FW3470 User's Manual

(Product Guide)

Version 4.12

September 30, 2011

FlexWATCH®
(주)세연테크 Seyeon Tech Co., Ltd.

Class A Digital Device (industrial & commercial environment)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to CE and 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 instruction 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.

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About This Document

This document is prepared for users of FW3470 supplied by Seyeon Tech Co., Ltd. It is assumed that the users are familiar with Microsoft Windows operating systems and Web browsers such as Internet Explorer. It is also assumed that the users are well aware of how to install and use the network equipment such as LAN, Hub, router, and having basic knowledge of network terminologies. If you have any questions regarding network installations, please contact your network equipment vendor or network administrator or Internet service providers.

For updated contents, detailed features and other applications from Seyeon Tech, please refer to the user's manual in CD-ROM provided with the product you purchased, or visit Seyeon Tech's Internet homepage at http://www.flexwatch.com/.

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1. Product Overview

1.1. FW3470

FlexWATCH® 3470 is 1ch network video server which transmits digital images captured by Analog CCD camera over IP(Internet Protocol) network.

It can transmit up to 30fps@D1 over the existing network. You can monitor video of FW3470 through web browser(ie. MS Internet Explorer), if FW3470 is connected to network. FW3470 supports video compression both Motion-JPEG and H.264 simultaneously so that user can choose appropriate video compression for the purpose. For both Motion-JPEG and H.264, FW1174 provides 6 levels of video quality.

FW3470 server is state-of-the art device and leads new generation of monitoring and security solution.

Picture 1 : FW3470

1.2. Key Features

- Standalone device with a built-in web server
- 10M/100M/1000M Auto-Sensing Ethernet
- Configuring and controlling through Web browser
- Max 30 fps transmission rate at D1 resolution in NTSC format on TCP/IP network
- Effective Bandwidth & Bit-rate Control (VBR/CBR) by H.264
- Supports Dual Streaming in Motion JPEG and H.264
- Compressed audio transmission for each channels
- Audio decoding for one channel
- Support Dynamic IP network by IPCCTVDNS Server
- Support various PTZ (Pan/Tilt/Zoom) devices
- Provide Sensor Input and Digital Output
- Provide Transparent Mode
- Encryption on user authentication level
- Image transmission via FTP and Email
- Provide 4-Channel analog quad outputs

1.3. Technical Specification

Hardware	32bit Embedded CPU Flash 8Mbytes /SDRAM: 128Mbytes Linux version 2.6.24.4 operating system Battery backed up real-time clock
Video compression	Motion JPEG H.264
Resolution	NTSC: 704x480,704x240,352x240,176x112 PAL: 704x576,704x288,352x288,176x144
Frame rate (each channel)	Motion JPEG: Up to 120 fps@D1 H.264: Up to 120 fps@D1
Video Streaming	Motion JPEG and H.264 Dual Streaming (Simultaneously) Controllable frame rate and bandwidth
Image setting	Compression levels: 6 (MJPEG/H.264) Color: color, black & white
Transmission	Performance(1000Base-T / LAN) Trans: Up to 120fps(NTSC)/100fps (PAL) when 4channels at D1
Voice	4bit G.723, Sampling rates 8KHz Mono Audio 4ch in & 1ch out
LAN interface	10/100/1000BaseT Ethernet auto sensing
Alarm I/O Interface	4x1 Photo-coupled inputs and 4 Relay output
Video Input	4 Channel Composite Video Input
Quad Output	1 Channel Quad Composite Video Output
Serial Interface	COM Port: RS-232 AUX Port: RS-485/RS-422 COM ports for console, serial input/output device and AUX ports for PTZ or other RS485/422 device Max Baudrate: 115200 bit/s
Security features	Multi user level protection for camera access, PTZ, Alarm I/O
Advanced Service	Up to 5.6M memory for Pre/Post alarm buffer e-mail, FTP, IP notification, Alarm Notification to e-mail, CGI Call by event or schedule
Built-in Motion detections	Accuracy: 12x12=144 blocks Motion Sensitivity : -100 ~ 100 : 100 is hypersensitive
PTZ & UART Control Support	PTZ and UART device control through serial port (RS-232/RS-485) (Support protocols from Pelco "P"& "D"protocol, Vicon V1311RB, Samsung PTZ, Honeywell PTZ and X10 Epson Printer)
Others	Time stamp on Video Transmit External data(ex. POS) transfer with Video IP notification by e-mail
Management	Configurable by serial, web or telnet Remote system update via telnet, FTP OR web browser.

Developer support	Provides HTTP CGI API ActiveX control development kit
PWR Supply	SMPS Input: 100~240VAC, 1.5A Output: DC 12 Volt, 3 A, SMPS
PWR Consumption	DC 12Volt Max or Peak: 0.8 A Normal : 0.7 A
Operating Environment	Temperature : 32°~ 122℉ (0°~ 50℃) Humidity : 20 ~ 80% RH(non-condensing)
Miscellaneous	Freely downloadable NDVR Software Work with FW-Manager(NDVR S/W) Dynamic IP support through IPCCTVDNS
Users	128 simultaneous users
Installation, management and maintenance	Installation CD and web-based configuration Configuration backup and restore Firmware upgrades over HTTP or FTP , firmware available at www.flexwatch.com
Video access from Web browser	Video access from Web browser
Minimum Web browsing requirements	Pentium 4, 2 GHz, 2GB(RAM) or higher Video Card: 256MB RAM, 1024x768 resolution or higher 100Mbps Network Adaptor or faster Windows XP Pro or later Internet Explorer 6.x or later
System integration support	Powerful API for software integration available at http://www.flexwatch.com, including Simple Viewer API, FlexWATCH Control SDK, event trigger data in video stream, embedded scripting and access to serial port peripherals over HTTP/TCP User can be installed user program daemon for event notification or sending image. Embedded operating system: Linux 2.6
Supported protocols	HTTP, RTP/RTSP, TCP/IP, FTP, Telnet, RARP, PPPoE, PAP, CHAP, DHCP, SMTP client(e- mail), NTP
Applications (not included)	FlexWATCH Manager 16/32/128/256
Included Accessories	Power supply 12 V DC / Power cord Terminal Blocks CD (User's Manual, installation wizard and etc)
Not included Accessories	19"Rack Mount Bracket
Approvals	MIC FCC CE RoHS
Dimensions (HxWxD) and weight	240(W) x 224(D) x 44(H) (in mm) About 1.62kg without power supply.

Table 1 : FW3470 Data Sheet

1.4. FW3470 Packing List

FW3470 Network Video Server	1 EA	
Power Supply (Power Cable & SMPS DC12V 3A Adapter)	1 EA	
Terminal Block	7pin 2 EA 8pin 1 EA	
Users Manual and CD	1 EA	

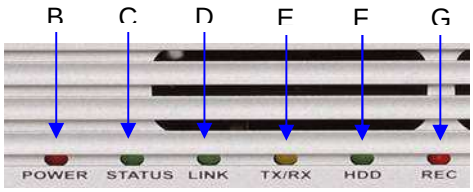
Table 2 : FW3470 Packing List

Note: Please make sure all the listed items are included in the package. For any missing items, please contact your local distributor.

2. Product Description

2.1. FW3470 Front View

Picture 2 : FW3470 Front View



Picture 3 : Enlarged Front LED

	Name	Description
A	Power On/Off Switch	This switch is used to turn FW3470 On or Off. **Note: Never turn off during formatting the HDD because it may cause a severe damage to it.**
B	POWER LED	This red LED is lit during FW3470 is powered on.
C	STATUS LED	Shows the operating status of FW3470. It goes green when it enters into normal operation after powered on and booting process.
D	LAN LINK LED	Indicates the connection status of LAN connector. It goes green when a physical connection is properly made to the LAN port.
E	LAN(Tx/Rx) LED	Blinks green when there is any data activity on the LAN port.
F	HDD LED	Not supported for FW3470.
G	RECORDING LED	Not supported for FW3470.
H	USB port	USB port (reserved for future use)
I	Factory Default Switch	Restore the factory default setting for FW3470. Keep pressing this button for 5 seconds after a system boot up.

Table 3 : FW3470 Front Panel

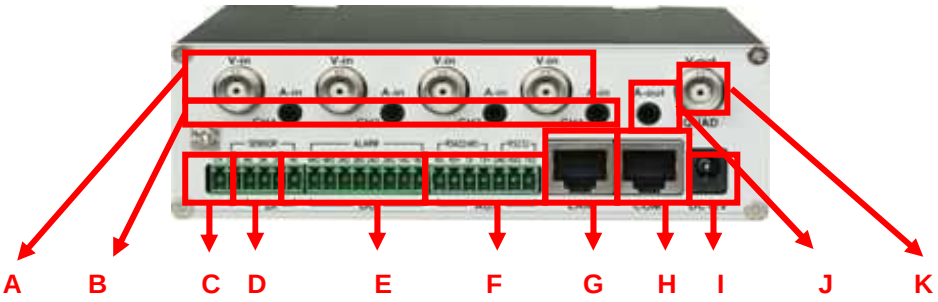
Beep Sound Description

	Name	Description
1	Power ON	One short beep if boot-up is started normally.
2	System Ready	Two short beeps if boot-up is finished normally.

Table 4 : FW3470 Beep Sound

2.2. FW3470 Rear View

Picture 4 : FW3470 Rear View

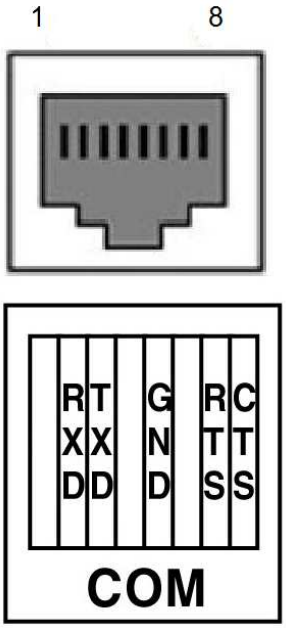


	이름	설명
A	Video In 1	BNC connector for Camera 1
	Video In 2	BNC connector for Camera 2
	Video In 3	BNC connector for Camera 3
	Video In 4	BNC connector for Camera 4
B	Audio In 1	3.5mm Audio Jack for Audio-In 1
	Audio In 2	3.5mm Audio Jack for Audio-In 2
	Audio In 3	3.5mm Audio Jack for Audio-In 3
	Audio In 4	3.5mm Audio Jack for Audio-In 4
C	12V output	12V power supply for external device (not over 0.5A)
D	DI	Sensor/Contact Input Port
E	DO	Beacon/Alarm Output Port
F	AUX	Auxiliary port for Modem or other devices (PTZ, UART-Out, Audio, UART-In)
G	LAN	RJ-45 Network Connector
H	COM	Control port for setup or other devices (PTZ, UART-Out, Audio, UART-In)
I	Power	DC 12V 3A
J	Audio Out	Speaker jack to receive audio in 2-way audio communication.
K	Video Quad Out	Video output port for quad-view on the screen.

Table 5 : FW3470 Rear Panel

2.2.1. COM Port Description

The picture below shows how to wire the COM port connector pins when configuring the FW3470 with console. Each signal should be wired to the correct pin as shown in the picture. It is a common practice to use only RXD, TXD, and GND signals for RS-232 functionality. If FW3470 needs to be connected a computer through RS-232, then RXD and TXD pin may need to be cross-wired.



Picture 5 : COM Port Description

3. FW3470 Installation and Basic Setup

3.1. Before Installation

- Read carefully User's Manual.
- Check User's Network (IP Address, Network Mask and default gateway)
- Secure IP address for FW3470.

3.2. Factory Default Settings

The following table shows the factory default condition. Please refer to this when you need to change the values on admin menu.

	Factory Default
Admin ID	root
Admin password	root
IP address	10.20.30.40
Network mask	255.255.255.0
Gateway	10.20.30.1

Table 5 : Factory Default

Note: Factory default Admin ID and Password are all lower case letters. You can change the password with Capital letters.

3.3. Installing FW3470

For installation of FW3470, please follow the steps below.

1. Place the CCTV cameras in place and connect power supplies.
2. Connect the video output ports of analog CCTV cameras to the video-in ports of FW3470.
3. Connect the FW3470 to the Internet cable through the LAN port.
4. Connect the power supply of FW3470.

After that, you need to follow the steps below.

- Network Configuration: Refer to "IP Installer User's Manual"
- Camera Configuration: Refer to "FlexWATCH Admin Menu User's Manual"
- Service Configuration: Refer to "FlexWATCH Admin Menu User's Manual"