



# Hardware Installation And Reference

Pelco, Inc. Worldwide Headquarters:  
3500 Pelco Way, Clovis, California 93612-5699 USA  
USA & Canada Tel: (800) 289-9100 • FAX (800) 289-9150  
International Tel: (559) 292-1981 • FAX (559) 348-1120  
[www.pelco.com](http://www.pelco.com)

C3653M-A (11/08)



## Preface

This manual is a hardware installation and reference for the Intelli-M<sup>®</sup> access control security system. An overview of a typical configuration for a hardware installation is provided, as well as a description of the major Intelli-M hardware components that can be used. Technical specifications for each Intelli-M hardware component are also provided.

## Trademarks

All brand or product names mentioned herein are used for identification purposes only and may be trademarks or registered trademarks of their respective companies.

Pelco, the Pelco logo, and Intelli-M are registered trademarks of Pelco, Inc.

*Intelli-M Hardware Installation And Reference Manual*

© Copyright 2005-2008 Pelco, Inc.

All Rights Reserved.

Reproduction, adaptation, or translation of this document without prior written permission is prohibited, except as allowed under copyright laws.

Printed in the United States.

**Note:** The information in this document is subject to change without notice or obligation.

Pelco, Inc.  
C3653M-A (11/08)  
JML

---

# Table of Contents

<b>OFFICIAL NOTICES</b> .....	<b>5</b>
FCC Declaration Of Conformity (S-EIDC-U, S-PCON-U) .....	5
UL Compliance (S-EIDC-U, S-PCON-U) .....	5
<b>CHAPTER 1: INTELLI-M<sup>®</sup> HARDWARE OVERVIEW</b> .....	<b>7</b>
Contents .....	7
Intelli-M Hardware Overview .....	8
Using This Manual .....	9
<b>CHAPTER 2: S-EIDC-U (ETHERNET INTEGRATED DOOR CONTROLLER)</b> .....	<b>11</b>
Contents .....	11
S-EIDC-U Overview .....	12
<i>Technical Features</i> .....	12
Wiring S-EIDC-U Door Components .....	13
Powering Up An S-EIDC-U .....	15
Determining The Network IP Address Type .....	16
Setting A Static IP Address Within The S-EIDC-U .....	17
Setting A DHCP IP Address Within The S-EIDC-U .....	18
<i>Setting An S-EIDC-U For DHCP Addressing</i> .....	18
Resetting An S-EIDC-U .....	19
Quick Mount Assembly .....	19
<b>CHAPTER 3: S-PCON-U (POWER CONNECTOR)</b> .....	<b>21</b>
Contents .....	21
S-PCON-U Overview .....	22
<i>Technical Features</i> .....	22
Wiring And Powering Up S-PCON-U .....	23
<b>CHAPTER 4: WIRING CONNECTIONS AND CONFIGURATIONS</b> .....	<b>25</b>
Contents .....	25
Sample S-EIDC-U Global Configuration .....	26
S-EIDC-U Wiring Terminals .....	27
Single Door Door Configuration With S-EIDC-U .....	28
<b>APPENDIX A: eFAMILY UPDATE UTILITY (BACKUP, UPGRADE, AND RESTORE eFAMILY DEVICE SOFTWARE)</b> .....	<b>29</b>
Contents .....	29
Installing The eFamily Update Utility .....	30
<i>Supervisor Plus Users</i> .....	30
<i>Web Interface Users</i> .....	30
Before Updating Your eFamily Device .....	32
eFamily Update Procedure .....	32
Errors That Occur During Update .....	37

**APPENDIX B: DEMO KIT WIRING ..... 39**

**APPENDIX C: INTELLI-M® HARDWARE TECHNICAL SPECIFICATIONS ..... 41**

**S-EIDC-U Technical Specifications (Ethernet Integrated Door Controller) ..... 41**

        Dimensions ..... 41

*Ethernet IDC* ..... 41

*Weight* ..... 41

        Quick Mount Assembly Kit Enclosure ..... 41

*Recessed Mounting Box* ..... 41

*Plaster Ring* ..... 41

*Cover Plate* ..... 41

        Environmental ..... 41

*Operating Temperature* ..... 41

*Storage Temperature* ..... 41

*Humidity* ..... 41

        Power ..... 42

        Communication ..... 42

        Reader Ports ..... 42

        Inputs ..... 42

        Outputs ..... 42

        Certifications ..... 42

**S-PCON-U Technical Specifications (Power Controller) ..... 43**

        Dimensions ..... 43

*Power Connector Module (S-PCON-U)* ..... 43

*Weight* ..... 43

*Composition* ..... 43

        Environmental ..... 43

*Operating Temperature* ..... 43

*Storage Temperature* ..... 43

*Humidity* ..... 43

        Operational ..... 43

*Input Connectors* ..... 43

*Output Connector* ..... 43

*Output Indicator* ..... 43

*Power In* ..... 44

*Power Out* ..... 44

**Miscellaneous Computer Hardware Specifications ..... 45**

        Performance Communications Server Requirements ..... 45

*Minimum Server Requirements* ..... 45

        Performance Badging / Workstation Requirements ..... 45

*Minimum Badging / Workstation Requirements* ..... 46

        Digital Camera ..... 46

        USB Camera (WebCam) ..... 46

        Signature Capture ..... 46

        Modem ..... 46

        Network Requirements ..... 46

---

## Official Notices

### **FCC Declaration Of Conformity (S-EIDC-U, S-PCON-U)**

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

### **UL Compliance (S-EIDC-U, S-PCON-U)**

Pelco models S-EIDC-U and S-PCON-U have been evaluated in accordance with the requirements of UL294, Standards for Access Control System Units, and found to comply with the aforementioned standards set by Underwriters Laboratories (UL).



---

# Chapter 1: Intelli-M<sup>®</sup> Hardware Overview

## Contents

This Chapter provides an overview of the Intelli-M system for electronic access control (EAC). A section describing the layout of this manual is also provided.

The following topics can be found within this Chapter:

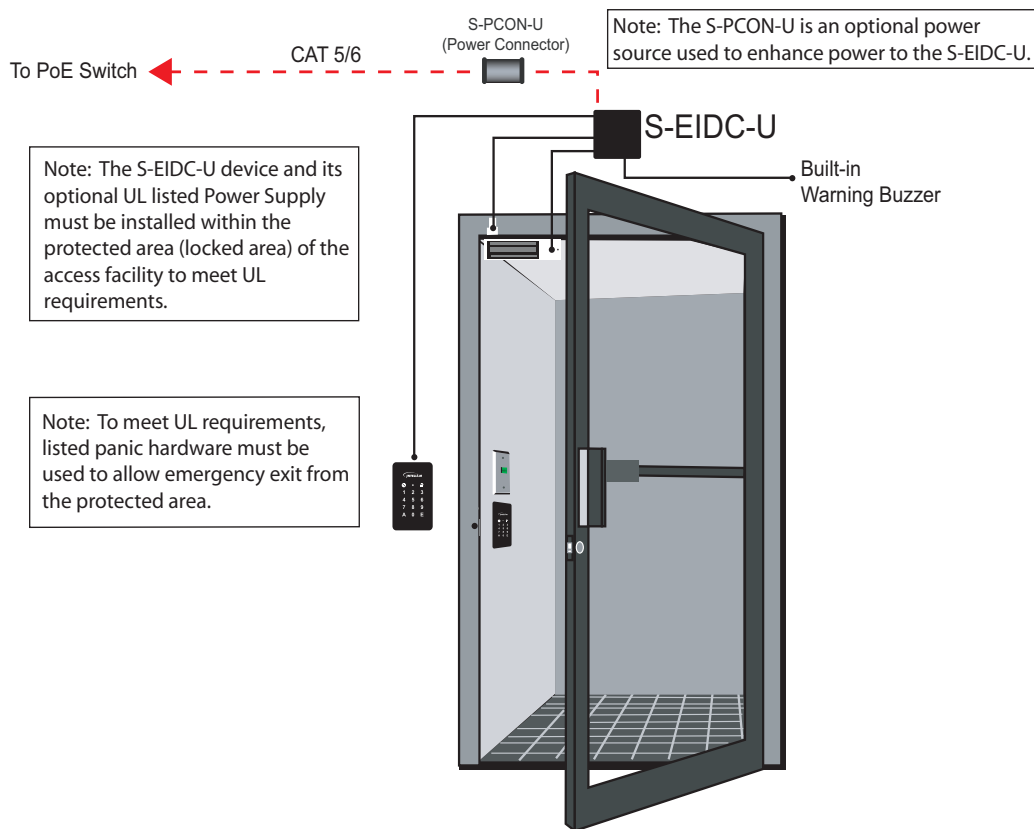
- [Intelli-M Hardware Overview](#)
- [Using This Manual](#)

## Intelli-M Hardware Overview

This manual provides reference, installation, and technical specifications for the hardware products that are used with the Intelli-M system. Technical specifications for each product are also provided. The following Intelli-M hardware products are discussed in this manual, and are currently available:

- S-EIDC-U (ethernet Integrated Door Controller) in Chapter 2
- S-PCON-U (Power Connector) in Chapter 3

The Intelli-M system uses a door controller called the S-EIDC-U (ethernet Integrated Door Controller). The S-EIDC-U controller is state of the art, being only a fraction of the size of more traditional access control hardware but fully capable of providing maximum security. The controller will fit into any standard double gang box, and simply click into a mounting plate for easy installation. As shown in the “S-EIDC-U Sample Configuration” illustration below, the S-EIDC-U receives both power and communication from the ethernet by way of a single CAT 5 or 6 cable connected to a PoE (Power over Ethernet) enabled switch.



*Sample S-EIDC-U Configuration*

A module called the S-PCON-U (Power Connector) can also be used to route the power and communication data from a CAT 5 or 6 cable to the S-EIDC-U. The S-EIDC-U device is capable of peer-to-peer communication, industry-standard IP protocol support (DHCP), and AES 128-bit encrypted communications.

**Note:** Peer-to-peer communication, IP protocol support (DHCP), and AES 128-bit encrypted communications have not been UL verified for the S-EIDC-U and S-PCON-U.



## Using This Manual

This manual provides reference and installation guidance for the hardware components that are used in the Intelli-M system. Technical specifications are provided. Here is a quick overview of this manual's Chapters and Appendices:

- **Chapter 1: Intelli-M Hardware Overview** -- Provides an overview of the Intelli-M system and a brief description of all Chapters and Appendices used in this manual.
- **Chapter 2: S-EIDC-U (Ethernet Integrated Door Controller)** -- Provides a description and lists some features of the S-EIDC-U. Also discussed are wiring connections, wiring door components, powering up, and resetting the S-EIDC-U.
- **Chapter 3: S-PCON-U (Power Controller)** -- Provides a description and lists some features of the S-PCON-U module. Also discussed are wiring and powering up the S-PCON-U.
- **Chapter 4: Wiring Connections And Configurations** -- Wiring connections and configurations for the Intelli-M hardware components are shown in this Chapter.
- **Appendix A: Intelli-M eFamily Update Utility** -- This Appendix describes how to use the eFamily Update Utility. This utility provides the ability to update the firmware of an eFamily device (such as an S-EIDC-U), backup a device configuration (including card holders, schedules, and services) and event history log, and/or restore a backup configuration.
- **Appendix B: Demo Kit Wiring** -- Provides the default configuration parameters if wiring the S-EIDC-U for a demo kit.
- **Appendix C: Intelli-M Hardware Technical Specifications** -- Gives the technical specifications for the for the various Intelli-M hardware components discussed in this manual.



---

## Chapter 2: S-EIDC-U (ethernet Integrated Door Controller)

### Contents

This Chapter provides a basic description of the Intelli-M<sup>®</sup> S-EIDC-U. Technical features are listed, and various wiring and power up configurations are shown.

The following topics can be found within this Chapter:

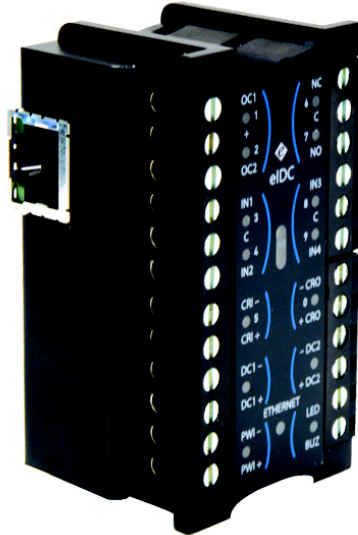
- [S-EIDC-U Overview](#)
- [Wiring S-EIDC-U Door Components](#)
- [Powering Up An S-EIDC-U](#)
- [Determining The Network IP Address Type](#)

**Note:** Network communication formats and configurations have not been UL verified for the S-EIDC-U and S-PCON-U.

- [Setting A Static IP Address Within The S-EIDC-U](#)
- [Setting A DHCP IP Address Within The S-EIDC-U](#)
- [Resetting An S-EIDC-U](#)
- [Quick Mount Assembly](#)

## S-EIDC-U Overview

Intelli-M's S-EIDC-U (ethernet Integrated Door Controller) provides access control and alarm services for a single door. The cutting-edge technology of Power over Ethernet (PoE) allows you to run a single cable carrying both power and data for the controller and all peripheral door hardware. The controller has LEDs built into it for verifying connections to peripherals in the security system.



*Intelli-M S-EIDC-U*

The footprint of the controller is 1.70" W x 2.82" H x 1.30" D. It has flash-base memory capability, and can be updated with the latest firmware data via a simple flash upgrade. Instructions on how to perform an update to the S-EIDC-U can be found within this manual in [“Appendix A: Intelli-M S-EIDC-U Update Utility.”](#)

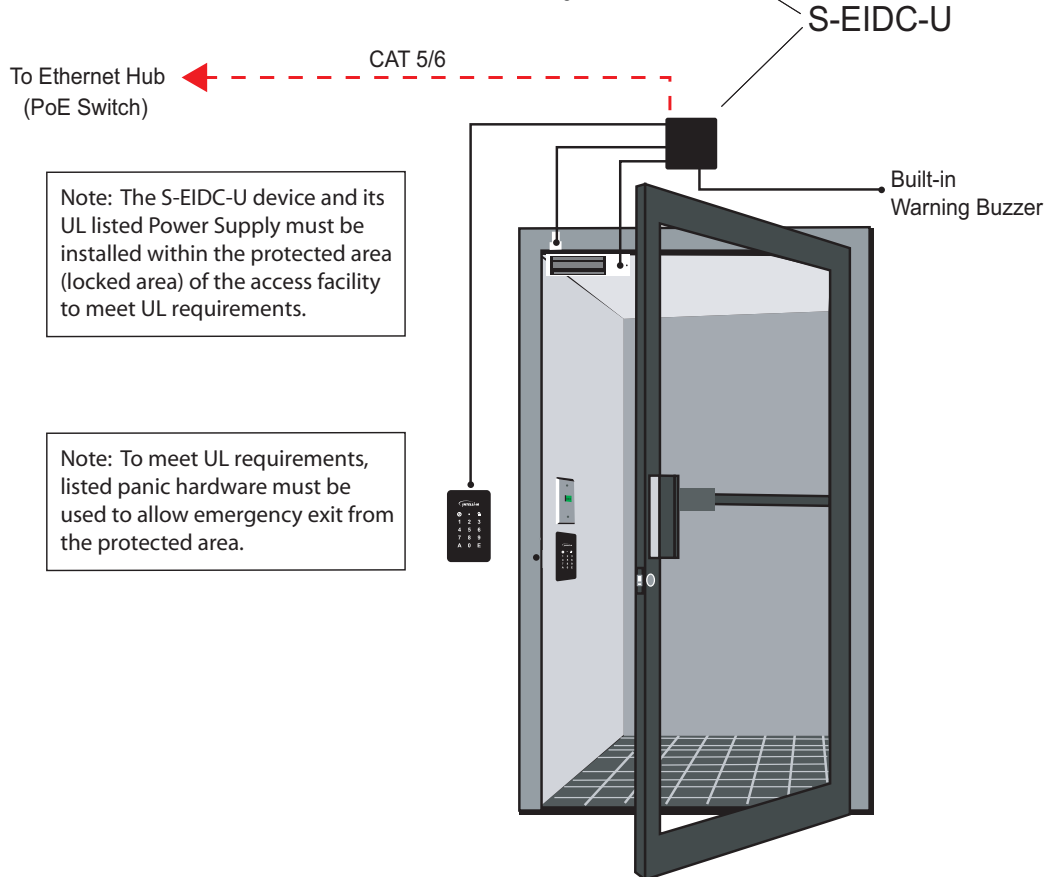
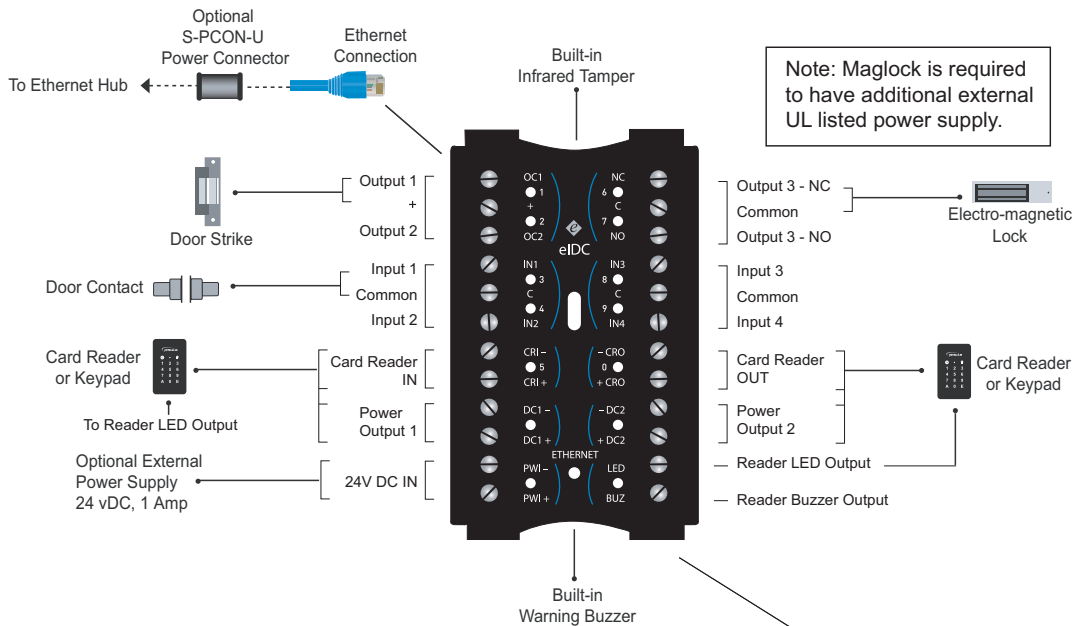
## Technical Features

The Intelli-M S-EIDC-U has the following technical features:

- Supports a local database of 1,500 card holders
  - Note:** Consult a Pelco Product Support Engineer for installations with more than 1,500 cardholders.
- 16,000 local event buffering
- Two reader ports for entry and exit configurations (with or without keypads)
- Supports DHCP or Static IP addresses
- Provides encrypted communication (AES 128 bit)
- Embedded Web server provides complete control of the device without the need of a server for a stand-alone door
- Integrated, non-mechanical, infrared tamper sensor for high reliability and precision
- Built-in warning buzzer provides a local alarm without requiring an external alarm device

## Wiring S-EIDC-U Door Components

Up to 750 mA of power is provided through the S-EIDC-U for peripheral devices. An illustration of wiring an S-EIDC-U for a single door, and the steps necessary to do so, are as follows:



*S-EIDC-U Door Component Wiring*

The steps necessary to wire an S-EIDC-U for a single door are as follows:

**Step 1: Connect magnetic lock or door strike. Refer to the illustration above.**

The following information may be pertinent when dealing with locks or door strikes:

- A magnetic lock or door strike can be powered by the eIDC (12 VDC @ 450 mA or less). This is a shared load.
- The two Open Collector outputs “OC1” and “OC2” (Output 1 and Output 2) provide a maximum of 12 VDC @ 450 mA combined.
- “OC1” and “OC2” each have their own “-” terminal but share a “+” terminal.
- “OC1” and “OC2” are software configurable “E” (energized) or “DE” (de-energized).
- Magnetic locks can be powered by the Open Collector output if it draws less than 450 mA. If it draws more than 450 mA, then it must be wired to the form C relay (5A @ 30 VDC) labeled “NC” and “NO” and powered externally.
- Relay (Output 3) has separate terminals for “C” (Common), “NO” (Normally Open), and “NC” (Normally Closed) but the software designation must match for proper status reporting.

**Important:** To meet UL requirements, listed panic hardware must be used to allow emergency exit from the protected area.

**Step 2: Wire the status, shunt, and exit inputs.**

Keep in mind the following points:

- Input devices can be wired to S-EIDC-U Inputs (IN) 1-4.
- “NO” or “NC” is software configurable with Inputs 1-4.
- “EOLR” (End Of Line Resistance) supervision is software selectable, and is supported with 1k ohm resistors.

**Step 3: Wire the readers.**

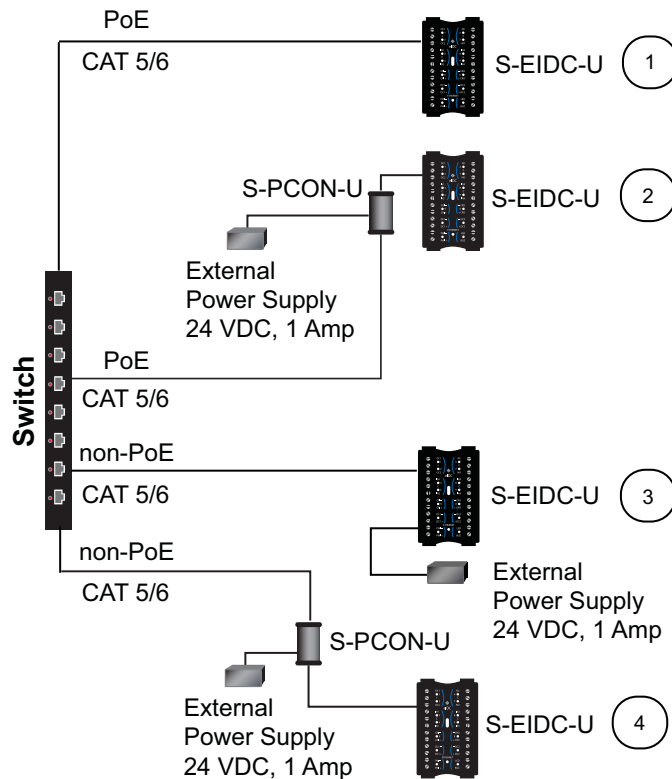
Keep in mind the following points:

- Reader IN (CRI) and Reader OUT (CRO) are internally configured each having their own Data 0 (CR-), Data 1 (CR+), DC+, and DC-.
- “DC1-” has a maximum load of 250 mA; “DC2-” has a maximum load of 250 mA.
- The sum of all 4 open collectors (OC1 + OC2 + DC1 + DC2) must not exceed 750 mA.
- There is a single terminal for optional Reader LED control and optional Buzzer control.
- Only Readers can be wired to the Reader’s Data 0 (CR-), and Data 1 (CR+) terminals.

## Powering Up An S-EIDC-U

The S-EIDC-U is designed to be powered from either a PoE enabled switch or from an external power source. Use one of the power configuration options shown in the Figure below to provide power to an S-EIDC-U.

### Four Power Options



#### *S-EIDC-U Power Configuration Options*

Option 1 -- Using PoE, run directly from Switch to S-EIDC-U.

Option 2 -- Using PoE, run directly from Switch to S-PCON-U, use S-PCON-U for power injection, and then run from S-PCON-U to S-EIDC-U.

**Note:** The External Power Supply connected to the S-PCON-U in Option 2 may not be required.

Option 3 -- Using non-PoE, run directly from Switch to S-EIDC-U and inject power at the installation site through the external power supply ports on the S-EIDC-U.

Option 4 -- Using non-PoE, run from Switch to S-PCON-U, use S-PCON-U for power injection, and then run from S-PCON-U to S-EIDC-U.

When using POE, bear in mind that an S-EIDC-U will request the maximum power of 15.4 watts from the PoE switch port to which it is connected. A PoE enabled switch has a total power budget that is divided among all the PoE switch ports; therefore, the total power draw from all PoE equipment connected to the switch cannot exceed the switch power budget. Make sure that the

aggregate power draw of all PoE powered devices does not exceed the total power budget of the switch. Exceeding the power budget of a PoE enabled switch will cause an S-EIDC-U to randomly fail.

**Important:** If both a PoE enabled switch and DC power are connected to the S-PCON-U, priority is given to the DC power supply. In such instances, PoE power is still being allocated by the PoE switch and counts toward the aggregate total power budget of the switch.

## Determining The Network IP Address Type

**Note:** Network communication formats and configurations have not been UL verified for the S-EIDC-U and S-PCON-U.

The S-EIDC-U controller will appear as a full IP client on the data network, and thus will require an IP address. The network connection for the S-EIDC-U will be for either static addressing or DHCP (Dynamic Host Configuration Protocol) addressing. Use of either a DHCP permanently leased IP address or a static IP address is required by the S-EIDC-U.

Whenever power is initially applied to the S-EIDC-U, the S-EIDC-U will signal the current IP address that it is receiving. (Signaling also will occur when the S-EIDC-U is rebooted, that is, disconnected and then connected.) To determine the IP address type, connect power to the S-EIDC-U and note the address reported by the device as follows:

1. Use the LEDs on the S-EIDC-U unit when you are ready to note the IP address. If you look at the S-EIDC-U closely, each of the top five LEDs on each side have a number (left side 1-5 and right side 6-0).
2. Disconnect the power from the S-EIDC-U and then reconnect the power. The S-EIDC-U unit will boot and then attempt to acquire an IP address. (This happens because the S-EIDC-U is shipped from the factory set for DHCP addressing).
3. If the following sequence occurs when power is connected to the S-EIDC-U, the network IP address type may or may not be DHCP:
  - All LEDs will flash three times to begin the sequence. (The S-EIDC-U is fully operational during IP address flashing.)
  - A numbered (LED) will flash representing each number in the IP address. Each number group is separated by all LEDs flashing once.  
**For example:** 145.198.1.1 interprets as #1 flash #4 flash #5 flash <all flash> #1 flash #9 flash #8 flash <all flash> #1 flash <all flash> #1 flash <all flash>.
  - Once the sequence has repeated 3 times, the S-EIDC-U LEDs will return to normal operation mode.

**Important:** If DHCP addressing is to be used, the DHCP address must be a permanently leased address. Read the section “[Setting A DHCP IP Address Within The S-EIDC-U](#)” later in this Chapter. Then check with the Network Administrator at the location for the availability of permanently leased DHCP addresses.

4. If the following sequence occurs when power is connected to the S-EIDC-U, the network IP address type is static:
  - All of the LEDs on the S-EIDC-U unit flash continuously for about 10 seconds (more than 3 times) after the S-EIDC-U receives power.



This means a DHCP IP address cannot be determined (i.e., there is no DHCP connection). When this occurs, the S-EIDC-U will revert to its built in default static address of 169.254.1.1

**Note:** The default static address can be changed when the S-EIDC-U is configured. Refer to the section “Setting A Static IP Address Within The S-EIDC-U” below.

## Setting A Static IP Address Within The S-EIDC-U

An S-EIDC-U can be statically addressed using a permanent IP Address, Subnet Mask, and Gateway (i.e., default route). To do this, perform the following steps:

1. To determine the current IP address of the controller, use the LEDs on the S-EIDC-U unit and note the IP address. If you look at the S-EIDC-U closely, each of the top five LEDs on each side have a number (left side 1-5 and right side 6-0).
2. Disconnect the power from the S-EIDC-U and then reconnect the power. The IP address of the device will be displayed three times on power up. IP address interpretation from LEDs is as follows:
  - All LEDs will flash three times to begin the sequence. (The S-EIDC-U is fully operational during IP address flashing.)
  - A numbered (LED) will flash representing each number in the IP address. Each number group is separated by all LEDs flashing once.  
**For example:** 145.198.1.1 interprets as #1 flash #4 flash #5 flash <all flash> #1 flash #9 flash #8 flash <all flash> #1 flash <all flash> #1 flash <all flash>.
  - Once the sequence has repeated 3 times, the S-EIDC-U LEDs will return to normal operation mode. Note that the entire sequence can be repeated at any time by power cycling the S-EIDC-U.
3. Obtain a valid static IP Address, Subnet Mask, and Gateway that is to be set into the S-EIDC-U from the Network Administrator of the facility where the S-EIDC-U is located.
4. Using a standard web browser, browse to the IP address obtained in Steps 1 and 2 above. Click the “Start” button to be presented with a login screen. The default user Name is **admin** and the default Password is **admin** (all lower case).
 

**Note:** If the Name and/or Password have been changed in the device and are unknown, the S-EIDC-U will need to be reset to its factory defaults to enable access. Refer to “[Resetting an S-EIDC-U](#)” later in this Chapter to perform a hardware reset.
5. Click the “System” button and then click “Controllers.”
6. Select the S-EIDC-U controller (i.e., click to highlight the line) and then click the “Modify” button.
7. Uncheck the “Use DHCP” box by clicking it. This enables the IP Address, Subnet Mask, and Gateway fields so that they can be changed.
8. Type the new IP Address, Subnet Mask, and Gateway information into the appropriate fields.
9. Click “Ok” and then “Done” to set the changes. The S-EIDC-U is now ready for further configuration and use.

## Setting A DHCP IP Address Within The S-EIDC-U

When using DHCP addressing, an S-EIDC-U on power up sends a request for an address lease to any DHCP server on the network. If a DHCP server is present on the network, that server will respond with an IP address, Subnet Mask, and Gateway (i.e., an alternate route) for the S-EIDC-U. The S-EIDC-U will store this information.

There are two primary types of DHCP addressing, which are as follows:

- Dynamic DHCP addressing with an expiration time limit
- Permanently Leased DHCP addressing

The S-EIDC-U requires Permanently Leased DHCP addressing. The problem with Dynamic DHCP addressing is that after a time the address assigned to an S-EIDC-U may expire, and the network could assign the S-EIDC-U a different address. If Supervisor Plus software is used with the S-EIDC-U, then Supervisor Plus may still be configured with the expired address. When this happens, random failures can occur within the S-EIDC-U and Supervisor Plus software application. If DHCP addressing is to be used at a location, check with the location's network administrator to ensure that only Permanently Leased DHCP addressing will be used with S-EIDC-U(s).

**Note:** The Supervisor Plus software has not been UL verified.

**Important:** Do not use Dynamic DHCP addressing with an expiration time limit. Always check with the network administrator to make sure that the network will be using Permanently Leased DHCP addressing if DHCP addressing is to be used with an S-EIDC-U.

## Setting An S-EIDC-U For DHCP Addressing

The S-EIDC-U is shipped from the factory set for DHCP addressing. If you are not sure an S-EIDC-U is set for DHCP addressing, or need to set an S-EIDC-U for DHCP addressing, do the following:

1. Perform the steps described in the “[Determining The Network IP Address Type](#)” section above to get the S-EIDC-U's current address.

2. Using a standard web browser, browse to the IP address obtained in Step 1.

3. Click the “Start” button to be presented with a login screen. The default user Name is **admin** and the default Password is **admin** (all lower case).

**Note:** If the Name and/or Password have been changed in the device and are unknown, the S-EIDC-U will need to be reset to its factory defaults to enable access. Refer to “[Resetting an S-EIDC-U](#)” later in this Chapter to perform a hardware reset.

4. Click the “System” button and then click “Controllers.”
5. Select the S-EIDC-U controller (i.e., click to highlight the line) and then click the “Modify” button.
6. Make sure that the “Use DHCP” box has a check mark in it. If unchecked, click the box to add a check mark to it. This enables DHCP addressing for the S-EIDC-U.
7. Click “Ok” and then “Done” to set the change.

## Resetting An S-EIDC-U

To perform a hardware reset of an S-EIDC-U, perform the following steps:

Step 1: Disconnect power from the S-EIDC-U. Refer to the “[Powering Up An S-EIDC-U](#)” section above to see the possible power connections.

Step 2: Disconnect any wiring that may be connected at Input 2 and at BUZ. Then place a jumper at Input 2 and BUZ (that is, connect the Input 2 terminal to the BUZ terminal with a wire.)

Step 3: Reconnect power to the S-EIDC-U, and then after about 3 or 4 seconds remove the jumper (without removing power) that connects the Input 2 terminal to the BUZ terminal.

Step 4: Wait for the LEDs to start flashing the IP address sequence. (You may have to wait up to 5 minutes before the flashing occurs.) Once the LEDs start to flash, recycle power to the S-EIDC-U by disconnecting the power to the S-EIDC-U and then reconnecting the power.

Once Step 4 has been performed, the reset procedure is complete and the S-EIDC-U will have been restored to its factory default.

## Quick Mount Assembly

The S-EIDC-U fits in any standard double-gang box, and simply clicks into the mounting plate.

**Note:** To meet UL requirements, unauthorized access of the Quick Mount Assembly is not permitted.



*Quick Mount Assembly Breakdown*



---

## Chapter 3: S-PCON-U (Power Connector)

### Contents

This Chapter provides a basic description of the Intelli-M<sup>®</sup> S-PCON-U. Various wiring and power up configurations for the S-PCON-U are shown.

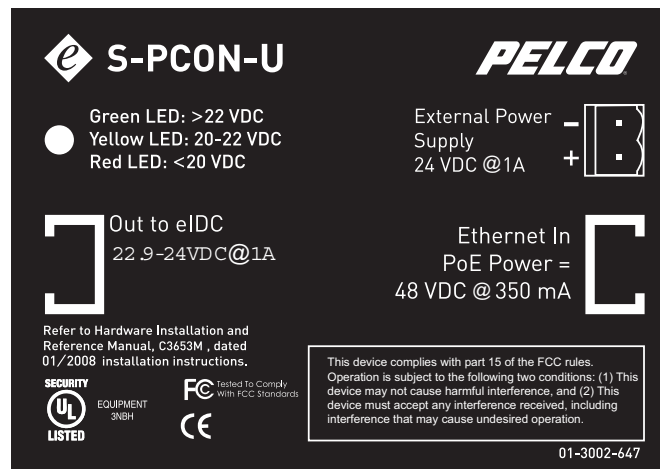
The following topics can be found within this Chapter:

- [S-PCON-U Overview](#)
- [Wiring And Powering Up S-PCON-U](#)

## S-PCON-U Overview

The Intelli-M Power Connector Module (S-PCON-U) is a dual input, single output power supply and communications module for the Intelli-M ethernet IDC (S-EIDC-U). It provides a method for supplying power and ethernet communication into the S-EIDC-U over a standard ethernet cable. Power is connected into the S-PCON-U via a PoE (Power over Ethernet) enabled switch connected to the input RJ45 ethernet connector, and/or by an external 24 VDC power supply connected to the DC input connector.

**Note:** PoE has not been UL verified.



*Intelli-M S-PCON-U*

## Technical Features

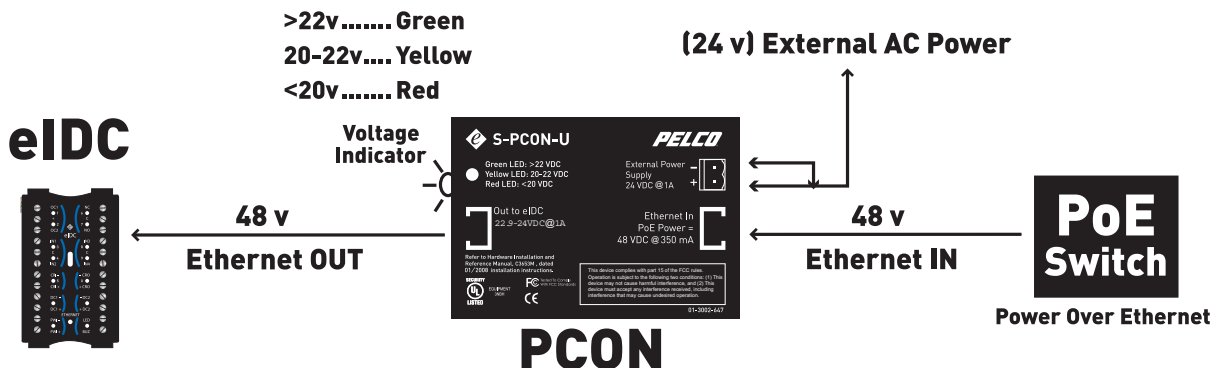
The Intelli-M S-PCON-U has the following technical features:

- Supports one S-EIDC-U
- One ethernet “In” port with capability of accepting PoE power at 48 VDC (350 mA)
- One ethernet “Out” port with capability of passing through PoE power at 48 VDC (350 mA)
- One connector capable of accepting 24 VDC from an external power supply
- LED voltage indicator

## Wiring And Powering Up S-PCON-U

When the S-PCON-U is connected to a PoE enabled switch, electronics inside the S-PCON-U signal the PoE switch to place power onto the input ethernet cable. This power is then directed by the S-PCON-U onto the output RJ45 Ethernet connector. When the S-PCON-U is connected to a non-PoE enabled switch it is necessary to provide an external power supply to the S-PCON-U. This DC power is then directed onto the output RJ45 Ethernet connector. If both a PoE enabled switch and DC power are connected to the S-PCON-U, priority is given to the DC power supply.

**Important:** The S-PCON-U device and its Power Supply must be installed within the protected area (locked area) of the access facility to meet UL requirements.



*S-PCON-U Wiring and Powering up Diagram*

The output LED on the S-PCON-U provides visual feedback that the device is functioning. The LED can be illuminated green to indicate output voltage is greater than 24 VDC, amber to indicate that output voltage is between 22 and 24 VDC, or red to indicate that output voltage is below 22 VDC.

**Warning:** When the S-PCON-U is operating DO NOT CONNECT any ethernet device other than an S-EIDC-U to the output RJ45 connector. Damage to electronics inside the connected ethernet device could result.

**Important:** It is important to maintain correct polarity when connecting a DC supply to S-PCON-U. Check for proper connection of the DC supply on the provided plug prior to connecting the supply to the S-PCON-U.





---

## Chapter 4: Wiring Connections And Configurations

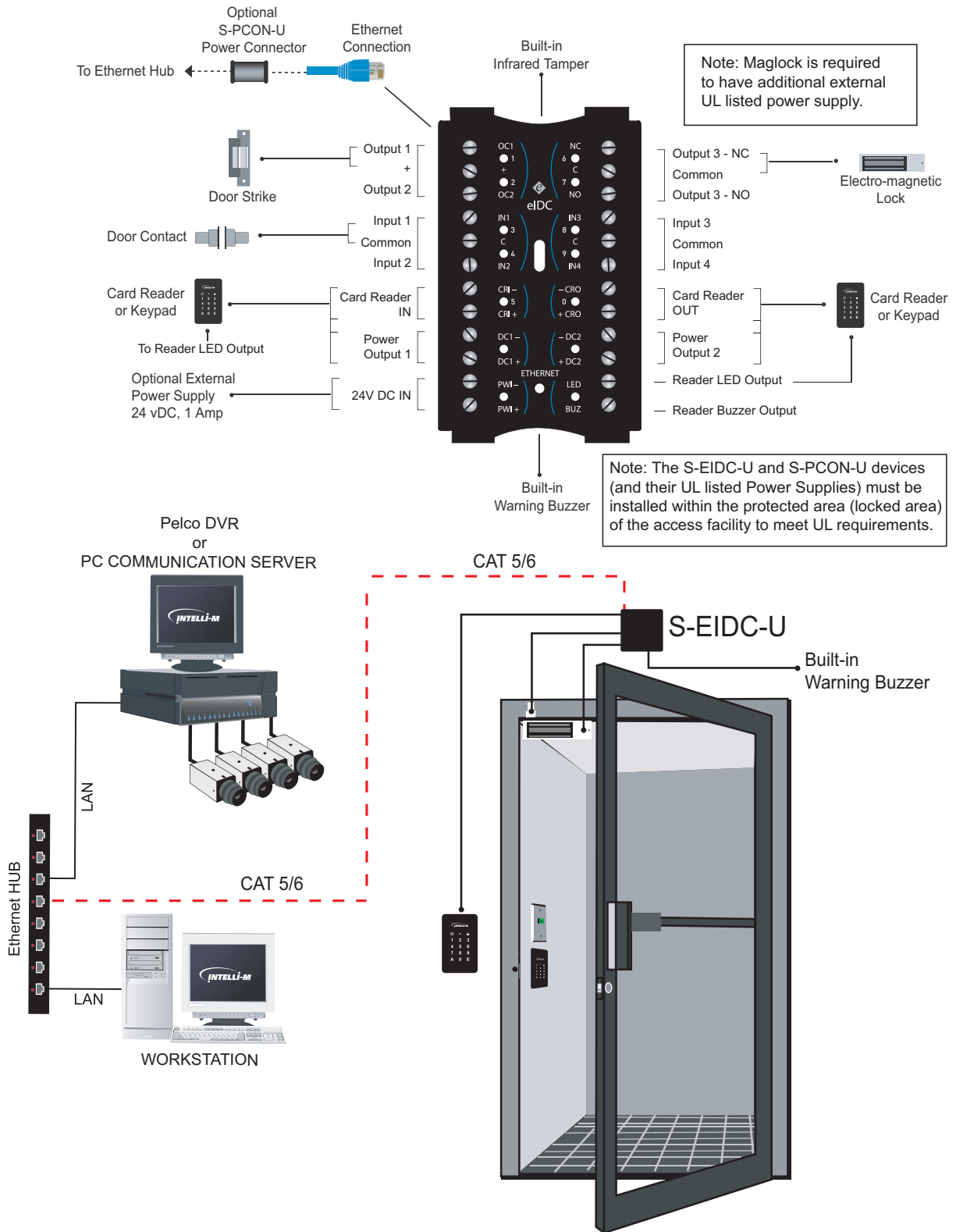
### Contents

This Chapter provides a description of the wiring connections for various Intelli-M products, and various configurations diagrams featuring the products as well.

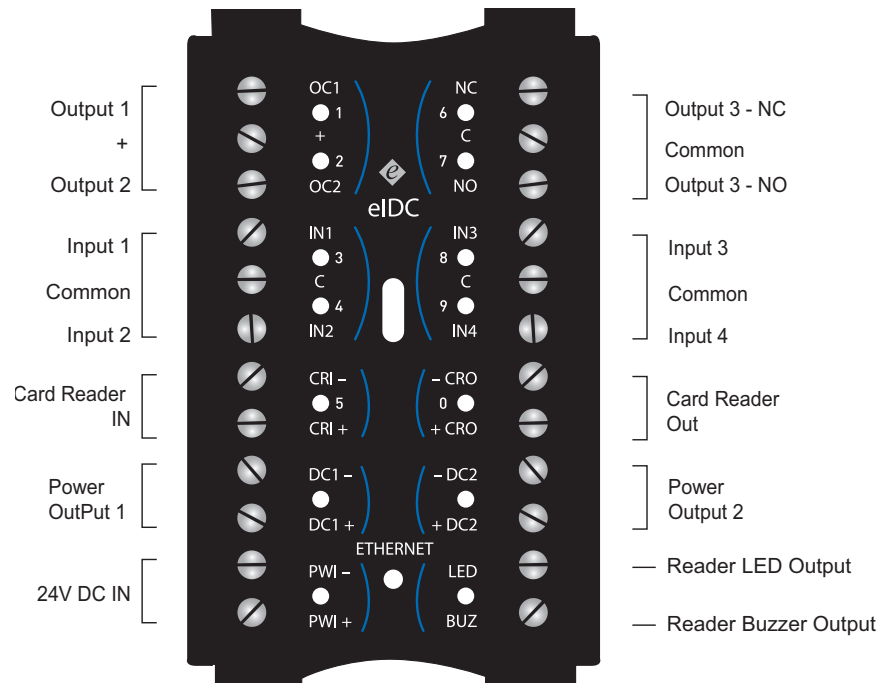
The following wiring connections and configuration diagrams can be found within this Chapter:

- [Sample S-EIDC-U Global Configuration](#)
- [S-EIDC-U Wiring Terminals](#)
- [Single Door Configuration With S-EIDC-U](#)

## Sample S-EIDC-U Global Configuration



## S-EIDC-U Wiring Terminals



The following circuit connections on the S-EIDC-U must occur in a “protected area” to meet UL requirements. A protected area is defined as being within the locked area of the access facility.

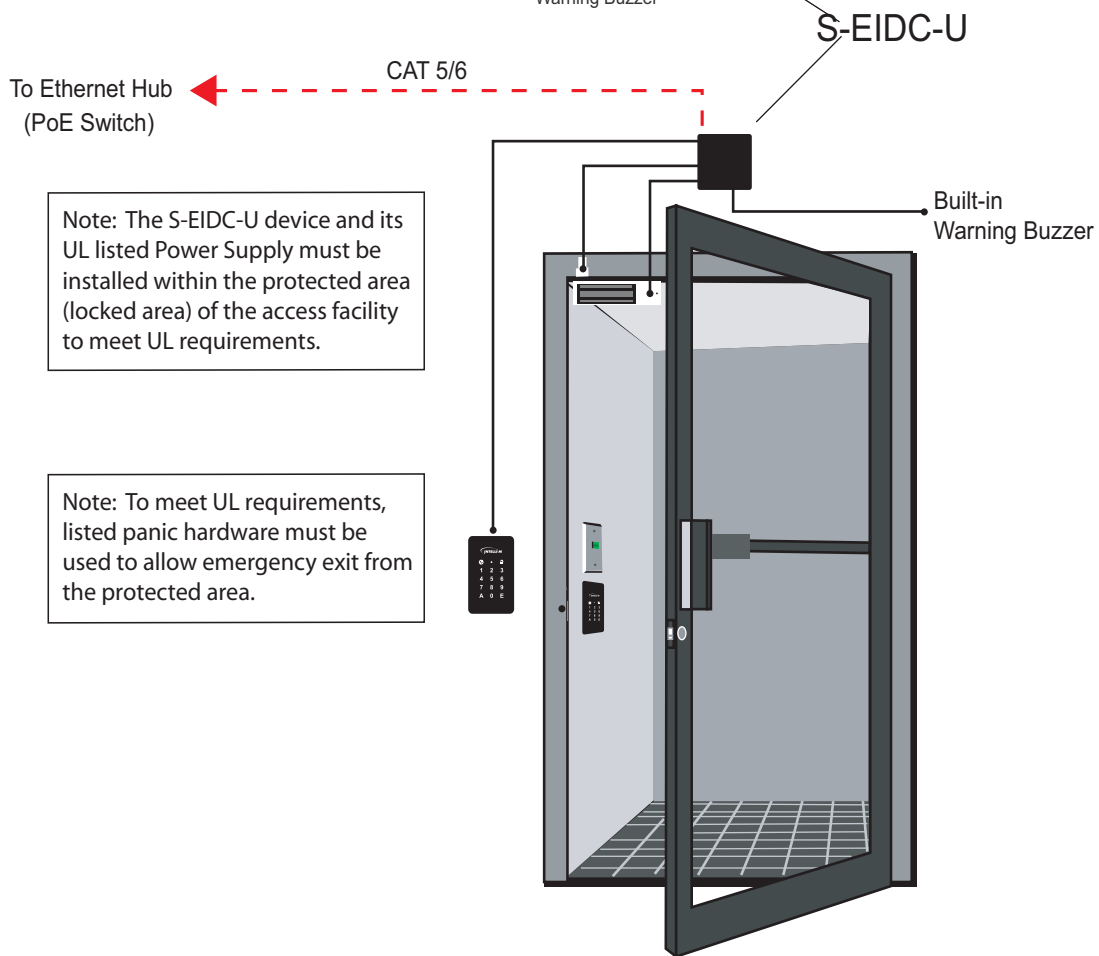
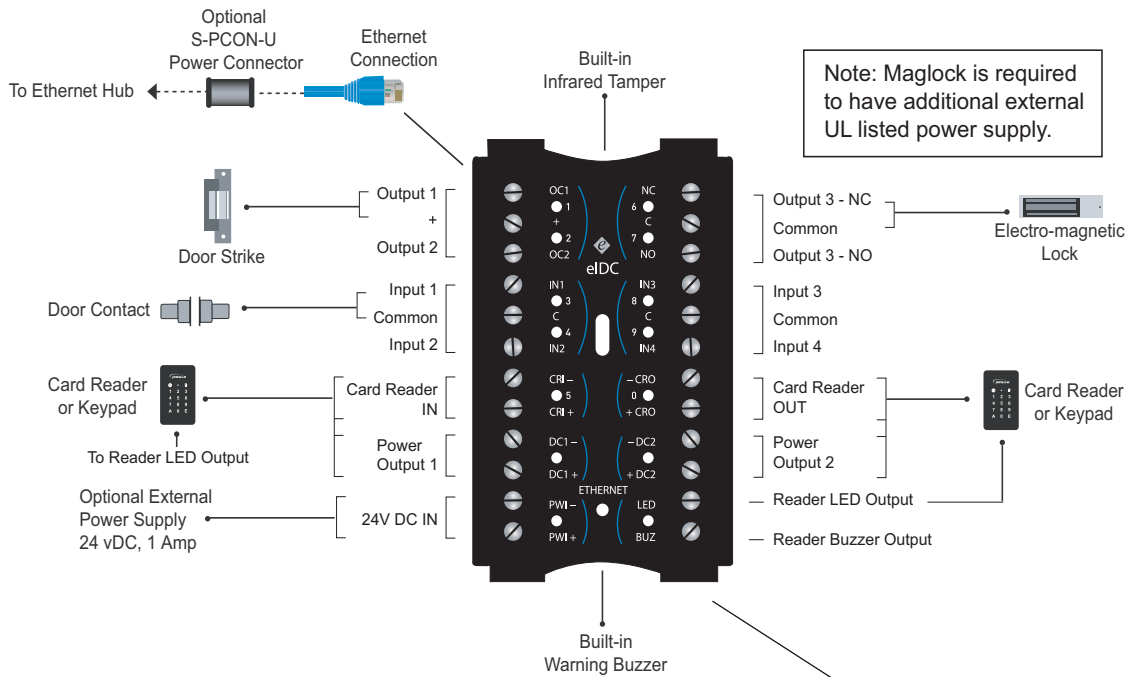
<u>Input Power</u>	<u>Outputs</u>
PW1+	OC1
PW1-	+
	OC2
<u>Relay Inputs</u>	<u>Relay Outputs</u>
IN1	NC
C	C
IN2	NO
IN3	
C	
IN4	

Input “C” is DC common or ground.

Relay Outputs “NC,” “C,” and “NO” must be connected to a lock within the same room to meet UL requirements.

Output “C” is common between the “NC” and “NO” contact on the relay. For example, if the relay is energized “NO” is connected to “C” and “NC” is not.

## Single Door Configuration With S-EIDC-U



---

## **Appendix A: eFamily Update Utility (Backup, Upgrade, And Restore eFamily Device Software)**

### **Contents**

The eFamily Update Utility provides the ability to update the firmware, backup the device configuration (including card holders, schedules, and services) and event history log, and/or restore a backup configuration to an eFamily device.

The following topics can be found within this Appendix:

- [Installing The eFamily Update Utility](#)
- [Before Updating Your eFamily Device](#)
- [eFamily Update Procedure](#)
- [Errors That Occur During Update](#)

## Installing The eFamily Update Utility

Installation of the eFamily Update Utility is dependent on Intelli-M<sup>®</sup> Supervisor Plus or the Intelli-M<sup>®</sup> Web Interface.

**Note:** The Supervisor Plus software has not been UL verified.

### Supervisor Plus Users

The eFamily Update Utility can be found on the Intelli-M Supervisor Plus installation CD. Once the CD is placed into the CD-ROM drive, right-click on the CD-ROM drive icon within “My Computer” and select “Open.” Navigate to the eFamily Update Utility folder, and then follow the installation procedure steps below.

### Web Interface Users

The eFamily Update Utility file can be downloaded from the Pelco Web site at: [www.pelco.com](http://www.pelco.com).

### Installation Procedure

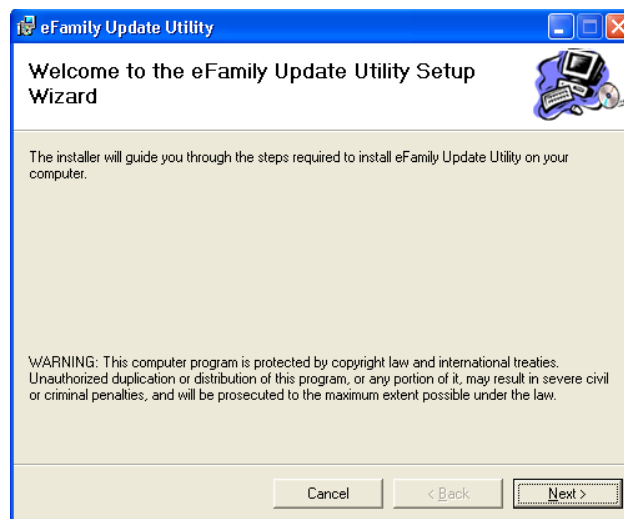
The procedure for installing the eFamily Update Utility is as follows:

**1. If the file was downloaded from the Web site, unzip the downloaded file.**

**Important:** Make a note of where you unzip the file contents, as you will need the unzipped files during the update procedure.

**2. Launch (double click) the “setup.exe” file.**

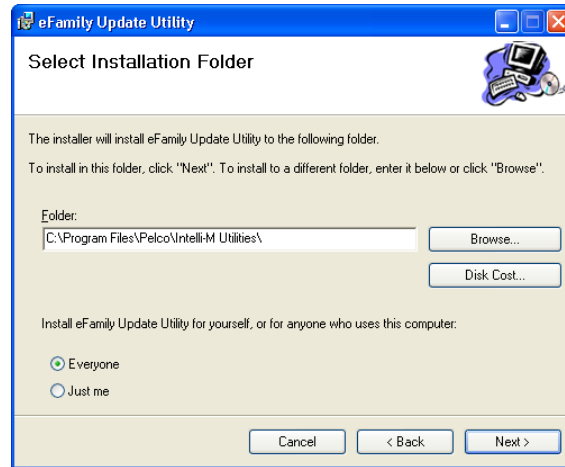
The welcome screen for the install wizard screen similar to that shown in Figure A-1 will be displayed.



*Figure A-1: Setup Welcome Screen*

**3. Click the “Next” button.**

The installer select installation folder screen similar to that shown in Figure A-2 will be displayed.



*Figure A-2: Select Installation Folder Screen*

Be sure to indicate if the utility will be used by only you, or if it will be used by anyone who has access to the computer.

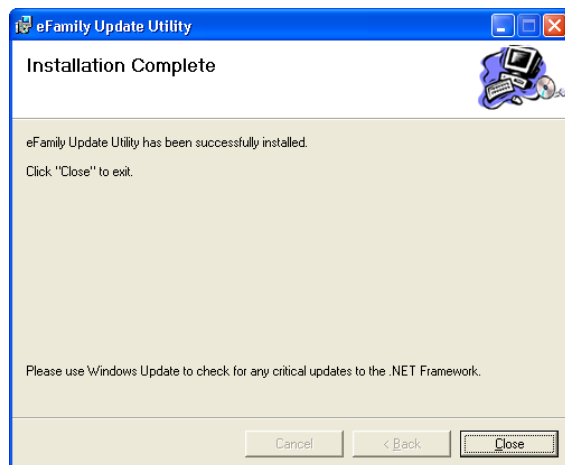
The “Disk Cost” button can be used to determine how much room is on each of the computer’s drives, and how much disk space (cost) will be used after the program is installed.

The “Browse” button can be used to install the utility at some location on the computer other than the default location.

**4. Click the “Next” button so that the “Confirm Installation” screen is displayed.**

This will prepare the installer to install the eFamily Update Utility onto the computer.

**5. Click the “Next” button. A screen displaying the progress of the installation process will be displayed. Then, an “Installation Complete” screen similar to that shown in Figure A-3 will be displayed.**



*Figure A-3: Installation Complete Screen*

**6. Click the “Close” button.**

This completes installation of the “eFamily Update Utility”.

## Before Updating Your eFamily Device

To update an eFamily device, you must first gather the following information for the procedure:

- IP Address of the device you want to update
- Port number configured for communication (The default port number is 18777.)
- FTP Username and Password for that device (The default Username and Password is the word “admin” without the quotes.)
- Location of the update file

If you are unsure of the IP address for the eFamily device you plan to update, power cycle the device. As the device boots, the IP address will be signalled by the LEDs. Refer to the “[Determining The Network IP Address Type](#)” section within Chapter 2 of this manual for details on reading the IP address from an eFamily device.

## eFamily Update Procedure

Perform the following steps to update an eFamily device:

**Important:** If Supervisor Plus is running, shut it down before launching the eFamily Update Utility.

**Note:** The Supervisor Plus software has not been UL verified.

1. **Launch the eFamily Update Utility** (Start >> All Programs >.> Pelco >> Intelli-M Utilities >> eFamily Update Utility).

The following screen will be displayed.

**Note:** If your computer needs to be updated to .NET Framework 2.0, then installation screens for NET Framework will be displayed before the screen shown in Figure A-4 is displayed.

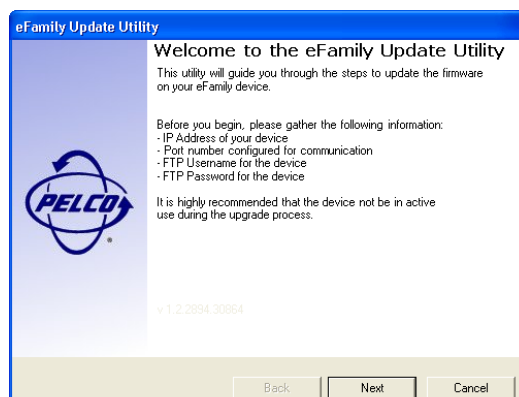


Figure A-4: eFamily Update Utility Screen

Click the “Next” button.

2. **Type in the connection information used by the eFamily device to be updated.**

A screen similar to that shown in Figure A-5 will be displayed requesting the path to the upgrade file. Type in the IP address. The TCP port number, FTP user name, and FTP password are system defaults. If you are unsure of the port number, user name, or pass-



word for your system, then use the default information provided. In most instances, the default information will be correct. If you know that your TCP port number and/or name and password are different, then type in the correct information for your system.

Figure A-5: Connection Information Screen

Click the “Next” button which will display the “Backup File” screen. Since updating an eFamily device erases any configuration data coded into it, a dialog is displayed that gives the opportunity to back up the device. Refer to Figure A-6.

Figure A-6: Choice To Backup Screen

If “Yes” is selected, “Backup Device Configuration” is enabled on the Backup File screen. Refer to Figure A-7. An additional option is also given to backup up the Event Log on the eFamily device.

If “No” is selected, a verify skip backup dialog is displayed, then “Skip Configuration Backup Step” is enabled.

Figure A-7: Connection Information Screen

The “Browse” button can be used to change the default name of the backup file (which is the year, month, and date per the computer’s clock in yyyyymmdd format), and can also be used to change the default location (eFamily Update folder) to which the device’s current configuration is saved.

Click the “Next” button which will display the “Update File” screen.

3. **The eFamily Update Utility file will have an .iti or .xml extension. Use the “Browse...” button to navigate to the file and open it. Refer to Figures A-8 and A-9.**

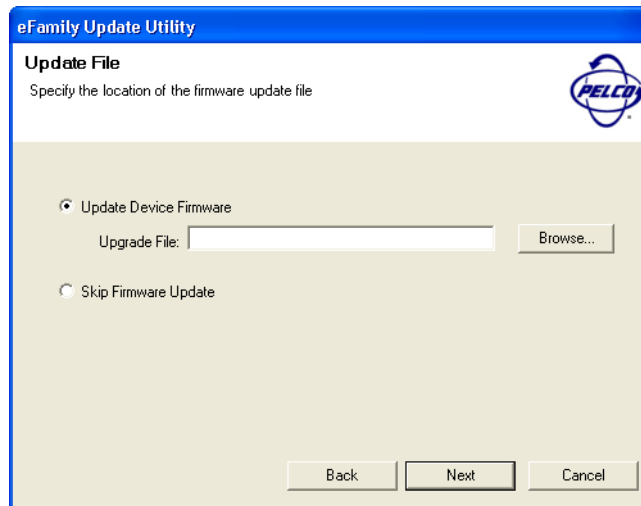


Figure A-8: Example Use Of Path To Upgrade File Screen

If “Skip Firmware Update” is enabled (checked), go to Step 4.

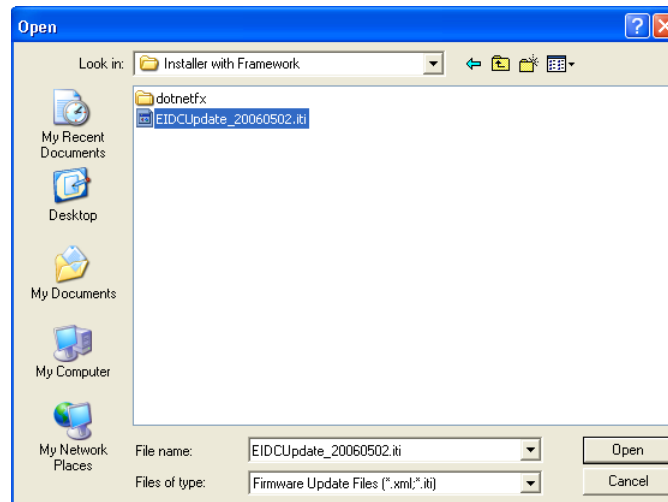


Figure A-9: Example Of Browse Button Being Used Screen

If “Skip Firmware Update” is disabled (unchecked), click the “Next” button and go to Step 5.

4. The “Restore File” screen is used to load a configuration onto the device that is different from the one currently on the device. (An example of this would be a previously backed up configuration.) Refer to Figure A-10. Use the “Browse...” button to navigate to the file, and then click the “Next” button.

**Note:** The backed up eFamily configuration file must have an .iti or .xml extension.

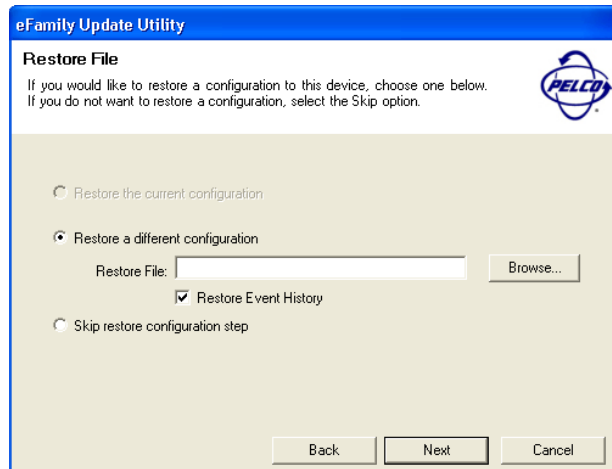


Figure A-10: Example Of Browse Button Being Used Screen

An additional option is also given to restore the Event History on the previously backed up file to the eFamily device.

5. The “Summary of Tasks” screen will be displayed. Check the summary of tasks the update utility will perform.

A screen similar to that shown in Figure A-11 will be displayed listing the tasks that will be performed by the utility. Check the list to make sure the tasks listed are the ones desired. The “Back” button can be used to make changes to the tasks that are to be done.

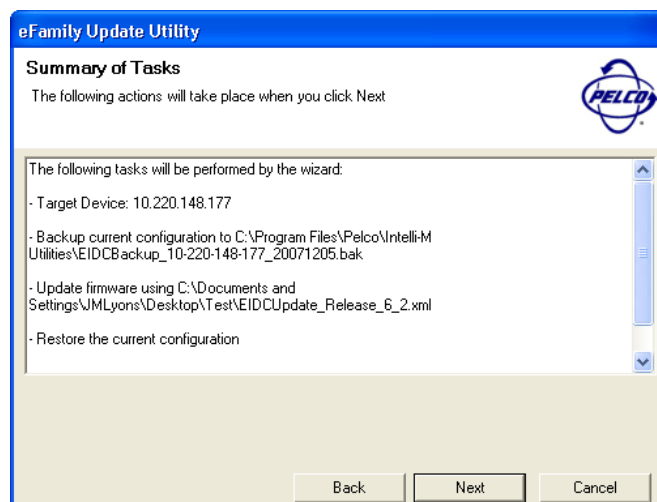
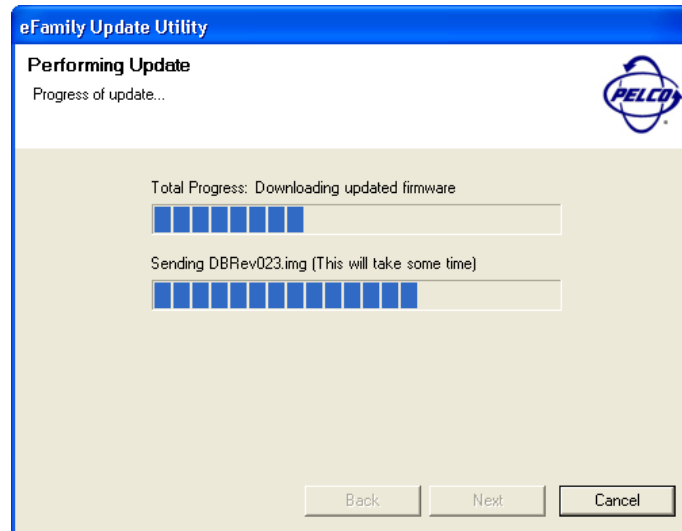


Figure A-11: Connection Information Request Screen

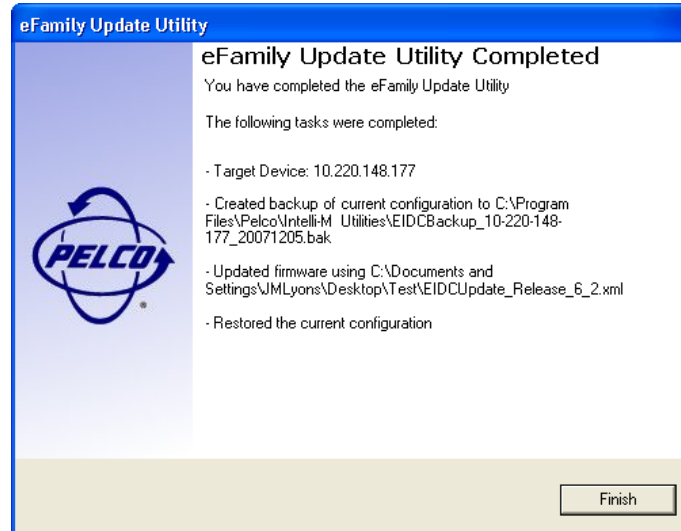
**6. Click the “Next” button to upgrade data to the eFamily device.**

As the update proceeds, the screen will provide details about the update process. Refer to Figure A-12.



*Figure A-12: Update In Process Screen*

Once the update is complete, a screen similar to that shown in Figure A-13 will be displayed indicating that the update is complete.



*Figure A-13: Update Complete Screen*

Click the “Finish” button to close the utility, or click the back button to update a different eFamily device.

## Errors That Occur During Update

If any problems occur during the update process, an error message similar to that shown in Figure A-14 with details about the problem will be displayed.



*Figure A-14: Example Error Message*

Dismiss the message by clicking the “OK” button. Verify that the device is online and operating properly. Use the “Back” button to verify the information specified on each screen, and then attempt the update again.

**Important:** It is very important that neither the Supervisor Plus software nor the Web Interface is actively monitoring the device during the update process. These processes will interfere with the ability of the eFamily Update Utility to configure your device. It is highly recommended that the device be removed from normal operation and isolated on the network prior to updating the firmware.

**Note:** The Supervisor Plus software has not been UL verified.

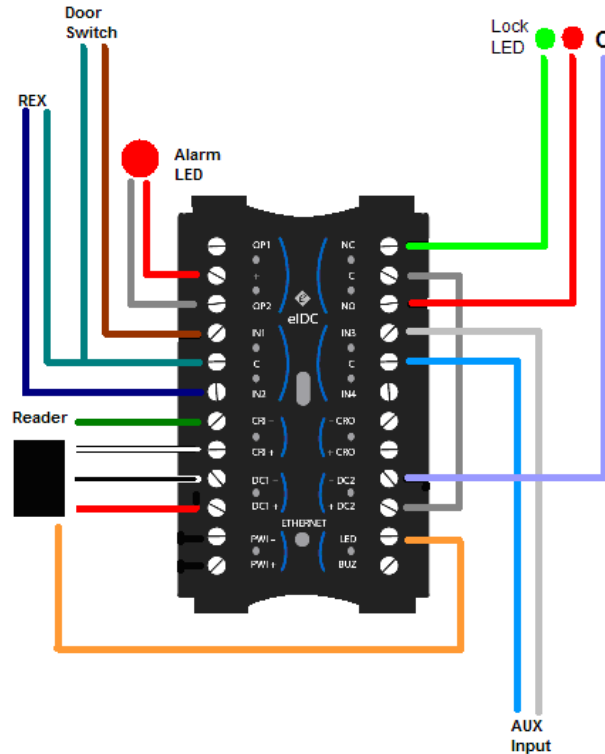


---

## Appendix B: Demo Kit Wiring

The following data provides the default configuration parameters if wiring the S-EIDC-U for a demo kit.

**Important:** An alarm is defined within Intelli-M as an event (i.e., alert) that is sent to the software monitoring the S-EIDC-U. This is not a “burglar alarm” nor has it has not been verified by UL.



*S-EIDC-U Demo Kit Wiring*

Defaults:

- Inputs: Demo Kit Inputs (Push buttons or Toggles) should be wired as Normally Open
- Outputs: Initial Status = De-Energized

Input Configuration:

- Input 1: Door Contact (NO)
- Input 2: REX (NO)
- Input 3: REX Free Egress (NO)

Output Configuration:

- Output 1: Door Strike (DE)
- Output 2: Alarm LED (DE)
- Output 3 Door Status LED (DE)
- Output 4 Buzzer (DE)

### Controller Configuration:

- Description: S-EIDC-U 300
- IP Address: 169.254.1.1
- Serial #: Obtain from back of S-EIDC-U
- Reader Type:
  - IN: Card reader
  - OUT: Reader + keypad

### Access Service Configuration:

- General Tab:
  - Description: Basic Door
  - Controller: S-EIDC-U (local default - 1.300)
  - Lock Schedule: Default (1/0/0/0)
  - Unlock Mode: Default Pulse (4 sec)
  - Door Open Too Long: Default
  - Anti-Passback: Default
- Inputs Tab:
  - Input 1 – Door Contact (Enable Door Status)
- Outputs Tab:
  - Lock Outputs:
    - Output 1 – Door Strike
    - Output 3 – Door Status LED
  - Warning Outputs:
    - Output 4 – Buzzer
- Triggers Tab:
  - Triggers:
    - CR-IN – Reader
    - CR-OUT – Reader + keypad
    - Input 2 - REX

### Alarm Service Configuration:

- General Tab
  - Controller: S-EIDC-U (local default - 1.300)
  - Input: Input 1 – Door Contact
  - Output: Output 2 – Alarm LED
  - Conditions: Input 3 – REX Free Egress



---

## Appendix C: Intelli-M<sup>®</sup> Hardware Technical Specifications

The specifications for various hardware components of the Intelli-M system are given below.

**Note:** All specifications are subject to change without notice

### S-EIDC-U Technical Specifications (Ethernet Integrated Door Controller)

#### Dimensions

##### **Ethernet IDC**

1.7" W x 2.82" H x 1.3" D  
(4.32 cm x 7.16 cm x 3.3 cm)

##### **Weight**

3.7 oz  
(105 g)

#### Quick Mount Assembly Kit Enclosure

##### **Recessed Mounting Box**

4.3" W x 4.3" H x 2.84" D  
(10.9 cm x 10.9 cm x 7.2 cm)

##### **Plaster Ring**

4.75" W x 4.75" H x 0.48" D  
(12.1 cm x 12.1 cm x 1.2 cm)

##### **Cover Plate**

4.75" W x 4.75" H x 0.48" D  
(12.1 cm x 12.1 cm x 1.2 cm)

#### Environmental

##### **Operating Temperature**

32° to 120° F  
(0° to 49° C)

##### **Storage Temperature**

-40° to 150° F  
(-40° to 66° C)

##### **Humidity**

0 to 85% relative (non-condensing)

## **Power**

Direct from PoE (Power over Ethernet) Switch

**Note:** PoE has not been UL verified.

Optional: External (24 VDC, 1 A) Power Supply

**Note:** Power Supply must be UL 294 listed with a power limited output rating of 9.5 to 24 VDC.

## **Communication**

Ethernet -- 10 BaseT with a maximum distance of 100 meters (328 feet)

Cable -- CAT 5, CAT 5E, CAT 6

## **Reader Ports**

There are 2 reader ports on an S-EIDC-U.

Reader Power -- 12 VDC @ 250 mA per reader port

**Note:** Shared with Output 1 and Output 2. Refer to “Outputs” below.

Reader Types -- Standard Wiegand

**Note:** Recommended standard Wiegand readers are the HID ProxPoint Plu 6005 series, HID ProxPro 5355 series, or XceedID model XF2100.

**Note:** Smart Card readers are not yet supported in the S-EIDC-U.

## **Inputs**

There are 4 programmable inputs on an S-EIDC-U with configurable circuit type (contact closure or TTL) and optional EOLR (End Of Line Resistor) supervision. Plus there is an integrated infrared tamper.

**Note:** The tamper sensor can be programmed within the Alarm Services of the Supervisor Plus software, and must be enabled to meet UL requirements. Refer to the “Intelli-M Software Installation and Reference” manual. The Supervisor Plus software has not been UL verified.

## **Outputs**

There are 3 programmable outputs and a built-in warning buzzer output on an S-EIDC-U.

Outputs 1 & 2 -- Open collector outputs with electronic overload protection (max 450 mA @ 12 VDC)

**Note:** The eIDC provides 750 mA of continuous power:

- The maximum total of all output power from the eIDC is 750 mA.
- The maximum output of either reader is 250 mA.
- The maximum output from the combined open collectors is whichever of the following is less: 450 mA or 750 mA less the sum of the readers.

Output 3 -- Form C, SPDT relay output with configurable initial state (max 5 Amp @ 30 VDC)

Output 4 -- Built-in warning buzzer or alarm tone generator (max 85 dB)

## **Certifications**

CE, FCC, ROHS, UL 294

# S-PCON-U Technical Specifications (Power Controller)

## Dimensions

### **Power Connector Module (S-PCON-U)**

3.40" W x 2.25" H x 1.03" D (8.64 cm x 5.72 cm x 2.62 cm)

### **Weight**

3.5 oz (99.2 g)

### **Composition**

Body: Black Anodized Extruded Aluminum    End Caps: Black ABS Plastic

## Environmental

### **Operating Temperature**

32° to 120° F (0° to 49° C)

### **Storage Temperature**

-40° to 150° F (-40° to 66° C)

### **Humidity**

0 to 85% relative (non-condensing)

## Operational

### **Input Connectors**

Ethernet -- 10/100 BaseT, RJ45

**Note:** The Ethernet Input Connectors have not been UL verified.

DC Power -- 2-Position, Pitch 0.200i (5.08 cm), EuroStyle

### **Output Connector**

Ethernet -- 10/100 BaseT, RJ45

### **Output Indicator**

LED -- Multi-Color: Green, Amber, Red

### **Power In**

Power over Ethernet (PoE) -- 802.3af compatible Ethernet switch

**Note:** PoE has not been UL verified.

DC Power -- 24 VDC, 1A

**Note:** Power Supply must be UL 294 listed with a power limited output rating of 12.7 to 24 VDC.

### **Power Out**

Power over Ethernet (PoE) -- 48 VDC nominal (40 VDC minimum, 57 VDC maximum), 12 W maximum

**Note:** PoE has not been UL verified.

DC Power -- 22.9 to 24 VDC, 1A

## Miscellaneous Computer Hardware Specifications

**Note:** Miscellaneous Computer Hardware Specifications have not been UL verified.

### Performance Communications Server Requirements

-- The minimum requirements for a Performance Communication Server are as follows:

- 2 GHz CPU
- 1 GB RAM
- 120 GB hard disk
- 2 serial communication ports
- 1 parallel port
- 1 USB port (or additional parallel port for badging)
- 19" 1280 x 1024 true color monitor
- Operating system: Windows XP Professional or Windows® 2000 (service pack 4)
- Standard keyboard
- Standard mouse

### Minimum Server Requirements

-- The minimum requirements for a Server are as follows:

- 1 GHz CPU
- 512 MB RAM
- 80 GB hard disk
- 2 serial communication ports
- 1 parallel port
- 1 USB port (or additional parallel port for badging)
- 15" SVGA color monitor (1024 x 768, 16 bit)
- Operating system: Windows XP Professional or Windows® 2000 (service pack 4)
- Standard keyboard and mouse

### Performance Badging / Workstation Requirements

-- The minimum requirements for a Performance Badging / Workstation are as follows:

- 2 GHz CPU
- 512 GB MB RAM
- 20 GB hard disk
- 1 parallel port
- 1 USB port (or additional parallel port for badging)
- 19" 1280 x 1024 true color monitor
- Operating system: Windows XP Professional or Windows® 2000 (service pack 4)
- Standard keyboard and mouse

## Minimum Badging / Workstation Requirements

-- The minimum requirements for a Badging / Workstation are as follows:

- 1 GHz CPU
- 512 MB RAM
- 20 GB hard disk
- 1 parallel port
- 1 USB port (or additional parallel port for badging)
- 15" SVGA color monitor (1024 x 768, 16 bit)
- Operating system: Windows XP Professional or Windows® 2000 (service pack 4)
- Standard keyboard and mouse

## Digital Camera

-- Supervisor Plus supports digital cameras through a USB connection (additional camera manufacturer drivers must be installed separately using the software shipped with the camera). This allows you to capture photos and import them into Intelli-M Supervisor Plus through the clipboard (copy/paste) or a file on disk. For detailed instructions on using a digital camera with the Intelli-M Supervisor Plus software, see the "Intelli-M Software Installation And Reference" manual.

## USB Camera (WebCam)

-- Supervisor Plus allows badge image capturing directly from a USB camera (WebCam). This requires USB digital cameras compatible with Microsoft's® DirectShow (a component of DirectX version 8.0a and later), which works only on Windows® 2000 or Windows XP.

## Signature Capture

-- Intelli-M Supervisor Plus includes built-in support for the PenWare 3100 digitizing signature pad from MobiNetix Systems. For detailed instructions on using a signature pad, see the "Intelli-M Software Installation And Reference" manual."

## Modem

-- 3Com U.S. Robotics Sportster 56K fax-modem (external version recommended) or selected Hayes compatible modems are supported.

## Network Requirements

- The MSDE/MSSQL database must be accessible from all computers.
- Recognition is established using the Windows computer name on the network.
- Computers must be visible to each other through the Microsoft-compliant network.
- Intelli-M Supervisor Plus requires the TCP/IP network protocol.

## Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>