FW1170 User's Manual

(Product Guide)

Version 4.12(Rev.E)

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.

FW1170 User's Manual

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About This Document

This document is prepared for users of FW1170 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. FW1170

FlexWATCH® 1170 is a stand-alone device transmitting vdeo from built-in megapixel camera over IP(Internet Protocol) network. There is one type of FW1170 model: VO.

It can transmit up to 30fps@VGA over the existing network. You can monitor video of FW1170 through web browser(ie. MS Internet Explorer), if FW1170 is connected to network. FW1170 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, FW1170 provides 6 levels of video quality. FW1170 also supports both ONVIF and PSIA.

Built-in SD card slot is available as an option. Exteriror PIR Sensor can be attached instead of Wireless USB.

Picture 1 : FW1170

1.2. Key Features

- Standalone device with a built-in web server
- 10M/100M Auto-Sensing Ethernet
- Configuring and controlling through Web browser
- Max 30 fps transmission speed on TCP/IP network
- Effective Bandwidth & Bit-rate Control (VBR/CBR) by H.264
- Supports Dual Streaming in Motion JPEG and H.264
- Support Dynamic IP network by IPCCTVDNS Server
- Support various PTZ (Pan/Tilt/Zoom) devices
- Support Sensor Input and Digital Output
- Support Transparent Mode
- Encryption function by user authentication
- Image transmission function via FTP and Email
- Built-in SD card slot
- Support both ONVIF/PSIA

1.3. Technical Specification

	FW1170-VO
Hardware	32bit Embedded CPU NAND Flash 128Mbytes/DDR2: 128Mbytes Linux version 2.6.xx operating system Battery backed up real-time clock
Image sensor	1/4" optical format CMOS Sensitivity : 1500 mV/lux.sec MAX Active pixel resolution: 652x488 [Detail] S/N ratio: 46dB White Balance: AWB
Lens	4.3mm F.2.0 lens
Minimum illumination	Color: 0.5 Lux (F2.0), B/W: 0.01 Lux(F2.0)
Video related special functions	Backlight (OFF/LOW/MIDDLE/HIGH) AGC (OFF/LOW/MIDDLE/HIGH) Lens (MANUAL/DC) Shutter (ESC/MANUAL/FlickerLess) White Balance (ATW/AWC/MANUAL) DNR
Video compression	Motion JPEG H.264
Resolution	VGA(640x480), CIF(320x240), QCIF(160x112)
Frame rate (each channel)	Motion JPEG : Up to 30/25 fps @VGA (Secondary Stream at QCIF) H.264 : Up to 30/25 fps @VGA (Primary Stream at QCIF)
Video Streaming	Motion JPEG and H.264 Dual Streaming (Simultaneously) Controllable frame rate and bandwidth
Video Standards	ONVIF PSIA
Image setting	Compression levels : 6 (Motion-JPEG, H.264) Color : color, black & white
LAN interface	10/100BaseT Ethernet auto sensing IEEE 802.3af Built-in POE (optional)
Alarm I/O Interface	1 Photo-coupled input and 1 Relay output
Audio Input(MIC)	Built-in MIC
Audio Output(SPK)	Output Impedence : 16 Ohm Output Power : 62 mWatt Jack : 2.6mm Mono
Power Over Ethernet	Exterior PoE
Security features	Multi user level protection for camera access
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 interface Up to 35 PTZ protocols from Pelco "P"& "D" protocol, Vicon V1311RB, Samsung, Honeywell and Etc,.X10 device control
Others	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, AC 50/60Hz, 300mA Output : DC 12 Volt, 1A
PWR Consumption	DC 12Volt Max 300 mA
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 Server
Simultaneous users	Live-cast for up to 16 clients
Installation, management and maintenance	Installation CD and web-based configuration 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 CD (User's Manual, installation wizard and etc)
Approvals	KCC FCC : Class A CE : Class A RoHS
Dimensions (HxWxD) and weight (1lbs = 454g)	64(W) x 113(D) x 47(H) (in mm) About 0.160kg without lens and power supply

** All specifications are subject to change without prior notice.*

Table 1 : FW1170 Data Sheet

1.4. FW1170 Packing List

FW1170-VO	1ea	
Power Supply Unit (Power Cable & SMPS DC12V 1A Adapter)	1ea	
CD (User's Manual, installation wizard and etc)	1ea	

Table 2 : FW1170 Packing List

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

2. Hardware Description

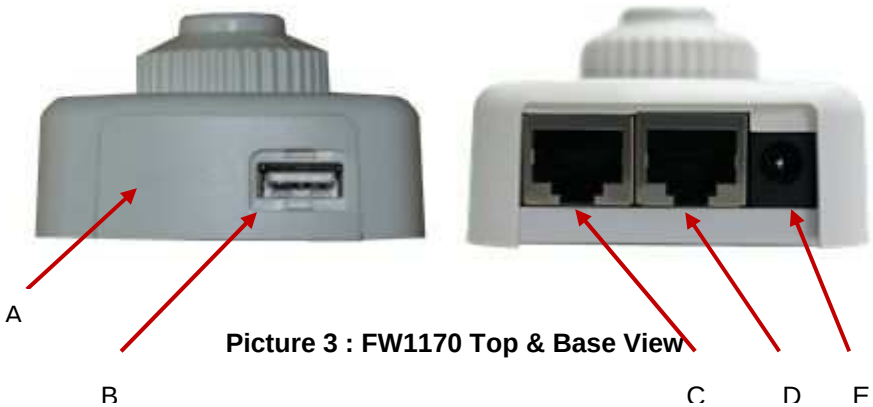
2.1. Front View

Picture 2 : Front View

	Name	Description
A	MIC	MIC for audio communication
B	Power LED (Red/Green)	RED LED - POWER(turned on with power) GREEN LED – STATUS (turned on in case of IP setup completed, setup for uPnP. Refer to uPnP Manual) UPNP Setup 1) blinks every sec(of f & on in 1 sec)--> communicatable with gate with IP set up 2) blinks every 1/4 sec (off & on in 1/4 sec) --> Internet is available (DNS setup needed) 3) blinks every 1/16 sec (off & on in 1/16 sec) --> Port mapping completed (access from the outside is available) 4) continuous On --> test of access from IPCCTVDNS server to FW is completed (IPCCTVDNS server setup completed, access test is available only when IP is enable.) (If IPCCTVDNS setup is Disable, LED is continuously On)
C	LAN(Tx/Rx) LED	RED LED – LAN TX/RX(turned off when transmitting data) GREEN LED – LAN LINK(when LAN cables are linked)
D	Lens	Lens for board mount
E	Lens Guide	Helps to focus easily
F	SPK Jack	Audio Input Port (2.6pi)

Table 3 : FW1170 Front View

2.1. Top & Base view



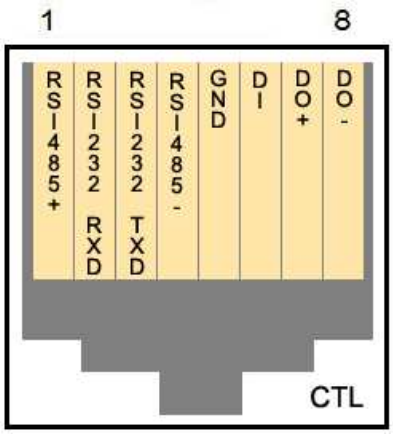
Picture 3 : FW1170 Top & Base View

	Name	Description
A	Upper Cap	Can be removed for use of PIR Sensor (optional)
B	USB	USB Port for Wireless Connection
C	CTL Conn.	CTL Port
D	LAN	LAN Connector
E	Power Conn.	Power Connector

Table 4 : FW1170 Top & Base View

2.1.1. CTL Port Description

It's RS-232 port for Serial input device, Modem or Console (Hyperterminal.connection). For RS-232 connection, RXD,TXD and GND are used. For connection to PC, RXD and TXD are used. RXD and TXD should be cross to communicate properly



Picture 4 : CTL Port Description

3. FW1170 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 FW1170.

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 FW1170

Following steps are the physical installation process for FW1170.

1. Fix the FW1170 in place
2. Connect the FW1170 to the Internet cable through the LAN port.
3. Connect the power supply of FW1170.

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"