advanced Digital 1/0	Date Time		l	Save Cancel	
Network Advanced	Network Advanced Digital I/O	Security				
	Digital I/O	Network Basic				
Digital I/O		Network Advanced				
		Digital I/O				
LED	LED	LED				
	System Log	System Log				
	LED	Digital I/O				
	LED					
	System Log	System Log				

If your network camera is equipped with a digital I/O interface, you can configure the connections on this page. The screen shows the current status of input 1 and output 1. The screen also allows you to define the "normal" state of the port. The normal state can be viewed as the "non-alert-state."

★ ×	LED
Information	A DECEMBER OF
Basic Setup	LED Indicator
Live View	Show LED indicator for normal operation
Playback	O Hide LED indicator for normal operation
Event	
System	
Maintenance	Save Cancel
Date Time	
Security	
Network Basic	
Network Advanced	
Digital I/O	
LED	
System Log	
System Log	

You can enable or disable the operation LEDs on your network camera. Hiding the LED indicator will make the camera appear to be offline while in fact it is operational and captures video.

9.8 System Log

★ ×	System Log	
Information	System Log	
Basic Setup	System Log	
Live View	Enable Remote Log	
Playback	-	
	Server Name	
Event	Server Port	
System		
Maintenance	Save Cancel Clear	
Date Time		
Security	0.0257035	
Network Basic	Current Log	
Network Advanced		
	Feb 16 08:11:21 P6210-001BFE052753 syslog.info syslogd started: BusyBox	
Digital I/O	v1.20.2	^
LED	Feb 16 08:11:21 P6210-001BFE052753 daemon.err inetd[1140]: /etc/inetd.conf: No such file or directory	
System Log	Feb 16 08:11:23 P6210-001BFE052753 user.err PTZMANAGER: main: Unable to	
	open /proc/pwm Feb 16 08:11:40 P6210-001BFE052753 daemon.info init: starting pid 1600,	
	tty ': '/sbin/getty =L ttyS000 115200 vt100 -n root =I "Auto login as	
	root"'	
	Feb 16 08:11:40 P6210-001BFE052753 auth.info login[1600]: root login on 'ttyS000'	
	Feb 16 08:11:58 P6210-001BFE052753 user.info STREAMD:	
	rtsp://192.168.1.10:554/video.prol connect Feb 16 08:12:04 P6210-001BFE052753 user.info STREAMD:	~
	red 16 08:12:04 F6210-0018FE052/53 USer.into SIKEARD:	~

The Network Camera features a log function for system messages. These are system messages about the camera start-up procedure, e-mail deliveries, FTP uploads, motion detection and more. The camera stores the messages in its internal memory and displays them on the system log screen. Since memory is limited, the messages will eventually be truncated. If you need to log all the system messages on a remote server (e.g., for permanent record keeping of alarm events or for troubleshooting purposes), you can utilize the remote log functionality.

Enable Remote Log:

Server Name - Type in the network address of the system log server. Enter the address without any leading characters, such as http://.

Server Port- The standard port for this protocol is 514. If your system log server is set up differently, you can change the value here.

Current Log:

This text box displays the real-time log of the camera messages. The remote log function uses the System Log Protocol, which is a standard for forwarding log messages in an IP network. System Log is a client/server protocol. The System Log sender (the Network Camera) sends a small (less than 1KB) textual message to the System Log server. This user manual shows one example of a System Log server, the 3CDaemon utility by 3Com Corporation (Download Location:

http://support.3com.com/software/utilities_for_windows_32_bit.htm) After the installation of 3CDaemon, the main program window opens and the program is ready to receive System Log messages from the network camera.



The messages shown here are the same messages that are displayed in the Web browser.

	Time	IP Address	Msg Type	Message
TFTP Server				
ETP Server	Sep 19 09:50:32		user.info	RTSP: h264 over HTTP from 192.168.0.101
	Sep 19 09:50:19			FTP: FTP Send Success
Syslog Server	Sep 19 09:50:19		user.info	FTP: Send file to ftp://X, S.rtf. Mth Y/cameraimages/alarm20090919095017_AD.
	Sep 19 09:50:16		user.info	FTP: FTP Send Success
	Sep 19 09:50:16		user.info	FTP: Send file to ftp://#2.8.44* \$5.04 /cameraimages/alarm20090919095014_AD.
	Sep 19 09:50:15		user.info	FTP: FTP Send Success
	Sep 19 09:50:14		user.info	FTP: Send file to ftp:// Control of the send file to ftp:// Control of to ftp:// Contr
	Sep 19 09:49:38		user.info	RTSP: h264 over HTTP from 192.168.0.101
	Sep 19 09:49:16		user.info	SSMTP: SMTP Sending Success
5144	Sep 19 09:49:12		user.info	SSMTP: Send SMTP to: We A State we was a single set of the set of
	Sep 19 09:49:11		user.info	WDT: watchdog start
	Sep 19 09:49:09	192.168.0.115	user.notice	NET: Secondary DNS = 0.0.0.0
	Sep 19 09:49:09	192.168.0.115	user.notice	NET: Primary DNS = 192.168.0.1
	Sep 19 09:49:09	192.168.0.115	user.notice	NET: Gateway = 192.168.0.1
e 📈	Sep 19 09:49:08	192.168.0.115	user.notice	NET: Subnet Mask = 255.255.255.0
	Sep 19 09:49:08	192.168.0.115	user.notice	NET: Host IP = 192.168.0.115
Clearlist	Sep 19 09:48:28		syslog.info	SYS: log started
	Sep 19 09:48:22	local	user.info	Listening for Syslog messages on IP address: 192.168.0.101
- 19				
TFTP Client	<			

10 Video Surveillance Software

The Network Camera ships with a surveillance application that can monitor and record up to 64 network cameras.

CamGraba2.0, the free-bundled network video management software, works perfectly with all network products. CamGraba2.0 is designed with reliable performance and easy-to-use features offering efficient video management solution for diversely small-to-mid size IP surveillance applications. In addition, CamGraba Viewer is available to download from iPhone app store and Android app market.



A detailed user manual is located on the Installation CD in the User Manuals folder. It contains installation instructions and information on the use of the software.