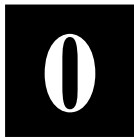# 16-channel MPEG-4 1U Video Encoder

ACD-2400

User's Manual

Ver.080331

www.acti.com

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.

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Trademarks

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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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ACD-2400

Warranty Card

Product CD

Terminal Blocks

Power Cord

Bracket

1.2   Features and Benefits

The 16-channel MPEG-4 1U Video Encoder is a cutting-edge digital video transmission device. It can compress and transmit 16 channels of real time images with outstanding images quality (D1, 720x480) at reasonable bandwidth through a standard TCP/IP network. This 16-channel MPEG-4 1U Video Encoder also provide two-way audio streams along with each video channel. That's because it is Ethernet ready and has the powerful ARM9 SoC and the MPEG-4 compression ASIC inside. In addition, with these powerful hardware platform, excellent SDK support and powerful respective apparatuses (eg. the transcoder), this 16-channel MPEG-4 1U Video Encoder is your best choice building up either conventional IP surveillance system or intelligent IP surveillance system.

Real-time MPEG-4 Compression

With hardware MPEG-4 compression chip inside, the composite video inputs can be efficiently compressed into MPEG-4 bit stream without any delay. The ASIC base compression engine can support not only CIF, but also FULL D1 image resolution.

Automatic Frame Rate Control

The 16-channel MPEG-4 1U Video Encoder 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 is recorded. It is very useful when users want to find the video at an exact time or between a certain time intervals.

Built-in Low Latency PPPoE Supported

The Ethernet port is equipped with a low latency PPPoE (Point-to-Point over Ethernet) which has excellent transmission speed and enables the 16-channel MPEG-4 1U Video Encoder to connect to an ADSL or a cable modem.

DDNS Supported

The 16-channel MPEG-4 1U Video Encoder supports DDNS (Dynamic Domain Name Server), users can set the 16-channel MPEG-4 1U Video Encoder 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 16-channel MPEG-4 1U Video Encoder 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 16-channel MPEG-4 1U Video Encoder, a powerful surveillance program is included in the package and is totally 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

The 16-channel MPEG-4 1U Video Encoder 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 items instructed in the operation manual as they are proper adjustment. Other adjustment 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. **Channel Number**

2. **Action LED Indicator**
   The LED will light up after this video channel has successfully completed the boot process.

3. **LAN LED Indicator**
   The LEDs indicating when this video channel is transmitting data.

4. **Serial Port LED Indicator**
   LEDs indicating when serial port is active.

5. **Video Input**
   Each channel supports one analog video input of composite signal with BNC connector

6. **Reset Button**
   Step 1: Switch off 16-channel MPEG-4 1U Video Encoder by disconnecting the power cable
   Step 2: Using a suitable pointed object, press and continue to hold the Reset Button depressed. While continuing to hold the reset button depressed, reconnect the power cable.
   Step 3: Keep holding the reset button depressed around 6 seconds, release the reset button. The unit will start up with factory default settings.

7. **ETHERNET Port**
   The 16-channel MPEG-4 1U Video Encoder connects to the Ethernet via a standard RJ45 connector. Supporting NWAY, this 16-channel MPEG-4 1U Video Encoder can auto detect the speed of local network segment (10Base-T/100Base-TX Ethernet). The Ethernet port is for FTTH and can connect to a xDSL or cable modem.
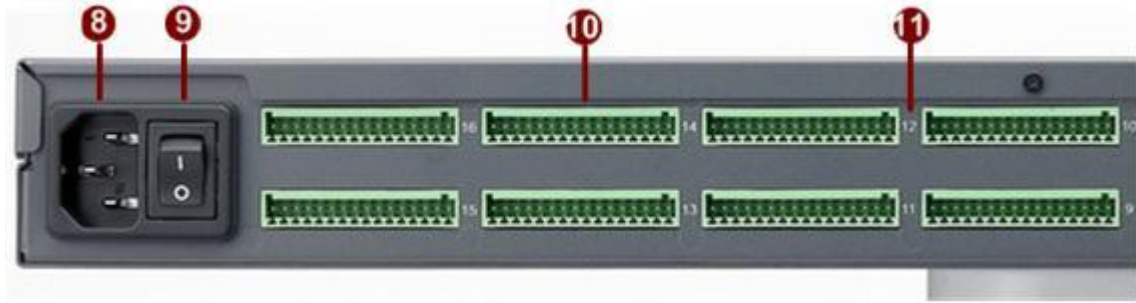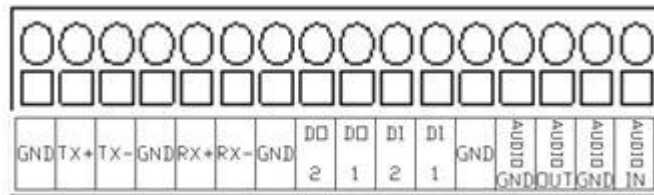
8. **AC Power Input**

    100-240V AC 50/60Hz Power Input.

9. **Power Switch**

    16-channel MPEG-4 1U Video Encoder power switch.

10. **Terminal Blocks**

    The 16-channel MPEG-4 1U Video Encoder supports two alarm
    input and two alarm output. DI: Logic Level 0: 0~0.4V; Logic
    Level 1: 3.3~30V   DO: Logic Level 0: 0.1~0.6V; Logic
    Level1: 2.4~5V

PIN	NAME	DESCRIPTION		
		RS-485	RS-422	RS-232*
1	GND	Ground Pin		
2	Tx+	D+	Tx+	Tx
3	Tx-	D-	Tx-	
4	GND	Ground Pin		
5	Rx+		Rx+	Rx
6	Rx-		Rx-	
7	GND	Ground Pin		
8	DO2	Digital Output 2		
9	DO1	Digital Output 1		
10	DI2	Digital Input 2		
11	DI1	Digital Input 1		
12	GND	Ground Pin		
13	AUDIO GND	Audio Ground Pin		

14	AUDIO OUT	Audio Output
15	AUDIO GND	Audio Ground Pin
14	AUDIO IN	Audio Input

* RS-232 mode requires user to set the jumpers inside the 16-channel MPEG-4 1U Video Encoder.
Bcause opening the 16-channel MPEG-4 1U Video Encoder will void the warranty, please contact your distributor for how to switch to RS-232 mode.

11. **Channel Number**