

# IN-E1004 Encoder Hardware Manual

2014/06/03

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# **Precautions**

### **Read these instructions**

You should read all the safety and operating instructions before using this product.

#### Heed all warnings

You must adhere to all the warnings on the product and in the instruction manual. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.

### Servicing

Do not attempt to service this video device 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 are probably registered trademarks of respective companies.

### Liability

Every reasonable care has been taken during the writing of 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.

## IN-E1004 Hardware Manual

#### **Federal Communications Commission Statement**



This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential

installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Warning:** Changes or modifications to the equipment that are not expressly approved by the responsible party for compliance could void the user's authority to operate the equipment.

#### **European Community Compliance Statement**

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to European Standard EN 55022 and EN 55024. In a domestic environment, this product may cause radio interference in which cause the user may be required to take adequate measures.

# **Safety Instructions**

## 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.

## Do not use accessories not recommended by the manufacturer

Only install this device in a dry place protected from weather

## Servicing

Do not attempt to service this video product yourself. 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 inner parts of video product have been directly exposed to rain or water.
- 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 of 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 if the video product is in proper operating condition.

# Introduction

# The List of Models

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This hardware manual contains the following model:

IN-E1004	4	4-Channel 960H/D1 H.264 Video Encoder
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# Package Contents

Video Encoder	Screw Pack	Power Terminal Block
		12V GND
Audio Terminal Block	Serial Communication Terminal Block	Digital Input/Output Terminal Block
AIN4 AIN3 AIN2 AIN1 GND AOUT GND	NA/RX- NA/RX+ GND D-/TX- D+/TX+	DIO4 DIO3 DIO2 DIO1 GND 12V
Quick Installation Guide	Warranty Card	
	<section-header>          Series and and and and and and and and and and and</section-header>	

NOTE: The above pictures are for reference only; actual items may slightly vary.

# **Physical Description**

IN-E1004



	ltem	Description
1	Power LED	Lights up when the device is powered on.
2	Serial Port	Lights up when a serial device is connected to the
	Activity LED	encoder.
3	Digital Input /	Connects to digital input or output devices, such as an
	Output	alarm trigger, panic button, etc. Digital Input (DI) and
	Connector	Digital Output (DO) devices are used in applications
		like motion detection, event triggering, alarm
		notifications, etc. See How to Connect DI/DO Device
		on page 17 for information on how to connect DI/DO
		devices to the encoder.
4	Audio Input /	Connects to audio input and output devices, such as a
	Output	microphone with built-in amplifier, speaker, etc. See
	Connector	Connecting Audio Devices (Optional) on page 20
		for more information.
		<b>NOTE:</b> The microphone must have a built-in amplifier.
		Connecting an ordinary microphone will dwarf sounds
		and will result in inaudible recording.

5	Serial Port	Connects to the serial port of an analog encoder for
	Connector	RS-485 / RS-422 communication to control encoder
		functions like pan-tilt, zoom, etc. See Connecting
		a Serial Device (Optional) on page 21 for more
		information.
6	Reset Button	Used to restore the factory default settings, including
		the administrator's password. Using a pointed object,
		such as a pen, press and hold the Reset button for 5
		seconds or until the Power LED lights up.
7	DC 12 V Power	In case the encoder is connected to a non-PoE
	Connector	(Power over Ethernet) switch, use this connector to
		connect the encoder to an external power adaptor.
		See Connecting a Power Adapter (Optional) on
		page 14 for more information.
8	Ethernet Port	Connects to the network using a standard Ethernet
		cable.
9	Memory Card	Insert a memory card (not included) into the slot for
	Slot	local recording purposes. See How to Install /
		Remove the Memory Card on page 23 for more
		information.
		<b>NOTE:</b> Supports only microSDHC and microSDXC
		cards.
10	Video In	Connects an analog camera through BNC connection.
	Connectors (1~4)	The numbers indicate the camera channel number.
		See Connecting the Analog Camera on page 13 for
		more information.
		NOTE: Video cable with BNC connector not included
		in the package.

# Mounting the Device

The encoder can be directly mounted on a flat surface, such as walls.

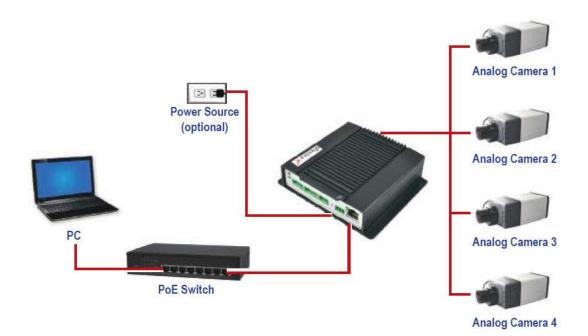
Attach the four (4) supplied screws to secure the device.



# **Connection Architecture**

The diagrams below show examples of the basic connection within a local network.

# **Connecting IN-E1004**



# **Making Connections**

This section describes the procedures in connecting analog cameras and a video output device and preparing the external devices that you can connect to the encoder. The encoder supports DC12V power input, Digital Input and Output (DI/DO), Audio Input and Output devices, as well as Serial Port Communication via RS-485 / RS-422 protocol using the bundled terminal blocks. The use of these devices, however, is optional.

# **Connecting the Analog Camera**

Connect an analog camera to the **Video In** port of the encoder using a video cable with BNC connectors.





# **Connecting a Power Adapter (Optional)**

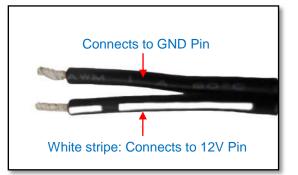
In case of using a non-PoE switch or your PoE switch has limited power supply, you can purchase a power adapter and directly connect the encoder to a power outlet. The power adapter must be connected to the supplied terminal block before use.

To do this, follow the procedures below:

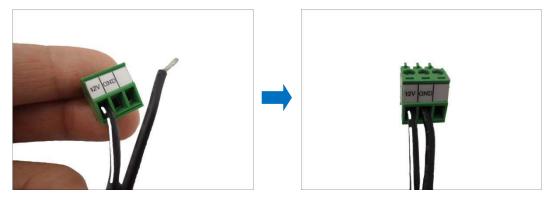
1. Loosen the screws of the 12V and GND pins of the power terminal block.



2. Take note that a standard power adapter cable has two (2) different wires:



3. Connect the wire with the white stripe to the **12V** pin and the other to the **GND** pin.



4. Tighten the screws of the 12V pin and the GND pins to secure the wire connection.



5. Set the prepared power adapter for connection later. Below is an example of a power adapter with an attached terminal block.



**NOTE:** The power adapter is not bundled in the package.

# **Connecting the Digital Input/Output Devices (Optional)**

Depending on your surveillance needs, you may connect digital input / output devices to your encoder.

Digital Input (DI) devices can be used to notify the encoder about an activity in the camera or the encoder site. DI can be triggers of events. For example, you can connect a "panic button" to the encoder; as such when the panic button is pressed, the alarm signal will be sent through the encoder. Other common DI device applications are emergency button, smoke detector, passive infrared sensor, etc.

Digital Output (DO) devices are external devices that are activated by the encoder upon an event within the encoder (e.g. memory card removed, etc.) or triggered by motion in the camera site among others. For example, you can connect an "alarm horn" to the encoder; as such when an event occurs on the camera side (e.g. detected intruder), the alarm horn will sound. Other common DO device applications are motion-triggered lights, electric fence, magnetic door locks, etc.

## How to Connect DI/DO Device

The digital input and output pins of IN-E1004 are configurable; meaning, either a digital input or digital output device can be connected to a particular DIO pin. Once connected, the pin must be defined through the Web Configurator (see the Encoder Firmware Manual for more information).

- 1. Configure the DIO ports in Web Configurator (see the Encoder Firmware Manual for more information).
- 2. Press and hold the orange tab as you insert the wire through the pin slot, then release the orange tab to secure the wire.

-	DIO4	-
	DIO3	
	DIO2	
	DIO1	
	GND	100
	12V	

3. To connect digital input / output devices (DI/DO), map the pins to one of the pin combinations below:

Device	Pin Label	Mapping Instructions
	DIO (port number)	Connect the wires of the output
Digital Output (DO)	12V	device to a <b>DIO</b> and <b>12V</b> .
	DIO (port number)	Connect the wires of the input device
Digital Input (DI)	GND	to <b>DI</b> and <b>GND</b> .

**NOTE:** For every digital output device, a wire must also be mapped to the **12V** pin. Same with for every digital input device, a wire must also be mapped to the **GND** pin. The **GND** and **12V** pins may be mapped with more than one device.

4. Connect the terminal block to the DIO connector of the encoder.

## **DI/DO Connection Specifications**

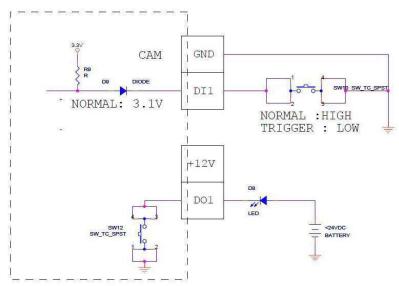
Device			
Connection design		TTL - compatible logic levels	
		To trigger (low)	Logic level 0: 0V ~ 0.4V
DI Voltage	Normal (high)	Logic level 1: 3.1V ~ 30V	
	Current		10mA ~ 100mA
	Connection design		Transistor (Open Collector)
DO Voltage & Curr		rent	< 24V DC, < 50mA

The table below shows the DI/DO connection specifications:

## **Typical Connection**

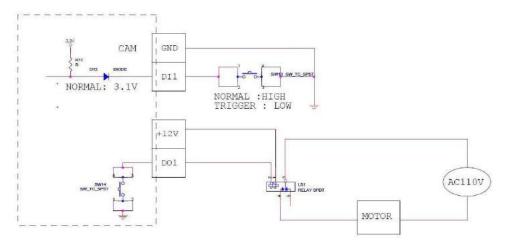
Based on these specifications, if the DI device has a voltage of  $0V \sim 30V$  or the DO device has a voltage of < 24V (< 50mA), then the encoder can supply internal power to these devices and there is no need to connect the DI/DO device to an external power source.

Use the **GND** and **DI** pins to connect a DI device and use the **DIO** and **12V** pins to connect a DO device. See wiring scheme below:



## **High Voltage DO Device Connection**

Even though the encoder provides 12V power, this may not be enough for some high voltage DO devices, such as a ceiling light or a motor that opens or closes a gate. In this case, there is a need to connect an external relay. See wiring scheme below:



Note that when choosing an appropriate relay, please refer to its specifications and make sure they match the above design. The triggering circuit voltage has to be around 12V DC and the switch-controlled circuit voltage has to match the external power supply (e.g. 110V AC or 220V AC).



The illustration below is a graphic example of connecting a relay to a high voltage DO device.

# **Connecting Audio Devices (Optional)**

Audio input / output devices, such as an active microphone or speaker can be connected to the encoder using the supplied terminal block.

Press and hold the orange tab as you insert the wire through the pin slot, then release the orange tab to secure the wire.



**Terminal Block** 

To connect audio devices, map the pins to one of the pin combinations below:

Device	Pin Label	Mapping Instructions
	AOUT	Connect the wires of the audio output device to
Audio Output GND		AOUT and GND.
	AIN	Connect the wires of the audio input device to <b>AIN</b>
Audio Input	GND	and <b>GND</b> . The number after <b>AIN</b> is the camera channel corresponding the audio input device (e.g. <b>AIN1</b> ).

## NOTE:

• The GND pin may be mapped with more than one audio device.

# **Connecting a Serial Device (Optional)**

The encoder can be connected to a camera with Pan-Tilt (PT) functions or a PT Scanner (Pan-Tilt Head) using the serial port connector. This allows the encoder to do pan and tilt using protocols, such as Pelco-D, etc. Most PT devices accept protocol commands via RS-485 or RS-422 connection, which are both supported by the encoder.

Check the connection available on the PT device and connect it to the encoder following the procedures below.

1. Map the wires from the PT device to the encoder using the supplied terminal block according to one of the tables below.



## Via RS-485 Connection

Pin Label	Encoder Pin	PT Device Pin
RX-		-
RX+		-
GND	GRO	UND PIN
TX- / D-	TX -	DATA -
TX+ / D+	TX +	DATA +

#### Via RS-422 Connection

Pin Label	Encoder Pin	PT Device Pin
Rx-	RX -	ТХ -
RX+	RX +	TX +
GND	GRO	UND PIN
TX -	ТХ -	RX -
TX +	TX +	RX +

**NOTE:** The pins of the PT Scanner may be labeled differently depending on the location or country where the scanner is purchased. For example, some devices may have RS-485 **DATA+** pins labeled as "TX+", "RX+", "A" or "485+", etc. Refer to the scanner documentation or contact the manufacturer to verify the corresponding pin labels and ensure proper wiring connection.

**CAUTION:** Incorrect wiring may cause damage to the connected devices.

**DISCLAIMER:** Inaxsys will not be responsible for any damage caused by improper

wiring.

2. Connect a ground wire to the **GND** terminal pin to complete the connection.

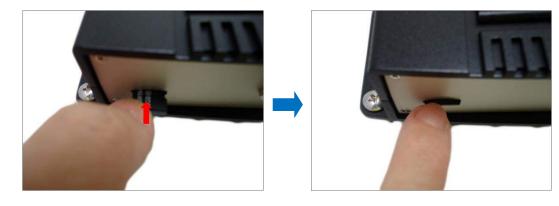
# **Other Accessories**

# How to Install / Remove the Memory Card

The encoder supports local video recording or saving of snapshots to a memory card. **NOTE:** Supports microSDHC and microSDXC cards.

## How to Insert the Memory Card

Insert a memory card into the card slot with the metallic contacts facing down the encoder. Push the card until it clicks into place.



## How to Remove the Memory Card

In case there is a need to remove the card, make sure to access the encoder Web Configurator to safely "unmount" the card first (see the encoder Firmware manual for more information). Once unmounted from the firmware, push the card to eject it from the slot.

# Accessing the Encoder

## **Configure the IP Addresses**

In order to be able to communicate with the encoder from your PC, both the encoder and the PC have to be within the same network segment. In most cases, it means that they both should have very similar IP addresses, where only the last number of the IP address is different from each other. There are 2 different approaches to IP Address management in Local Area Networks – by DHCP Server or Manually.

### Using DHCP server to assign IP addresses:

If you have connected the computer and the encoder into the network that has a DHCP server running, then you do not need to configure the IP addresses at all – both the encoder and the PC would request a unique IP address from DHCP server automatically. In such case, the encoder will immediately be ready for the access from the PC. The user, however, might not know the IP address of the encoder yet. It is necessary to know the IP address of the encoder in other to be able to access it by using a Web browser.

The quickest way to discover the encoders in the network is to use the simplest network search, built in the Windows system – just by pressing the "Network" icon, all the encoders of the local area network will be discovered by Windows thanks to the UPnP function support of our encoders.

\_ 🗆 🗙 📬 🕨 Network 🕨 👻 🍫 Search Netv 2 Organize 🔻 Search Active Directory Network and Sharing Center Add a printer Add a wireless device ? ▷ 🚖 Favorites V21----YYY-X-nnnnn TCM6630-12C-X-00037 Libraries TCM1111-12C-X-00039 TCD2500-09K-X-00290 Computer TCD2100-10D-X-00043 KCM7911-12H-X-00466 **G** Network KCM5311-11L-E-00010 KCM5211-12B-E-00112 58 items

In the example below, we successfully the encoder model that we had just connected to the network.

## IN-E1004 Hardware Manual

Double-click the mouse button on the encoder model, the default browser of the PC is automatically launched and the IP address of the target encoder is already filled in the address bar of the browser.

If you work with our encoders regularly, then **there is even a better way to discover the encoders in the network** – by using **IP Utility**. The IP Utility is a light software tool that can not only discover the encoders, but also list lots of valuable information, such as IP and MAC addresses, serial numbers, firmware versions, etc, and allows quick configuration of multiple devices at the same time.

The IP Utility can be downloaded for free from www.inaxsys.com

172:16:26:13         E92-A-XX-13D-00321         00:0F:7C:0A:A1:0F         A1D-500-V6:06:16-AC         Megapixel IP Dome         228:5.6.1           172:16:26:141         E94-A-XX-13L-0054         00:0F:7C:0B:AE:80         A1D-500-V6:07:07-AC         Megapixel IP Dome         228:5.6.1           172:16:26:153         E97-A-XX-13L-0054         00:0F:7C:0B:AE:80         A1D-500-V6:05:23-AC         Megapixel IP Dome         228:5.6.1           172:16:26:95         ACD2000-09C-X-00043         00:0F:7C:02:98:5D         A4Q-220-V3:05:01-AC         Quad Server         224:16:17.1           192:168:0.200         ACD3100-08C-X-00063         00:0F:7C:01:2E:D4         B1D-220-V3:03:07-AC         Video Decoder         228:5.6.1					.26.63 / 255.255.255.0	<ul> <li>Basic Search</li> </ul>		
PAddress         Senial No.         MAC Address         FW Version         Model         Multicast IP           1         172.16.26.12         E51-A-XX-12J-00073         00:0F7:C:09:52:0E         A1D-500-V66.06.16-AC         Megapixel IP Dome         228:26:226:226         2           1         172.16.26.16         E72-A-XX-13D-00166         00:0F7:C:0A:33:A         A1D-500-V66.06.16-AC         Megapixel IP Dome         228:26:226:226:226           1         172.16.26.16         E82-A-XX-13D-00166         00:0F7:C:0A:3D:1F         A1D-500-V6:06:16-AC         Megapixel IP Dome         228:5.6.1           1         172.16.26.16         E82-A-XX-13D-00154         00:0F7:C:0A:3D:1F         A1D-500-V6:06:16-AC         Megapixel IP Dome         228:5.6.1           1         172.16.26.14         E94-A-XX-13D-00321         00:0F7:C:0A:3D:1F         A1D-500-V6:06:16-AC         Megapixel IP Dome         228:5.6.1           1         172:16.26.141         E94-A-XX-13D-00321         00:0F7:C:0A:3D:40:0         A1D-500-V6:0D:7AC         Megapixel IP Dome         228:5.6.1           1         172:16.26.153         E97-A-XX-13D:0054         00:0F7:C:0C:03:9A         A1D-500-V6:0D:23-AC         Megapixel IP Dome         228:5.6.1           1         172:16.26.153         E97-A-XX-13D:0054         00:0F7:C:0C:03:9A         A1D-500-V6:0D:23-AC		Refresh	Device Settings	Change Network Address	Firmware Upgrade	Config. Backup Con	fig. Restore Reset	Save&Reboot
172.16.26.2         E51-A-XX-12L-00073         00:0F:7C:09:52:0E         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.151         E72-A-XX-13D-00166         00:0F:7C:09:52:0E         A1D-500-V6.07.06-AC         Megapixel IP Dome         226.26.226.226           172.16.26.151         E72-A-XX-13D-00166         00:0F:7C:0A:A3:3A         A1D-500-V6.06.16-AC         Megapixel IP Dome         226.26.226.226           172.16.26.152         E91-A-XX-13D-00164         00:0F:7C:0A:3E:B8         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.152         E91-A-XX-13D-00321         00:0F:7C:0A:3E:B8         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.153         E92-A-XX-13D-00321         00:0F:7C:0A:A1:0F         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.153         E92-A-XX-13D-00324         00:0F:7C:0B:AE:80         A1D-500-V6.07.7-AC         Megapixel IP Dome         228.5.6.1           172.16.26.153         E92-A-XX-13K-00147         00:0F:7C:0B:9A         A1D-500-V6.07.7-AC         Megapixel IP Dome         228.5.6.1           172.16.26.155         ACD2000-09C-X-00043         00:0F:7C:02:98.5D         A40-220-V3.05.01-AC         Quad Server         224.16.17.1           192.168.0200         ACD3100-08C-X	6	Account	admin Password	•••••				
172.16.26.151         ET2-A-XX-13D-00166         00:0F:7C:0A:A3:3A         A1D-500-V6 07.06-AC         Megapixel P Dome         226.226.226.226           172.16.26.151         E52-A-XX-13D-00166         00:0F:7C:0A:A5:3A         A1D-500-V6 06.16-AC         Megapixel P Dome         228.5.6.1           172.16.26.152         E51-A-XX-13B-00154         00:0F:7C:0A:A5:1B         A1D-500-V6 06.16-AC         Megapixel P Dome         228.5.6.1           172.16.26.13         E52-A-XX-13D-00321         00:0F:7C:0A:A5:1B         A1D-500-V6 06.16-AC         Megapixel P Dome         228.5.6.1           172.16.26.13         E52-A-XX-13D-00321         00:0F:7C:0A:A1:0F         A1D-500-V6 06.16-AC         Megapixel P Dome         228.5.6.1           172.16.26.13         E52-A-XX-13D-00321         00:0F:7C:0B:A6:1A         Megapixel P Dome         228.5.6.1           172.16.26.15         E57-A-XX-13K-00147         00:0F:7C:0C:60:9A         A1D-500-V6 05.23-C         Megapixel P Dome         228.5.6.1           172.16.26.15         E57-A-XX-13K-00147         00:0F:7C:0C:60:9A         A1D-500-V6 05.23-C         Megapixel P Dome         228.5.6.1           172.16.26.15         E57-A-XX-13K-00147         00:0F:7C:0C:60:9A         A1D-500-V6 05.23-C         Megapixel P Dome         228.5.6.1           172.16.26.95         ACD2000-09C-X-00043         00:0F:7C:0C:298:5D		IP Address	Serial No.	MAC Address	FW Version	Model	Multicast IP	Status
172.16.26.146         E82-A-XX-13C-00016         00.0F;7C:0A:5D:1F         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.152         E91-A-XX-13D-00154         00.0F;7C:0A:3E:B9         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.152         E91-A-XX-13D-00321         00.0F;7C:0A:A1:0F         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.13         E92-A-XX-13D-00321         00.0F;7C:0A:A1:0F         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.141         E94-A-XX-13D-0054         00.0F;7C:0B:AE:80         A1D-500-V6.05.07.0-AC         Megapixel IP Dome         228.5.6.1           172.16.26.153         E97-A-XX-13V-00147         00.0F;7C:0C:08:9A         A1D-500-V6.05.02-AC         Megapixel IP Dome         228.5.6.1           172.16.26.95         ACD2000-09C-X-00043         00.0F;7C:02:98:5D         A40-220-V3.05.01-AC         Qued Server         224.16.17.1           192.168.0.200         ACD3100-08C-X-00063         00.0F;7C:01:2E:D4         B1D-220-V3.03.07-AC         Video Decoder         228.5.6.1		172.16.26.2	E51A-XX-12J-00073	00:0F:7C:09:52:0E	A1D-500-V6.06.16-AC	Megapixel IP Dome	228.5.6.1	
172.16.26.152         E91-A-XX-13B-00154         00.0F.7C:0A:3E:B9         A1D-500-V6.06.16-AC         Megapikel IP Dome         228.5.6.1           172.16.26.13         E92-A-XX-13D-00321         00:0F.7C:0A:A1:0F         A1D-500-V6.06.16-AC         Megapikel IP Dome         228.5.6.1           172.16.26.13         E92-A-XX-13D-00321         00:0F.7C:0A:A1:0F         A1D-500-V6.06.16-AC         Megapikel IP Dome         228.5.6.1           172.16.26.141         E94-A-XX-13L-0054         00:0F.7C:0B:AE:80         A1D-500-V6.07.07-AC         Megapikel IP Dome         228.5.6.1           172.16.26.153         E97-A-XX-13L-0054         00:0F.7C:0C:60:9A         A1D-500-V6.05.23-AC         Megapikel IP Dome         228.5.6.1           172.16.26.153         E97-A-XX-13K-00147         00:0F.7C:02:98:5D         A4Q-220-V3.05.01-AC         Quad Server         228.5.6.1           172.16.26.95         ACD2000-09C-X-00043         00:0F.7C:01:2E:D4         B1D-220-V3.03.07-AC         Video Decoder         228.5.6.1           192.168.0.200         ACD3100-08C-X-00063         00:0F.7C:01:2E:D4         B1D-220-V3.03.07-AC         Video Decoder         228.5.6.1		172.16.26.151	E72A-XX-13D-00166	00:0F:7C:0A:A3:3A	A1D-500-V6.07.06-AC	Megapixel IP Dome	226.226.226.226	
172.16.26.13         E92-A-XX-13D-00321         00:0F:7C:0A:A1:0F         A1D-500-V6.06.16-AC         Megapixel IP Dome         228.5.6.1           172.16.26.141         E94-A-XX-13D-00324         00:0F:7C:0B:AE:80         A1D-500-V6.07.07-AC         Megapixel IP Dome         228.5.6.1           172.16.26.153         E97-A-XX-13K-00147         00:0F:7C:0C:60:9A         A1D-500-V6.05.23-AC         Megapixel IP Dome         228.5.6.1           172.16.26.955         ACD2000-09C-X-00043         00:0F:7C:02:98:5D         A4Q-220-V3.05.01-AC         Quad Server         224.16.17.1           192.168.0.200         ACD3100-08C-X-00063         00:0F:7C:01:2E:D4         B1D-220-V3.03.07-AC         Video Decoder         228.5.6.1		172.16.26.146	E82A-XX-13C-00016	00:0F:7C:0A:5D:1F	A1D-500-V6.06.16-AC	Megapixel IP Dome	228.5.6.1	
172.16.26.141         E94A-XX-13I-00054         00:0F:7C:0B:AE:80         A1D-500-V6.07.07-AC         Megapixel IP Dome         228.5.6.1           172.16.26.153         E97A-XX-13K-00147         00:0F:7C:0C:60:9A         A1D-500-V6.05.23-AC         Megapixel IP Dome         228.5.6.1           172.16.26.955         ACD2000-09C-X-00043         00:0F:7C:0C:60:9A         A1D-500-V6.05.23-AC         Megapixel IP Dome         228.5.6.1           172.16.26.955         ACD2000-09C-X-00043         00:0F:7C:02:98:5D         A4Q-220-V3.05.01-AC         Quad Server         224.16.17.1           192.168.0.200         ACD3100-08C-X-00063         00:0F:7C:01:2E:D4         B1D-220-V3.03.07-AC         Video Decoder         228.5.6.1		172.16.26.152	E91A-XX-13B-00154	00:0F:7C:0A:3E:B9	A1D-500-V6.06.16-AC	Megapixel IP Dome	228.5.6.1	
172.16.26.153         E97-A-XX-13K-00147         00:0F:7C:0C:60:9A         A1D-500-V6.05.23-AC         Megapixel IP Dome         228.5.6.1           172.16.26.95         ACD2000-09C-X-00043         00:0F:7C:0C:80:9A         A4D-220-V3.05.01-AC         Quad Server         224.16.17.1           192.168.0.200         ACD3100-08C-X-00063         00:0F:7C:012E:D4         B1D-220-V3.03.07-AC         Video Decoder         228.5.6.1		172.16.26.13	E92A-XX-13D-00321	00:0F:7C:0A:A1:0F	A1D-500-V6.06.16-AC	Megapixel IP Dome	228.5.6.1	
172.1626.95         ACD2000-09C-X-00043         00.0F.7C.02:98:5D         A40-220-V3.05.01-AC         Quad Server         224.16.17.1           192.168.0.200         ACD3100-08C-X-00063         00.0F.7C.01:2E:D4         B1D-220-V3.03.07-AC         Video Decoder         228.5.6.1		172.16.26.141	E94A-XX-13I-00054	00:0F:7C:0B:AE:80	A1D-500-V6.07.07-AC	Megapixel IP Dome	228.5.6.1	
192.168.0.200         ACD3100-08C-X-00063         00:0F:7C:01:2E:D4         B1D-220-V3.03.07-AC         Video Decoder         228.5.6.1		172.16.26.153	E97A-XX-13K-00147	00:0F:7C:0C:60:9A	A1D-500-V6.05.23-AC	Megapixel IP Dome	228.5.6.1	
		172.16.26.95	ACD2000-09C-X-00043	00:0F:7C:02:98:5D	A4Q-220-V3.05.01-AC	Quad Server	224.16.17.1	
		192.168.0.200	ACD3100-08C-X-00063	00:0F:7C:01:2E:D4	B1D-220-V3.03.07-AC	Video Decoder	228.5.6.1	
172.16.26.126 ACD2100-10A-X-00450 00:0F:7C:03:F9:BE A1D-220-V3.14.19-AC Video Server 224.16.17.8		172.16.26.126	ACD2100-10A-X-00450	00:0F:7C:03:F9:BE	A1D-220-V3.14.19-AC	Video Server	224.16.17.8	
172.16.26.160 ACD2300-09K-X-00072 00:0F:7C:03:D2:33 A8D-R2N-V2.08.03-AC Video Server 224.16.17.20		172.16.26.160	ACD2300-09K-X-00072	00:0F:7C:03:D2:33	A8D-R2N-V2.08.03-AC	Video Server	224.16.17.20	
TCD2100-10D-X-00043 00:0F:7C:04:87:A7 A1D-310-V4.12.09-AC Video Server 224.16.17.5		172.16.26.9	TCD2100-10D-X-00043	00:0F:7C:04:87:A7	A1D-310-V4.12.09-AC	Video Server	224.16.17.5	
172.16.26.182 TCD2500-09K-X-00290 00:0F:7C:03:0B:2A A1D-310-V4.12.09-AC Video Server 224.16.17.7		172.16.26.182	TCD2500-09K-X-00290	00:0F:7C:03:0B:2A	A1D-310-V4.12.09-AC	Video Server	224.16.17.7	
172162671 V23		172.16.26.71	V23YYY-X-nnnnn	66:C8:55:57:EB:E9	A1D-600-H1.00.00-AC	Video Server	228.5.6.1	

With just one click, you can launch the IP Utility and there will be an instant report as follows:

You can quickly notice the encoder model in the list. Click on the IP address to automatically launch the default browser of the PC with the IP address of the target encoder filled in the address bar of the browser already.

#### Use the default IP address of a encoder:

If there is no DHCP server in the given network, the user may have to assign the IP addresses to both PC and encoder manually to make sure they are in the same network segment.

When the encoder is plugged into network and it does not detect any DHCP services, it will automatically assign itself a default IP:

# 192.168.0.100

Whereas the default port number would be **80**. In order to access that encoder, the IP address of the PC has to be configured to match the network segment of the encoder.

## Manually adjust the IP address of the PC:

In the following example, based on Windows 7, we will configure the IP address to **192.168.0.99** and set Subnet Mask to **255.255.255.0** by using the steps below:

				a a represent	
1 💱 « All Control Panel	I Items  Network and Sharing Center	✓ ✓ ✓ Search Control Panel	2 م	🗢 👰 « Netw	ork and Internet 🔸 Network Conn
Control Panel Home	View your basic network inform	nation and set up connections	0 ^ Orga	nize 🔻 Disab	le this network device Diagnos
Change adapter settings	A	🖢 🥝 Se	e full map	Local Area C	onnection
Change advanced sharing settings	SISO_NP_PC1 Net (This computer)	work Internet		Network Intel(R) 81	) Disable
	View your active networks	Connect or d	isconnect		Status
	Network	Access type: Internet			Diagnose
	Work network	Connections: 🏺 Local Area Conn	ection =	6	Bridge Connections
	Change your networking settings				Create Shortcut
	🙀 Set up a new connection or net	work		1	Delete
	Set up a wireless, broadband, d access point.	ial-up, ad hoc, or VPN connection; or set up a	router or	6	Rename
	Connect to a network				Properties
See also		less, wired, dial-up, or VPN network connecti	on.		
HomeGroup	Choose homegroup and sharin	g options			
Internet Options		d on other network computers, or change sha	ring		
Windows Firewall	settings.				
	(Territorian and the second se		3		
Connect using:		You can get IP settings assigned	automatically if your network	supports	
Intel(R) 82567LM-3 Gigabit	t Network Connection	this capability. Otherwise, you not for the appropriate IP settings.	eed to ask your network admi	nistrator	
	Configure	Obtain an IP address autor	atically		
This connection uses the followin	-	• Use the following IP addres	51		
Client for Microsoft Netw Client for Microsoft Netw VirtualBox Bridged Netw		IP address:	192 , 168 , 0 , 99	9	
QoS Packet Scheduler		Subnet mask:	255 . 255 . 255 . 0	8	
Internet Protocol Version	n 6 (TCP/IPv6)	Default gateway:	3 X X		
<ul> <li>Internet Protocol Version</li> <li>Link-Layer Topology Dis</li> <li>Link-Layer Topology Dis</li> </ul>	scovery Mapper I/O Driver	<ul> <li>Obtain DNS server address</li> <li>O Use the following DNS server</li> </ul>			
Install Uni	nstall Properties	Preferred DNS server:			
Description	and the second second as	Alternate DNS server:			
Transmission Control Protocol/ wide area network protocol that across diverse interconnected	at provides communication	Validate settings upon exit	Adv	vanced	
	OK Cancel		ОК	Cancel	

### Manually adjust the IP addresses of multiple encoders:

If there are more than 1 encoder to be used in the same local area network and there is no DHCP server to assign unique IP addresses to each of them, all of the encoders would then have the initial IP address of **192.168.0.100**, which is not a proper situation for network devices – all the IP addresses have to be different from each other. The easiest way to assign encoders the IP addresses is by using **IP Utility**:

2						_ = >
		IP Address / NetMask	172.16.26.192 / 255.255.255.0	<ul> <li>Basic S</li> </ul>	iearch 🔻	
	Refres	sh Device Settings Change Network A	Address Firmware Upgrade	Config. Ba	ckup Config. Restore	Reset Save&Reboot
Fotal: 56	Account	admin Password 123456	Http Port 80			
	IP Address	MAC Address FW Version	Model	Serial No.	Multicast IP	Status
	172.16.26.2	00:0F:7C:07:DE:65 A1D-311-V5.07.05-AC	Hemispheric Camera	KCM3911	228.5.6.1	
	172.16.26.4	00:0F:7C:08:17:C2 A1D-310-V4.12.02-AC	Mega IP Camera	TCM1111	228.5.6.1	
	172.16.26.6	00:0 @ Change Network Address		KCM7311	228.5.6.1	
	172.16.26.7	00:0		TCM6630	228.5.6.1	
	172.16.26.10	00:0 Opnamic IP Address		TCM4201	228.5.6.1	
	172.16.26.11	00:0		KCM3911	228.5.6.1	
	172.16.26.13	00:0 Static IP Address		KCM5111	228.5.6.1	
	172.16.26.40	00:0		KCM5211	228.5.6.1	
<b></b>	172.16.26.41	00:0 Starting IP Address 192 . 168 .	0.101	KCM5311	228.5.6.1	
	172.16.26.50	00:0 Netmask 255 - 255 -	255 . 0	KCM5111	228.5.6.1	
<b></b>	172.16.26.52	00:0 Gateway 192 • 168 •	0 254	KCM5311	228.5.6.1	
<b>I</b>	172.16.26.53	00:0 Gateway 192 - 168 -	0.234	TCM5311	228.5.6.1	
<b>N</b>	172.16.26.54	00:0		TCM5611	228.5.6.1	
<b>I</b>	172.16.26.55	00:0 Apply		TCM5111	228.5.6.1	
<b>N</b>	172.16.26.57	00:0F:7C:04:87:A7 A1D-310-V4.12.09-AC	Video Server	TCD2100	228.5.6.1	
	172.16.26.61	00:0F:7C:04:32:E3 A1D-310-V4.12.09-AC	Megapixel IP Camera	TCM1231	228.5.6.1	

With the procedure shown above, all the encoders will have unique IP addresses, starting from 192.168.0.101. In case there are 20 encoders selected, the last one of the encoders would have the IP 192.168.0.120.

Later, by pressing the "Refresh" button of the IP Utility, you will be able to see the list of encoders with their new IP addresses.



Please note that it is also possible to change the IP addresses manually by using the Web browser. In such case, please plug in only one encoder at a time, and change its IP address by using the Web browser before plugging in the next one. This way, the Web browser will not be confused about two devices having the same IP address at the same time.

## **Access the Encoder**

Now that the encoder and the PC are both having their unique IP addresses and are under the same network segment, it is possible to use the Web browser of the PC to access the encoder.

You can use **any of the browsers** to access the encoder, however, the full functionality is provided only for **Microsoft Internet Explorer**.

The browser functionality comparison:

Functionality	Internet Explorer	Other browsers
Live Video	Yes	Yes*
Live Video Area Resizable	Yes	No
PTZ Control	Yes	Yes
Capture the snapshot	Yes	Yes
Video overlay based configuration (Motion Detection regions, Privacy Mask regions)	Yes	No
All the other configurations	Yes	Yes

\* When using non-Internet Explorer browsers, free third-party software plug-ins must be installed to the PC first to be able to get the live video feed from the encoder:

Browser	Required Plug-In	
Safari	QuickTime (http://www.apple.com/quicktime/download/)	
Other non-Internet Explorer browsers	Basic VLC Media Player ( <u>http://www.videolan.org</u> )	

Disclaimer Notice: The encoder manufacturer does not guarantee the compatibility of its encoders with VLC player or QuickTime – since these are third party softwares. The third party has the right to modify their utility any time which might affect the compatibility. In such cases, please use Internet Explorer browser instead.

When using Internet Explorer browser, the ActiveX control for video stream management will be downloaded from the encoder directly – the user just has to accept the use of such control when prompted so. No other third party utilities are required to be installed in such case.

The following examples in this manual are based on Internet Explorer browser in order to cover all functions of the encoder.

Assuming that the encoder's IP address is **192.168.0.100**, you can access it by opening the Web browser and typing the following address into Web browser's address bar:

## http://192.168.0.100

Upon successful connection to the encoder, the user interface called **Web Configurator** would appear together with the login page. The HTTP port number was not added behind the IP address since the default HTTP port of the encoder is 80, which can be omitted from the address for convenience.

Wet	o Configurator	
	Login	
A	count simin	
Pas	sword	
Lan	guage English 🗸	
Login	Reset	

Before logging in, you need to know the factory default Account and Password of the encoder.

## Account: admin

## Password: 123456

**IN-E1004 Hardware Manual** 



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