4CH ANT-3410 H.264 Encoder



User Manual ver.2.0

Safety Precaution

We appreciate your purchasing T Before installing the product, please read the following with care.

- \diamond Make sure to turn off the power before installing system.
- ♦ Do not install under the direct sunlight or in dusty areas.
- ♦ Make sure to use the product within the temperature and humidity specified in the specification.
- \diamond Do not operate the product in presence of vibrations or strong magnetic fields.
- ♦ Do not put electrically conducting materials in the ventilation hole.
- ♦ Do not open the top cover of the products. It may cause a failure or electric shock on the components.
- ✤ To prevent from overheating, make sure to keep the distance at least 10cm from the ventilation hole.
- ♦ Make sure proper voltage before connecting the power.

1. INTRODUCTION

About this manual

This user manual provides information on operating and managing the optimal video surveillance system. The manual includes instructions of installation, operation and configuration of 4CH ANT-3410 as well as how to make troubleshooting.

• Features

4CH ANT-3410 is a video and audio surveillance transmission system based on IP network through LAN, ADSL/VDSL, and Wireless LAN. The 4CH ANT-3410 operates as 4 Channel Encoder which compresses and transmits video & audio data through network and provides 4 BNC inputs for connecting analog video devices.

<u>Video</u>

- Highly efficient compression algorithm, H.264 & MJPEG support
- Wide range of transmission rates: 32kbps ~ 16mbps (Up to 4Mbps for each channel)
- Various transmission modes: CBR, VBR, Hybrid
- Motion detection

<u>Audio</u>

Multi-transmission mode: Simplex (Megapixel IP camera → Client PC or Decoder, Client PC or Decoder → Megapixel IP camera), Full Duplex

Network

- Fixed IP & Dynamic IP (DHCP) support
- 1:1, 1:N support
- Automatic transmit rate control according to network condition
- OnVIF, PSIA compliant

Serial Data

- Two serial ports
- Data pass-through mode: Serial data communication between Encoder Decoder

Sensor and Alarm

- Support direct connections of external sensor and alarm device
- Event alarm

<u>USB</u>

- Connection to internal or external USB storage for remote access

User Interface

- Diagnose and upgrade through dedicated program called True Manager
- System configuration using Internet Explorer

High Reliability

- Reliable embedded system
- System recovery by dual watch-dog function

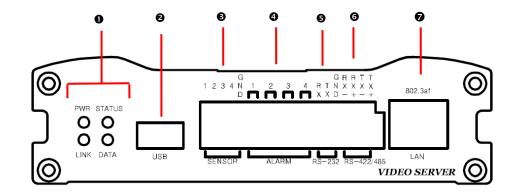
Product and Accessories



4CH ANT-3410

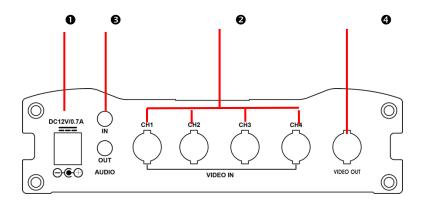
• Part names and Functions

Front view



Parts	Function
0 LEDs	Display power On/Off condition, Link, Status and data
O USB	USB port for any USB device
SENSOR	Sensor input
4 ALARM	Relay output
G RS-232	Serial communication port 1 (COM1) for PTZ control or bi-
	directional command pass-through
G RS-422/485	Serial port 2 (COM2) for PTZ control and etc. Support RS-422 and
	RS-485 protocol
LAN(Ethernet)	1000/100/10-base-T Ethernet interface

<u>Rear view</u>



Parts	Function			
• POWER IN	DC +12V power input			
❷ VIDEO IN	4 channels video input			
	Audio Input, output			
Video Out	Video ouput			

System Connections

The 4CH ANT-3410 system operates as Encoder and can be connected in either 1-to-1 fashion where 4CH ANT-3410 is connected one decoder or 1-to-many fashion where 4CH ANT-3410 connected to many decoders.

System Mode	Video	Audio	Serial Data	
Encoder	Transmit	Transmission/Receive	Transmit/Receive	

Therefore, 4CH ANT-3410 is capable of bi-directional transmission of audio or serial data.

Topology

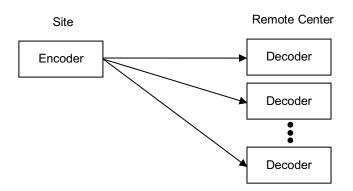
Generally, the encoder and the decoder are connected in 1-to-1 mode. To support specific situations, 1-tomany connection is also supported.

1:1 Connection (Unidirection)



Mostly used configuration is 1 to 1 connection. An encoder is installed at a site where video images can be transmitted and a decoder is installed at a center location to receive and view the video images on analog monitor. Audio and serial data are transferred in either direction.

1:N Connection (Unidirection)



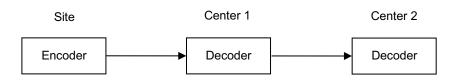
In this configuration, a site can be monitored from many remote center locations. Although up to 64 decoders can be connected to on encoder, in the real network environment, network bandwidth can limit the maximum connections.

Functionally, the CMS (Central Monitoring System) software can replace the decoder.

Multicast Mode

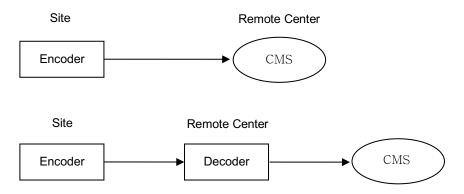
In 1:N Connection, network that supports multicasting, a large number of decoders can receive video efficiently from an encoder transmit a single streaming of video and audio.

Relaying



In this arrangement, video and audio can be retransmitted from a center to another center. The arrangement is useful when the network bandwidth to the site is limited while there are more than one center wanting to monitor the site.

CMS (Central Monitoring System)



CMS (Central Monitoring System) is a Windows based remote monitoring program to access multiple encoders for real-time monitoring or control of the encoders and connected cameras. Please refer to CMS User Manual for more information on CMS.

2. Installation

Connecting Network (LAN)

- Connect the power adaptor to IP camera
- Connect network cable to Ethernet port
- To display video through composite port, after connecting each port to a monitor, set **preview** option "ON" on the web-viewer page.

Connecting Audio

Audio is full-duplex. It is possible to set the mode as Tx-only, Rx-only or Tx-Rx.

- Connect audio input and output port to audio device accordingly.
- The audio signal required is line level so audio equipment with an amp, mixer or other amplifier should be used.

Connecting Serial Ports

RS-485 of IP camera can be connected to external equipment such as PT receiver etc. PC client can send PT commands to the external equipment via the serial port.

When a decoder system instead of PC client is connected to IP camera, the serial port and that of the decoder system works in pass-through mode. That is, data from one port is delivered to the other port, vice versa.

Connecting Sensor and Alarm

Connect sensors and alarm devices to corresponding terminals accordingly.

Connecting Power

After confirming the power source, connect power adaptor and connect the 12VDC connector to the IP camera.

Check if it Works

Once the power is supplied to the IP camera, it will start booting. The IP camera will boot up to an operating mode after approximately 40-60 seconds. The green LED on the Ethernet port will flash indicating the IP camera is ready.

Software provided on the disc called True Manager allows you to check the IP address and other network details of the IP camera. Please refer to the True Manager manual for instructions on how to find the IP address of the IP camera and if required changing it.

3. System Operation

Remote Video Monitoring

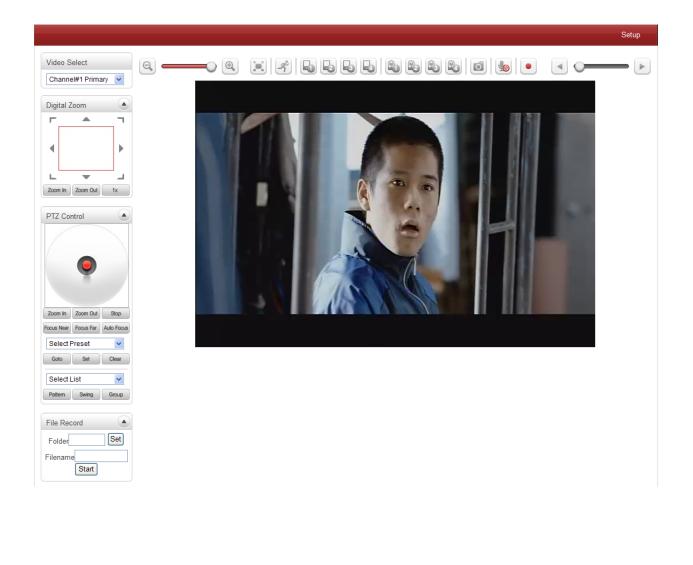
There are two ways to monitor video when the center system and IP camera are connected. In order for a proper operation, an IP address must be set accordingly. Please refer to **True Manager Manual enclosed with product** for further details.

- Default ID : admin
- Default Password :1234

Video Monitoring using Internet Explorer

Open Internet Explorer and enter camera's IP address. The system will ask for confirmation to install Active-X control. Once authorized, the Internet Explorer will start to display video images from camera as shown below.

> Default IP Address : <u>http://192.168.10.100</u>



10/58

Video Select

Video Select	
Channel#1 Primary	~

Select the Video stream to be viewed : Primary, Secondary, Quad steam tertiary or quartic streaming. This camera is capable of dual streaming; primary streaming and secondary streaming.. Video will be displayed according to the resolution set on video configuration. If dual streaming ("**Use Dual Encode**" Menu in Video page) is not activated, secondary video is not available

View Size



Adjust the size of the screen.

Screen size if initially adjusted according to the compression resolution. Click on 50% icon and the whole screen size will be reduced to half size.

Digital Zoom



Control the Digital zoom on the screen

The more the camera zooms in, the smaller the square of control panel is. Position of the image can be changed by moving position of the square. If you press x1, the screen will return to the normal size.

PTZ Control (Optical Zoom & Digital Zoom Built-in the Camera)



Control PTZ and PTZ Control Panel is used for controlling external PTZ devices when the external PTZ devices are connected through serial port. It is possible to make zooming control by **Zoom in/out** buttons of PTZ control Panel (In order to use digital zoom, select **Digital zoom ON** in the Camera tab)

ANT-3410 User Manual

- S	top
S	top on-going action
- F	ocus Near, Focus Far, Auto Focus
A	djust the focus of the lens
♦ S	Select Preset
	Select Preset
	Goto Set Clear
Set pr	reset position and move to the specific preset position.
- G	ioto
М	love to the selected preset entry if the preset entry is set.
- S	et
S	et the current position to the selected preset entry.
- C	lear
D	elete the selected preset entry.
♦ S	Sensor Input and Alarm Output
Displa	ay the status of the sensor in real time.
This c	camera supports one sensor input. When the sensor of the camera is working, the sensor light turns
red O	Operate the alarm device by pressing the number icon. This camera supports one alarm output. A
numb	er icon indicates status of the alarm device.
♦ S	Snapshot
ĺ	0
Captur	e video images and store them as BMP or JPEG files.



9

Transfer audio from PC's mic to the camera.

• File Record

File Record					
Folder C:\E	ocume Set				
Filename					
	Start				

Recording to an AVI file on Live View page is available. AVI files are generated in the specified folder or in a specified file name on the PC where web browser is running.

- 1. Press "Set" button to select a folder or create a new folder. Enter the file name on a filename field.
- 2. Press "Start" button to start recording.
- 3. Press "Stop" button to stop recording.
- 4. An AVI file named "IP address_hh_mm_ss" or "File name_IP address_hh_mm_ss" will be generated in the specified folder depending on where the path specified folder or a prefix of the file name.

Display Buffer



Set the number of video frames to be buffered before being displayed on web browser. Larger value results in smoother video by sacrificing the latency. A setting of 10 ~ 15 frames can be used generally for most situations.

Video Monitoring with Decoder System

Once camera's IP address is set in the remote IP address section of the decoder, the decoder system will connect to camera and start receiving the video images. Normally, a monitor connected to the decoder will display video images

13/58

• Initialize of IP Address

If a system IP address is lost, the system can be reset to the system default IP address using the reset button in the back side of the system.

- 1. While the system is in operation, press the reset button for more than 5 seconds.
- 2. The system will reboot automatically.
- 3. Once the system reboots, IP address will be set to the system default as below;

• IP mode	Fixed IP	• IP address	192.168.10.100	
Subnet mask	255.255.255.0	Gateway	192.168.10.1	
Base port	2222	HTTP port	80	

4. Remote Configuration

• Using Web Browser

Remote setting is available by using web browser. Enter IP address of camera and then a live view screen appears as below. Press **Setup** button located in the upper right area of the monitoring screen to go to the server setup. For Remote Setting, user should be authorized higher than manager level.

① Enter IP Address		② Press Setup button
🖉 Video Surveillance - Windows Internet E	plorer	
🕞 🕞 🗢 🛃 http://192, 168, 10, 108:5000/Index, htm		• × Phole P-
: 파일(E) 편집(E) 보기(V) 즐겨찾기(A) 도규(I		
🖕 즐겨찾기 👍		
🏉 Video Surveillance		💽 - 🖃 🖶 - 페이지(P) - 안전(S) - 로구(Q) - 🕢 - 🎽
		Setup
Video Select	- @	
Digital Zoom		

The configurations are grouped into 9 categories: Video & Audio, Image, Network, Event, Record, Device, PTZ, System, User. Leaving the page without pressing Apply button, any changes in the page will be discarded.

ANT-3410 User Manual

• Video & Audio

Information

						Live
😼 Video&Audio 🛛 –	Video					
Information		Enable Algorith	m Resolution	Bitrate	Framerate	
Encode	Channel#1 Encoding	On H.264	720x480	990 (kbps)	30 (fps)	
Audio	Channel#2 Encoding	On H.264	720×480	939 (kbps)	30 (fps)	
Output	Channel#3 Encoding	On H.264	720×480	1045 (kbps)	30 (fps)	
👔 Image 🛛 🕂	Channel#4 Encoding	On H.264	720×480	1020 (kbps)	30 (fps)	
Network H	Quad Channel Encoding	On H.264	720x480	1003 (kbps)	30 (fps)	
🖥 Event 🚽	1200					_
Record +					Channel#1	
Device +	. 1100				Channel#3	
🛓 PTZ 🛛 🕂	1000				Channel#4	
🐮 User 🛛 🕂	. 006	1		\sim		
🛬 System 🚽					\Box	
	800					_
	700					_
	600 L	2	3 4	5	6 7	8
		-		-		-
	Audio					
		Enable Alg	rithm	Samplerate	Bitrate	
	Audio Encoding	On G.7	11 (8 KHz	49 (kbps)	
	Audio Decoding	On -			0 (kbps)	

The information provides current information regarding the settings for video and Audio

ANT-3410 User Manual

	-	View
 Information 		
• Encode		
Audio		
• Output		
🛊 Image	+	
Network	+	
Event	+	
Record	+	
Device	+	
📩 PTZ	+	
😣 User	+	
👌 System	+	
		Channel #1 Channel #2 Channel #3 Channel #4 Quad Channel Primary Resolution 720x480 * Framerate 30 *
		Preference CBR *
		Quality Economy *
		Bitrate 1024 ktps (32 ~ 4000)
		I-Frame interval 30
		H 264 Profile High Profile V
		Secondary
		Enable Off 💮 On
		Algorithm H.264 MJPEG
		Resolution 720x480 *
		Framerate 30 V
		Preference CBR v
		Quality Economy *
		Bitrate 1024 kbps (32 ~ 1024)
		I-Frame Interval 30
		H.264 Profile High Profile v

- Input format

Select channel and video input format..

Resolution

Select video encoding solution.

Scaling option is used when encoding resolution is different from input resolution. Without Scaling option, input video will be cut according to encoding resolution. On the other hand, if Scaling is selected, input video will be adjusted according to encoding resolution.

- Framerate

Determine the maximum number of frames per second for the video stream.

1,2,3,4,5,6,8,10,15,20,25 and 30 frame rate can be selected. The actual frame rate of video can be less than the maximum frame rate set due to the network bandwidth limitation

- Preference

Select encoding mode to control video quality or bitrate: Quality(VBR) or Bit rate(CBR). If 'Bitrate' selected, the video encoding will be effected by the 'Bitrate' value entered. Therefore, "Bitrate" mode corresponds to CBR (Constant Bit rate) encoding. If 'Quality' selected, the video encoding will be effected by the quality of image selected. Therefore, "Quality" mode corresponds to VBR (Variable Bit Rate) encoding.

- Quality

Select Video quality. 7 levels of quality are available.

Quality mode (VBR encoding) tries to encode every frame in a constant quality. Therefore, resulting bitrate may vary a lot depending on the complexity or activity changes in the input video. It is preferred when constant video quality is required and network bandwidth is enough for delivering the stream of highly varying bitrate.

- Bitrate

Determine bitrate value between 32 ~ 16Mbps.

Bitrate mode (CBR encoding) allows you to set a fixed target bitrate that consumes a predictable amount of bandwidth. In order to keep the bitrate limit, video quality is controlled dynamically according to the complexity or activity changes in the input video.

I-Frame Interval

Determine I-frame Interval between 1 and 255.

- H.264 Profile

Select H.264 Profile : High Profile or Baseline Profile

The standard defines various sets of capabilities which are referred to as profiles,

targeting specific classes of application.

I. High Profile

The Primary profile for broadcast and disc storage applications, particularly for high-definition television application.

II. Baseline Profile

Primarily for low-cost applications that require additional data loss robustness, this profile is used in some videoconferencing and mobile application. This profile includes all features that are supported in the constrained baseline profile, plus three additional features that can be used for loss robustness.

- Use Dual Encode

Select **ON** to enable to use Secondary

The Secondary video can be viewed on Live View window by selecting Stream number on Video selection

- Algorithm

Select H.264 or MJPEG for the secondary, tertiary or quartic streaming. In case of H.264, wither bitrate mode or Quality mode can be selected for Preference mode in. On the other hand, MJPEG supports **Quality** mode

Channel #1 Channel #2	Channel #3 Channel #4 Quad Channel
Primary	
Resolution	720x480 •
Framerate	30 🖤
Preference	CBR 💌
Quality	Economy 🔻
Bitrate	
I-Frame Interval	30
H.264 Profile	High Profile 🔻

Quad Channel

ANT-3410 User Manual

<u>Audio</u>

						Live
😼 Video&Audio	-	Audio				
Information		Audio Source	Analog Stereo]		
• Video		Algorithm	G.711 v	ĺ		
Audio		Bitrate	64kbps 🔻	ĵ		
Output		Mode	Tx & Rx v	Ĵ		Apply
📑 Image	+			/		
Network	+	Input Gain				
Event	+	Input Gain			25	
Record	+					
Device	+					
📥 PTZ	+					
🍇 User	+					
👌 System	+					

- Algorithm

Select the audio algorithm: G.711 or AAC

G.711 and AAC from client to server direction are supported. Thus, bidirectional audio communication is supported.

- Bit rate

Select the bitrate between 64Kbps and 128kbps when AAC is selected

The sampling rate is fixed to 8KHz and 32KHz for G.711 and AAC respectively.

Note that when camera is connected to a decoder, the decoder's audio algorithm should be set identically to transmit audio properly.

- Mode

Select audio operation mode

Mode	Action
Off	No operation
Tx-Only	Transmit only
Rx-Only	Receive only
Tx & Rx	Transmit and Receive

- Input Gain

Set audio input gain from 0 to 31.

<u>Output</u>

		Live
S Video&Audio –	Video	
Information	Preview Option Quad Channel Apply	
Encode		
Audio	Audio	
Output	Audio Output Obcoded Audio O Loopback	
📑 Image 🛛 🕂		
Network +		
Event +		
Record +		
🛄 Device 🔸		
📥 PTZ 🛛 🛨		
🍇 User 🛛 🕂		
🍓 System 🛛 +		

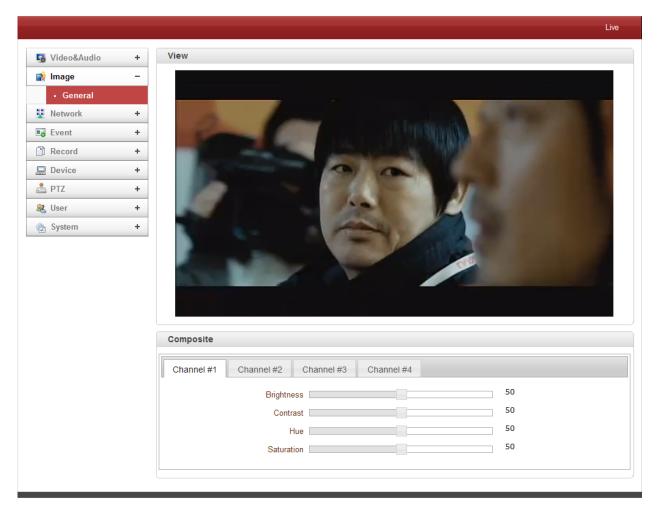
- Output Format

Select the format of output when Enable Preview is selected.

- Audio Output

Audio Output: The input audio is transmitted to the encoder Loopback: Does not transmit the audio to the encoder. Audio input and output at the camera.

Image General



- Audio Output

Brightness : Controls input video brightness by selecting values between 0 and 100.Contrast : Controls input video contrast by selecting values between 0 and 100.HUE : Controls input video Hue by selecting values between 0 and 100.Saturation : Controls input video saturation by selecting values between 0 and 100

ANT-3410 User Manual

Network

IP & Port

		Live
	Local	
Video&Audio +	Local	
🙀 Image 🛛 +	IP Mode	Fixed IP
😟 Network –	Local IP	192.168.32.55
IP&Port	Local Gateway	192.168.10.1
 Discovery 	Local Subnet	255.255.0.0
One-way		
SNMP	DNS	
DDNS		Obtain DNS server address automatically
IP filtering		Use the following DNS server addresses
E-mail	Primary DNS Server	0.0.0.0
• FTP	Secondary DNS Server	0.0.0.0
Google Drive		
• SSL	IPv6	
Connecting	IPv6 Address	
Event +	IPv6 Subnet Prefix Length	٥
Record +	IPv6 Default Gateway	
Device +	IPv6 LinkLocal	fe80::21c:63ff:feb3:7b9/64
📥 PTZ 🛛 🔸		
🎎 User 🛛 🕂	Port	
🍖 System 🔸	Base Port	2222 (1025~65535)
	HTTP Port	80 (80, 1025~65535)
	HTTPS Port	(443) (443, 1025~65535)
	RTSP Port	554 (554, 1025~65535)
	MTU Size	
	MTU Size	[1500] (default:1500)
	Multicast	
	Multicast IP	224.10.0.0 (224.0.0.0 ~ 239.255.255.255)
	TTL	64 (1~255)
		Apply

- Local

Select the IP mode: Fixed IP or DHCP Depending on the selected mode, further configuration items comes as follows,

IP Mode	Selection	Description
	Local IP	Fixed IP address
Fixed IP	LocalGateway	Gateway IP address
	Local Subnet	Subnet mask
DHCP	N/A	

Please ask IP address information from ISP provider or network manager.

- DNS

Obtain DNS server address automatically

Get DNS server address automatically when IP mode is DHCP.

Use the following DNS server address

Enter the DNS server IP address; Primary or Secondary DNS server

Domain Name System (DNS) is a database system that translates a computer's fully qualified domain name into an IP address. Networked computers use IP addresses to locate and connect to each other, but IP addresses can be difficult for people to remember. For example, on the web, it's much easier to remember the domain name www.amazon.com than it is to remember its corresponding IP address (207.171.166.48). Each organization that maintains a computer network

- IPv6

- > Ipv6 Address: Enter the designated Ipv6 address.
- > Ipv6 Subnet Prefix Length: Enter the bit number of Ipv6 Subnet
- > Ipv6 Default Gateway: Enter the designated Ipv6 gateway.
- Ipv6 Link Local: Display Ipv6 Link Local.

- Port

Base Port (1025~65535)

Enter the Base Port number

Network base port is used for communication with remote clients. In order for camera and remote systems to be connected, the port number must be identically configured in camera side and client side.

HTTP Port (80, 1025~65535)

Enter HTTP port used for web-based connection.

HTTPS Port (443, 1025~65535)

Enter HTTPS port used secured HTTP connection.

RTSP Port (554, 1025~65535)

Enter RTSP port used for RTSP-based connection. The default TRSP port is 554.

RTSP (Real Time Streaming Protocol) is a standard for media streaming between server and client.

- Multicast

The Multicast menu is used for configuring the multicast IP address to which media stream is delivered when a client such as a Decoder, VMS or NVR software is connected in multicast mode. The multicast IP address selection range is between 224.0.0.0 and 239.255.255.255. The selection can be used only when media protocol is set to Multicast.

Discovery

				Live
😼 Video&Audio	+	Discovery		
📑 Image	+	UPNP	O off 🖲 On	
Setwork	-	Zeroconf	Off 🖲 On	
IP&Port		WS Discovery	O Off 🖲 On	Apply
Discovery				
 SNMP 				
DDN S				
IP filtering				
E-mail				
FTP				
• SSL				
Event	+			
Record	+			
🚍 Device	+			
📩 PTZ	+			
🍇 User	+			
🍖 System	+			

- UPNP

By the setting **UPNP** to ON, it allows the discovery by the clients according to UPNP (Universal Plug and Play) protocol.

- Zeroconf

By setting **Zerodonf** to ON, it allows the discovery by the clients according to zeroconf protocol.

- WS Discovery

Discovery function based on web service is enabled. It allows the discovery by the client SW which is supporting Onvif.

<u>SNMP</u>

					Live
Video&Audio	+	SNMP			
📑 Image	+	SNMP Listen Port	161	(0, 161, 1025~65535)	
Vetwork	-	SNMP Trap Destination IP	0.0.0.0]	
IP&Port		SNMP Trap Destination Port	162	(0, 162, 1025~65535)	Apply
Discovery					
SNMP					
DDN S					
IP filtering					
E-mail					
FTP					
• SSL					
Event	+				
Record	+				
Device	+				
📩 PTZ	+				
🎎 User	+				
🗞 System	+				

Setup for using SNMP (Simple Network Management Protocol). It is compatible to both SNMPv1 and

SNMPvec. Settings for using SNMP are as following;

- SNMP Listen Port (0, 161, 1025 ~ 65535)

The port is for connecting external device when system operates as a SNMP client. SNMP is not used by setting 0 value.

- SNMP Trap Destination IP
 Set the SNMP Trap Destination IP.
- SNMP Trap Destination Port (0, 162, 1025 ~ 65535)
 Set the SNMP Trap Destination Port. SNMP is not used by setting 0 value.

Simple Network Management Protocol (SNMP) is used by network management systems to communicate with network elements. SNMP lets TCP/IP-based network management clients use a TCP/IP-based internetwork to exchange information about the configuration and status of nodes. SNMP can also generate trap messages used to report significant TCP/IP events asynchronously to interested clients. For example, a router could send a message if one of its redundant power supplies

<u>DDNS</u>

			Live
Video&Audio	+	DDNS	
👔 Image	+	DDNS Server None 🔻	
Vetwork	-	None TrueDNS	Apply
IP&Port		DynDNS Vdyn	
 Discovery 			
 SNMP 			
DDN S			
IP filtering			
E-mail			
FTP			
• SSL			
Event	+		
Record	+		
Device	+		
📩 ptz	+		
User	+		
👌 System	+		

Select DDNS (Dynamic DNS) server to use. One of the two can be selected.

- TrueDNS

True DNS service is used in the mode. Systems can be registered on the website for True DNS service, <u>http://ns1.truecam.net</u>. A system will get a domain name of xxx.truecam.net. Please refer to user guide document for True DNS service.

- DynDNS

Dyn DNS service is used in this mode. Refer to <u>www.dyndns.org</u> for details. ID, Password and Domain name are needed when DYN DNS is set.

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

- Vdyn

Vdyn is a DDNS service provided by Visionica (<u>http://visionica.com</u>). No further configuration is required for using this service. It internally uses MAC address for the registration. When it succeeds, the domain name of the form 001C63A607EC.visionica.info is displayed on Current Domain entry of Network page. E-mail setting is not mandatory.

- Check IP Disable

If "Check IP Disable" is selected, it will skip to check its own IP. In fixed IP mode, the set IP will be registered on DDNS server. In DHCP mode, dynamically assigned IP will be registered on DDNS server. Normally **Check IP Disable** should be unchecked in order to obtain public IP in the network.

IP filtering

🐻 Video&Audio	+	IP Filtering Setup				
🔋 Image	+	Basic Policy	Allow all			
Network	-		Below IP list is not allo	owed to access.		
IP&Port		No.	From	То	Enable	
 Discovery 		1	0.0.0.0	0.0.0.0		
		2	0.0.0.0	0.0.0.0		
 One-way 		3	0.0.0.0	0.0.0.0		
 SNMP 		4	0.0.0.0	0.0.0.0		
DDNS		5	0.0.0.0	0.0.0.0		
IP filtering		6	0.0.0.0	0.0.0.0		
		7	0.0.0.0	0.0.0.0		
 E-mail 		8	0.0.0.0	0.0.0.0		
 FTP 		9	0.0.0.0	0.0.0.0		
Event	+	10	0.0.0.0	0.0.0.0		
Record	+	11	0.0.0.0	0.0.0		
-		12	0.0.0.0	0.0.0		
Device	+	13	0.0.0.0	0.0.0.0		
🛓 PTZ	+	14	0.0.0.0	0.0.0.0		
System	+	15	0.0.0	0.0.0.0		
		16		0.0.0.0		
🐮 User	+	17		0.0.0		
		18	0.0.0	0.0.0		
		19	0.0.0.0	0.0.0.0		Apply

IP filtering is simply a mechanism that decides which types of IP datagrams will be processed normally and which will be discarded.

<u>E-mail</u>

		Live
Video&Audio +	E-mail	
📑 Image +	Server Address	
Network -	Port	25 (25, 465, 587, 1025~65535)
 IP&Port 	Sender Address	
- QoS	Authentication on SMTP Server	● Off ○ On
Discovery	ID	
SNMP	Password	
- DDNS	SSL	● Disable ○ Enable
IP filtering	Destination Address	E-mail Test
• E-mail		
• FTP		Apply
Google Drive		
- SSL		
Connecting		
Event +		
Record +		
Device +		
📥 PTZ 🛛 🕂		
🎎 User 🛛 🕂		
🐑 System 🛛 +		

- E-mail

Specify the information to send event information, when E-mail is selected as an

event action.

Server Address

Enter an address of mail (SMTP) server

> Port

Specify a port for SMTP operation (**Port 25 is the default port in SMTP operation**. If a different port is configured in the SMTP server, this ports needs to be changed accordingly.)

Sender Address

Enter an account registered in SMTP server.

> Authentication on SMTP server

This function is applicable when the E-mail server requires authentication for sending E-mail.

> ID & Password

When the server requires authentication, ID and Password of an E-mail account need to be entered.

> SSL

This function is applicable when the E-mail server requires encryption for sending E-mail.

Destination Address

Enter Destination address. More than one address can be entered by delimiting comma (,) or semicolon (;). Destination address can take up to 63 characters.

E-mail Test

E-mail sending can be tested with this button. Please note that configured settings should be saved first by pressing **Apply** button before using E-mail Test function. One of the following messages will come as a result of the test.

Message⊷	Description୶
E-mail sent successfully₽	Test E-mail has been sent successfully. Reception in the client can be checked.
Failed to connect SMTP server*	Connection to the SMTP server failed. It is necessary to check if the server is reachable and server address and port are correct.
Authentication failed	The server is reachable but authentication failed. ID and/or password need to be checked.40
SMTP server rejected the mail4	The server is reachable, but mail sending failed due to a reason other than authentication. This error happens often when the server authenticates according to its own rule. For example, IP addresses of a specific range or addressed of a specific suffix are allowed.4 ³

ANT-3410 User Manual

<u>FTP</u>

		Live
Video&Audio	+ FTP	
	+ Server Address	
-		
-		
 IP&Port 	ID	
- QoS	Password	
 Discovery 	FTP Base Directory FTP T	est
 SNMP 		
- DDNS	FTP Upload	
IP filtering	Continuous Upload On 💌	
• E-mail	Upload Video Primary Video 💌	
• FTP	Channel 🖌 Channel #1 🗸 Channel #2 🗸 Channel #3 🖌 Channel #4	
Google Drive	Upload Duration 10 sec (Max 300)	
- SSL	Upload Interval 300 sec (Max 3600)	
Connecting		
Event	+ App	ly
Record	+	
Device	+	
📩 PTZ	+	
🍇 User	+	
🔄 System	+	

Specify the information to upload event information, when FTP is selected as an event action.

- FTP
- Server Address

Enter an address of an RTP server to receive video files

Port

Specify a port for FTP operation (port 21 is the default port in FTP operation. If a different port is configured in the FTP server, this port needs to be changed accordingly.)

ID & Password

Enter ID and password for accessing the FTP server.

FTP file name

The names of files upload by FTP can be specified by user. If a fixed name is specified, the file is overwritten repeatedly.

Max length of a file name is 60 characters. If the name is left blank, file name is determined according to the internal rule implemented in the firmware.

The following macros are supported to form variable parts of file names. The strings are casesensitive.

%YYYY : year %MM : month

29/58

%DD : day
%hh : hour
%mm : minute
%ss : second
%EVENT : event type (Sensor1, Motion, ...)
%ADDR : address of the server (Domain name when DDNS is used. Otherwise IP address)
".avi" or ".jpg" will be added automatically at the end of the filename depending on the type of video file.

FTP Base Directory

Specify the name of the directory to be created in the FTP server. It is valid only when Use Record is set to Use on Record session.

FTP Test

FTP upload function can be tested with this button. Please note that configuration settings should be saved first by pressing **Apply** button before using FTP test function. One of the following messages will appear as a result of the test.

Message⊷	Description 4 ³
FTP connection tested successfully₽	The connection to the FTP server is successful.
Failed to connect FTP server*	The connection to the FTP server failed. It is necessary to check if the server is reachable and server address and port are correct.
Authentication failed	The server is reachable but authentication failed. ID and/or password need to be checked
Failed to upload file₽	File upload failed. The user of the ID is not allowed for writing into the directory or FTP server can be full.42
Failed to erase file↩	Failed to delete the test file. The user of the ID doesn't have the privilege for file deletion.43

- FTP Upload

Upload Video

Primary video and secondary, tertiary or quartic video (H.264 only), JPEG capture can be selected for uploading.

Number of Frame

Enter frame number of JPEG capture. (1 ~ 10)

Capture Interval

Select the interval of captured frame.

Continuous Upload

Continuous upload 'ON' allows video clips to be transmitted regularly regardless of occurrence of event. When this mode is activated, FTP upload by event is suppressed.

30/58

Upload Duration

Specify recording duration of a video clip to be transmitted. (max 300 sec.)

Upload Interval

Specify transmission interval. (max 3600 sec.)

Upload duration is not included in upload interval. For example, if upload interval is 60 sec. and upload duration is 20 sec, a video clip for 20 sec is transmitted every 80 sec.

Google Drive

			Live
😼 Video&Audio 🛛 +	Google Drive Auth		
📑 Image 🛛 +	Status	Not Authorized	
🚆 Network -	Current Authorized ID		Authorize
IP&Port			
Discovery	Google Drive Upload		
One-way	Base Directory		
SNMP		Email warning enable when drive storage full	
DDNS	Upload Video	Primary Video	
IP filtering	Number of Frame	1 (1 ~ 6)	
• E-mail	Capture Interval	Continuous	Apply
• FTP			
Google Drive			
• SSL			
Connecting			
Event +			
Record +			
Device +			
📥 PTZ 🛛 🛨			
🍇 User 🛛 🕂			
👸 System 🕂			

Google Drive Auth

First of all, please make Google ID and password, Try to google Drive ID and password for uploading recorded data.

Base Directory

Specify the name of the directory to be created in the google drive. It is valid only when Use Record is set to Use on Record session.

Upload Video

Primary video and secondary, tertiary or quartic video (H.264 only), JPEG capture can be selected for uploading.

Number of Frame

Enter frame number of JPEG capture. (1 ~ 10)

Capture Interval

Select the interval of captured frame.

<u>SSL</u>

		Live
😼 Video&Audio 🛛 +	SSL	
📑 Image 🕂	SSL Enable On	
Network -		
IP&Port	Password	
Discovery	VPN IP Address	
One-way	VPN Port 0	
SNMP	Crypto Enable Off	Apply
- DDNS		
IP filtering		
• E-mail		
• FTP		
Google Drive		
• SSL		
Connecting		
Event +		
Record +		
Device +		
📥 PTZ 🛛 🕂		
🎎 User 🛛 🕂		
👸 System 🕂		

> SSL Enable

SSL-VPN function will be enabled

User ID

User ID on VPN Client

> Password

User Password on VPN client

> VPN IP Address

Set IP address on VPN

> VPN Port

Set the port on VPN

> VPN IP Address

Set IP address on VPN

Connecting

			Live
Video&Audio	+	Connecting	
🐨 Image	+	Refresh	
Network	-	base :: 192.168.26.77 - (0,0,0,0)	_
IP&Port			^
 Discovery 			
• One-way			
SNMP			
• DDNS			
IP filtering			
E-mail			
• FTP			
Google Drive			~
• SSL		< >	
Connecting			
Event	+		
Record	+		
🛄 Device	+		
📥 PTZ	+		
🎎 User	+		
💮 System	+		

Client IP Addresses that are currently connected to system are listed. (1) Indicates

• Event Notification

Image +	Sensor 1	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	▼ FTP	Ch#1-AVI V	Preset	Channel #1 VNO	Preset
Network +	Sensor 2	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI V	Preset	Channel #1 VO	Preset
Event -	Sensor 3	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI V	Preset	Channel #1 VNo	Preset
Notification	Sensor 4	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI V	Preset	Channel #1 VNo	Preset
Motion Detection	On Video Loss 1	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	• FTP	Ch#1-AVI V	Preset	Channel #1 VO	Preset
Sensor	On Video Loss 2	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	▼ FTP	Ch#1-AVI V	Preset	Channel #1 VN	Preset
Alarm	On Video Loss 3	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI V	Preset	Channel #1 VNo	Preset
Record +	On Video Loss 4	Веер	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI 🔻	Preset	Channel #1 VNo	Preset
Device +	On Motion 1	Веер	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI V	Preset	Channel #1 VNo	Preset
PTZ +	On Motion 2	Веер	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI V	Preset	Channel #1 VNo	Preset
User +	On Motion 3	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI V	Preset	Channel #1 VNo	Preset
System +	On Motion 4	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	FTP	Ch#1-AVI V	Preset	Channel #1 VN	Preset
	Remote												
	Sensor 1	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	• FTP	Ch#1-AVI V	Preset	Channel #1 Vo	Preset
	Sensor 2	Веер	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	• FTP	Ch#1-AVI V	Preset	Channel #1 VO	Preset
	Sensor 3	Веер	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	• FTP	Ch#1-AVI V	Preset	Channel #1 VO	Preset
	Sensor 4	Beep	Alarm1	Alarm2	Alarm3	Alarm4	E-mail	NONE	• FTP	Ch#1-AVI V	Preset	Channel #1 VN	Preset

- Local

When a decoder instead of a PC client is connected to an IP camera, one system becomes a Local system and the other a Remote system (Generally a system which is being used by the user is called as Local system). Then, actions for events can be configured for events from the remote system as well as for local system. For example, it is possible to turn on an alarm device in local (center) decoder system when a sensor device in remote (site) IP camera is triggered. **Local** section configures the actions for events from local (self) system, and configuration activates local devices and **Remote** sections configure the actions for events from remote (peer) system.

Action	Description
Alarm out	Triggers alarm (relay) port.
E-mail	Sends E-mail to the specified address. AVI file can be attached
FTP	Upload AVI file to a specified FTP server
Preset	Move to the Preset position

The following table lists the possible actions for events.

- Local & Remote Event Configuration.

Sensor

Configure the action when the sensor is activated. Multiple actions can be set for a single event.

On Video Loss

Configure the actions when the video input signal is lost. Multiple actions can be set for a single

event.

> On Motion

Configure the actions motion is detected. Multiple actions can be set for a single event.

- On Disconnection

Configure the action when link (connection) with peer system is disconnected. Multiple actions can be set for a single event.

Motion Detection

- Use Motion Detection

Determine to use **Motion Detection** function.

- Motion Detection Area Editing

Configure region for motion detection. Regions of arbitrary shape can be configured by the following steps;

- I. Select Enable on Edit tab.
- II. Select editing mode. Set is for including cells to motion detection region and Erase is for excluding.
- III. Select cells by right click. Multiple cells can be selected by press and dragging.
- IV. Press Apply Edit Area to save the setting.

		Live
Video&Audio +	Motion Detection	
Image +	Channel #1 Channel #2 Channel #3 Channel #4	
Event -	Use Motion Detection Off Region-based	
Notification Motion Detection	Sensitivity(0 for most sensitive)	
Sensor	Region 1	
Alarm	Region 2	
Record +	Region 3	
Device +	Region 4	
📥 PTZ 🛛 🕇	Region 5	
& User +	Region 6	
💮 System 🕂	Region 7	
	Region 8	
	Edit o Off Set Erase Apply	

ANT-3410 User Manual

<u>Sensor</u>

olbuA&oeblV	+	Sensor Type																				
🏚 Image	+		Se	nsor 1		off		N/C			N/C											
Network	+		Se	nsor 2		orr		N/C			N/C											
6 Event	-		Se	nsor 3		orr					N/C											
Notification			Se	nsor 4		off		N/C			N/C											
Motion Detectio	n																					
Sensor		Sensor Schedule																				
Alarm				Select	0	Sen	sor D	Isabl	•		Sens	sor E	nable	,								
Record	+		Se	nsor 1																		
Device	+			0 1	2	34	5	6 1	78	•	10.1	1 12	2 13	14 1	5 1	5 17	18	19.2	0 21	22	23	
🛓 PTZ	+		SUN				Ŭ										Ĩ					
& User	+		MON																\bot			
System	+		TUE WED																			
-			THU		++	+	+	+	+	\vdash	+	+	+	+	+	+		+	+	\vdash		
			FRI																			
			SAT																			
			Se	nsor 2																		
				0 1	2	3 4	5	6 1	78	9	10 1	1 13	2 13	14 1	5 1	5 17	18	19 2	0 21	22	23	
			SUN		\square	_	\square	+	+	\square	_	+	\square	\rightarrow	+	-		_	+	\square		
			MON TUE		$\left \right $		+	+	+	$\left \right $		+	$\left \right $	-	+				+	$\left \right $		
			WED		++	+	+	+	+	\square	+	+	+	+	+	+		-	+	\vdash		
			тни																			
			FRI		\square	_	+	_	+	\square	_	+	+	_	+	+		_	+	\square		
			SAT																			
			Se	nsor 3																		
			~	0 1	2	34	5	6 1	78	9	10 1	1 13	2 13	14 1	5 1	5 17	18	19 2	0 21	22	23	
			SUN MON		$\left \right $	+	+	+	+	$\left \right $		+	+	+	+	+			+	$\left \right $		
			TUE																T			
			WED		\square	_	\square	_	_	\square		_	\square		+				+			
			THU FRI		++	+	+	+	+	\vdash	_	+	+	+	+	+			+	$\left \right $		
			SAT		+		+	+		$\left \right $		+	+	+	+				+	\square		
			Se	nsor 4																		
				0 1	2	34	5	6 1	78	9	10 1	1 13	2 13	14 1	5 1	5 17	18	19.2	0 21	22	23	
			SUN	Ť.			Ŭ														200	
			MON																			
			TUE																			
			WED THU																+	\mathbb{H}		
			FRI																			
			SAT																			

- Sensor Type

There are two sensor input ports on ANT-3410. Each of the sensor ports can be configured to the followings;

Function	Operation
OFF	Not used
NO (Normally Open)	The port is normally open and activated when closed.
NC (Normally Closed)	The port is normally closed and activated when opened.

The function of the sensor port is set based on the type of the sensor connected.

- Sensor Schedule

Choose **Sensor OFF** or **Sensor On** and click the below schedule table to make a sensor schedule according to day of week and hours.

<u>Alarm</u>

					Live
	Video&Audio	+	Alarm		
	e Image	+	Beep Duration	Synchronous v	
2	Network	+	Alarm1 Duration	Synchronous v	
	Event	-	Alarm2 Duration	Synchronous v	
	Notification		Alarm3 Duration	Synchronous 🔻	
	Motion Detection		Alarm4 Duration	Synchronous v	Apply
	 Sensor 				
	• Alarm				
ß	Record	+			
	2 Device	+			
2	PTZ	+			
2	User	+			
0	System	+			

Set the duration of alarm activation in case of an event. If it is set to continuous, it will be in active until an operator reset it manually.

RecordGeneral

😼 Video&Audio	+ (General	
👷 Image	+	Use Record Off • On	
Network	+	Overwrite Off On	
🔹 Event	+	Max File Size 100M bytes v	
Record	-	Max File Length 10 Minutes V	Apply
General			
Schedule			
 Disk Informati 	ion		
Search Page			
Device	+		
📩 PTZ	+		
& User	+		

- Use record
 - > Off: Recording function will not be used when "OFF" is selected.
 - On : Use disk function will follow the setting of Schedule table which set as record off as a default.
 - ·
- Max File Size / Max File Length

Max File Size option is for limiting the size of AVI file. If small file size is set, files of small size will be generated but numbers of the files will be increased. Max File Length option is for limiting the time length of AVI file. If the size of a file becomes Max File Size or the duration of the recording reaches Max File Length, a new file is created.

Checking status of recording

Recording status can be checked on the main view page.



Schedule

		Live
Video&Audio +	Event Type	
🙀 Image 🔸	Event Type 1 🗸 Sensor1 Sensor2 Motion Video Loss	
Vetwork +	Event Type 2 Sensor1 🗸 Sensor2 Motion Video Loss	
Event +	Event Type 3 Sensor1 Sensor2 🗸 Motion Video Loss	
🕅 Record -	Event Type 4 Sensor1 Sensor2 Motion Video Loss	
General	Pre-event Time 5 sec 💌	
Schedule	Post-event Time 5 sec 💌	
Disk Information		
Search Page	Schedule Table	
🔜 Device 🔸	Select o Record Off Continuous Disconnect	
📥 PTZ 🛛 🔸	Event Type1 Event Type2 Event Type3 Event Ty	pe4
& User +		
🏠 System 🔸	Channel #1 Channel #2 Channel #3 Channel #4	
	Select Video Primary Video • 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 SUN Image: Supervision of the s	
	Apr	ply

- Event Type

Three recording modes are supported: Continuous, Event, Disconnect. In case of Event recording, event types can be selected among several events. Selected event type is used for configuring the schedule table. Up to 4 event types can be configured and each event type can be a combination of sensor, video loss and motion event.

Pre-event Time

Specify the duration of recording before an event happens.

Post-event Time

Specify the duration after the event is cleared.

- Schedule Table

Actual recording mode is determined by **Schedule Table**, where recording mode configured by day (of a week) and hour.

Each of recording modes configures the recording operation as follows:

Record Off

No Recording

Continuous

Records continuously

- Disconnect Recording is started when the system loses the connection to its last client(Decoder, VMS/NVR) etc. When there are multiple clients and one of the client is disconnected, this doesn't happen.
- Event Type

Records when an event configured in Event Type setting happens.

Disk Information

SD memory can be used, and at least 1GB size is recommended. Either EXT3 or FAT32 file system can be used. A disk with either EXT3 or FAT32 file system can be read in Linux PC. However, only disk with FAT32 file system can be read in Windows PC. Less than 4Mbps of video bit rate is recommended when you record and monitor video simultaneously since frame dropping may happen due to performance limitation.

		Live
😼 Video&Audio 🕂	Disk Information	
😭 Image 🛛 🕂	Disk Information USB Disk available - (FAT32)	
💱 Network 🔸	Disk Size 15.03 G	2%
Event +	Free Space 0.38 G	
Record -		
General		
Schedule		recorded
Disk Information		98%
Search Page		
🔜 Device 🔸		Auto Refresh Refresh
📥 PTZ 🛛 🛨		
& User +		
💮 System 🔸		

Be sure to restart the system after connecting an SD card. During booting, the system reads status of disk and initializes it. Once the initialization of a disk is finished, the status of disk is shown on **Record** page of web-based setup Refer to the chart for checking the status of disk.

40/58

Disk status⊷	Description₄ ³
Disk error detected⊷	Error
No disk ℯ᠈	Disk is not connected to the system.↔
Searching Disk information₄ [,]	Checking the status of disk. Refresh the page and wait until the status is changed.4 ²
Mounting and ℯ Recovering Diskℯ	Performing recovery process when disk damage is found. It takes from seconds to minutes for recovering.
Disk format needed 🏼 🖓	Disk is attached, but the type of the file system is
Unknown disk type detected 🤞	unknown or damaged.₄ ³
USB Disk available↩	Available to be used for recording.
Disk removed ↩ or in abnormal state↩	Disk is detached during operation or there is damage on the file system. If it happens while disk is connected, it is recommended to format the disk. 49

Search Page

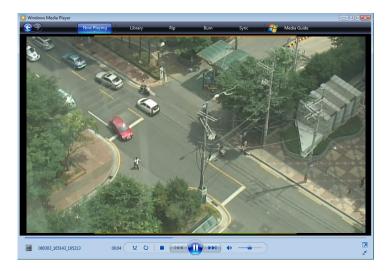
		live
Video&Audio +	Search Page	
📑 Image 🛛 +	2013_07_16 2013_07_09	2012_10_29
Network +	H (1) F H	
Event +		
Record -		
General		
Schedule		
Disk Information		
Search Page		
Device +		
📥 PTZ 🛛 🕂		
🐑 System 🔸		
🎎 User 🛛 🕂		

Recorded video and audio data can be saved as AVI format in the disk. In general, one AVI file is created for an event in case of event-based recording. However, it is possible that recorded data by serious of events happening continuously can be merged to a single AVI file depending on pre/post event time setting. The size of file is limited to $10 \sim 2$ GB. In case of continuous recording, AVI files are created in series and the size of each is limited to $10 \sim 2$ GB.

	_				
5 Video&Audio	+	Search Page			
📑 Image	+	Root >> 2013	_07_16		
Network	+		Delete		
Event	+			File Name	Size
Record	-			130716_065810_070019.avi	100.12M
General				130716_065603_065810.avi	100.60M
Schedule				II I (1) F F	
Disk Information					
Search Page					
Device	+				
📥 PTZ	+				
👸 System	+				
& User	+				

- Playback

- 1. Selecting an AVI file will show a dialog for opening or saving the file
- 2. Pressing **Save** button, the file will be stored in the PC. The AVI file can be played with Windows Media Player.



3. If you press **Open** in the dialog, the file will be downloaded and played automatically with Media Player.



4. Another connection through web is disabled during downloading and it is also not allowed to download two AVI files at the same time.

Device

Information

😼 Video&Audio	+	Device Information				
📑 Image	+		COM1	Tx=0 (bps)	Rx=0 (bps)	
Network	+		COM2	Tx=0 (bps)	Rx=0 (bps)	
Event	+					
Record	+					
🛄 Device	-					
Information						
 Serial 						
📥 PTZ	+					
& User	+					

The information provides current serial communication status

Live Image + Image + Network + Event + Record +	Serial		
Image Image </th <th></th> <th></th> <th>Live</th>			Live
Image: Network + Bitrate 9600 Image: Determinant of the second s	😼 Video&Audio 🛛 +	COM1 (RS-232 Port)	
Event + Data Bit 8	📑 Image 🛛 🕂	Protocol RS-232	
	Network +	Bitrate 9600 v bps	
Record + Parity None	Event +	Data Bit 8 Bits	
	Record +	Parity None	
Device - Stop Bit 1 Bits	Device -	Stop Bit 1 Bits	
Information	Information		
Serial COM2 (RS-422/485 Port)	Serial	COM2 (RS-422/485 Port)	
A PTZ + Protocol RS-485 V	📥 PTZ 🛛 🛨	Protocol RS-485	
Bitrate 2400 v bps	🎎 User 🛛 🕂	Bitrate 2400 v bps	
🔁 System + Data Bit 8 v Bits	💮 System 🔸	Data Bit 8 Bits	
Parity None V		Parity None	
Stop Bit 1 Bits		Stop Bit Bits	
485 Terminating Resisters Off •		485 Terminating Resisters Off	
Apply			Apply

- Serial Protocol : There are two serial ports, RS-232, RS-422/485 in ANT-3410. Select RS-422 or RS-485 in RS-422/485 port
- Serial Port Configuration: The serial ports can be configured as follows.

Each of the serial ports configurations must be same as the connecting device

Mode	Selection
Bitrate	2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
Data Bits	5, 6, 7, 8 bits
Parity	NONE, EVEN, ODD bit
Stop Bit	1, 2 bit

• PTZ General

😼 Video&Audio	+	PTZ			
🔹 Image	+				
Network	+	Channel #1	Channel #2 Channel #	3 Channel #4	
🐻 Event	+		PTZ Type Pelco-D	Ŧ	
Record	+		PTZ ID 1		
🔜 Device	+		PTZ Port COM2	Ŧ	
📥 PTZ	-				
General					Apply
Preset					

> PTZ Type

Select the type of PTZ camera or receiver.

> PTZ ID

Since it is possible to control multiple PTZ cameras or receivers over a single control line, each camera or receiver will be assigned with unique ID. Enter PTZ ID of a camera or receiver for control. The ID value range can be between 0 and 255.

> PTZ Port

Select the serial port for PTZ camera control.

Preset

😼 Video&Audio	+	Preset				
👔 Image	+	Vide	o Select Channel#1		v	
Network	+					
Crent	+					
Record	+			JUNC PROPERTY	SIL DIRECTOR LINES, LANS	
Device	+			DUTAL DUDAT USU KANDUNU TUDAK SHTUKU	2년부 파북일 제동문	
📩 PTZ	-	•		BETALIO NEI ORAEN TUDEK	192 808 248 268 276	
General				AVAID ATTAC NOTAHONG CLUDN DOUTAND CLUDN	492 4 10 6+10	
Preset		Zoom In Zoom Out Stop		NO-REAL PROPERTY	STA DERVIC DESTALIAN	
& User	+	Focus Near Focus Far Auto Focus		LAS MARKED COLOR MARTER NEON INC. MCR. 20070 SOLINO FROM 20070	유규도 위에서 서명한 서간부 김동아 영방규 부순도	
🇞 System	+			HREING REITHE ROOMER GRANN SAFRANCE	*문화 학원은 접근적 한민공 고양로 대학은 역학인 신상은 서동법 전화된 미원은 열등의 집은법 입사별	
				DELETING DEPARTMENT		
				WORKSON WARKER	080 890	
		Select Preset	Number Select Preset		Ŧ	
			Set	Go to	Erase	
		E	dit Label Select Preset	First		

Max 128 preset positions can be defined.

- Select Preset Number: Select an entry in the list to be assigned to current camera position.
- Focus Mode: Select the focus mode after preset Goto is executed.
- > Do not change: current focus mode is not changed.
- > Focus Auto: auto-focusing is executed after the preset moved.
- > Focus Manual: move to the focus position saved when preset set.
- Event Holding Time: Set the time to stay at the preset position when the preset moved by event.
 <u>If it is set to 0, the camera doesn't return to original position after moving to the preset</u> position by event.
- Edit Label: Assign a label to the preset position. Only the first 15 preset entries (Preset-1 ~ Preset-15) can have labels.

• User <u>User List</u>

😼 Video&Audio	+	User L	ist				
📑 Image	+			ID	Privilege Level		
Network	+			admin	Admin	۲	
Event	+						
Record	+		Add	Delete	Modify Password	Modify Privilege	
Device	+						
📩 PTZ	+						
👸 System	+						
😣 User	-						

User can be registered and privilege level of a user can be specified. User configuration is allowed only to admin user. Max 16 users can be registered and each user can have one of four privileges.

Privilege	Allowed Operations	Remarks
Admin	All operations	User ID = admin
Managar	All operations except for user	
Manager	configuration	
User	Live viewing and PTZ control	
Guest	Live viewing only	

Add User _

Press Add button. The following window will appear.

Add User		
ID		
Password		
Confirm Password		
Privilege Level Manager	Ŧ	
	Add	Cancel
Enter User ID and password (Up to 15 characters) an	d select Privilege Level.	
Delete User		
Select the User to be deleted and press Delete buttor	۱.	
Change Password		
		48/58

Press Modify Pass					
Modify Passwo	ord				
	ID	admin			
	Current Password				
	New Password				
	Confirm Password				
				Modify	Cance
				Moully	Cancer
Modify Privilege L Press Modify Privi Idmin user. Modify Privilege	lege button to cha	nge User leve	I. It is no	t allowed to cha	nge the privilege l
Press Modify Privi Idmin user.	lege button to char e Level	111		t allowed to cha	nge the privilege l
Press Modify Privi Idmin user.	lege button to char e Level		I. It is no	t allowed to cha	nge the privilege k
Press Modify Privi Idmin user.	lege button to char e Level	111		t allowed to cha	nge the privilege le
Press Modify Privi Idmin user.	lege button to char e Level	111			
Press Modify Privi Idmin user. Modify Privilege	lege button to chan e Level ID Privilege Level	111			
Press Modify Privi Idmin user. Modify Privilege	Login Policy	111 Manager	v		
A Policy	Login Policy	111 Manager Skip Login O Disab	▼ Ie ^③ Enable		Cancel
A Policy S Video&Audio	Level ID Privilege Level Login Policy Privilege Level After Lo	111 Manager Skip Login O Disab	v		
A Policy Video&Audio Video&Audio Network Event	Login Policy	111 Manager Skip Login O Disab	▼ Ie ^③ Enable		Cancel
Press Modify Privi admin user. Modify Privilege Policy Video&Audio Network Event Record	Lege button to chan E Level ID Privilege Level Privilege Level After Lo Privilege Level After Lo Authentication	111 Manager Skip Login O Disab	e Enable		Cancel
Press Modify Privi admin user. Modify Privilege Policy Video&Audio Network Record Record	Lege button to chan E Level ID Privilege Level Privilege Level After Lo Privilege Level After Lo Authentication	111 Manager Skip Login O Disab	e Enable		Cancel
Press Modify Privi admin user. Modify Privilege Video&Audio Video&Audio Network Event Record Device PTZ	Login Policy Privilege Level After Lo Authentication RTSP Au	111 Manager Skip Login O Disab	e Enable		Cancel

- Login Policy

Skip Login provides for convenient access to the server when authentication is not required. When Skip Login is set to **Enable**, login step is skipped. The privilege level after login in this way is

determined by the setting of Privilege Level After Login Skipped.

- Authentication

HTTP authentication based on RFC 2617(HTTP Authentication: Basic and Digest Access Authentication) is supported.

• System Information

			Liv
😼 Video&Audio	+	System Information	
📑 Image	+	Model	<u>410 (1003)</u>
Network	+	Version	<u>V3.507Q01_T100</u>
Event	+	MAC Address	00:1C:63:AA:04:58
Record	+	Current IP	<u>192.168.32.147</u>
Device	+	Current Domain	Not RegisteredB
📥 PTZ	+		
🍇 User	+		
🍖 System	-		
Information			
 Upgrade&Rebo 	ot		
• Time			
 Display Time 	&OSD		
 Language 			

- System information

Followed network information is displayed (Read only)

> Model

Display the model name.

Version

Display the current firmware version.

Mac Address

Display the MAC address of the camera. In case the camera is registered at DDNS server, the MAC address is used in DDNS registration.

> Set Current Time

Display Current date and time

Current Domain

In case the camera is registered at DDNS server, the registered domain name is displayed.

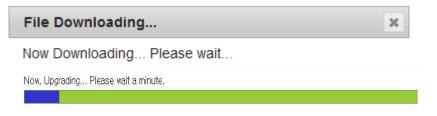
Maintenance

					Liv
😼 Video&Audio	+	Firmware			
📑 Image	+	Ve	ersion V3.507Q01_T100		
Network	+	Up	grade	찾마보기	Firmware Upgrad
Event	+				
Record	+	Config Backup&Restore			
Device	+	Ba	ackup		Config Backup
📥 PTZ	+	Re	estore	찾아보기	Config Restore
🍇 User	+				
🍖 System	-	Reboot			
Information					Reboot
Upgrade&Reboot					
• Time		Factory Reset			
 Display Time&0 	DSD				Factory Reset
 Language 				F	actory Reset Except Network Setting
mware					
rsion : Display	the cu	ırrent firmware versi	on		
grade: To upgra	ada fir	mwara.			

- 1. Press **Browse** button to select a firmware file from PC.

 - 2. Press **Firmware Upgrade** button to start upgrading.
 - 3. A message for showing status (downloading / upgrading) will be displayed.
 - 4. The camera will reboot automatically after completing upgrade.

Do not turn the camera off during upgrading.



- Config Backup & Retore
- Backup

 \geq

All the setting of configuration can be stored.

Restore

Stored configuration can be browsed and restored. The server is rebooted once Config Restore

button is pressed.

- Reboot
- Reboot the camera
 Do not press the Reboot button unless the server needs a reboot.
- Factory Reset
 All settings including user accounts and logs are cleared
- Factory Reset Except Network Settings
 All settings except for current network settings are changed to the default values.

<u>Time</u>

				live
5 Video&Audio	+	Time		
📑 Image	+	Start Time	2013/07/10 3:45:57	
Network	+		2013/07/10 11:07:58	
Event	+	Set time	2013/07/10	Set Current Time
Record	+	Time Format	YYYY/MM/DD hh:mm:ss v	
🛄 Device	+		(GMT+09:00) Seoul	
📥 PTZ	+		Automatically synchronize with NTP server	
🍖 System	-	NTP Server Name		Apply
Information				
Maintenance				
• Time				
System ID				
Language				
🍇 User	+			

Start Time

The latest the camera's booting date and time.

Current Time

Current date and time.

Enter a new date and time then press Set Current Time button to update date & time.

> Time Format

Change the time format. The selectable time formats are as below;

- I. YYYY/MM/DD hh:mm:ss (Eg. 2012/10.30 12:30:45)
- II. DD/MM/YYYY hh:mm:ss (Eg. 10/30/2012 12:30:45)
- III. MM/DD/YYYY hh:mm:ss (Eg. 30/10/2012 12:30:45)

Time Zone

Select time zone of where the camera is installed.

Depending on the time zone, Daylight Saving Time will work automatically

A **time zone** is a region of the earth that has uniform standard time, usually referred to as the **local time**. By convention, time zones compute their local time as an offset from UTC (Coordinated Universal Time). In casual use, GMT (Greenwich Mean Time) can be considered equivalent to UTC. Local time is UTC plus the current time zone offset for the considered location

> Automatically synchronized with NTP server

Synchronize the camera time with an NTP server using NTP (network time protocol). Name of the NTP server should be registered on NTP server Name.

The **Network Time Protocol** (**NTP**) is a protocol for synchronizing the clocks of computer systems over packet-switched, variable-latency data networks. It is designed particularly to resist the effects of variable latency by using a jitter buffer.

System ID

			Live
Video&Audio	+	System ID	
image	+	System ID TCS-410	
Network	+		
Event	+	Information Display	
Record	+	SystemID 💿 Off 🔿 On	
Device	+	Time 💿 Off 🛇 On	
📩 PTZ	+	Position 💿 Bottom 🔿 Top	
& User	+		
🍖 System	-	Burn-in OSD	
Information		Channel #1 Channel #2 Channel #3 Channel #4	
 Maintenance 			
• Time		SystemID On	
System ID		Time ⊙ Off ◯ On	
Language		Position 💿 Bottom 🛇 Top	
		Font Size 12x12	
		Apply	

System ID

Enter System ID that is used as a camera title.

The set System ID is displayed with video image on a Web Browser. The System ID is also transferred to remote software, such as VMS, and displayed on it.

Information Display

System ID and/or server time can be display over the video window in Internet Explorer. Each item can be turn on or off separately, and position also can be configured. This information is displayed

after the video is decompressed.

- BurnIn OSD

Insert system ID and date/time **in the compressed video**. System ID and time respectively can be turned on or off in the video. Position and Font size can be configured also. System ID for BurnIn OSD exists independently from normal System ID.

Note that size of Burnin OSD display varies according to the encoding resolution setting. This is inevitable because Burnin OSD is inserted to the frames before encoding is performed. The following table describes the rule for BurnIn OSD display.

Resolution.∉	Small (8x8)↩	Middle (16x16)₽	Large (32x32)₽
352x480 / 352x240 / 352x576 / 352x288+2	2⊷	1 ₽	0⊷
720x480 / 720x240 / 720x576 / 720x288 /«	2₽	20	1 e
640x480 / 800x600+3			
1024 x 768 / 1280x720 / 1280 x 960 / 1280x1024 / 1440x900 / 1600x900 / 1680x1050 / 1920x1056 / 1920x1080 / 2048x1536 / 2560x1600 / 2592x19364 ³	242	2₽	2₊⊃

- 2 : Both System ID and Time are displayed
- 1 : Either System ID or Time can be displayed. When both are enabled, System ID is displayed.
- 0 : No items are displayed. This is because video area is too small to display OSD text in large text.

- User defined OSD

You can enter any text you like independent.

X-Coordinate or Y-Coordinate

For example, if you enter 500, 500 values, OSD is placed in center of images.

<u>Language</u>

😼 Video&Audio	+	Language					
📑 Image	+		Language	English	Ŧ	Apply	
Vetwork	+			•		,	
Event	+						
Record	+						
🔜 Device	+						
📥 PTZ	+						
🍖 System	-						
 Information 							
Maintenance							
Time							
 System ID 							
Language							

- Language

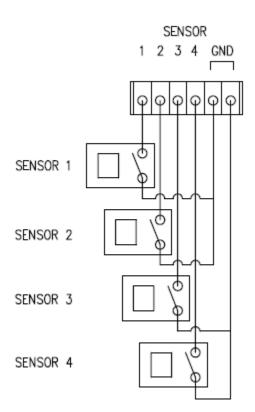
.

Select the language to be used for web-based configuration.

Appendix A : Sensor and Alarm Port

Sensor Port

- Terminal Type
- Voltage Rating: 150VAC
- Current Rating : 2A
- Color : Red
- Sensor Signal Input Type
- NO Contact Signals
- Connection to External Device



Alarm Port

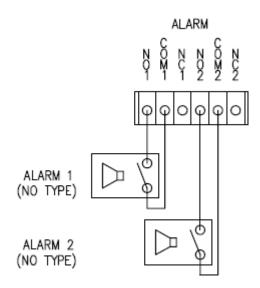
- Terminal Type
- Voltage Rating: 150VAC
- Current Rating : 2A

• Relay Type

- Contact Rating : 1A 30VDC
- Switching Power : Max 30W 62.5VA
- Switching Voltage : Max 60VDC

• Alarm Signal Output Type

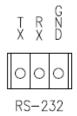
- NO/NC Contact Signals
- Connection to External Device



Appendix B : Serial Port

RS-232 Port

- Port Type
- 3 PIN
- Pin Arrangement



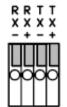
- Pin Description

Pin NO	Pin Name	Description
1	ТХ	RS232 TX(Transmit)
2	RX	RS232 RX(Receive)
3	GND	Ground

RS-422/485 Port

- Port Type
- 4 PIN
- Pin Diagram

RS-422/485 TERMINALS



- Pin Description

Pin No.	Pin Name	Description
1	RX-	RS422 RX-
2	RX+	RS422 RX+
3	TX-	RS422 TX- or RS485 TRX-
		It is selectable by S/W Setup
4	TX+	RS422 TX+ or RS485 TRX+
		It is selectable by S/W Setup