

FW1161SE User's Manual

Part 1

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1. Product Overview

1.1. FlexWATCH®

FlexWATCH® is a device which digitizes analog Video from CCD Camera as digital stream and transmits over Internet.

Users can monitor Video at any places in real time by MS Internet Explorer or Netscape Communicator without any additional software, if Internet access is possible.

1.2. FW-1161SE

FlexWATCH® 1161SE is a stand-alone device transmitting Video from built-in PTZ Analog Camera over IP(Internet Protocol) Network.

It can transmit up to 30fps(NTSC@CIF) over the existing network such as LAN, leased line, DSL and Cable modem. You can monitor Video of FW-1161SE through either web browser(MS IE or Netscape Communicator), if FW-1161SE is connected to Network. FW-1161SE supports Video compression both Motion-JPEG and MPEG4 simultaneously so that user can choose appropriate Video compression for the purpose.

FW-1161SE supports NTSC/PAL and 4 different size and 6 levels of Video quality.



Picture 1 : FW-1161SE

1.3. Key Functions of FW-1161SE

- Standalone device built-in web server
- 10M/100M Auto Sensing Ethernet
- Configure and control device through Web browser
- Max 30 fps transmission speed on TCP/IP network
- Effective Bandwidth & Bit-rate Control (VBR/CBR) by MPEG4
- Supports Dual Stream (Motion JPEG & MPEG-4)
- 1ch Voice Encoding / 1ch Voice Decoding
- Support Dynamic IP users by AOIP server
- Support PTZ(Pan/Tilt/Zoom)
- Support Sensor Input, Digital Output
- Support Transparent Mode
- Encryption function by user authentication
- Support Modem (Dial-in, Dial-out)
- Image transmission function via FTP, Email

1.4. Technical Specification of FW-1161SE

| | |
|---------------------------------|---|
| Hardware | Flash 8Mbytes /SDRAM: 32Mbytes Linux version 2.4.xx operating system Battery backed up real-time clock 32 Bit Embedded CPU |
| Image sensor | 1/4" Sony 410K Super HAD CCD Resolution: 540 TV Lines [Detail] S/N ratio: 50dB or more (AGC OFF) Electronic shutter speed : 1/60 ~ 1/100,000 sec (NTSC) 1/50 ~ 1/100,000 sec (PAL) White Balance: ATW (indoor: 3,000K~6,500K / outdoor: 1,800K~10,500K),AWC,MWB |
| Lens | IRIS control: Auto & Manual F1.4-30, f=3.3 mm wide to 115.5 mm tele Angle of view: 2.3~62.0 horizontal Shutter speed: Auto or 1/120~1/60,000 sec |
| Minimum illumination | Color: 0.4 Lux (F1.6) B*W: 0.1 Lux (F1.6) DSS(Digital Slow Shutter) : 0.0007 Lux (F1.6) |
| Video related special functions | DIS (Digital Image Stabilizer) - protection from variation AGC (Auto Gain Control) DSS (Digital Slow Shutter) BLC (Back Light Compensation) ICR (Day & Night) SSNR (Noise Reduction at Low Light) |
| Video compression | Motion JPEG MPEG-4 |
| Resolution | NTSC: 704x480,704x240,352x240,176x112 PAL: 704x576,704x288,352x288,176x144 |
| Frame rate (each channel) | Motion JPEG: Up to 30/25 fps @4CIF (Secondary Stream at QCIF) MPEG-4: Up to 30/25 fps @4CIF (Secondary Stream at QCIF) |
| Video Streaming | Motion JPEG and MPEG-4 Dual Streaming (Simultaneously) Control able frame rate and bandwidth |
| Image setting | Compression levels: 6 (Motion JPEG) / 6 (MPEG-4) Color: color, black & white |
| Zoom | 35x optical zoom, 10x digital zoom Smart Zoom (Speed control by zoom ratio) |
| PAN/Tilt | Max Speed: Pan 360°/sec, Tilt 200°/sec@preset mode Rotation Angle: Pan 360°(endless), Tilt: 92° (auto flip) 32 Preset Positions Swing, Group, 16 privacy zone |
| Voice | 4 bit ADPCM, Sampling rates 8KHz, Mono Audio 1ch in & 1ch out Bandwidth: 2KByte/sec (per channel) Min/Max Audio Freq.: 300Hz ~ 3.4KHz |
| LAN interface | 10/100BaseT Ethernet auto sensing |
| Alarm I/O Interface | 1 Photo-coupled inputs and 1 Relay output |

| | |
|--|---|
| Audio Input(MIC) | Input Impedence : 4 KOhm Pantom Power : 5 Volt Gain : 20 dB Jack : 3.5mm Mono |
| Audio Output(SPK) | Output Impedence : 160 Ohm Output Power : 50 mWatt Output Voltage : Peek To Peek 1 Volte Jack : 3.5mm Stereo |
| Power Over Ethernet | Option |
| Serial Interface | Two serial ports for console, modem(PSTN & GSM), serial input/output device, PTZ COM Port is RS-232, AUX port connected to Built-In PTZ Max Baudrate: 115200 bit/s |
| Security features | Multi user level protection for camera access, PTZ, Alarm I/O |
| Advanced Service | Up to 2.2M memory for Pre/Post alarm buffer e-mail, FTP, alarm Buffer by event or schedule IP notification, Alarm Notification to e-mail, CGI Cal by event or schedule |
| Built-in Motion detections | Accuracy: 12x12=144 blocks Motion Sensitivity : -100 ~ 100 : 100 is hypersensitive |
| PTZ & UART Control Support | Built-in PTZ device is controled through AUX UART control X10 device Dial in/out via PSTN or GSM modem |
| Others | Transmit Serial input data 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 | Transformer input: 100~240VAC, 1A Output: AC 24 Volt, 1.5A |
| PWR Consumption | AC 24Volt 1.0 A |
| Operating Environment | Temperature : 32° ~ 122°F (0° ~ 50°C) Humidity : 20 ~ 80% RH(non-condensing) |
| Miscellaneous | Freely downloadable NDVR Software Work with FW-Manager(NDVR S/W) Dynamic IP support through AOIP |
| Simultaneous users | Live-cast for up to 32 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 III CPU 500 MHz or higher Windows XP, 2000, NT4.0*, 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 instal ed user program daemon for event notification or sending image. Embedded operating system: Linux 2.4 |
| Supported protocols | HTTP, TCP/IP, FTP, Telnet, RARP, PPP, PAP, CHAP, DHCP, SMTP client(e- mail), NTP |

| | |
|---|--|
| Applications (not included) | FlexWATCH Manager 16/32/128/256 |
| Included Accessories | Power supply 24 V AC / Power cord Mounting brackets Connector kit Installation Guide (Hard copy) CD (Installation wizard, user's manual, quick instal guide & software), |
| Approvals | MIC FCC : Class A CE : Class A IP66 RoHS |
| Dimensions (HxWxD) and weight (1lbs = 454g) | Size : 216.8mm(Diameter) X 289.2mm(Height) 8.53" (Diameter) X 11.38" (Height) Weight : 5.5 Kg (12.1lbs) without power supply. |

Table 1 : FW-1161SE Specification

1.5. Packing List

FW-1161SE's packing box includes the following items







| | | |
|--|-----|---|
| FW-1161SE | 1ea |  |
| Power Supply Unit (Power Cable & SMPS DC12V 3.0A Adapter) | 1ea |  |
| RS-232 Serial Cable (Cross cable, DB9 Female) | 1ea |  |
| Direct LAN Cable | 1ea |  |
| CD (User's Manual, installation wizard and Pictures) | 1ea | |

Table 2 : FW-1161SE Packing List

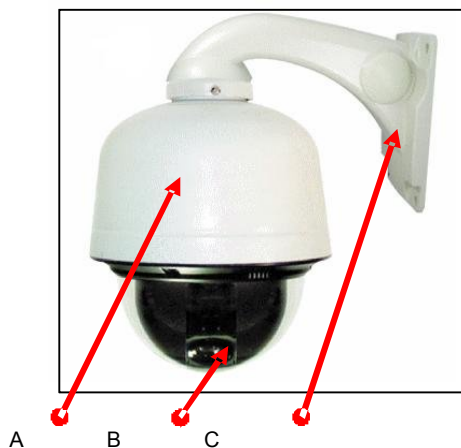


Please check all the listed items are included in your package. For any missing items, please contact your local distributor.

2. Hardware Description

2.1. FW-1161SE

Picture 2 FW-1161SE with Wall Mount Bracket



| | Name | Description |
|---|------------|--------------------------------------|
| A | PTZ Camera | Camera supporting PTZ(Pan/Tilt/Zoom) |
| B | BODY Frame | Body Frame for Camera |
| C | Bracket | Wal Mount Bracket |

3. FW-1161SE HW 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 FW-1161SE

3.2. Factory Default Condition

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

| | Factory Default Condition |
|-----------------------|---------------------------|
| Admin ID | root |
| Admin password | root |
| IP address | 10.20.30.40 |
| Network mask | 255.255.255.0 |
| Gateway | 10.20.30.1 |
| Wireless LAN (Option) | Disabled |

Table 3 : Factory Default Condition

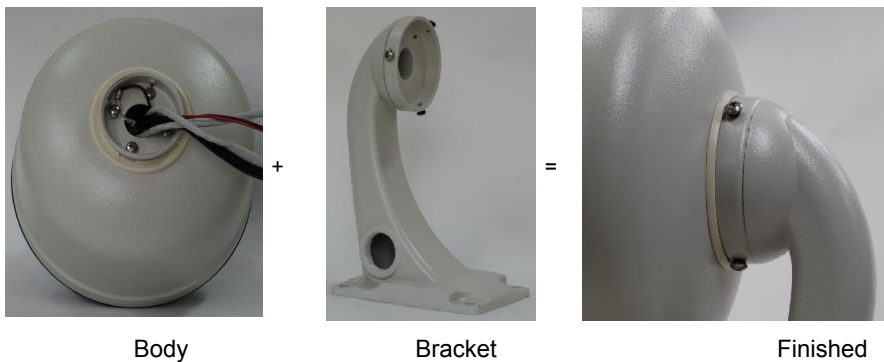


Factory default Admin ID and Password are all lower case letters. You can change the password with Capital letters.

3.3. Hardware installation

Following steps are the physical installation process for FW-1161SE.

1. Attach Body of FW-1161SE to bracket



2. Connect all cables to the Camera.



3. Connect power cable to FW-1161SE.



After that, you need to follow the steps below.

- First, Network Configuration by FW-installer.
- Second, Camera Configuration by FW-installer or admin-menu.
- Third, Service Configuration by FW-installer or admin-menu.

You can configure most settings on Admin menu by Web Browser so you have to configure Network first.