PELCO ®

by Schneider Electric

Endura® UDI5000 Series Universal Device Interface

For Third-Party Edge Devices

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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.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

KOREAN CLASS A EMC

이 기기는 업무용 (A 급) 전자파 적합기기로서 판매자 또는 사용자는
이 점을 주의하시길 바라며 , 가정 외의 지역에서 사용하는 것을 목적
으로 합니다 .

WARRANTY STATEMENT

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

Description

The Endura® UDI5000 Series universal device interface provides a flexible integration platform between third-party IP sources and the Endura IP video surveillance system.

The UDI5000-CAM models can accommodate IP camera streaming for as many as 16 standard resolution cameras and several megapixel cameras from most manufacturers. Any combination and any mix of IP camera type and manufacturer is supported to reach a maximum bit rate, frame rate, and resolution. These cameras can be distributed throughout the network and then associated with a UDI5000 Series to translate network communication packets into a standard that is compatible with the Endura system. As more third-party sources are added to the system, they can be associated with additional UDI5000 Series units.

When third-party IP cameras are associated with the universal device interface, live and recorded video are accessible in the Endura system, and all camera functions are available from any viewing station on the system.

The UDI5000-MTRX provides users with a powerful means by which to leverage investments in legacy analog systems and integrations, while paving the way to leverage the benefits afforded by today's IP and megapixel camera technologies. The UDI5000-MTRX has three operation modes to integrate ASCII interfaces into an Endura system, extend the operational life of analog matrix switchers by pulling digital video from standard resolution and megapixel IP devices, or provide the functionality and operator interface of the analog matrix without the cost and complexity of the matrix hardware.

MODELS

UDI5000-CAM	Universal device interface for use with third-party cameras
UDI5000-MTRX	Universal device interface for use as an ASCII interface, matrix digital decoder (MDD), or V9700 virtual matrix controller

COMPATIBLE PRODUCTS

Endura System Components	The UDI5000 Series is fully compatible with Endura 2.x or later components. The UDI5000-MTRX is compatible with existing CM9700 matrix systems. In V9700 mode, the system can include CM9700-ALM alarm interface units and CM9700-KBD keyboards.
Third-Party Cameras	The UDI5000-CAM is compatible with several camera vendors. For an updated list of supported cameras, go to *www.pelco.com*.
Third-Party ASCII Systems	The UDI5000-MTRX converts Pelco ASCII commands and Pelco P protocol commands into Endura messages.

PARTS LIST

The following parts are supplied with the device.

Qty Description
- 1 UDI5000 Series universal device interface
- 4 Rubber mounting feet, attached
- 1 Power cord (either 1 United States standard, European standard, United Kingdom standard, Australian standard, or Argentinian standard)
  NOTE: Units shipped to China do not include power cords.
- 1 Documentation packet containing the following items:
  - 2 Installation manuals (1 English, 1 Chinese)
  - 1 Important Safety Instructions (multilingual)
  - 1 Resource disc with additional documentation and supporting software

USER-SUPPLIED PARTS LIST

A Phillips screwdriver (if mounting the unit into a rack) and Cat5e or better network cable are needed but not supplied.

The UDI5000-MTRX is designed to support third-party components, some of which might require additional parts to operate properly. For example, you might need to purchase a serial to Ethernet converter or a video down converter (sometimes referred to as a DVI to BNC converter). Consult with your Pelco sales representative to determine if you need to purchase these or other parts to support your implementation.

Product Overview

FRONT AND REAR PANELS

Figure 1 illustrates the front panel with and without the face plate, and Figure 2 illustrates the rear panel of the UDI5000 Series.
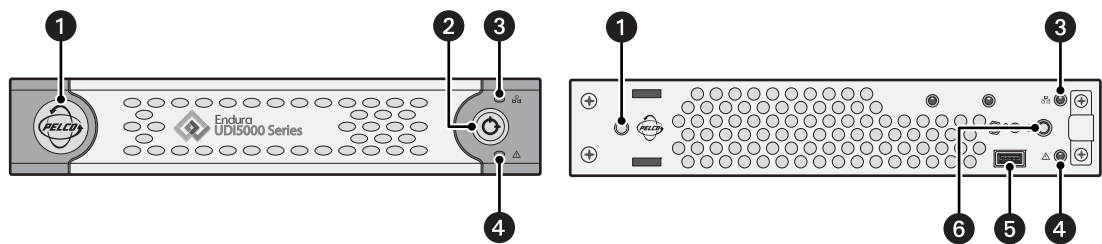

Figure 1. UDI5000 Series Front Panel With and Without a Face Plate

1. Pelco Badge and Power Indicator

2. Face Plate Lock

3. Network Activity Indicator

4. Unit Status Indicator
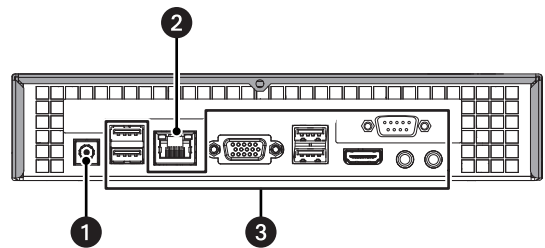
5. USB 2.0 Port

6. Power Button

Figure 2. UDI5000 Series Rear Panel

1. Power Connector

2. Ethernet Network RJ-45 Connector

3. (Not used)

Before You Begin

Endura is a network system that requires a continuous amount of bandwidth to transmit live video; therefore, always include your network administrator when planning and installing Endura components.

You will also need the following items:

- Pelco-approved Endura certification if you are installing an SM5000/SM5200 system manager or NSM5200 network storage manager.
- Access to an Endura network
    – that is an active, gigabit Ethernet network that supports the full Internet Protocol suite,
    – that is configured with at least one SM5000/SM5200 system manager

PRODUCT SERIAL NUMBER LABEL PLACEMENT

The product serial number label helps identify your universal device interface and its factory configuration settings in the event that the unit requires service.

A label citing your product's serial number is attached to the bottom panel of the universal device interface. Because rack mounting or other installation options may obscure the factory-applied label, two additional labels are provided. Attach one label to your product documentation or another product location that will not be obscured by installation. The second label is a spare.

To use the serial number label, complete the following steps:

1. On the bottom panel of the universal device interface, locate the two small labels, attached with a yellow sticker that reads "Extra serial number labels: remove prior to installation."

2. Remove the yellow sticker and the labels.

3. Peel away the backing from one label and attach it to this manual, other product documentation, or an unobscured product location.
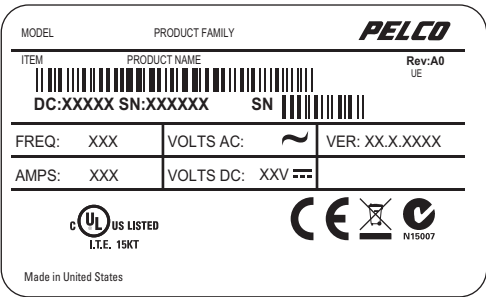

Figure 3. Product Serial Number Label

Installation

MOUNTING

Use one of the following installation methods for the universal device interface (detailed instructions are provided in the following sections):

- **Desktop installation:** The UDI5000 Series is equipped with rubber feet for placement on a flat surface, such as a shelf or desktop.
- **Rack mount installation:** Turn the unit upside down and remove the four rubber feet from the unit. The feet are attached with screws. Store the screws and feet for future use. Install the unit in the optional RK-UDI5000 rack mount kit.

DESKTOP INSTALLATION

When placing the universal device interface on a flat surface, such as a desktop, be sure that you position the unit to allow for cable and power cord clearance at the rear panel.

⚠ **WARNING:** Do not place the universal device interface on its side; the unit could fall over and cause equipment damage or personal injury.
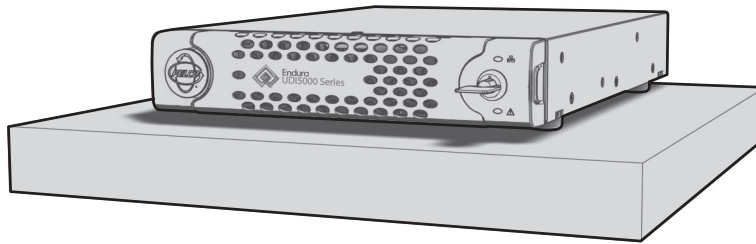

Figure 4. UDI5000 Series Desktop Placement

RACK MOUNT INSTALLATION

You can mount the UDI5000 Series in the optional RK-UDI5000 rack mount kit along with a second unit. The rack mount kit is designed to support two UDI5000 Series units in a side-by-side installation. For installing a single unit, the rack mount kit contains support brackets that can be attached to the UDI5000 Series before installing it in a rack. The UDI5000 Series connects directly to a power brick that rests in a shelf at the back of the mounting kit. Clearance for power cords is provided for up to two units in the rack.

Refer to the rack mount installation manual for instructions.

HARDWARE CONNECTIONS

NETWORK CONNECTION

Consult your network administrator before installing the universal device interface to avoid possible network conflicts.

Use the network port on the rear panel and a Cat5e (or better) cable with RJ-45 connectors to connect the universal device interface to your system network.
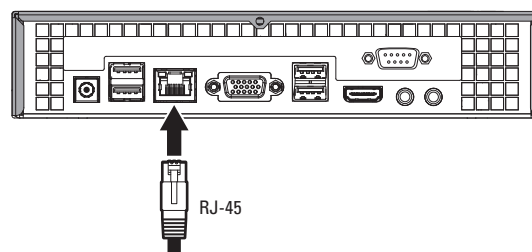

RJ-45

Figure 5. Network Connections

POWER CONNECTION

1. Connect a power supply to the unit.

2. Connect power to the power supply.

3. Press the power button on the front panel. If necessary, remove the face plate to access the power button. The Pelco badge (blue) on the front panel should glow.
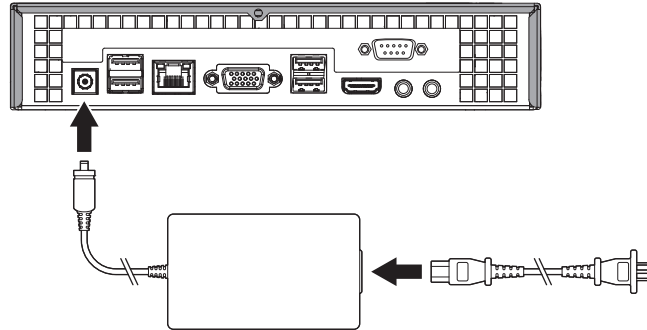

Figure 6. Power Connections

Software Configuration

SOFTWARE UPDATES

The UDI5000 Series uses the same procedure to update its software as any other device on the Endura system. Refer to the WS5200 Advanced System Management Software Configuration manual for instructions on updating software.

SYSTEM SETTING CONFIGURATION FOR THE UDI5000 SERIES

After the UDI5000 Series is connected to the Endura network and the power is turned on, the device is discovered automatically on the network. A dynamic IP address is assigned to the UDI5000 Series through the network Dynamic Host Configuration Protocol (DHCP) server. Use the Endura Utilities or the WS5200 advanced system management software to verify that the UDI5000 Series is available on the system. System settings for the UDI5000 Series are configured through the Web application that is provided within the unit. This application is accessed through a Microsoft® Internet Explorer® Web browser window by entering the IP address assigned to the unit. Refer to the configuration manual that is available on the resource disc for information on configuring the units.

Troubleshooting

LED indicators on the front panel of the UDI5000 Series allow you to monitor data activity and operating power. Table A provides troubleshooting information relating to the front panel indicators.

If the following instructions fail to solve your problem, contact Pelco Product Support at 1-800-289-9100 (USA or Canada) or +1-559-292-1981 (international) for assistance.

Note the following information before calling Pelco:

- **Unit serial number:** Located on the product label.
- **Unit firmware version:** Located on the System page in the UDI5000 Series system configuration software.

NOTE: Do not try to repair the unit yourself. Opening it immediately voids any warranty. Leave maintenance and repairs to qualified technical personnel. Exchange the defective unit and return it for repair.

Table A. Troubleshooting the UDI5000 Series

Problem	Indication	Possible Causes	Suggested Remedy
Power LED (Pelco badge) is not lit	Power is not being supplied to the UDI5000 Series	Power connection is faulty	Check power connection; if the UDI5000 Series is rack mounted, reseat the unit or the power supply as necessary
		Power supply has failed	Replace power supply
Network activity and status LED is not lit	No network connection is available	Network cabling is faulty	Ensure the cabling is tested for Cat5e or Cat6 connectivity
Unit status indicator LED is red	Internal hardware or software failure	Log on to the configuration software and check the camera connections; check the fans	Check all camera connections, repair the camera associations; return to the factory for service
Unit status indicator LED is amber	Operating temperature is approaching a threshold	Improper installation or ambient temperature has risen to dangerous level	Check the installation area for proper cooling and ventilation; reinstall the UDI5000 Series in an area with proper ventilation
Unit status indicator LED is green	UDI5000 Series is operating normally	N/A	N/A

Specifications

MODEL

UDI5000-CAM	Universal device interface for third-party cameras
UDI5000-MTRX	Universal device interface for CM9700 Series Matrix, V9700 virtual matrix, or ASCII systems

GENERAL

Construction	Sheet metal
Finish	Gray metallic with black end caps, black matte finish
Operating System	Linux®
Dimensions	31.3 x 21.6 x 4.3 cm (12.32" D x 8.8" W x 1.70" H)
Mounting	
Desktop	Rubber feet (factory-installed)
Rack	Optional mounting accessories required
Unit Weight	3.0 kg (6.6 lb)

FRONT PANEL INDICATORS/FUNCTIONS

Power	Blue
Network Activity	Red, amber, green
Unit Status	Red, amber, green

REAR PANEL INDICATORS/FUNCTIONS

Network Port	1 Gigabit Ethernet RJ-45 (10/100/1000Base-T)
Other Ports (not used)	2 USB 2.0 ports, 1 VGA port, 2 high-current/fast charging USB ports, 1 HDMI port, audio input/output

POWER

Power Input	12 VDC ±10%
Power Consumption	31.2 W, 107 BTU/H

ENVIRONMENTAL

Operating Temperature	10° to 35°C (50° to 95°F) at unit air intake
Storage Temperature	–40° to 65°C (–40° to 149°F)
Operating Humidity	20% to 80%, noncondensing

COMPATIBLE PRODUCTS

Endura System Components	The UDI5000 Series is compatible with Endura 2.x or later components.
Third-party cameras	The UDI5000 Series is compatible with several camera vendors. For an updated list of supported cameras, go to *www.pelco.com*.

OPTIONAL ACCESSORIES

RK-UDI5000	Rack mounting hardware for two UDI5000 Series units

STANDARDS/ORGANIZATIONS

- Pelco is a member of the MPEG-4 Industry Forum

- Pelco is a member of the Universal Plug and Play (UPnP) Forum

- Pelco is a member of the Universal Serial Bus (USB) Implementers Forum

- Pelco is a contributor to the International Standards for Organization/Electrotechnical Commission (ISO/IEC) Joint Technical Committee 1 (JTC1), "Information Technology," Subcommittee 29, Working Group 11

- Compliance, ISO/IEC 14496 standard (also known as MPEG-4)

- Compliant with International Telecommunication Union (ITU) Recommendation G.711, "Pulse Code Modulation (PCM) of Voice Frequencies"

This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC 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
C4680M	1/11	Original version.
C4680M-A	8/11	Added feature descriptions for the V9700 mode and updated some illustrations.
C4680M-B	5/13	Revised illustrations to describe the updated motherboard rear panel connectors.
C4680M-C	6/13	Revised illustrations to describe the motherboard COM port on the rear panel.
C4680M-E	8/13	Revised document to describe Class A compliance.

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