IP Cube Camera
ACM-4001

Ver. 090730

Hardware User's Manual

ACTi

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0 PRECAUTIONS

1. **Read these instructions**
   All the safety and operating instructions should be read before the product is operated.
2. **Heed all warnings**
   All warnings on the product and in the instruction manual should be adhered to.

The symbol indicates the following items, please carefully read the description next to each symbol.

a. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.
b. The requirements to make this device work, including hardware, computer settings, network settings, and operation procedures.
c. The tips to make using this device easier, more convenient and more efficient.

3. **Servicing**
   Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Trademarks

All names used in this manual for hardware and software are probably registered trademarks of respective companies.

Liability

Every care has been taken during writing this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

FCC/CE Regulation

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses,

and can radiate radio frequency energy and, if not installed and used in accordance with the 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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1 INTRODUCTION

1.1 Package Contents

ACM-4001

Power Adaptor (Option)

Product CD

Camera Stand

Warranty Card

Accessory

1.2 Features and Benefits

This IP device is a cutting-edge digital video transmission device. It can compress and transmit real time images with outstanding images quality (VGA, 640x480) at reasonable bandwidth through a standard TCP/IP network. That is because it is Ethernet ready and has the powerful ARM9 SoC with excellent system performance to offer dual streams of MPEG4/MJPEG, and both formats offer megapixel resolution. In addition, with these powerful hardware platform, excellent SDK support and powerful respective apparatuses (e.g. the transcoder), this IP device is your best choice building up either conventional IP surveillance system or intelligent IP surveillance system.

MPEG-4/MJPEG Dual Streaming

With excellent system performance, MPEG-4/MJPEG are supported. It brings superior image quality 30 frame per second in VGA resolution.

Automatic Frame Rate Control

This IP device supports automatic/manual streaming frame rate control, especially for multiple clients' concurrent access the same video stream in different network bandwidth.

Digital Time Code Embedded

The "Digital Time Code Embedded" function is to embed the recording time in the MPEG bit stream. Therefore, each image frame has its respective time when it was recorded. It is very useful when users want to find the video at an exact time or between a certain time intervals.

DDNS Supported

This IP device supports DDNS (Dynamic Domain Name Server), users can set this IP device at a virtual domain name (such as cam1.Taipei.xxx) at dynamic IP. Everyone can use the virtual domain name to view the video anywhere that has the access to the internet.

Build-in Hardware Motion Detection

No more external motion sensors are required. Each IP device can be set up to 3 detection areas. By tuning the object size and sensitivity, it is very reliable to fit into your environment. Besides, hardware motion detection delivers better sensitivity and responds faster than software motion detection.

Bundle Powerful Surveillance Software

To extend the capabilities of the IP outdoor rugged dome series, a powerful surveillance program is included in the package and is very free to use. Users can easily utilize the existing PC to be a digital video recorder. Schedule recording and manual recording keep every important image recorded in the local hard disk. Reliable and accurate motion detection with instant warning makes you responsive in every condition. Quick and simple search and playback function lets you easily find the images you want.

Software Development Kit Support

This IP device can be integrated or controlled by user's application program through the Streaming Library or ActiveX control. With its high level programming interface, software developer's time and efforts to is highly reduced.

1.3 Safety Instructions

Don’t use the power supply with other voltages

This device is likely to be damaged or damage other equipments / personnel, if you use a power supply with different voltage than the one included with this device. All warranty of this product will be voided in the situations above.

Don’t open the housing of the product

Cleaning

Disconnect this video product from the power supply before cleaning.

Attachments

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

Water and Moisture

Do not use this video product near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool and the like.

Don’t use accessories not recommended by the manufacturer

- **Only install this device and the power supply in a dry place protected from weather**
- **Servicing**

Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring service

Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

1. When the power-supply cord or plug is damaged.
2. If liquid has been spilled, or objects have fallen into the video product.
3. If the video product has been exposed to rain or water directly.
4. If the video product does not operate normally by following the

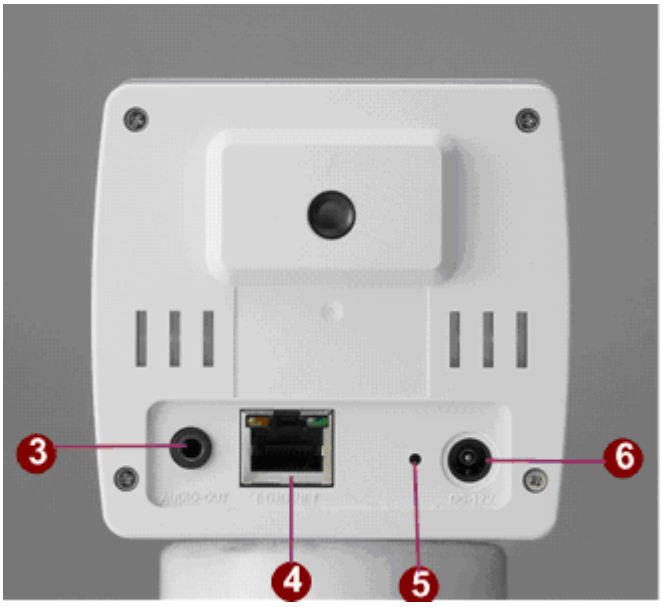
operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual as an improper adjustment . Other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.

Safety Check

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

1.4 Physical Description

1. **<u>Action LED Indicator</u>**
   The LED will light up after IP camera has successfully completed the boot process
2. **<u>Microphone Input</u>**
   Sensitivity: -36dB ± 3dB(0dB=1V/Pa at 1KHz)
   S/N Ratio: More than 58dB
   Directivity: Omni directional



3. **Audio Output**

   The IP device supports audio output with earphone jack

4. **Ethernet Port**

   The IP device connects to the Ethernet via a standard RJ45 connector. Supporting NWAY, this IP device can auto detect the speed of local network segment (10Base-T/100Base-TX Ethernet).

5. **Reset Button**

   Step 1: Switch off IP device by disconnecting the power cable

   Step 2: Press and continue to hold the Reset Button. Reconnect the power cable while continuing to hold the reset button.

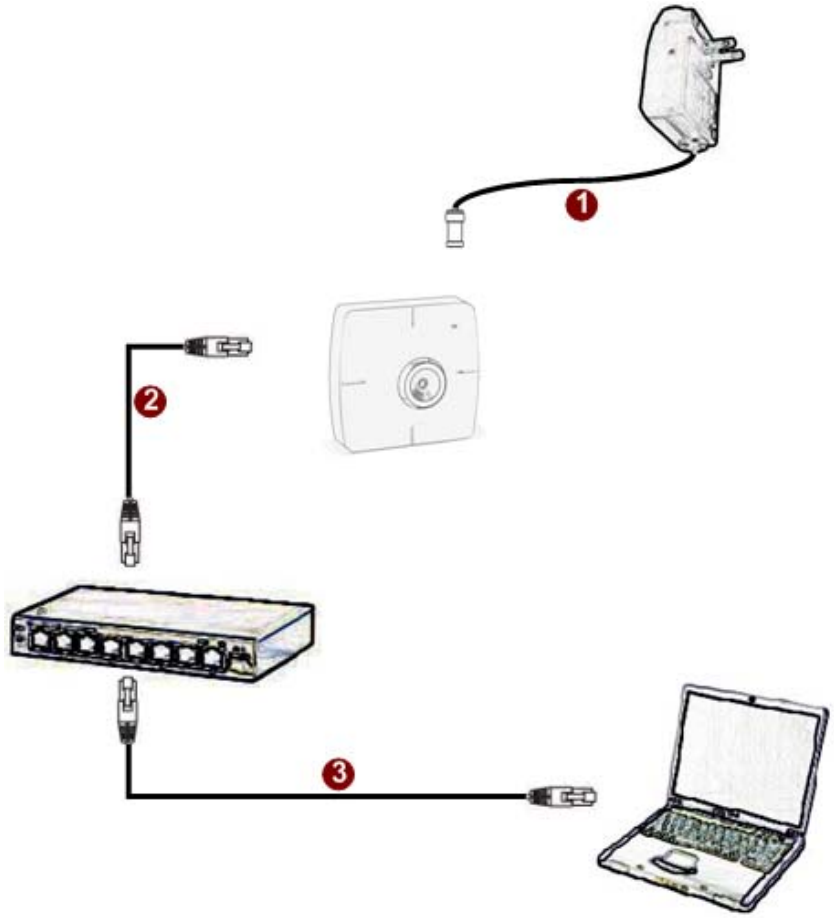
   Step 3: Keep holding the reset button depressed around 6 seconds, then release the reset button. The unit will start up with factory default settings.

6. **Power Input**

   If your power input is DC12V. Please use power supply of input DC 12v only.

1.5 Basic Connections

Follow the procedures below to connect the IP device to the respective apparatuses.



1. Connect the power adaptor to IP device

2. Connect IP device's ethernet port to an Ethernet (RJ45 connectors). If your IP device has PoE built-in, you can regard it as a PD and connect it directly to a PSE device like PoE switch.

3. Connect a PC to the Ethernet hub (RJ45 connectors)

NOTE: You may find a support package for help you getting familiar with PoE. Please visit our web site, and get the support document TS-00040.

1.6 Product Specification

		ACM-4001
Image	Device	Micron Progressive Scan CMOS
	Size	1/3 inch
	Pixels - Effective	640 x 480
Min. scene Illumination	Color	0.5 Lux at F1.0 (2400°K, 30 IRE)
Lens	Lens	f4.2mm / F1.8
	Viewing Angle	75° (Horizontal)
Synchronization	Sync. System	Internal
Functions	Motion Detection	Yes (3 Windows)
	Electronic shutter	1/5 ~ 1/2,000 sec. (60Hz) 1/5 ~ 1/2,000 sec. (50Hz)
	Flickerless	1/120 sec. (60Hz) 1/100 sec. (50Hz)
	BLC	Yes
	AGC	Automatic (User defined)
	White Balance	6 Modes (AUTO,INDOOR1,INDOOR2,OUTDOOR1,OUTDOOR2, HOLD CURRENT,MANUAL) configurable
S/N Ratio	S/N Ratio	Better than 44 dB
Video Compression	Compression	MPEG-4 SP / MJPEG
	Picture Resolution	VGA (640 x 480) QVGA(320 x 240) QQVGA(160 x 112)
	Image Frame Rate	VGA at 30 fps QVGA at 30 fps QQVGA at 30 fps
Audio Input	Compression	8kHz, Mono, PCM
	Built-in Microphone	Sensitivity: -36±3dB(0dB=1V/Pa); S/N Ratio: more than 58dB; Directivity: Omni-directional
Audio Output	Compression	8kHz, Mono, PCM
	Audio Line Output	Unbalanced, 1.4Vp-p, 1Vrms, 3.5mm Phone Jack
External I/O	Reset Button	Factory Default
	LED	System Status
Network	Ethernet	Ethernet(10/100 Base-T), RJ45 Connector
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP,FTP,SMTP,DNS,DDNS,NTP,ICMP,IGMP,ARP,3GPP
Software	Web Browser	Microsoft Internet Explorer 6.0 or above
	SDK	ACTi SDK-10000
	Security	Password Protection: Configured by the administrator
Operating	Temperature	0℃~40℃ (32℉ ~ 104℉)
Power	Power Requirement	PoE (IEEE 802.3af) with Class 3
	Power Consumption	2.88 W (DC 12V), 3.00 W (PoE)
Physical	Dimensions (WxHxD)	88 mm x 85 mm x 39 mm (3.46" x 3.35" x 1.54")
	Weight	150g (0.33 lb) (w/o bracket)