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EdgeReader & EdgePlus

Quick Installation Guide

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Contents

Introduction

The HID® EdgeReader™ and EdgePlus™ are a unique IP-enabled intelligent access control processor and host interface solution in a single unit. They are designed to provide a complete and full-featured access control hardware/software infrastructure at "the edge" of the network for OEM software host systems.

Today, as more IT departments become involved in the security system implementation decision-making process, they prefer that access control be managed over the network. The EdgeReader and EdgePlus address this by offering an IP-based solution incorporating PoE capability that takes advantage of existing LAN and CAT-5 cable infrastructure. In addition, they can be fully integrated into any host system utilizing an IP network software interface.

Parts List

Description	Quantity
EdgeReader or EdgePlus	1
- Mounting screws	4
- 2.2K EOL resistors	8
- Quick Installation Guide	1
- Quick Reference Card	1

Product Specifications

| Description	Specification
Power Supply	12-16VDC or Power over Ethernet (PoE)
Maximum current at 12VDC per EdgeReader	1 Amp
Average operating current at 12VDC	300 mA – ERW400 EdgeReader and no accessories

Maximum Supplied Power
    - ERW400 EdgeReader
    - E400 EdgePlus
	
	600 mA – Split between one or two relays
	700 mA – Split between a reader and one or two relays

Relay Contact Rating	2 Amps @ 30VDC
Operating temperature range	32°-122°F (0°-50°C)
Humidity	5% to 95% non-condensing

Cable Specifications

Cable Type	Length	Specification
Input Circuits *	500 feet (150 m)	2-conductor, shielded, using ALPHA 1292C (22AWG) or Alpha 2421C (18AWG), or equivalent.
Output Circuits *	500 feet (150 m)	2-conductor, using ALPHA 1172C (22AWG) or Alpha 1897C (18AWG), or equivalent.
Wiegand (Remote mounted reader only)	500 feet (150 m) to reader	ALPHA 1299C, 22AWG, 9-conductor, stranded, overall shield. Fewer conductors needed if all control lines are not used.
Ethernet	328 feet (100 m)	Cat5, Cat5E, and Cat6
Power Supply +12 VDC IN	----	Refer to your Power Supply Installation Guide.

* Minimum wire gauge depends on cable length and current requirements.

Overview

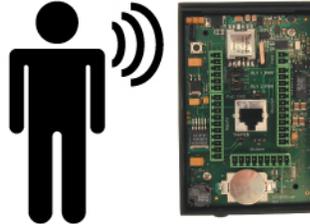The following outlines what is required to install the Edge device.

① Connect
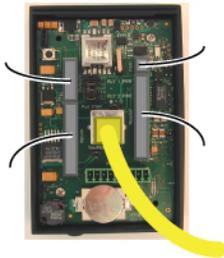
Connect includes:
Mounting and wiring the
Edge device.

② Contact

Contact includes:
Establishing communication
with the Edge device.

③ Configure

Configure includes:
Establishing communication so the
host can push down the detailed
configuration data.

④ Communicate

Communicate includes:
The Edge device
communicating with the host
to complete the configuration.

Step 1   Connect

1.1   Wiring the Edge Device

Reference **82000-902 Reference Card** for wiring instructions.

Step 2   Contact

Contact the Edge device through two methods.

- Discovery Client (DHCP or Static TCP/IP Configurations Only)

- Virtual Port

2.1   Discovery Client

The Discovery Client provides a technician with a method of locating all of the Edge devices that are connected to a network. Edge device information is displayed providing the ability to 'blink' the Edge device Comm LED and configure it by launching a browser pointed at the Configuration GUI of the targeted Edge device. When the Discovery Client is launched, a discover command is issued and the Configuration GUI screen is populated with the results. Also provided is the ability to refresh the Configuration GUI screen on command.

Use this feature when the Edge device(s) and the network have been installed and are operational, but before the Edge device(s) has been configured. At this point, all of the Edge devices on a network will have the same host name and unknown IP addresses (assuming a DHCP environment). In this scenario, the only mechanism available to configure a Edge device is by placing one device on the network at a time. The Discovery Client provides an easy to use mechanism to configure Edge devices.

2.1.1   Installation

An operating system of Windows® XP with .NET Framework v2.0 installed is a requirement for the Discovery Client to function properly.

1. The Discovery Client can be downloaded by placing the following path in an Internet browser. http://www.hidcorp.com/downloads/DiscoveryClient.zip

2. The **File Download** dialog will display, click **Open**

3. When the contents of the zip file display, double-click **setup.exe**

4. If a security warning is received, click **Run**

5. From the Discovery Client Welcome page, click **Next**

6. Select the Installation folder and who should have access to the Discovery Client, click **Next**

7. Confirm the installation location, click **Next**

8. Click **Close**

2.1.2 Use

The following provides information on how to access and use the Discovery Client.

Note: The computer operating the Discovery Client must be within the same subnet (IP address range) as the Edge devices.

1. Enable Edge devices on the network

2. Click **Start** > **Programs** > **VertX Tool Box** > **Discovery GUI** to access the Discovery Client

3. Displayed is a list of Edge devices attached to the network. If there is more than one Edge device listed, the Edge devices can be identified using the MAC Address label on the unit

4. If unsure of an Edge devices physical location click **Blink ON** to start the Comm LED blinking on the Edge device. Note the name on the button will change to **Blink OFF**. When verification of the Edge device is complete, click **Blink OFF**

5. Click **Configure Unit** to open the **Basic Configuration** page of that Edge device

6. Go to Step 1 Configure, page 6

2.2 Virtual Port

Contact an Edge device by directly connecting the computer to the Edge device using an Ethernet cable. By default, every Edge device is configured to respond to a fixed address: **169.254.242.121**.

1. Ensure you are running a Windows 2000 or XP computer

2. Disconnect your Windows computer from its hub or network

3. Connect the Windows computer to the Edge device with an Ethernet cable

4 Using the Windows® **Start** button, click **Start** > **Run**

5. Enter **ipconfig /renew** -- wait for DHCP to timeout (approximately 60 sec). The computer will acquire a **169.254.x.x** address

6. Access a web browser and enter **169.254.242.121** into the **Address** field. The Edge device is now accessible through this Virtual Port

Step 3 Configure

This section describes the communications configuration that enables the Edge device to communicate with the host software.

There are three methods of communication possible on an Edge device:

- Dynamic Host Configuration Protocol (DHCP) TCP/IP Addressing

- Static TCP/IP Addressing (see Configuration Checklist, page 14 for a list of criterion needed for a Static TCP/IP configuration)

- Modem (see Configuration Checklist, page 14 for a list of criterion needed for a modem configuration)

3.1 Edge Device Communications

The Edge device communications configuration is provided through a browser-based application called the **Configuration GUI** (Graphic User Interface).

Access a web browser and enter the Edge devices **IP Address** into the **Address** field.

3.1.1   Configuration GUI Login

The **Login** screen for that Edge device will display.

In the **User name** field, enter **admin** (leaving the **Password** field empty). Click **OK**.

3.1.2   Basic Network Setup

Select the **Connection Selection** radio button to establish your systems specific communication type.

Choices include:

- Network
- Modem
- Network with Modem Backup

Default network information will load. Before making changes, review the default network information.

Note: Most configurations will **not** require accessing the **Advanced Setup** screen.

3.1.2.1   Static Network

If using a Static TCP/IP network, proceed with changes using the information collected on the Configuration Checklist, page 14.

3.1.2.2   DHCP Network

If using a DHCP TCP/IP network, this information is configured automatically.

3.1.2.3   Modem

If using a Modem, proceed with changes using the information collected on the Configuration Checklist.

3.1.3   Basic Host Communication Setup

Enter the **Host IP Address** or **Host Name**, and the **Here I Am Interval** collected on the Configuration Checklist, page 14.

3.1.3.1   Login Password

During your first instance of accessing the Configuration GUI, you must change the password (located at the bottom of the screen). Enter a new password, and reenter the password in the second field.

Note: This step is not necessary during any consecutive Configuration GUI sessions. However on consecutive sessions the password may be changed.

Once configuration changes have been made, click **Submit**, and the **Confirmation** page (see 3.1.4 Confirmation, page 8) will display.

3.1.4 Confirmation

Once configuration changes are complete and submitted, the **Confirmation** screen will display. Verify that the changes submitted are accurate, and click **Save**. If the changes submitted are not accurate, click **Cancel** and adjust the settings appropriately.

Step 4 Communicate

Now the Edge device is connected, contacted and configured.

1. Reboot the Edge device by removing and reconnecting the power supply. The Edge device should be functional within 20-60 seconds.

2. Contact the host to test communications.

Basic setup is now complete!

Additional trouble-shooting tools are available through the System Status and Supplemental Configuration (page 9) screens.

Appendices

Troubleshooting

System Status

System Status provides a technician with a method of validating the Edge device installation, and field wiring. Perform the System Status at any time after the Edge device has been installed and power is available. In addition, a technician may perform a system status as many times as necessary.

Upon startup, the **System Status** page will display the Edge device's inputs, outputs, and host status.

Reference the **Legend** to determine the meaning of the different images.

Supplemental Configuration

Supplemental Configuration provides the ability to view and configure system inputs and outputs.

These buttons provide navigation to the following functionality:

 Configure - configure inputs, outputs and door characteristics

 System Time - update System Time

 Update System – updates the firmware

Configure

Configure provides the ability to view and modify system inputs, outputs and door characteristics.

Upon successful validation, the **Save** button will write modified values to the Edge device.

System Time

System Time provides the ability to view and set the date, time, and time zone values.

Upon initialization, Date, Time, Time Zone and TZ fields will be populated with the current system settings. The date displayed (non-text box) will be updated approximately every 30 seconds.

The **Time Zone** field provides a drop-down menu. One of the options in the **Time Zone** drop-down menu is **Custom Time Zone**. If **Custom Time Zone** is selected, the **TZ** text box will be enabled. Otherwise, the TZ is associated with the **Time Zone** field.

Update System

Update System allows the user to update the firmware on the Edge device. During a download the Edge device image flashes between grey and yellow. When a download completes the image color changes to green for success or red for failure. If the download fails, a tool tip with the error status code may be viewed by hovering the mouse over the image.

Note: Depending on the system, it may take several minutes to completely download.

Network Defaults Jumper

The **Network Defaults Jumper** requires that someone with physical access to the Edge device place a jumper over the P65 header prior to the rebooting the device. The Edge device reconfigures its network settings to the factory defaults when the jumper is on the header. From this point, configuration (or re-configuration) will proceed normally.

Use the **Network Defaults Jumper** to correct potential errors in an Edge device network configuration.

CAUTION: Upon rebooting the Edge device (with a jumper in place,) all network configuration information will be overwritten.
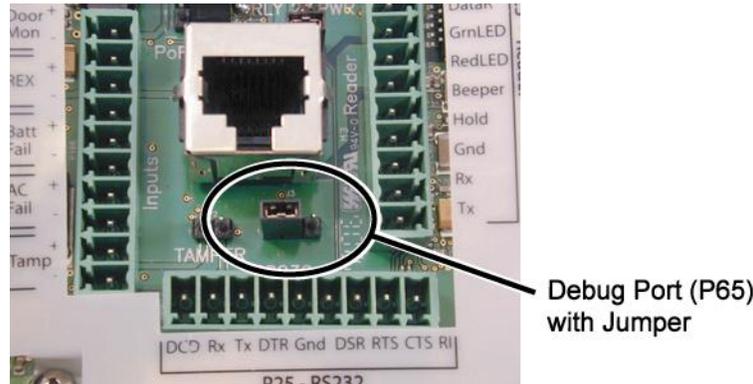

Figure 1 Network Defaults Jumper

1. Remove the jumper from Tamper header

2. Place the same jumper over the left two pins of the P65 header (as shown in Figure 1 Network Defaults Jumper).

3. Reboot the Edge device to change all of the configuration settings back to the factory defaults.

4. After the LED turns amber, remove the jumper from the P65 header, returning it to the tamper header. Upon removing the jumper it takes approximately 60 seconds for the Edge device to reset. Once the reset is complete, the LED will return to green.

5. Configure the Edge device for your installation parameters.

Firewall

If an Edge device is being installed where it communicates through a firewall, then the firewall should be configured to allow TCP data transfer on the specified port(s).

Note: Confirm with the Network/IT Admin what ports are to be allowed through the firewall. The following describes the default ports.

1. Before starting, ensure that any pop-up blocker software is disabled on the computer

2. Open the following ports on the firewall

- `connection_port (4070)`

- `listen_port (4050)`

If you are **not** familiar with configuring a firewall for the network, contact the Network/IT administrator or manager.

> **CAUTION:** If the firewall is not configured properly the Edge device cannot communicate with the host.

Contact Information

Americas

HID Global (California, USA)
support: support_na@hidvertx.com
sales: sales@hidvertx.com
main: (949) 598-1600
sales: (800) 210-4744
telephone: 1-800-237-7769
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fax number: +44 1440 714 840

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sales: salesapac@hidvertx.com
telephone: (852) 3160 9802
fax number: (852) 3160 4809

Certifications

All National and local Electrical codes apply.

- This equipment is intended to be powered from a limited power source output of a previously certified power supply.

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Class A Digital Devices

FCC Compliance Statement: This equipment has been tested and found to comply with the limits for a Class. A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Class B
Canada Class A
CE Mark – Europe (EU)
C-Tick – Australia and New Zealand
VCCI – Japan

Intentional Blank

Configuration Checklist

Ensure that the Configuration Checklist content is provided prior to attempting to install an Edge device.

Contact		
Name	**Email**	**Phone Number**
☐ IT contact		
☐ Sales / PM		

Hardware		
Name	**Source**	**Part Number**
☐ PoE Injector switch		
☐ Ethernet Cable		
☐ Computer with Web Browser		
☐ Hub (Optional)		
☐ AC Electrical Outlet or Surge Protector (Optional)		

Configuration Data	
☐ Connection Type	DHCP ☐ (DHCP data required in gray) Static ☐
☐ Edge Device IP Address	. . .
☐ Subnet Mask	. . .
☐ Default Gateway	. . .
☐ Primary DNS Server	. . .
☐ Secondary DNS Server	. . .
☐ Network Broadcast	. . .
☐ Domain Name	
☐ Edge Device Host Name	
☐ FTP Enabled	Yes ☐ No ☐
☐ Telnet Enabled	Yes ☐ No ☐
☐ Virtual Port Enabled	Yes ☐ No ☐
☐ Host Addressing (IP Address or Host Name)	. . . OR
☐ Here I Am Interval (sec)	
☐ TCP/IP Connection Port	
☐ TCP/IP Listen Port	
☐ Login Password	