COMTREND

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MD-21 Mini Dome IP Camera



User Manual



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Chapter I.

Overview

1.1. Read Before Use

This network camera is a professional grade device for surveillance purposes. Please comply with local laws to prevent any relevant privacy violations before use.

In order to operate this network camera, a basic knowledge of network structure is require. For further use in a project application, it requires an advance level of knowledge in lens optics selection, network structure design, storage planning and software capability.

Please review the package contents are complete. Then, carefully read through all the instructions before use.





Chapter I.

Overview

1.2. Physical Description

1.2.1. Mechanical and hardware interface

The MD-21 is an internal fixed lens network camera. It can be placed on the wall or ceiling. With its mini and compact design, it is suitable for a variety of indoor applications.

The MD-21 only supports PoE power as a power source

The MD-21 supports one way audio. It has a built-in microphone.

The MD-21 has a Micro SD/SDHC card slot built-in for local recording options. Micro SD/DHC cards of up to 32GB are supported.







MicroSD/SDHC Card Slot



Microphone







Chapter I. Overview

1.2. Physical Description

1.2.2. Digital Input (DI)

ltem	Description
1	DI
2	GND

Digital Input			
Pin	Notes	Specifications	
	Trigger is "Off", DO connect to GND	Max load:	
	Trigger is "On", DO is floating	30mA,30VDC	





Overview

1.3. Safety Instructions

Carefully read through the safety instruction below.

- •Network cameras are delicate. Handle with care.
- Do not store the camera in a high temperature or high humidity location. Avoid direct sun light.
- •Keep away from children.
- •Do not disassemble the camera. No serviceable components inside.
- •When placing a camera in a high humidity or wet environment, select a product with an IP66/67 level weather proofing rating.
- •Cameras will generate heat during normal operation. Avoid direct contact with hot camera components during or after operations.
- Do not attach DC/AC power directly to the camera's DI/DO port.
- Check the correct direction when inserting the Micro SDHC card into camera's Micro SDHC card slot.
- •Contact your sales channel or find a regional Comtrend distributor for any warranty issues.



Chapter I. Overview

1.4. Package Contents

Description	Qty
Network Camera	1
Tools package (Screw Kit…etc.)	1
CD: A. Software: Comtrend Finder x 1 B. Doc: Datasheet, User Manual, Quick Installation Guide	1



Network Camera



CD



Chapter I. Overview

1.5. EMC (Electromagnetic Compatibility)

FCC Statement

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

(1.) This device may not cause harmful interference, and

(2.) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

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

F©CE

Chapter 2.

Installation

2.1. Installation

Follow the instructions below to setup your network camera.



Push the housing release tab and remove the cover. Insert a Micro SD card (Optional) for on device storage.



Setup 2.

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Fix the camera on the wall or ceiling with supplied screws and twist the camera to the desired viewing angle.





Setup 6. Re-mount the cover.



Setup 7.

Make sure to keep the camera cover closed and the network cable output fed through the desired path.





P 07

Chapter 2.

Installation

2.2. Comtrend IPFinder Installation

A basic camera setup diagram is shown on the right: (In a normal application, the camera only needs to be within a local LAN structure to meet the surveillance requirement.)

Comtrend Finder Installation :

Read the CD from the package content. Then copy **IPFinder.exe** file to your personal PC. Run the program until the Finder windows display as shown on the right picture.

Comtrend Finder procedure :

Step 1.

Press the "Discover" button so the program will search for all Comtrend IP cameras within the local network.

Step 2.

Choose a specific camera, then press the "Link" button. The program will launch the default browser and initiate connection to the camera's web UI access page.

Notification:

Comtrend camera default IP setting is DHCP mode. Default IP address is **192.168.1.99**. (if No DHCP Service)

Default username and password is both admin.



Model Name	Host Name	IP Address	Port	MAC Address	
		192.168.1.99	80	D4:A4:25:00:47:57	



2.3. Ready to Use

Access procedure:

Step 1.

When linked from Comtrend's Finder to the camera's web UI access page, enter the default username and password (ID: admin / PW: admin) for further access.

Step 2.

When first connecting to a Comtrend camera, some plugin need to be installed on to your computer. Follow the instruction and press allowed to allow the installation to proceed.

Step 3.

After installation of ActiveX plugin, you should be able to see the video stream from camera as shown on the below picture.







Chapter 3.

Accessing

3.1. Network Deployment

Comtrend cameras support both intranet and internet structures.

- A. True IP address setting
- B. Transfer from UPnP router
- C. PPPoE connection setting

Structure as shown on the right

Step 1.

Run the IPFinder and search the local network for Comtrend cameras.

Step 2.

Enter you static true IP address which was provided by your ISP. Then press enter. Notification :

Please contact your ISP vender for further static true IP address setting or service.



Notification :

When you have a true IP address, you may need set your camera to a static IP address. Then you may use an internet browser by entering this static true IP address to access your network camera.

If your true IP address is going to your router, you may need to use port forwarding. This is the solution that solves the problem when a surveillance project lacks a true IP address for management. The performance of the camera will be strongly dependent on the performance of the router. It may cause an abnormal connection. <refer to 3.1. B. setting >

Internet and Intranet setting structure illustration



Chapter 3. Accessing

3.1. Network Environment Setting

A. True IP address setting

Step 1.

Run the Comtrend IPFinder and search for the camera within the local network.

Step 2.

Select the camera and click "Change IP" button.

Step 3.

Select static mode and enter your true IP address, Subnet mask, Default gateway, and the username and password of the camera. Then press "OK" to finish. Once complete, the "Change IP Success!" message will display.

Notification :

Please contact your ISP vender for further static true IP address setting or service.

Model Name	Host Name	IP Address	Port	MAC Address	Camera IP = 192.168.1.99
AU1	AU1	192.168.1.99	80	D4:A4:25:00:47:57	Model Name = AU1 Version = 1.03.19 Host Name = AU1 Subnet Mask = 255.255.255.0 Gateway = 192.168.1.1 Primary DNS = 192.168.1.1 Secondary DNS = 192.168.1.2 HTTP Port = 80 RTSP Port = 554
About	Dis	cover	Link	Chang	e IP Exit





Chapter 3. Accessing

3.1. Network Environment Setting

Transfer from UPnP router Α.

Step 1.

Access to the camera's web UI page and select the "Configuration" option.

Step 2.

Select the "Network" option.

Step 3.

Assign a static IP address the fits your local network, then enter your gateway address and DNS information.

Step 4.

Select "Enable UPnP Discovery" and "Enable UPnP Port Mapping". Then press the "Apply" button to apply the setting.

Notification :

Network camera's UPnP function may have some compatible issue with certain routers. For your specific router refer to your router's instruction manual about Port Forwarding and other UPnP setting.



Port

*If you are using PPPoE, be sure to enable SMTP Service(Event > Event server) to receive PPPoE ip address

80

554 5556

HTTP Port

RTSP Port

RTP Data Port Apply



Chapter 3. Accessing

3.1. Network Environment Setting

A. PPPoE connection setting

Step 1.

Access to the camera's web UI page and select the "Configuration" option.

Step 2.

Select the "Network" option.

Step 3.

Select "PPPoE" and enter your username and password. Then press the "Apply" button to finish.

Notification :

When select PPPoE connection, make sure your network camera is equipped with a true static IP address. If so, you can access to the camera by entering the IP address via internet. If not, refer to our DDNS setting.



Home •	Network		
lient Settings 🔹	General	Advanced	
Configuration •		Network type	
System		Network type	
Security	O LAN		
Network	PPPoE		
IP Filter	Username		
Video	Password		
Motion			
Privacy Mask			
Event		Port	
Recording	HTTP Port	80	
SDHC	RTSP Port	554	
Log	RTR Data Port	5556	
Device info		3330	
Maintenance	Apply		



Chapter 3. Acce

Accessing

Comtrend Network Camera connection :

Comtrend's network cameras support multiple connections for accessing. Including multiple browsers connection, video player connection that supports RTSP, and NVR access. Each connection fulfill different surveillance application for different purposes.

3.2. Accessing via Web UI

You can choose to view the Comtrend camera UI with a web browser to view live video, SD card recording and searching, local computer recording, audio functions and other advanced features.

Notification :

 We suggest to use IE 9/10/11 and above version to access the Comtrend network camera.
 Other than IE browser, Comtrend network cameras also support both Google Chrome and Mozilla Firefox

browsers for accessing.

3)If using Google Chrome and Mozilla Firefox to access, those browsers will need Quick Time to play the live video. If your computer has not install Quick Time software, download and install it prior to viewing the Comtrend camera UI.











Chapter 3.

Accessing

3.3. Accessing via RTSP Player

Comtrend network cameras support accessing via RTSP player. Below using VLC player as a reference instruction: **Step 1**.

Run the VLC player and select the "**Media(M)**" button. Then select "**Open network stream(N)**". It will pop out the settings window.

Step 2.

Enter the **RTSP address** "ex. rtsp://**Camera's IP**/stream1 " and press the "**Play**" button. It should link to the camera for the live video as shown in below picture. **Notification** :

Comtrend network cameras provide three RTSP stream: Main stream address: rtsp://Camera's IP/stream1 Second stream address: rtsp://Camera's IP/stream2 Mobile stream address: rtsp://Camera's IP/mobile



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▶ File	💿 Disc	🚏 Network	E Capture Device		
Network	Protocol				
Please er	nter a network	URL:			
rtsp://5	9.124.224.21	7/mobile			~
xtp://c mmrs: xtsp:// http://	9:1234 //mms.example server.example /www.youtube.	s.com/stæam.asz .ozg:8080/test.sdp com/watch?v=gg64:	x		
Show me	re options				
				Play -	Cancel



4.1. Home page

You can access the Comtrend network camera via a web browser to monitor live view, manage setting, SD card recording...etc. There is a complete introduction procedure of all function in the following chapters.

Homepage function list:

- 1)Live view screen
- 2)Select stream format
- 3)Select language
- **4)**Client settings
- 5)System configuration
- 6)Live view operation control list

Notification :

Function list of icons is shown on the picture to the right.







WEB UI

4.2. Client Settings

4.2.1. Protocol options

This setting is to define your protocol option. Default is set as **RTSP/RTP over TCP.** This protocol make sure that all image data must be transferred. But if you choose the image quality comes first, then you can change to RTSP/RTP over UDP. If your network environment only allows to connect with web page, then you can change to HTTP protocol.

4.2.2. Storage Options

This setting is to define your storage option. When doing a recording action, you can set where the recording file saves to. Press the "Browse" button to set your folder path. You can also name the Prefix of recording file and select to "Add date and time suffix to file name". Press "Apply" to save.



	Protocol Option	
RTSP/RTP or	rer TCP	
O RTSP/RTP of	ver UDP	
O HTTP		
Folder: C:\Reco	rding Browse	
Prefix: CLIP		
□ Add date an	I time suffix to file name	



Chapter 5.

Configuration

5.1. Configuration Settings

In the configuration menu, it includes all operating functions for settings, maintenance, log and device information...etc.

Configuration menu as shown below :

1)System 2)Security 3)Network 4)IP Filter 5)Video 6)Audio 7)Motion 8)Privacy Mask 9)Event 10)Recording 11)SDHC 12)Log 13)Device Info 14)Maintenance

Configuration
 System
 Security
 Network
 IP Filter
 Video
 Audio
 Motion
 Privacy Mask
 Event
 Recording
 SDHC
 Log
 Device info
 Maintenance







5.1. Configuration Settings

5.1.1. System

This system page displays your network camera's Host Name, LED Indicator ON/OFF Switch and set the Date and Time.

Date and Time Setting procedure :

Step 1.

Select your network camera's Time Zone and enable Daylight Saving if desired.

Step 2.

There are four ways to synchronize the camera's time: Keep the current date and time, Synchronize with computer time, Synchronize with NTP Server and Set Manually.

For a small surveillance system, we suggest Synchronize with computer time. Press the "Apply" button to save settings.

Step 3.

For a medium or larger surveillance system, we suggest to Synchronize with NTP Server. Enter your NTP Server Address and set the Update Interval. Then press "Apply" to save settings.

Configuration	Privacy Mask
System	Event
Security	Recording
Network	SDHC
IP Filter	Log
Video	Device info
Motion	Maintenance

	System	
Host Name SU1		
Indicator LED 💿 On 🤇	Ooff	
	Date and Time	
Camera Date and Time	10/22/2014 14:43:12	
TimeZone (GMT+08:00) Ta	ipei	~
Daylight Saving		
O Keep the current date an	d time	
○ Synchronize with comput	ter time	
• Synchronize with NTP Se	rver	
NTP Server Addres	s clock.stdtime.gov.tw	
Update Interval	6 hours 🗸	
○ Set Manually		



Chapter 5.

Configuration

5.1. Configuration Settings

5.1.2. Security

Select the "Security" button under the "Configuration" menu. This function is to manage the Users of the camera by setting Administrator and Account List.

Administrator Setting Procedure :

Step 1.

Enter a new Password and Retype Password.

Notification :

Administrator password can be a composition of letters and numbers. But the length must kept between 4 and 8 characters. No special character are allowed. The password is case sensitive.

Step 2.

Press the "Modify" button to save the settings.

Configurat System Security Network IP Filter Video	ion •	Eve Reco SD Lo Devic Mainte	ent rding HC og e info enance	
		Administrator		
Password Retype Password * Administrator pass	word length must be	between 4 and 8 character	Modify rs.	
Account List	john.tsai	Account List	Remove	
User Name Password Retype Password]]	



Chapter 5.

Configuration

5.1.2. Security

Account List Setting Procedure :

Step 1.

Enter a Username, Password, Retype Password. Notification:

Username can be a composition of letters and numbers. The length must kept between **1 and 32** characters. No special character are allowed. The Username is case sensitive.

User password can be a composition of letters and numbers. The length must kept between **4 and 8** characters. No special characters are allow. The password is case sensitive.

Step 2.

Select "Authority" then press "New" to add an account.

Notification :

Authority has two types, "User" or "Guest". The privilege of a guest is limited to watch the live view from the home page only. A "User" is allowed to operate all function within the home page and modify the client setting. Access to configuration menu is limited to "LOG" and "Device Info".



	Administrator
Password	
Retype Password	Modify
* Administrator pass	word length must be between 4 and 8 characters.
	Account List
Account List	john.tsai Remove
User Name	
Password	
Retype Password	
riet/per abonera	

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5.2. Network Settings

Default network settings of the camera are LAN type, DHCP IPv4/IPv6 and Enable UPnP Discovery. When this network camera is introduced to Local network environment, the camera will get a dynamic IP from the local DHCP server each time the camera turns on.

5.2.1. General Network Settings

5.2.1.1. General Network Settings Recommendation

We suggest to use Static IPv4/IPv6.

Camera's port setting as shown below :

a)HTTP Port : 80

b)RTSP Port : 554

c)RTP Data Port : 5556

Notification :

If the default setting cannot connects to network camera properly, consult with you network administrator.

Configuration	Privacy Mask
System	Event
Security	Recording
Network	SDHC
IP Filter	Log
Video	Device info
Motion	Maintenance

Network	
General Ad	Ivanced
	Network type
● LAN	
O DHCP IP	v4
OHCP IP	v4/IPv6
○ Static IP	v4/IPv6
🗹 Enable U	JPnP Discovery
🗆 Enable U	JPnP Port Mapping
○ PPPoE	
	Bort
HTTP Port	80
RTSP Port	554
RTP Data Port	5556
Two way audio port	5432
Apply	
Афріу	



Chapter 5.

Configuration

5.2.1.1. Intranet Static IPv4/IPv6 Setting Static IPv4 Setting Procedure :

Step 1.

Select "Static IPv4/IPv6" under "Network Type".

Step 2.

Enter an IP Address (IPv4), Subnet Mask, Gateway, Primary DNS and Secondary DNS settings.

Step 3.

Then press "Apply" to save settings.

Notification :

For static IP setting, refer to the pictures as shown on bottom right. If the LAN IP segment is **192.168.1.xxx**. Enter your router's IP address for the **Gateway**.

Configuration	Privacy Mask
System	Event
Security	Recording
Network	SDHC
IP Filter	Log
Video	Device info
Motion	Maintenance

General		Advanced
		Network type
LAN		
ODHC	P IPv4	
ODHCF	P IPv4/IPv6	
 Static 	c IPv4/IPv6	
	IP Address(IPv4)	192.168.1.99
	IP Address(IPv6)	
	Prefix Length	64 * number must be between 0~128.
	Subnet Mask	255.255.255.0
	Gateway	192.168.1.1
	Primary DNS	192.168.1.1
	Secondary DNS	192.168.1.254 ×
🗹 Enab	le UPnP Discovery	



5.2.1.2. Internet Static IPv4/IPv6 Setting Static IPv4 Setting Procedure :

Step 1.

Select "Static IPv4/IPv6" under "Network Type".

Step 2.

Enter the IP Address (IPv4), Subnet Mask, Gateway, Primary DNS and Secondary DNS settings.

Step 3.

Then press "Apply" to save settings.

Notification :

Please contact your ISP service vender for further internet static IP settings.

Configuration	Privacy Mask
System	Event
Security	Recording
Network	SDHC
IP Filter	Log
Video	Device info
Motion	Maintenance

General	Advanced
	Network type
LAN	
O DHCP IPv4	
ODHCP IPv4/IPv6	
Static IPv4/IPv6	
IP Address	(IPv4) 59.124.224.217
IP Address	(IPv6)
Prefix Len	64 * number must be between 0~128.
Subnet Ma	sk 255.255.255.0
Gateway	59.124.224.254
Primary D	IS 139.175.252.23
Secondary	DNS 139.175.55.247
Fnable UPnP Dis	overv



5.2.1.3. PPPoE Setting
PPPoE Setting Procedure :
Step 1.
Select "PPPoE" under the "Network Type" column.
Step 2.
Enter your PPPoE Username and Password.
Step 3.
Press "Apply" to save settings.

Notification :

PPPoE is a type that supports xDSL network connections. Contact your ISP service vender for the username and password.

For PPPoE connections, the network camera will get an IP Address from the ISP. Some ISP venders may provide a static IP address. The User only needs to enter that IP in to their browser, then you will able connects to the network camera.

If your ISP vender does not supply PPPoE static IP addresses, refer to the DDNS setting in Advanced Network Setting.



General	Advanced	
	Network type	
PPPoE		
Username		
Password		
	Port	
ITTP Port	80	
TSP Port	554	
RTP Data Port	5556	
wo way audio	5432	



5.2.2. Advanced Network Setting

Advanced network setting includes Multicast, Bonjour, QoS, DDNS, HTTPS function settings.

5.2.2.1. HTTPS Settings

HTTPS Settings Procedure :

Step 1.

Select "Advanced" page under "Network" page.

Step 2.

Select "Enable HTTPS". Default HTTPS Port is 443.

Step 3.



Network	
General Advanced	
	Multicast
Enable Multicast	
	Bonjour
Enable Discovery	
	Qos
Enable Qos	
	DDNS
Enable DDNS	
	HTTPS
Enable HTTPS	
HTTPS Port 443	
Apply	



Chapter 5.

Configuration

5.2.2.2. DDNS Settings

You must first get DDNS address settings from a DDNS service provider. That DDNS service provider should provide you with a **Host Name**, and let you know the **Username** and **Password**.

Notification :

Comtrend network cameras support two DDNS service providers: **DynDNS.org** and **No-ip**. You can choose either one of these services to host your **DDNS Host Name**.

DDNS Settings Procedure :

Step 1.

Select "Advanced" page under "Network" page.

Step 2.

Select "Enable DDNS". Then enter the Host Name, Username and Password.

Step 3.



General	Advanced	
	Multicast	
Enable Multicast		
	DDNS	
✓ Enable DDNS		
Provider	DynDNS.org 🗸	
Host Name		
noot name	1~30 Characters	
User Name	1x20 Characters	
Password	1~30 Characters	
	HTTPS	
✓ Enable HTTPS		
HTTPS Port 4	43	



Chapter 5.

Configuration

5.2.2.3. Multicast Setting

Multicast Description :

A normal connection between computer to network camera is a single point delivery. Which means sending a stream packet from camera to one computer only. A multicast function is to send the stream data to one point, but you can set multiple computer as the recipient.

Comtrend network cameras support multicast group addresses. It's IP address range is from **232.0.0.0 to 232.255.255.255** in a class D. A class D is a group address which the network camera will send the stream packet to. Then the recipient will inform the router to join this group.

Multicast Setting Procedure :

Step 1.

Select "Advanced" page under "Network" page.

Step 2.

Select "Enable Multicast". Then enter "Multicast Group Address" and all Multicast parameters. Suggest to keep the default setting.

Step 3.





General	Advanced	
		Multicast
🗹 Enable M	ulticast	
Multicast Group Address		232.128.1.99 * 232.0.0~232.255.255.255
Multicast Video Port		5560
Multicast RTCP Video Port		5561
Multicast Audio Port		5562
Multicast RTCP Audio Port		5563
Multicast TTL		15 * number must be between 1~255.
Enable H	TTPS Port 443	



Configuration

5.2.2.4. QoS Setting

Via QoS settings, the camera can ensure the video image and audio stream comes first in bandwidth. So the transfer stability will not be effected by other network packets.

QoS Setting Procedure :

Step 1.

Select "Advanced" page under "Network" page.

Step 2.

Select "Enable QoS". And select whether enable "Video", "Audio" or "Both", then enter its "DSCP value".

Step 3.

Press "Apply" to save settings.

Notification :

DSCP (Differentiated Services Code Point). In Dec. 1998, IETF published a QoS classification standard of Diff-Sery (Differentiated Service). DSCP using six bits and its range from 0~63.



Network	
General Adv	vanced
	Multicast
Enable Multicas	t
	Bonjour
Enable Discove	ry
	Qos
☑ Enable Qos	
● Video	DSCP 0 * number must be between (0~63).
OAudio	
OBoth	
Analys	
Арріу	





Configuration

5.2.2.5. Bonjour Setting

Bonjour is called a Zero-configuration networking tool, which can automatically find devices within local network. Bonjour is a standardize protocol that allows for each device to find each other without an IP address or DNS server.

Bonjour Setting Procedure :

Step 1.

Select "Advanced" page under "Network" page.

Step 2.

Select "Enable Bonjour".

Step 3.



Network			
General Adva	nced		
		Multicast	
Enable Multicast			
		Bonjour	
Enable Discovery			
		Qos	
Enable Qos			
		DDNS	
Enable DDNS			
		HTTPS	
Enable HTTPS	43		
Apply			
Арргу			



Chapter 5.

Configuration

5.2.3. IP Filter

Comtrend network cameras have an "IP Filter" function. It can manage to set a white list for "Accepted IP list" or black list for "Deny IP list". It is recommended to use one rule only to keep the connection performance. The white list rule is the most common method used in a surveillance project.

IP Filter Setting Procedure 3

Step 1.

Select "IP Filter" button under the "Configuration" menu. Step 2.

Select "Enable IP Filter".

Step 3.

Enter the IP List under "Accepted IP list" column, then press "New" button to add into white list.

Step 4.

Press "Apply" to save settings.

Notification :

Setting black list for **Deny IP list** is same process as for Accepted IP List described above.







5.3. Video & Audio Setting

This chapter includes all video setting, image adjusting, and audio setting.

5.3.1. Video Setting

5.3.1.1. Main Stream Setting

Main Stream Setting Procedure :

Step 1.

Select the "Video" button under the "Configuration" menu.

Step 2.

Select your desired format under the Main Stream column. Default is set as H.264 format. It can be changed to MPEG-4 format.

Step 3.

Define your Resolution, Frame Rate(fps). Default is set as 1920x1080 (1080P) @ 30fps.

Step 4.

Define your Rate control type. You can choose between Video quality or Bitrate comes first. Default is set as a constant Bitrate of 5000kbps. Press "Apply" to save settings.



Video		
mage Setting Vi	deo Setting	Overlay
		Main Stream
H.264 Video Resolution Frame Rate Rate Control	1920x1080 (1) 10 V OVideo qualit O Bitrate	ty Normal V 1000 kbps 512~6000
O MPEG4		
		MJPEG
└ Enable Video Resolution Frame Rate Video quality	640x480 (VGA 30 🗸 Normal 🔽	
Apply		

5.3.1.1. Main Stream Setting Rate Control Setting Description:

For a network camera only environment, we suggest setting the **Video quality to Normal.** If your surveillance environment is equipped with an NVR or NAS server for recording purposes, we suggest to set a constant **Bitrate** numbers.

Below is a suggestion chart for the video quality setting depending on your environment.

Notification :

When changing resolution settings will erase your privacy mask setting.

Resolution	Fps	Bitrate suggestion
1920 x 1080	30	4000~6000 kbps
1920 x 1080	15	2000~3000 kbps
1920 x 1080	10	1000~2000 kbps
1280 x 960	30	2000~3500 kbps
1280 x 960	15	1000~2500 kbps
1280 x 720	15	800~2300 kbps
720 x 480	15	768~1500 kbps
640 x 480	15	512~1200 kbps
320 x 480	15	256~900 kbps



ge Setting Vid	eo Setting Overlay	
	Main Stream	
• H.264		
Video Resolution	1920x1080 (1080P) 1280x960 (960P)	
Frame Rate	1280x720 (720P)	
Rate Control	720x480 (D1) 640x480 (VGA) hal	
	320x240 (QVGA) kbps ● Bitrate	
	512~6000	
O MPEG4		
	MJPEG	
Enable		
Video Resolution	640x480 (VGA)	
Frame Rate	30 🗸	
Video quality	Normal 🗸	



5.3.1.1. Main Stream Setting

Main Stream and Storage Calculation:

It is best to set a constant **Bitrate** number to make calculating recording storage space easier.

Calculate the storage space as described below for each network camera recording for one hour.

Bitrate(kbps) / 8 x 60(sec.) x 60(min.) / 1000 / 1000 = The storage space for each hour(GB)

Example Question :

If a camera is set at 1920x1080 (1080P)@ 10fps, 1000kbps as a Bitrate setting, how much space does a storage device need to hold at least a month (30days) of recording files?

Answer :

1000(kbps) / 8 x 60 x 60 / 1000 / 1000 x 24(hrs) x 30(days) = 324(GB) / 1000 = 0.324(TB)



Image Setting Video Setting Overlay	
Main Stream	7
 ● H.264 Video Resolution Frame Rate Rate Control ● Bitrate 1000 kbps 	
○ MPEG4	
MJPEG	
Enable	
Video Resolution 640x480 (VGA)	
Frame Rate 30 🗸	
*One snapshot is supported when MJPEG is enabled. *Change resolution will clear the privacy mask settings.]



5. 3. 1.2. Secondary Stream(MJPEG) Setting

Secondary Stream(MJPEG) Setting Procedure : Step 1.

Select "Video" button under the "Configuration" menu. Then goes to "Video Setting" page and select "Enable" under "MJPEG" column.

Step 2.

Define your "Video Resolution". There are three resolutions to choose from 720x480(Full D1), 640x480(VGA) and 320x240(QVGA).

Step 3.

Define your "Frame Rate" and "Video Quality". There are five segment of video quality from lowest to highest that you can choose from. Then press "Apply" to save setting.

Notification :

MJPEG compression rate is lower than H.264 and MPEG-4. But is best format for computer CPU performance when handling the image. The snapshot function only supports MJPEG format.

Resolution	Fps	Bitrate suggestion
720 x 480	5	Normal (1000~2000 kbps)
640 x 480	5	Normal (800~1800 kbps)
320 x 480	5	Normal (200~600 kbps)



Image Setting Video Sett	ng Overlay
	Main Stream
 H.264 Video Resolution 19202 Frame Rate 10 Rate Control Video Bit 	1080 (1080P) ♥ eo quality Normal ♥ rate 1000 kbps
O MPEG4	
	MJPEG
 ✓ Enable ✓ Video Resolution ✓ Frame Rate ✓ Video quality 	80 (D1) 80 (VGA) 40 (QVGA)
Apply	



5.3.1.3. Mobile View Setting

Mobile View Setting Procedure :

Step 1.

Select the "Video" button under the "Configuration" menu. Select "Enable" under "Mobile View" column.

Step 2.

Select with or without audio depends on your application.

Step 3.

Press "Apply" to save changes.

Notification :

Mobile stream format is set to **H.264** for a better compression rate. Default resolution is set as **320x240, 30fps.** But the actual transfer speed is depends on your regional environment. Actual performance will vary depending on network performance factors.

Resolution	fps	Bitrate suggestion
320 x 240	Max. 30	Normal
		(500~1000 kbps)



Image Setting	Video Setting	Overlay
ŕ		Main Stream
H.264 Video Reso Frame Rat Rate Contr	iution 1920x1080 (10 e 10 V ol Ovideo quality	280P) ♥ y Normal ♥ 1000 kbps
O MPEG4		
		Mobile View
🗹 Enable		
● H.264 w	ithout Audio	
⊖ H.264 w	ith Audio	
*One snapshot is a *Change resolution	upported when MJPEG is en will clear the privacy mask	nabled. ¢ settings.
Apply		





5.3.2. Focus Setting

Comtrend MD-21 network cameras are equip with **f=3.6mm fixed Lens.** In order to adjust the focus point, you will need to remove the top cover.

Focus Setting Procedure :

Step 1.

Please remove the top cover.

Step 2.

Set your browser to the main page and double click on the screen to the full screen mode.

Step 3.

Adjust the focus to get your desire clean view of your target by gently rotate the lens. Then put your top cover back on without touching the lens.











5.3.3. Image Setting

After completing your video setting, follow the instructions below to adjust your image settings.

5.3.3.1. Exposure Setting

Comtrend network cameras provide two **Exposure Modes.** Default setting as "**Auto**" mode. You can change to "**Manual**" mode for advanced exposure settings for day and night modes.

Image Setting	Video Setting	Overlay		
		Image Adjustm	ient	
			Brightness: Contrast: Saturation: Sharpness: Default	- 125 + - 125 + - 155 + - 50 +
Exposure Moo Day Mode Set	de E tting	Exposure Sett	ing	
Exposu Exposu Gain	rre Value rre Time0	/10000 ♥ Sec(s)	93)(Min) ~ 1/15 08 ~ x (Max)	✓ Sec(s)(Max)
Night Mode S Exposu Exposu Gain	etting ure Value ure Time 0	/10000 ♥ Sec(s)	181)(Min) ~ 1/15)8 ¥ x (Max)	Sec(s)(Max)
Apply				

Image Setting	Video Setting	Overlay		
		Image Adjustm	ent	
			Brightness: Contrast: Saturation: Sharpness: Default	- 125 + - 125 + - 155 + - 50 +
		Exposure Sett	ing	
Exposure Mod	de	Auto 🗸		
		Others		
Mirror Flickerless Power Line F Condition(AV TV out IR-Cut(Day/I Day WDR BLC	requence [VB) [Night)	Vertical Horizon Enable NTSC/60Hz Outdoor Charles Auto ONight mod Schedule From: 0 ON ON	le(B/W) ● Da 0 ♥ : 00 ♥	y mode(Color) To: 23 ♥ : 59 ♥
Apply				

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5. 3.3. 1. Exposure Setting

Exposure Setting Procedure :

Step 1.

Select the "Video" button under the "Configuration" menu. Then go to "Image setting" and change the "Exposure Mode" from "Auto" to "Manual". Step 2.

As an example, the picture to the right has an image that is too dark during night mode operations. We can manually adjust the maximum **Exposure Time** to **1/15 Seconds** to improve the night time image.

Step 3.

Press the "Apply" button to save settings and get a better image quality as shown below.

Image Setting	Video Setting	Overlay
		Image Adjustment
		Brightness: - 125 + Contrast: - 125 + Saturation: - 155 + Sharpness: - 50 + Default
Exposure Mod Day Mode Se Exposu Exposu Gain	de tting ure Value ure Time	181 0000 ♥ Sec(s)(Min) ~ 1/15 ♥ Sec(s)(Max) ♥ x (Min) ~ 08 ♥ x (Max)
Night Mode S Exposu Exposu Gain	etting ure Value ure Time	181 1/10000 ♥ Sec(s)(Min) ~ 1/15 ♥ Sec(s)(Max) 00 ♥ x (Min) ~ 08 ♥ x (Max)
Apply		



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5. 3.3.2. Image Setting

Image Setting Procedure :

Step 1.

Select the "Video" button under the "Configuration" menu. Then go to the "Image setting" tab.

Step 2.

Enter the desired **Brightness**, **Contrast**, **Saturation and Sharpness** numbers. Or use + and – button to do the adjusting incrementally.

Step 3.

Verify your changes with the image. Once you have gotten your ideal results, press the "**Apply**" button to save your settings.

Notification :

The range of Brightness, Contrast, Saturation and Sharpness numbers are from 0 to 255. Press the "Default" button if you wish to go back to the original factory settings. Press the "Apply" button to save your settings.

age Setting	Video Set	ting	Overlay	/	
			mage Adjı	ustment	
				Brightness: Contrast: Saturation: Sharpness: Default	- 125 + - 125 + - 155 + - 50 +
Exposure Mod	9	Aut	Exposure to V	Setting	
Exposure Mod	3	Au	Exposure to V Othe	Setting	
Exposure Mod	2	Au	Exposure to V Othe tical 🗆 Ho	Setting rs rizontal	
Exposure Mod Mirror Flickerless Power Line Fr Condition(AW	equence	Aut	Exposure to V Othe tical Ho able /60Hz V	Setting rs rizontal	
Exposure Mod Mirror Flickerless Power Line Fr Condition(AW TV out	equence 3)	Aut Ver Ena NTSC/ Auto	Exposure to V Othe tical Ho able /60Hz V able	Setting rs rizontal	
Exposure Mod Mirror Flickerless Power Line Fr Condition(AW TV out IR-Cut(Day/N	equence 3) ght)	Auto	Exposure to ✓ Othe tical □ Ho able /60Hz ✓ able to ○ Night	Setting rs rizontal mode(B/W) © Da	v mode(Color)
Exposure Mod Mirror Flickerless Power Line Fr Condition(AW TV out IR-Cut(Day/N Day	equence 3) ght)	Auto	Exposure to ✓ Othe tical □ Ho able (60Hz ✓ able to ○ Night nedule From	Setting rs rizontal mode(B/W) Da n: 00 : 00	y mode(Color) To: 23 ♥ : 59 ♥
Exposure Mod Mirror Flickerless Power Line Fr Condition(AW TV out IR-Cut(Day/N Day WDR	equence 3) ght)	Auto	Exposure to ✓ Othe tical □ Ho able /60Hz ✓ able to ○ Night nedule From	Setting rs rizontal mode(B/W) Da n: 00 : 00	y mode(Color) To: 23 ♥ : 59 ♥



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5.3.2. Motion Detection

The **Motion Detection** function allows you to set up to three motion detection windows on the screen. So these selected areas can detect motion base on the **Percentage** and **Sensitivity** numbers that are set.

Motion Detection Setting Procedure :

Step 1.

Select the "Motion Detection" button under the "Configuration" menu.

Step 2.

Select "Enable Privacy Mask", then select "Enable" under the "Windows 1" column and define a "Title" to this windows.

Step 3.

Resize the "Windows 1" frame and drag it to the area on the screen that you wish to monitor for motion.

Step 4.

Adjust the "**Percentage**" and "**Sensitivity**" settings to optimize your motion detection triggers.

Step 5.







5.3.3. Privacy Mask

The "**Privacy Mask**" function allows you to set up to three privacy masks that cover on your live view screen. The color of the mask can be selected from one of the four available colors. Once the mask has been set, the live view screen will no longer display the masked area.

Privacy Mask Setting Procedure :

Step 1.

Select the "Privacy Mask" button under the "Configuration" menu.

Step 2.

Select the **"Enable Privacy Mask"**, then select **"Enable"** under **"Mask 1**" column.

Step 3.

Resize the "**Mask 1**" frame and drag it to the place on the screen that you wish to cover.

Step 4.

Select the "Filled Color".

Step 5.

Press the "Apply" button to save "Mask 1" settings. If wish to set up "Mask 2" and "Mask 3", repeat the above procedure.







5.3.5. Audio Settings

Comtrend MD-21 network cameras are equipped with an internal microphone. You may enable the microphone function within the web UI.

One ways audio setting procedure :

Step 1.

Select the "Audio" button under the "Configuration" menu.

Step 2.

Select "Enable Microphone". Select the "Audio Type" and set the "Microphone Gain".

Step 3.

Press the "Apply" button to save the setting.

Notification :

Available audio features vary by camera models. Some models have a built-in microphone, speaker outputs or both.

a Configuration	Motion	
• comgutation •	Privacy Mask	
System	Event	
Security	Recording	
Network	SDHC	
IP Filter	Jog	
Video	Log	
Audio	Device info	
Audio	Maintenance	

Audio		
	Microphone	
🗹 Enable Microphone		
Audio Type	G711 u-law ✓	
Microphone Gain	0 dB ♥	
Apply		
	Audio Enable Microphone Audio Type Microphone Gain	Audio Microphone Audio Type G711 u-law Microphone Gain 0 dB v



5.4. SD Card Settings

The Comtrend MD-21 Camera has a built-in micro SD card slot for on camera recording. Micro SDHC cards up to 32GBs in capacity are supported.

5.4.1. SDHC

Setting new SD card procedure :

Step 1.

Select the "SDHC" button under the "Configuration" menu.

Step 2.

Select the "**Status**" page. If no SD card information is displayed, check that the SD card is properly inserted. Press the "**Refresh**" button to see SD card information.

Step 3.

When using an SD card for the first time, it is necessary to format the card. Press the "Format" button to start the format process. Once complete, your SD card will be ready for use.

SDHC				
Status	Recording	Event		
Refresh)			
			Status	
	Capacity		Used Capacity	Available Capacity
	30418 MB		29920 MB	498 MB





5.4.2. Recording Recording to SD card procedure :

Step 1.

Select the "Recording" button under the "Configuration" menu.

Step 2.

Select "Enable External storage Recording" function and set the maximum size of each recording file. The maximum file size must be set between 1MB and 50MBs in size.

Step 3.

Set your recording schedule in the "Recording Schedule" section.

Step 4.

Select "Memory card" under the "Storage Option" section. Then press the "Apply" button to save setting. Notification :

Under the "Storage Option" section, You can also choose to save your recoding files to a Samba Server. For the limitation of each recording file size is from 1~50MB. Each recording file length will depends on the setting of your recording stream.

Configuration	Privacy Mask Event
System	Recording
Network	SDHC
IP Filter	Log
Video	Device info
Motion	Maintenance

ecording	
General	
Z Enable External starage Recording	
Maximum Size of Each File 50 MB	
* number must be between 1~50.	
Recording Schedule	
☑ Sun ☑ Mon ☑ Tue ☑ Wed ☑ Thu ☑ Fri ☑ Sat	
Time: Alwaya	
$\bigcirc \text{ From } \boxed{0 \lor} : \boxed{0 \lor} \text{ To } \boxed{23 \lor} : \boxed{59 \lor}$	
Storage Option	
Memory Card	
○ Samba Server	





5.4.3. SD Card Recoding Search SD card recoding search procedure :

Step 1.

Select the "Recording" button under the "SDHC" page. Step 2.

Press the "All file" button to see all recording files from the SD memory card. You can search a specific period of recording by setting a desired **Start Time** and **End Time.** Then press the "**Search**" button to sort the recording files within the specified period.

Step 3.

You can choose to download the recording files to your computer or to delete file from memory card.

SDHC									
Status	Recordin	9	Event						
All file									
All file				Sear	rch				
All file Start Time	2	014 🗸 /	10 ¥ /	Sear	rch 14 ~	·] : 39 ·	: 29	~	

SDHC			
Status	Recording	Event	
All file			
	Sea	rch	
Start Time	e 2014 V / 10 V / 23 V	14 💙 : 46	5 💙 : [47 💙
End Time	2014 🗸 / 10 🗸 / 23 🗸	14 🗸 : 56	5 ♥ : 47 ♥ Search
	Search	Result	
Page 1 / 1			Size : KB
	File Name	Size	Date
(mi.₹) G	GP1-10232014-145436.avi	51287	Thu Oct 23 14:54:36 2014
💼 差 🛛 G	GP1-10232014-145252.avi	51285	Thu Oct 23 14:52:52 2014
💼 👤 🛛 G	P1-08092012-133045.avi	38123	Thu Aug 9 13:30:45 2012
💼 🛃 🛛 G	GP1-08092012-132902.avi	51282	Thu Aug 9 13:29:02 2012
First page	Previous Next F	inal page	





5.4.3. SD Card Event Recoding Search

When event recording is triggered and saves to SD memory card, You can search all event files within the "Event" page.

SD card event recoding search procedure : Step 1.

Select the "Event" button under the "SDHC" page.

Step 2.

Press the "All file" button to see all event recording files on the SD memory card. You can search a specific period of recording by setting a desired **Start Time** and **End Time.** Then press the "**Search**" button to sort the recording files within the specified period.

Step 3.

You can choose to download the recording files to your computer or to delete file from memory card.

SDHC				
Status	Recording	Event		
All file				
			Search	
Start Time End Time	2014	✓ / 10 ✓ / 2 ✓ / 10 ✓ / 2	$\begin{array}{c c} 3 \checkmark & 14 \checkmark : 43 \checkmark : 15 \checkmark \\ \hline 3 \checkmark & 14 \checkmark : 53 \checkmark : 15 \checkmark \\ \end{array}$	Search
SDHC				
Status	Recording	Event		
All file			Search	







5.5. Event Settings

The Event Setting page allows you to define event triggers to cause the camera to perform an action. You can set multiple event based on your application.

Comtrend network cameras have two event triggers and 5 possible actions:

1)Motion Detection

- 2)Digital Input signal
- Actions includes :
- 1)Send to FTP
- 2)Send to Email
- 3)Record to Samba
- 4)Record to SD Card

5)Trigger Digital Output





SEvent			
Setting	Media	Event Server	
		Event setting	
New			
		Setting	
Enable Set	ting		
Title MD	-2-SD_REC		
Trigger			
☑ Motio	n Detection		
□ Digita	I Input 1 High		
	i înput 2	•	
Schedule	Time		
🗹 Enabl	e Schedule Time		
	□Sun □Mon []Tue □Wed □Thu	🗆 Fri 🗆 Sat
	Time:		



5.5.1. Event Server

The "Event Server" tab is used to setup the media server that will support the "Action" from a "Triggered Event". FTP, SMTP and Samba are the three media server types that are supported.

5.5.1.1. FTP Server

FTP Server setting procedure :

Step 1.

Select the "Event" button under the "Configuration" menu. Then select "Event server" tab.

Step 2.

Select "Enable FTP server". Enter your FTP server's IP address, Port, Username, Password and File path Name. You may select "Enable Passive Mode" depending on your FTP server configuration.

Notification :

Default FTP Port is set to 21.

Step 3.

Press the "**Test FTP**" button to check if the FTP connection was successfully established.

Step 4.

	1 1E 0011101
Configuration	Event
System	Recording
Security	SDHC
Network	Log
IP Filter	Device info
Video	Maintenance

Setting	Media	Event Server	
		FTP Server	
Enable FTP FTP Serv Port User Nan Password File Path Enabl	Server er 21 ne Mame Passive Mode		
		SMTP Server	
Enable SMT	P Server		
Enable Sam	nba Server	Samba Server	
Apply			



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5.5.1.2. SMTP Server

The main function of the SMTP server it to send an email message when an event is triggered.

SMTP Server setting procedure :

Step 1.

Select the "Event" button under the "Configuration" menu. Then select the "Event Server" tab.

Step 2.

Select the "Enable SMTP server". Enter your SMTP server's IP address, Port, Sender e-mail address, Receiver #1 and #2 e-mail address and Subject. Indicate whether there is authentication required. Provide a Username and Password if necessary. You may select Require SSL Encryption and StartTLS if necessary for your server.

Notification :

Default SMTP Port is set to 25.

Step 3.

Press the "**Test SMTP**" button to check if the SMTP connection was successfully established.

Step 4.

Setting	Media	Event Server	
		FTP Server	
Enable F	TP Server		
		SMTP Server	
☑ Enable S	MTP Server		
SMTP S	Server		
Port		25	
Sender	r Email Address		
Receiv	er #1 Email Addres	ss	
Receiv	er #2 Email Addres	ss	
Subjec	t	GP1	
Aut	hentication		
	User Name		
	Password		
Rec	quires SSL Encrypti	on	
□ sta	ARTTLS		
Test	SMTP		
		Samba Server	
Enable S	amba Server		
Apply			



5.5.1.3. Samba Server

Samba Server setting procedure :

Step 1.

Select the "Event" button under the "Configuration" menu. Then select the "Event Server" tab.

Step 2.

Select "Enable Samba Server". Enter your Samba server's IP address, Storage Path, Username and Password.

Step 3.

Press the "Test Samba" button to check if the Samba connection was successfully established.

Step 4.

Setting	Media	Event Server	
		FTP Server	
🗆 Enable F	TP Server		
		SMTP Server	
🗆 Enable S	SMTP Server		
		Samba Server	
🗹 Enable S	Samba Server		
Samb	a Server Address		
Path			
User N	lame		
Passw	ord		
Test	SMB		
Apply			





5.5.2. Media setting

Media settings are to define what kind of media files should be save when an event is triggered. You can send a snapshot or an event recording file to your event server.

Media setting procedure :

Step 1.

Select the "Event" button under the "Configuration" menu. Then select the "Media" tab.

Step 2.

Select the "Snapshot" or "Maximum Video File Size". You can set the pre and post event time when selecting video as the media format. The length of "**Pre Event**" and "**Post Event**" are both configurable from 1 to 5 seconds.

Notification :

The maximum event recording file size is 3MB. Recommended "**Pre Event**" as 2 seconds and "Post **Event**" as 3 seconds.

Step 3.

Setting	Media	Event Server	
		Media	
One Snapsh	ot		
Maximum Vi	deo File Size: 3M	B	
Pre Ever	nt 3 🗸 seco	nd(s)	
Post Eve	ent 5 🗸 seco	nd(s)	





5.5.3. Adding New Event Settings

Event Settings will allow you to configure events that are triggered by either "**Motion Detection**" or "**Digital Input**". You can establish a "**Schedule Time**" for when the event will be active. Five "**Action**" types are available for each triggered "**Event**".

Example of adding new event procedure:

Step 1.

Select the "Event" button under the "Configuration menu". Then select the "New" button to open the "Settings" page.

Step 2.

Select "Enable Setting" and provide the "Event" title.

Step 3.

Select "Motion Detection" as a trigger.

Step 4.

Select "Enable Schedule Time" and select all days from Sunday to Saturday. Then set the time as Always.

Step 5.

Select "Enable SD Card" and "Enable Digital Output" as your action. Also set your digital output time as 10 seconds.

Step 6.



Setting	Media	Event Server	
		Event setting	
ew			
		Setting	
Enable Sett	ing		
Title MD-	2-SD_REC		
Trigger			
Motion	Detection		
🗌 Digital	Input 1 High	✓	
🗆 Digital	Input 2 High	~	
Schedule	Time		
🗌 Enable	Schedule Time		
	□Sun □Mon □]Tue 🗌 Wed 🗌 Thu	🗆 Fri 🔲 Sat
	Time: Always		
	O From 00	✓: 00 ✓ To 23 ✓	: 59 🗸
Action			
🗆 Enable	FTP		
🗆 Enable	EMAIL		
🗌 Enable	Samba(Net Stora	ge)	
🗹 Enable	SD CARD		
🗹 Trigge	digital output for	01 💙 second(s)	

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5.6. Maintenance Settings

This maintenance page includes **Reboot**, **Factory Reset, Backup, Restore,** and **Upgrade** functions.

5.6.1. Reboot

Reboot procedure:

The **"Reboot**" feature is used to remotely reboot the camera.

5.6.2. Factory reset

There are two "Factory Reset" options. The first option will reset all camera parameters to factory default. The second option will reset all parameters, except for the IP address, time zone and daylight savings parameters.

Reboot and Reset procedures:

To "**Reboot**" or "**Reset**" the camera, press the "**Reboot**" or "**Reset**" buttons.



♦ Maintenance			
Reboot			
System will be rebooted. Reboot			
Factory Reset			
Factory reset will restore all the settings to factory default.			
Reset			
Reset all parameters, except for the IP , time zone, and daylight saving parameters , to the original factory settings.			
Reset			
Backup			
Backup			
Backup to SD card device			
Restore			
Select the configuration file to restore			
瀏覽 Restore			
Restore from SD card device			





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5.6.3. Backup

Comtrend cameras can back-up your camera settings to either local computer or on to an installed SD card.

Backup procedure:

When you press the "**Backup**" button, the Comtrend camera will back-up it's setting to your computer. When you press the "**Backup to SD card device**" button, the Comtrend camera will back-up it's settings to the installed SD card.

5.6.4. Restore

Comtrend cameras can restore back-up files from the procedure above.

Restore procedure:

When restoring files from your computer, press the "**Browse**" button and select the backup file that you saved. Then press the "**Restore**" button. When restoring settings from the SD card, press "**Restore from SD card device**" button.



Maintenance		
Reboot		
System will be rebooted. Reboot		
Factory Reset		
Factory reset will restore all the settings to factory default.		
Reset		
Reset all parameters, except for the IP , time zone, and daylight saving parameters , to the original factory settings.		
Backup		
Backup		
Backup to SD card device		
Restore		
Select the configuration file to restore		
瀏覽 Restore		





5.6.5. Upgrade

Comtrend cameras contain its original firmware version when they first leave the factory. Comtrend will have the latest firmware version on the Comtrend website.

Firmware upgrade procedure:

Download the latest firmware version to your computer. Click the "**Browse**" button and select the firmware you want to upload to the camera. Click the "**Upgrade**" button to begin the upgrade. Once the upgrade is complete, "**Reboot**" your camera.

	Reboot
Sys	tem will be rebooted.
	Reboot
	Factory Reset
Fac	tory reset will restore all the settings to factory default.
-	Reset
Res	et all parameters, except for the IP, time zone, and daylight saving parameters, to the pinal factory settings.
	Reset
	Backup
Ba	ackup
P.	ackun to SD card device
De	
	Restore
Sele	ect the configuration file to restore
	Browse Restore
Re	estore from SD card device
	Firmware
Cur	rent Firmware Version 1.04.01
	Browse





5.7. Camera Information

Comtrend network cameras provide two ways of checking information. One is form the device information, it includes the fundamental of network setting and basic function of the camera. The other one is in the system log, it records all the operation and event history.

5.7.1. Device information

Device info display procedure:

To access device info, click "Configuration" from the menu then click the "Device Info" button.

Configuration System Security Network IP Filter Device info					Recording SDHC Log Device info Maintenance		
-]
				Basi	ic		
	Camera Name		GP1				
	Firmware version		1.03.20				
	MAC		d4:a4:25	00:48:	4b		
	Camera Date and	Time	10/23/20	14 16:1	9:19		
	н.	H.264					
	Video Resolution Video Quality	1920x10 Normal)80 (1080P))			
	Frame Rate	30 Tps					
	Au	dio			Mob	ile View	
	Microphone In	Disable			H.264 Enable	Disable	
	Microphone Gain	0 dB					
	Speaker Out	Disable					
				Netwo	ork		
			DHCP IP	4/IPv6	8943(G).		
	IP Address(IPv4)		192.168.1	.99			
	IP Address(IPv6)						
	Subnet Mask		255.255.2	255.0			
	Gateway		192.168.1	.1			
	Primary DNS		192.168.1	.1			
	Secondary DNS		192.168.1	.2			
	Subnet Mask Gateway Primary DNS Secondary DNS		255.255.2 192.168.1 192.168.1 192.168.1	255.0 1 1 2			



5.7.2. System Log

System log display procedure:

To access system log, click **"Configuration"** from the menu then click the **"Log"** button.

	Configuration System Security Network	n SDHC Log Device info Maintenance				
Log						
		System Log				
Item	Date and Time	Event				
1.	10/23/2014 16:16:57	admin login on 192.168.1.11				
2.	10/23/2014 15:46:55	[EVENT MGR]:Reload Config File				
3.	10/23/2014 15:26:57	admin login on 192.168.1.11				
4.	10/23/2014 15:18:17	[EVENT MGR]: reload config file				
5.	10/23/2014 15:02:41	[SDCard]: List Fail !!!				
6.	10/23/2014 14:52:52	[Recording]:SDCard Space=31058128 KB is enough				
7.	10/23/2014 14:52:52	[Recording]:Recording Start				
8.	10/23/2014 14:52:45	admin login on 192.168.1.11				
9.	08/09/2012 13:32:02	[Recording]:Recording Stop				
10.	08/09/2012 13:29:18	[SDCard]: List Fail !!!				
11.	08/09/2012 13:29:02	[Recording]:SDCard Space=31147552 KB is enough				
12.	08/09/2012 13:29:00	[Recording]:Recording Start				
13.	08/09/2012 13:12:25	[SDCard]: Format Success !!!				
14.	08/09/2012 13:07:32	admin login on 192.168.1.11				
15.	08/09/2012 13:03:57	[NET]:UPnPAV Disable				
16.	08/09/2012 13:03:13	[RTSP SERVER]:Start one session<192.168.1.99>				
17.	08/09/2012 13:03:07	[NET]:UPnPAV Disable				
18.	08/06/2012 15:44:01	[NET]:UPnPAV Disable				
19.	08/06/2012 15:43:18	[RTSP SERVER]:Start one session<192.168.1.99>				
20.	08/06/2012 15:43:11	[NET]:UPnPAV Disable				
Fir	st page Previous	Next Final page				

Remove



Chapter 5.	Configuration





Appendix

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Chapter 6. Appendix

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