



by **Schneider** Electric

NET5500 Series VIDEO ENCODER Quick Start Guide



English

NET5501
NET5504
NET5508
NET5516

C5653M-A (10/14)

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the points where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases shall be placed on the apparatus.
16. **WARNING** : To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
17. Installation should be done only by qualified personnel and conform to all local codes.
18. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
19. Use only installation methods and materials capable of supporting four times the maximum specified load.
20. A readily accessible disconnect device shall be incorporated in the building installation wiring.
21. The socket-outlet shall be installed near the equipment and shall be easily accessible.
22. A CCC approved power cord must be used to power this equipment when used in China.



CAUTION



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



WARNING : This product is sensitive to Electrostatic Discharge (ESD). To avoid ESD damage to this product, use ESD safe practices during installation. Before touching, adjusting or handling this product, correctly attach an ESD wrist strap to your wrist and appropriately discharge your body and tools. For more information about ESD control and safe handling practices of electronics, please refer to ANSI/ESD S20.20-1999 or contact the Electrostatic Discharge Association (www.esda.org).

IMPORTANT NOTICES

REGULATORY NOTICES

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits of 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.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

CAN ICES-3(A)/NMB-3(A)

LEGAL NOTICE [Audio Notice]

SOME PELCO EQUIPMENT CONTAINS, AND THE SOFTWARE ENABLES, AUDIO/VISUAL AND RECORDING CAPABILITIES, THE IMPROPER USE OF WHICH MAY SUBJECT YOU TO CIVIL AND CRIMINAL PENALTIES. APPLICABLE LAWS REGARDING THE USE OF SUCH CAPABILITIES VARY BETWEEN JURISDICTIONS AND MAY REQUIRE, AMONG OTHER THINGS, EXPRESS WRITTEN CONSENT FROM RECORDED SUBJECTS. YOU ARE SOLELY RESPONSIBLE FOR INSURING STRICT COMPLIANCE WITH SUCH LAWS AND FOR STRICT ADHERENCE TO ANY/ALL RIGHTS OF PRIVACY AND PERSONALTY. USE OF THIS EQUIPMENT AND/OR SOFTWARE FOR ILLEGAL SURVEILLANCE OR MONITORING SHALL BE DEEMED UNAUTHORIZED USE IN VIOLATION OF THE END USER SOFTWARE AGREEMENT AND RESULT IN THE IMMEDIATE TERMINATION OF YOUR LICENSE RIGHTS THEREUNDER.

VIDEO QUALITY CAUTION

FRAME RATE NOTICE REGARDING USER SELECTED OPTIONS

Pelco systems are capable of providing high quality video for both live viewing and playback. However, the systems can be used in lower quality modes, which can degrade picture quality, to allow for a slower rate of data transfer and to reduce the amount of video data stored. The picture quality can be degraded by either lowering the resolution, reducing the picture rate, or both. A picture degraded by having a reduced resolution may result in an image that is less clear or even indiscernible. A picture degraded by reducing the picture rate has fewer frames per second, which can result in images that appear to jump or move more quickly than normal during playback. Lower frame rates may result in a key event not being recorded by the system.

Judgment as to the suitability of the products for users' purposes is solely the users' responsibility. Users shall determine the suitability of the products for their own intended application, picture rate and picture quality. In the event users intend to use the video for evidentiary purposes in a judicial proceeding or otherwise, users should consult with their attorney regarding any particular requirements for such use.

OPEN SOURCE SOFTWARE

This product includes certain open source or other software originated from third parties that is subject to the GNU General Public License (GPL), GNU Library/Lesser General Public License (LGPL) and different and/or additional copyright licenses, disclaimers, and notices.

The exact terms of GPL, LGPL, and some other licenses are provided to you with this product. Please refer to the exact terms of the GPL and LGPL at <http://www.fsf.org> (Free Software Foundation) or <http://www.opensource.org> (Open Source Initiative) regarding your rights under said license. You may obtain a complete corresponding machine-readable copy of the source code of such software under the GPL or LGPL by sending your request to digitalsupport@pelco.com; the subject line should read Source Code Request. You will then receive an email with a link for you to download the source code.

This offer is valid for a period of three (3) years from the date of the distribution of this product by Pelco.

CCC POWER CORD STATEMENT

Models shipped to China do not include power cords.

Note : A CCC approved power cord must be used to power the equipment when used in China.

Korean Class A EMC

이 기기는 업무용 (A급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시길 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

ESD WARNING



WARNING: This product is sensitive to Electrostatic Discharge (ESD). To avoid ESD damage to this product, use ESD safe practices during installation. Before touching, adjusting or handling this product, correctly attach an ESD wrist strap to your wrist and appropriately discharge your body and tools. For more information about ESD control and safe handling practices of electronics, please refer to ANSI/ESD S20.20-1999 or contact the Electrostatic Discharge Association (www.esda.org).

Warranty

For information about Pelco's product warranty and thereto related information, refer to www.pelco.com/warranty.

NETWORK TOPOLOGY STATEMENT

IMPORTANT NOTE. PLEASE READ. The network implementation is shown as a general representation only and is not intended to show a detailed network topology. Your actual network will differ, requiring changes or perhaps additional network equipment to accommodate the system as illustrated. Please contact your local Pelco representative to discuss your specific requirements.

LEGAL NOTICE (AUDIO NOTICE)



Improper use of audio/visual recording equipment may subject you to civil and criminal penalties. Applicable laws regarding the use of such capabilities vary between jurisdictions and may require, among other things, express written consent from the recorded subjects. You are solely responsible for insuring strict compliance with such laws and for strict adherence to any/all right of privacy and personality.

INTRODUCTION

The NET5500 Series video encoder is a network-based channel encoder with a built-in, Web-based viewer for live streaming to a standard Web browser (Microsoft® Internet Explorer®, Chrome®, Safari® or Mozilla® Firefox®). The encoder is built upon open standards and is part of an Endura® system for recording, managing, administering, and viewing video streams.

The encoder supports H.264 and MJPEG compression. It can generate two independently configurable H.264 streams, each up to D1 resolution (720 x 480 for NTSC, 720 x 576 for PAL) and 30/25 images per second (ips) in addition to an MJPEG stream for Web viewing.

The NET5500 can be configured for one alarm input for each video channel. When an alarm event is triggered, the unit can send a message to an operator, and trigger a relay.

The unit also supports motion detection for each video channel. You can configure one motion zone, each with its own independent sensitivity and threshold settings. When the NET5500 detects activity in any of these areas, it can trigger an alarm event.

The video encoder supports one audio input for each video channel over the network. The system operator (security personnel) can see and hear activity in any target area in which a microphone is present.

The NET5500 supports control of remote peripherals such as pan/tilt/zoom (PTZ) cameras by way of D-Protocol, P-Protocol, and Coaxitron® protocols.

Models

- NET5501 One-channel H.264 rack encoder
- NET5504 Four-channel H.264 rack encoder
- NET5508 Eight-channel H.264 rack encoder
- NET5516 Sixteen-channel H.264 rack encoder

Getting Started

Before installing your device, thoroughly familiarize yourself with the information in the installation section of this manual.

NOTES

- Pelco recommends connecting the device to a network that uses a Dynamic Host Configuration Protocol (DHCP) server to address devices.
- Do not use a network hub when configuring the network settings for the device.
- To ensure secure access, place the device behind a firewall when it is connected to a network.

SUPPLIED PARTS LIST

NET5501

Installation Manual, Safety Instruction (2ea) / Resource Disc (1ea) / Adapter (1ea) / Rubber Feet (4ea) / Rack Mount Ear (2ea) / Cable Clamp (1ea) / Screw (2ea) for Cable Clamp binding 1 plus 1 spare / Screw (3ea) for Rack Mount Bracket / Screw (4ea) for Product Rack binding / 5-Pin Terminal Block (2ea)

NET5504

Installation Manual, Safety Instruction (2ea) / Resource Disc (1ea) / Adapter (1ea) / Rubber Feet (4ea) / Rack Mount Ear (2ea) / Cable Clamp (1ea) / Screw (2ea) for Cable Clamp binding 1 plus 1 spare / Screw (3ea) for Rack Mount Bracket / Screw (4ea) for Product Rack binding / 6-Pin Terminal Block (2ea)

NET5508

Installation Manual, Safety Instruction (2ea) / Resource Disc (1ea) / Adapter (1ea) / Rubber Feet (4ea) / Rack Mount Ear (2ea) / Cable Clamp (1ea) / Screw (2ea) for Cable Clamp binding 1 plus 1 spare / Screw (3ea) for Rack Mount Bracket / Screw (4ea) for Product Rack binding / 10-Pin Terminal Block (2ea) / Dust Filter (1ea)

NET5516

Installation Manual, Safety Instruction (2ea) / Resource Disc (1ea) / Adapter (1ea) / Rubber Feet (4ea) / Rack Mount Ear (2ea) / Cable Clamp (1ea) / Screw (2ea) for Cable Clamp binding 1 plus 1 spare / Screw (3ea) for Rack Mount Bracket / Screw (4ea) for Product Rack binding / 8-Pin Terminal Block (2ea) / 10-Pin Terminal Block (2ea) / Dust Filter (1ea)





FRONT PANEL DESCRIPTION

NET5501/NET5504



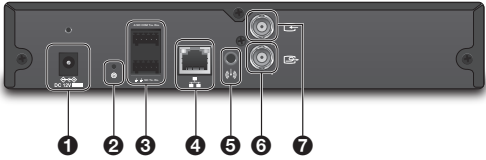
NET5508/NET5516



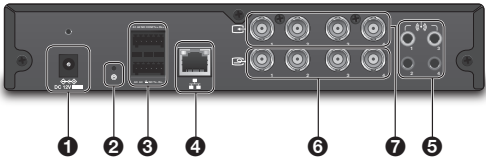
No.	Name	Description
1	Front Panel Indicators	 Displays power On/Off status. It glows blue when the unit has power.
		 Displays network status (connection and speed). Off : The unit is not connected to the network. Solid amber : The unit is connected to the network using the 100 Mbps standard. Solid red : The unit is connected to the network using the 10 Mbps standard. Solid green : The unit is connected to the network using the 1 Gbps standard.
		 A blinking light indicates network activity corresponding to the speed based on the color. Displays camera connection status. Not Lit : A camera has not been connected yet. Green : Camera video is present at the video in connector. Red : Video is no longer present, the camera is not functioning properly.
		 Displays unit status. Green : The unit is functioning normally. Red : The unit is in an error condition.

REAR PANEL DESCRIPTION

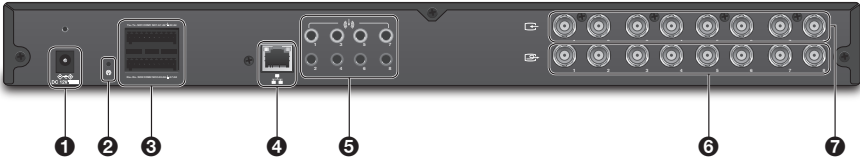
NET5501



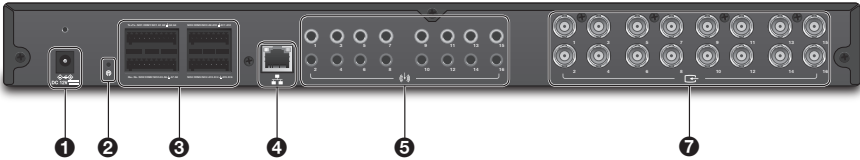
NET5504











NET5508




NET5516



No.	Name	Description
❶	 DC 12V	Power input socket. For connection of 12V adapter.
❷		Press this switch to reset device to the factory default. If you perform the factory reset, all your settings to device will be lost.
❸	A	Alarm input sensor terminal
	NO/NC	Relay control
	COM	Relay common
	TX+/TX-	RS-422 and RS-485 Data lines
	RX+/RX-	RS-422 RX Data line  Disabled in RS-485 mode.
		Ground terminal.
❹		LAN connection to a router or internal network.
❺		Video Encoder. Audio input terminal for sound input. A microphone or other source of sound may be connected to this.
❻		Video output BNC terminal.
❼		Video input BNC terminal.

PTZ, Relay and Alarm Pin Assignments

Label	Lead	Label	Lead
A1	Alarm 1	A3	Alarm 3
A2	Alarm 2	A4	Alarm 4
NO	Relay Normally Open		Ground
COM	Relay Common	NC	Relay Normally Closed
TX+	RS-422 Data TX+	TX-	RS-422 Data TX-
RX+	RS-422 Data RX+	RX-	RS-422 Data RX-

MOUNTING IN A RACK

The NET5500 Series encoder mounts into an industry-standard 48 cm (19-inch) equipment rack. The NET5500 Series encoder occupies 1 RU (4.45 cm or 1.75 inches) of vertical rack space. The hardware necessary to mount the NET5500 Series encoder into a rack is supplied with the unit.

The rack must meet the following requirements

Rack standard : 48 cm (19 inches), EIA-310-D compliant (rear column required)

Rack column depth : 50.8 to 76.2 cm (20 to 30 inches)

Column mounting hole provisions : 10-32 UNF-2B threaded holes or square window holes on front and rear columns

Door systems (optional) : Front doors must have at least 5.1 cm (2 inches) between the NET5500 Series encoder front bezel and the inside of the door.

Rear doors may be used only on rack columns that more than 66 cm (26 inches) deep.



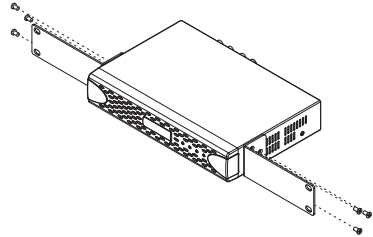
Make sure the NET5500 Series encoder is level.



Slots and openings in the cabinet provide ventilation to prevent the unit from overheating. Do not block these openings.

To install the NET5500 Series encoder in a rack

1. Remove the three Phillips flat head screws from each side of the unit. Set the screws aside.
2. Align the three screw holes in the mounting brackets with the threaded holes on the left and the right sides of the chassis.
3. Using the six Phillips flat head screws, attach the mounting brackets to each side of the chassis.
4. Insert and tighten the Phillips flat head screws you removed earlier.
5. Align the two mounting bracket holes on each side with the screw holes on the rack.
6. Insert and tighten the Phillips flat head screws (not supplied) to secure the unit in the rack.



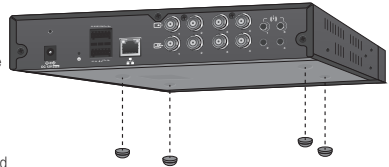
DESKTOP INSTALLATION

When installing the device on a horizontal surface such as a desktop, proceed as follows.

1. Attach the rubber feet to the bottom of the unit to prevent surface damage.
2. Place the device in a location that provides adequate space for wiring and cords at the front and back of the panel.

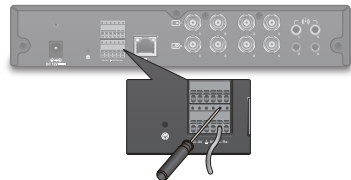


Do not place the device upright since that can lead to its falling over and becoming damaged. Placing the device upright will also block the flow of air, which may cause it to overheat.



CONNECTING THE TERMINAL BLOCK

The terminal block has tension clamps instead of screw terminals. Use a small screwdriver to open the clamp for a particular lead.



ACCESSING THE ENCODER AND ATTACHED CAMERAS

The first time you access the camera, the live video page appears. By default, you are viewing the video as a public user and only have access to the single stream live view.

If, for security purposes, users should not be allowed to view video without first logging on to the camera, change the permissions for public users.

Logging In

Entering the IP address of the camera as a URL into the web browser will immediately bring up the Live Mode screen if the encoder is not setup to require authentication (Open Authentication option).
If the camera is setup to require authentication, then the user will be prompted for a Username and Password before being able to see the live video feed.












1. Click <Login> on the live screen.
2. Enter your <Username> and <Password>.
✓ Default username : admin, Password : admin
3. Click the <Login> button.
✓ The Open Authentication option is configured on the Settings > Users > General Settings screen.

Live Screen Overview

Live Mode Screen Components



No.	Name	Description
1	Channel Name	Displays the name assigned to the channel selected.
2	Video Channel	Choose number 1 to number of channels on the encoder.
3	Multi-Function Image Button	<div>▲ Tilt Up</div> <div>▼ Tilt Down</div>

No.	Name	Description
3	Multi-Function Image Button	 Pan Right
		 Pan Left
		 Home Preset
4	Control the Zoom	  Activates Zoom in (-) / Zoom out (+) features.
5	Control the Focus	  Activates Near (-) / Far (+) features.
6	Control the Iris	  Adjusts the camera brightness.
7	Move to Presets	Moves to the preset selected.
8	Pattern	Activates the pattern selected.
9	Stream Selection	Selects the viewable video stream that displays in live view (Primary, Secondary, QuickView) and selects unicast or multicast and throttle settings.  It will not be presented to users who are designated as Viewers.
10	View the Selected Tab	Composed of Live, Settings, Help, and Logout settings menus.
11	Maximize Viewing Area	Scales the image to the full size of the browser. To resize the video pane to normal view, click the Show Toolbar button in the upper-right corner of the window.
12	Take a Snapshot	Captures the image displayed in the video pane and saves it as a JPEG file.
13	Open Stream in New Window	Opens the video in a scalable, independent window. Opening the video in a separate window allows you to view the video while other applications are running. This window can be minimized, maximized, or closed using the title bar buttons of the active window. The window can also be resized by dragging a corner of the window.
14	Pan/Tilt/Zoom	Control the encoder and the pan (left/right) and tilt (up/down) of the connected camera by dragging the mouse. Also, zoom using the scroll wheel on the mouse.  These icons are always available when using the Pelco Media Player. If you are using QuickTime®, PTZ overlay is only available with PMP player.



This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2012/19/EU of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

REVISION HISTORY

Manual #	Date	Comments
C5653M	07/14	Original version
C5653M-A	10/14	Changed power consumption values. Changed the model name(Network Video Encoders → Video Encoder)

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