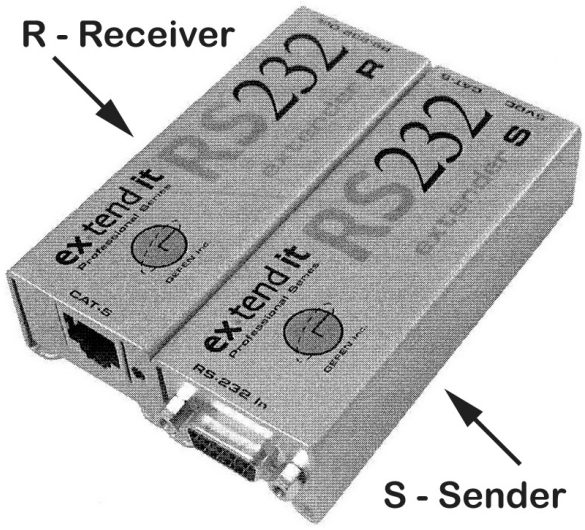
TS-DDH

TigerStop® Manual *Data Downloading*

May 2006 *Hardware*



Installation & User's Guide

ESC Ethernet-to-Serial Converter SX Serial Extender

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Table Of Contents

Ethernet to Serial Converter

Description and Use

The ESC is an Ethernet-RS232 adapter that lets you plug TigerStop into an ethernet network, eliminating the need for a serial port on your computer or a short haul modem, and permitting communication with TigerStop across your network.

Fig. 1

System Specification

The ESC consists of a white adapter box (Fig. 1) and its power cord. The adapter box has two DB9 serial ports, allowing one ESC to connect to two separate TigerStops and to communicate with each one separately. One serial cable is included.

There are two ports on the ESC, permitting simultaneous downloads to each of the two TigerStops.

The ESC is compatible with…

- any Ethernet network
- any TigerStop Level 2 (TigerSet) or higher
- TigerLink version 5.0 or higher

The connection to the TigerStop requires a straight-through serial cable with a male DB9 connector on one end, and a female DB9 connector on the other end. This is the standard cable used to connect a TigerStop to a computer, and is available at any electronics or computer store.

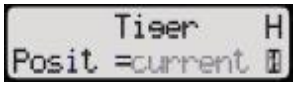
The connection to the network requires a standard straight-through CAT5[e] Ethernet cable with standard RJ45 connectors on each end. This is also available at any electronics or computer store.

Installation and Setup

Controller Setup

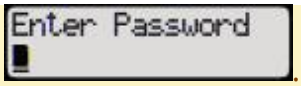
Concept On TigerStop's side of the installation, the controller has no specific setup requirements, but the user must know the controller's baud rate. The default setting is 115200, but this can be checked or changed in the Service Menu.

HowToDoIt To access the Service Menu and change the baud rate…

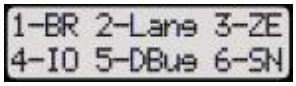
1. At the Ready screen 

hold down 

at the same time and then quickly release.

   The screen prompts you for a password 

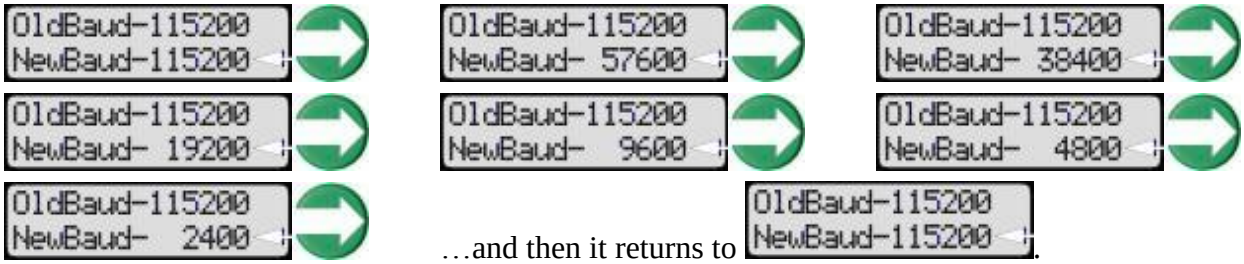
.

2. Enter the factory password 8 1 5 5 0 and press =.
3. The Service Menu will display 

the first six options.

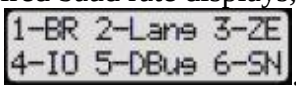
   Version 3.1 displays only 4 options. Version 3.5 and later displays 6 options on the first screen.
4. Press 1 to select the Baud Rate parameter.

   The top line of the screen displays the current baud rate, the bottom line displays the new baud rate.
5. Press + to cycle through the available baud rates from highest to lowest…



…and then it returns to

.

6. When the desired baud rate displays, press = to select it as the new baud rate and return to the service menu 

.
7. To exit the Service Menu, press Program List.

   The baud rate change takes effect upon exit.

ESC Hardware Setup

HowToDoIt

1. Plug one end of the power adapter included in the package into the wall, and the other end into the ESC.

   This should not be plugged into the same side of a line filter as a TigerStop.
2. Connect the female end of the serial cable to either port of the ESC, and the male end to the middle port of the TigerStop.
3. Connect either end of the Ethernet cable into the Ethernet port on the ESC, and the other end into a port on the network. It does not matter which end is plugged in to which port.

Software Setup

Concept This is done through Device Installer.

- The ESC comes with a default IP of 0.0.0.0, which sets it to DHCP.
- It is also possible to change the device's settings if the IP address is known by typing that address into the address bar of a web browser and using the Java utility found there. Don't forget to click Update Settings to affect any changes desired.

HowToDoIt Continue by turning to the following topics:

1. Install the Ethernet Device Installer
2. Run the Ethernet Device Installer

Computer Setup

HowToDoIt Install and run The Ethernet Redirector

Maintenance

The ESC should never need any maintenance. If a problem does develop, pulling out the power cord for 10 seconds should resolve it.

Use

Ensure that the redirector service is functioning, then connect to the virtual port normally (HyperTerm, TigerLink, custom program, etc). Everything should happen normally after this point.

See also…

ESC Troubleshooting

Ethernet Device Installer

Fig. 1

Concept

To use the ESC Ethernet-to-Serial Converter, some software on the accompanying CD (CD-UDS-04A) must first be installed and run on your computer.

The ESC comes with a Quick Start Guide from Lantronix (Fig. 1) and a CD (Fig. 2). Everything you need to know about the Ethernet-to-Serial Converter can be found in the TigerStop Manual. The Lantronix guide is for additional reference.

Fig. 2

HowToDoIt

Insert the CD into your CD-ROM drive.

If the CD launches automatically, continue at step 2.

If the CD does not launch automatically…

1. Click the START button on your computer task bar, and click Run.
2. Click Browse and select the CD-ROM drive. The Browse screen should look like Fig. 3 below.

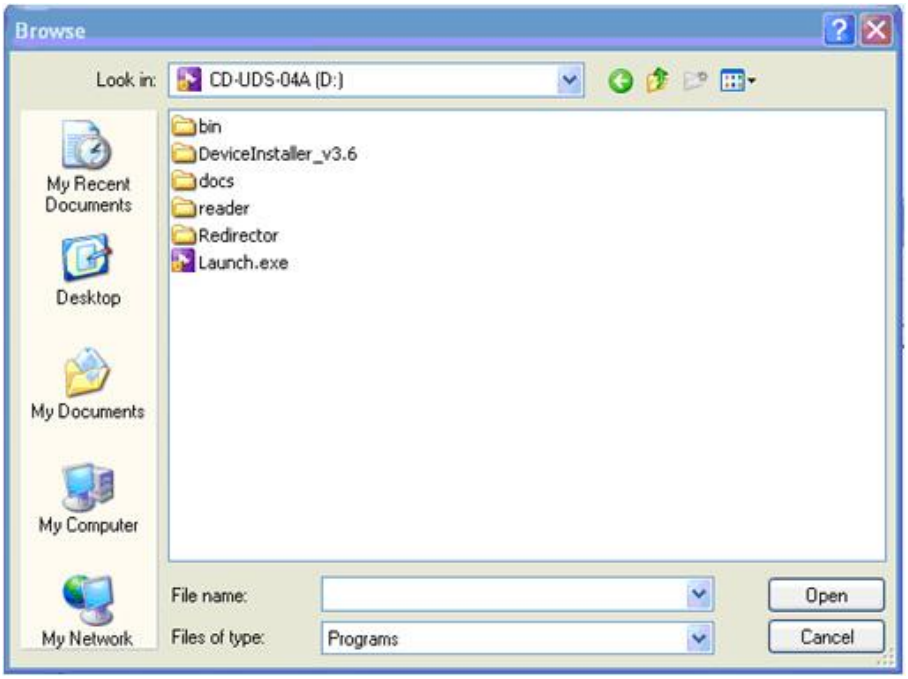


Fig. 3

3. Click Launch.exe.

If you get a message indicating that you need to download .Net Framework, go to http://ltxfaq.custhelp.com/cgi-bin/ltxfaq.cfg/php/enduser/std_adp.php?p_refno=020122-000019, download the file (Fig. 4) to your computer, and execute it.

Device Installer requires Microsoft's .NET Framework version 1.1
If you do not already have .NET Framework 1.1 installed, you can download it from the link below:

Product	Download via FTP	Download via HTTP
Microsoft .NET Framework v1.1	v1.1	v1.1

Fig. 4

4. Continue at the DeviceInstaller Setup Wizard.

The DeviceInstaller Setup Wizard (Fig. 5) will appear.

Fig. 5

5. Click Next.

The wizard will insert a default folder (Fig. 6) in which to install DeviceInstaller…

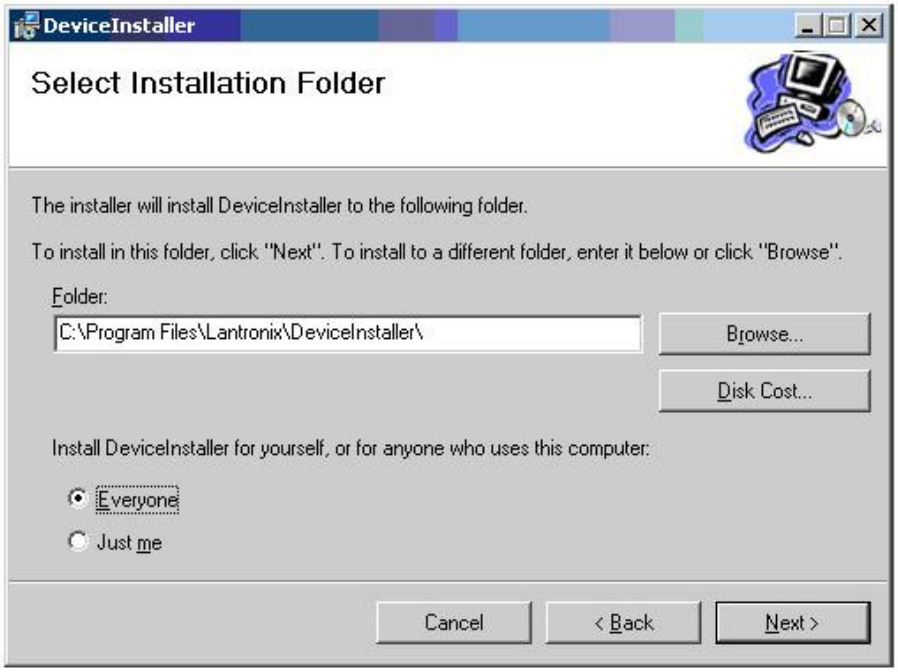


Fig. 6

…and will set permissions to "Everyone." You can browse for a different folder or set the permissions to "Just me" but, if the defaults are acceptable, leave them as they are.

6. Click Next.

The wizard displays the Installation Complete screen (Fig. 7).

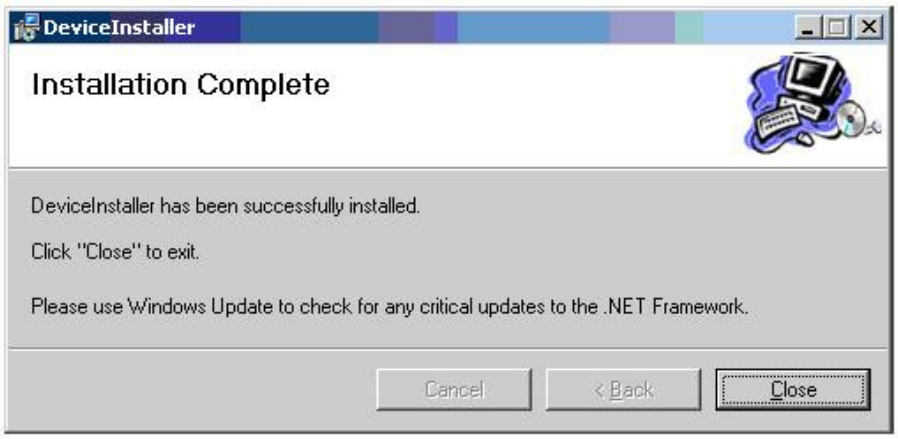


Fig. 7

7. Click Close.

Continue Run Ethernet Device Installer

Run Ethernet Device Installer

Assign the IP Address and Network Class.

1. Click the START button on the task bar and select All Programs > Lantronix > DeviceInstaller > DeviceInstaller (Fig. 1).

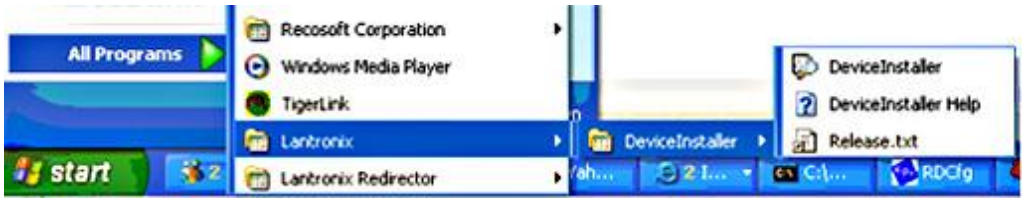


Fig. 1

The DeviceInstaller 3.6 window (Fig. 2) will appear.

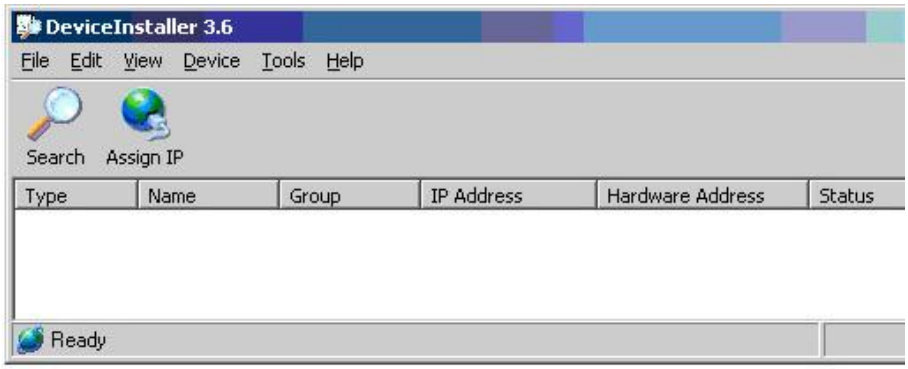


Fig. 2

2. Click Search.

DeviceInstaller 3.6 will display the IP address of every ESC on the local network, along with additional icons on the task bar (Fig. 3).

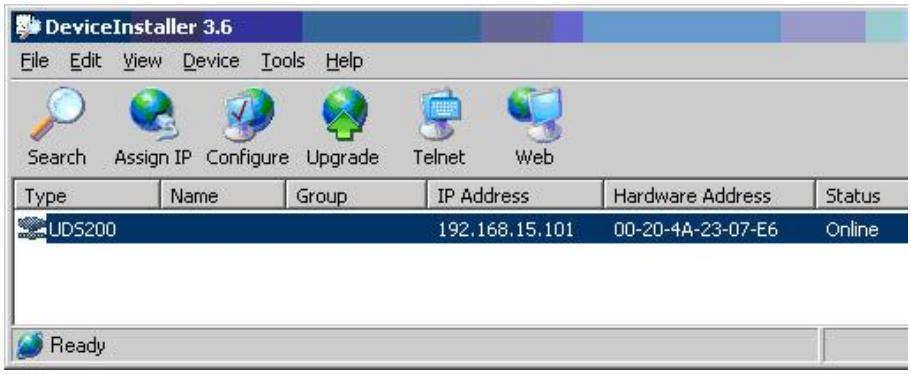


Fig. 3

3. Click Assign IP.

The Assign IP Address screen displays.

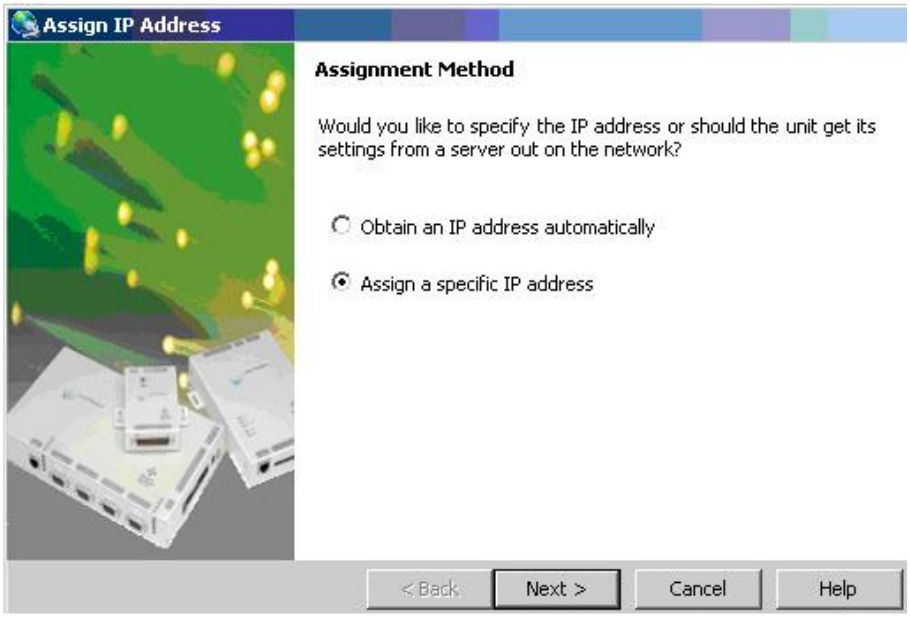


Fig. 4

4. Select "Assign a specific IP address" (Fig. 4) and click Next.

The IP Settings screen displays. In Fig. 5 the setting values are only examples!

Fig. 5

5. Enter the IP address, subnet mask, and default gateway (Fig. 5), and click Next.

If you are unsure about these values, contact your company's system administrator.

One more screen (Fig. 6) appears, prompting you to confirm the IP address.

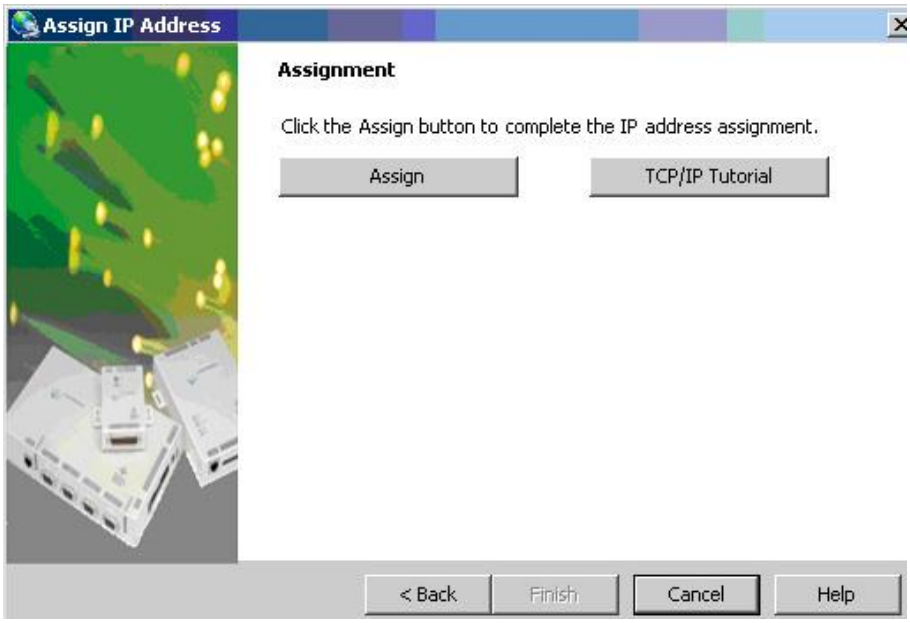


Fig. 6

6. Click Assign.

The new address will be saved, and the Ethernet adaptor will be rebooted (Fig. 7).

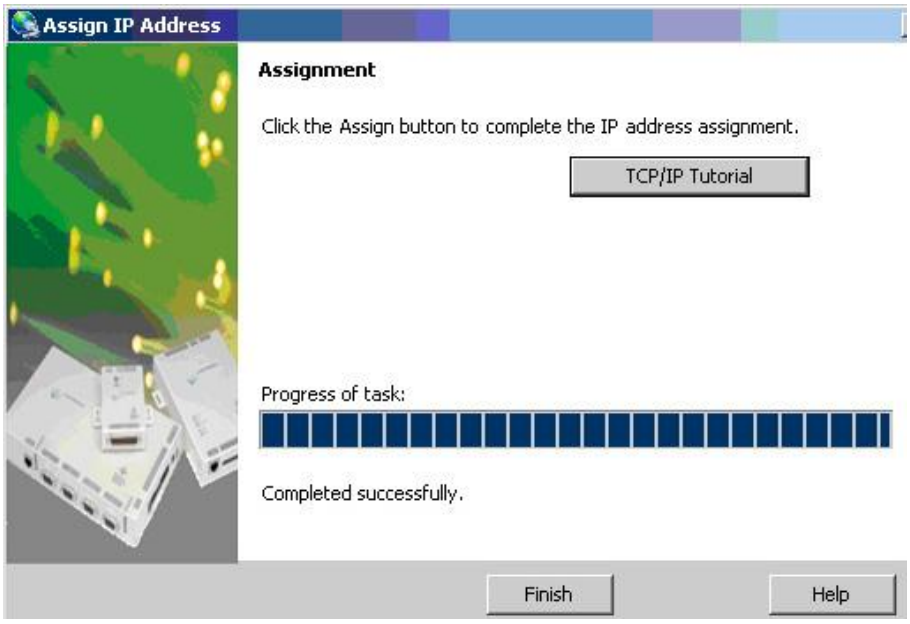


Fig. 7

7. Click Finish.

4 Configure the Ethernet Adaptor.

1. Click the START button on the task bar and select All Programs > Lantronix > DeviceInstaller > DeviceInstaller (Fig. 8).

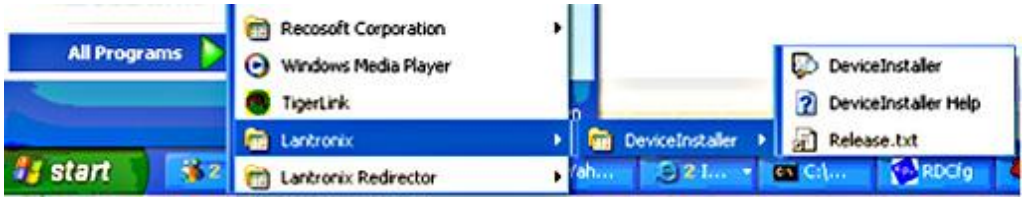


Fig. 8

The DeviceInstaller 3.6 window (Fig. 9) will appear.

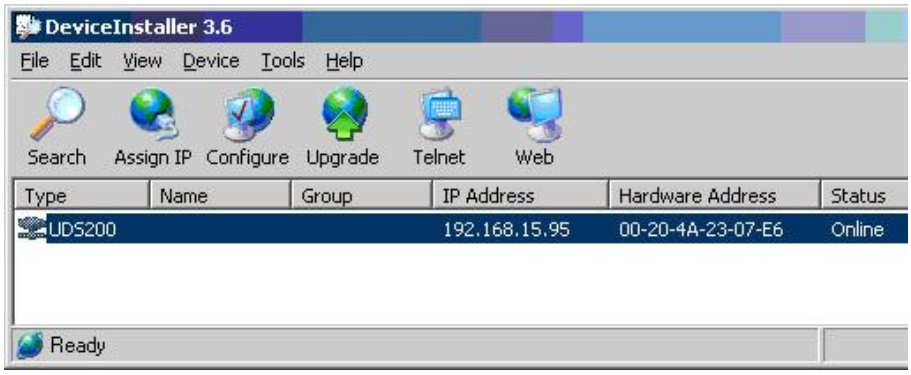


Fig. 9

2. This time, click Configure.

The Configure Device screen (Fig. 10) displays.

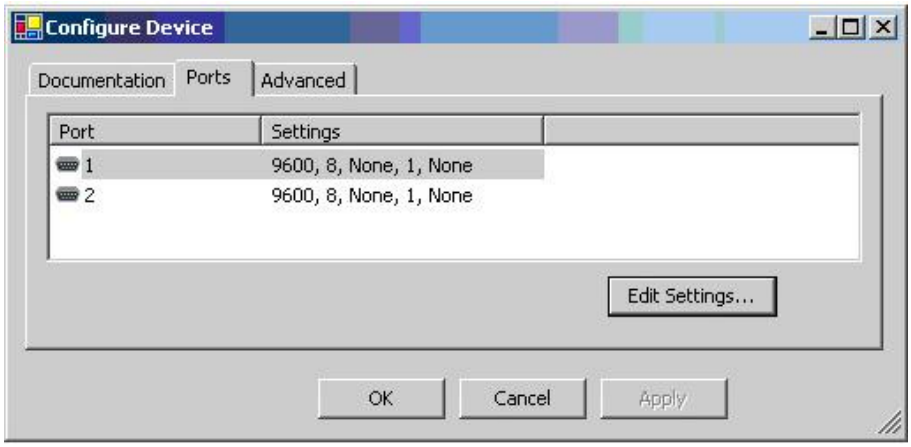


Fig. 10

3. Click Edit Settings.

The Port Properties screen (Fig. 11) displays.

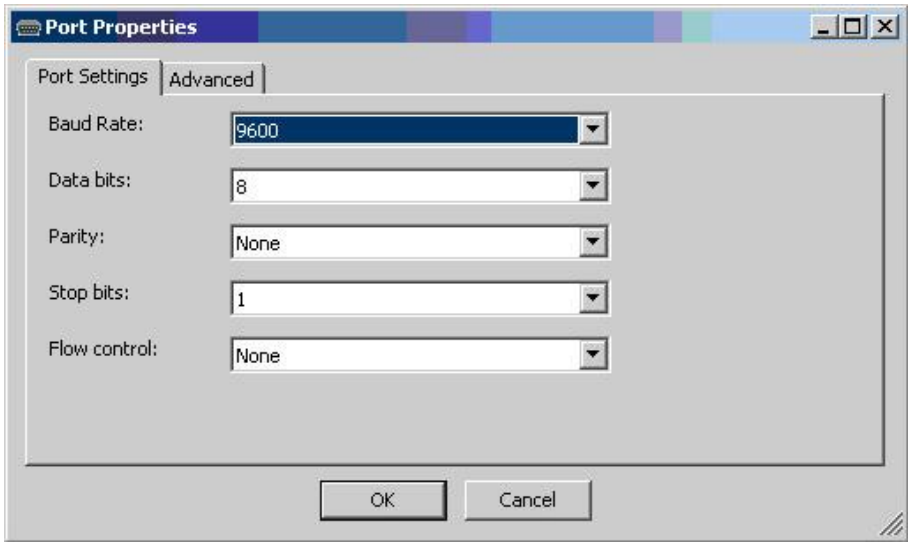


Fig. 11

4. Click the Advanced tab.

The Advanced tab (Figs. 12-13) displays all the port properties in detail.

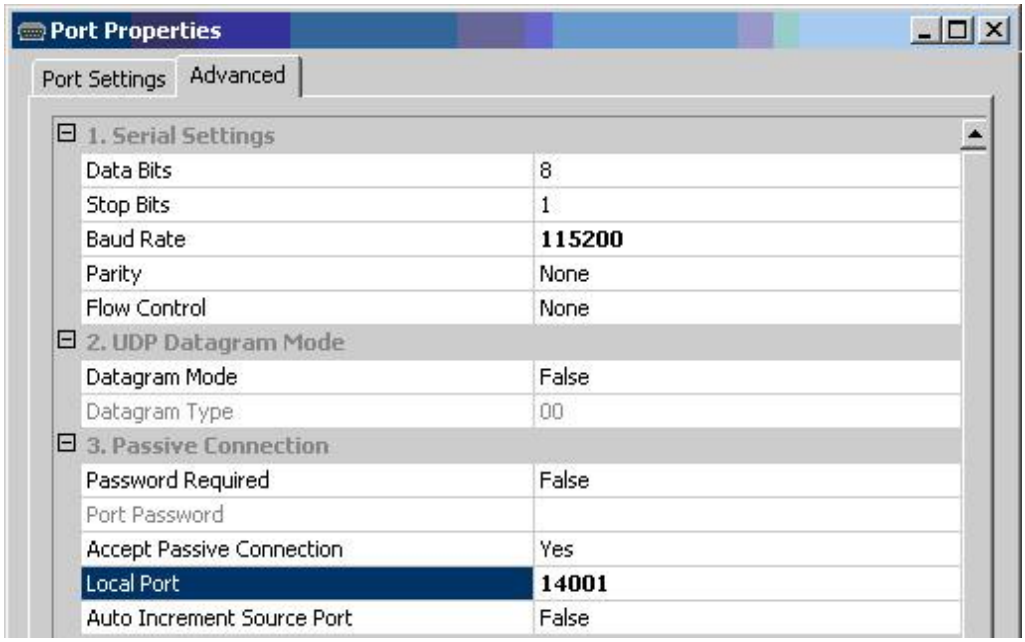


Fig. 12

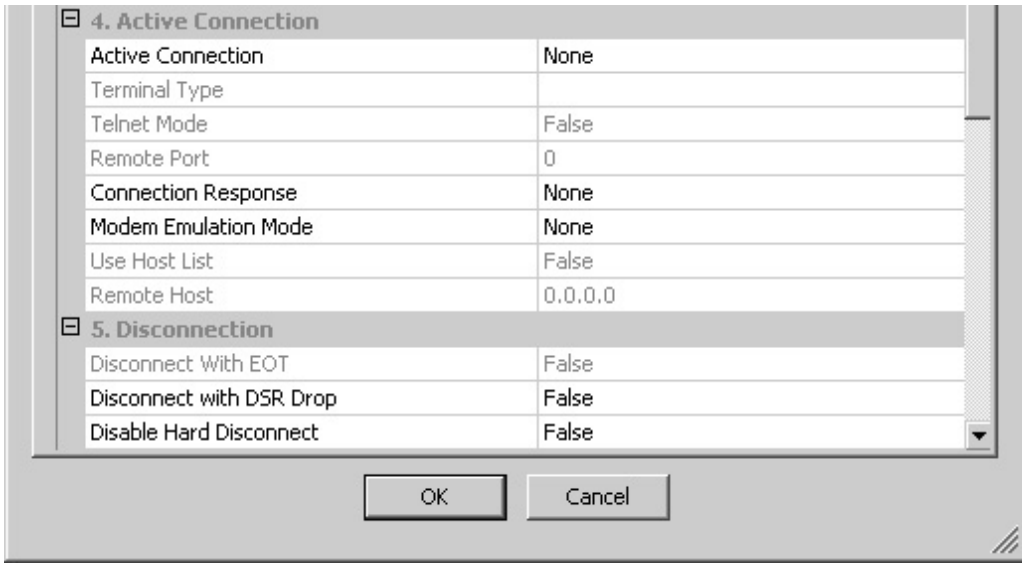


Fig. 13

5. In the 1. Serial Settings (Fig. 12) parameters, change Baud Rate to 115,200 as shown in the example, or to whatever baud rate is set in the controller. See Ethernet to Serial Converter, Installation and Setup, Controller Setup.
6. In the 3. Passive Connection (Fig. 12) parameters, change Local Port to 14001, and click OK.
7. The Local Port needs to be 11000 higher than the port setting in the Redirector. The other Advanced settings should be left at their factory defaults.
8. If you will use two Local Ports, go back to step 2, Configure, and set up the second port the same way. When you are back at step 6, change the Local Port to 14002.

The Configure Device screen (Fig. 14) reappears.

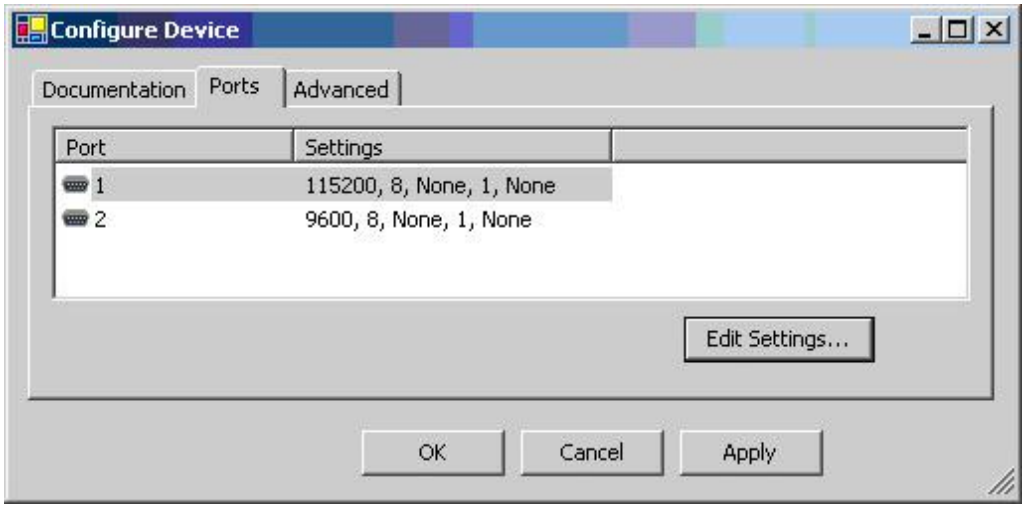


Fig. 14

7. Click Apply.

The program should now update the settings and reboot the device.

When in use, both ports should have a baud rate matching the controller baud setting, 115200. (The factory default is 9600.) Also be sure that Data bits = 8, Parity = None, Stop bits = 1, Flow control = none. (These should be the factory default settings.)

Continue The Ethernet Redirector

HowToDoIt Install the Redirector from the CD.

1. Choose the destination folder (Fig. 1) for the Redirector.

Fig. 1

2. Click Next.

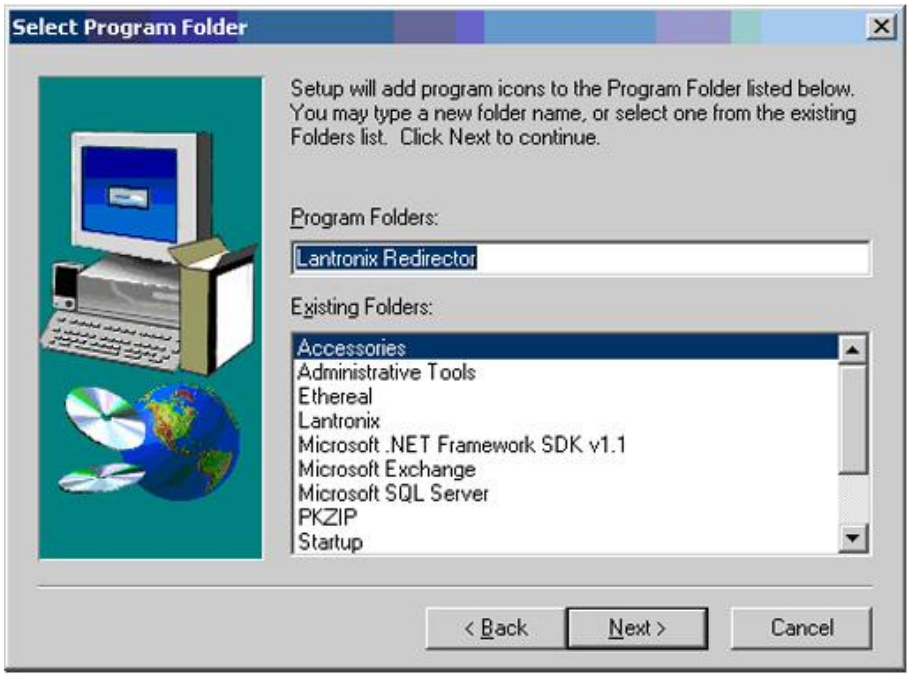


Fig. 2

3. Click Next.

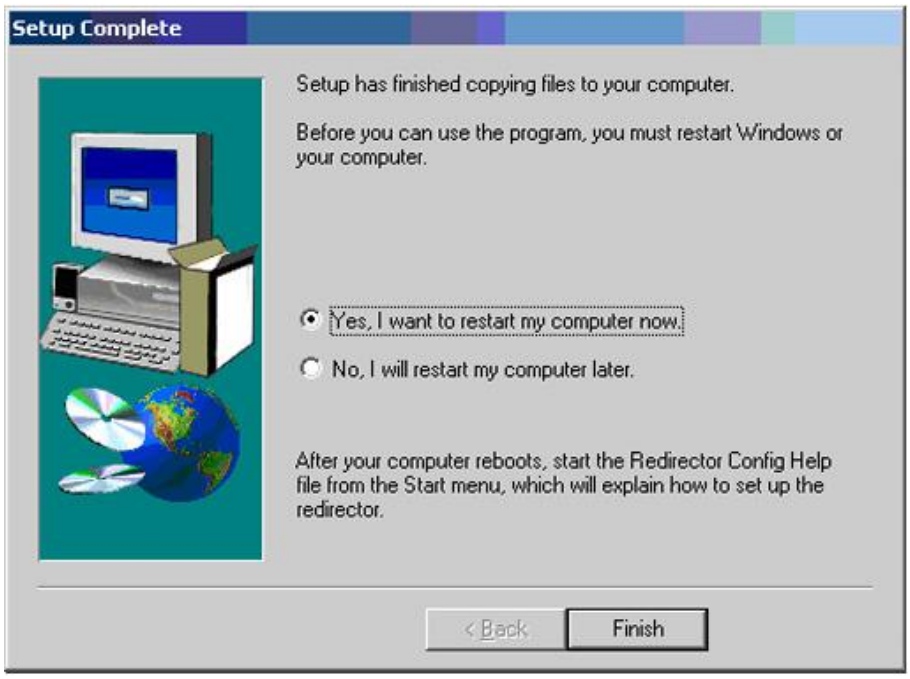


Fig. 3

4. Click Finish to complete the install.

HowToDoIt Launch the Redirector.

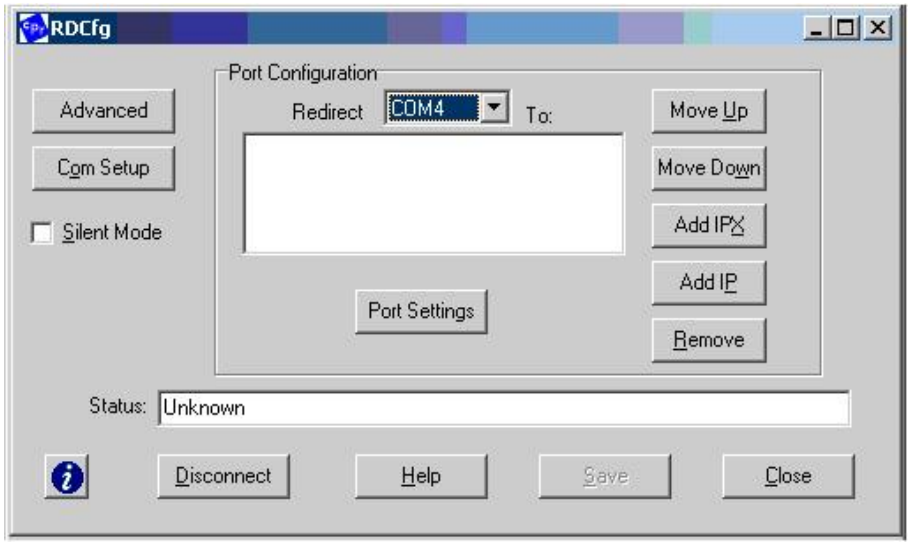


Fig. 4

1. Open the Com Port Redirector and set up the virtual com ports.
2. Click the Com Setup button (Fig. 4).
3. Check the box next to the first two Com labels. This is usually Com3 and Com4, so the remainder of this guide will assume it is. This enables port redirection for these com numbers.
4. Select COM3 from the top-center “Redirect To” drop down menu.
5. Click the Add IP button.
6. Enter the IP address of the first ESC in the Host box.
7. Enter 3001 in the TCP port box (11000 less than the number entered for Channel 1 in the ESC setup).

8. Click OK.
9. Click Save.
10. Select COM4 from the top-center “Redirect To” drop down menu.
11. Click the Add IP button.
12. Enter the IP address of the second ESC in the Host box.
13. Enter 3002 in the TCP port box (11000 less than the number entered for Channel 2 in the USD200’s setup).
14. Click OK.
15. Click Save.
16. Restart the computer.

ESC Troubleshooting

HowToDoIt Follow these steps in case of a communications failure:

1. Confirm hardware connections
2. Confirm software settings
3. Contact TigerStop Customer Support

1 Confirm Hardware Connections

The first step in troubleshooting almost any type of technical failure is to check the physical connections. Turn the power off, then trace the path of communication from one end to the other and ensure that everything is securely in place. This is usually accomplished by unplugging, then re-plugging, each end of each cable. In this case, the critical cables to check are:

- Serial cable connecting the TigerStop controller to the adapter box.
- Ethernet cable connecting the adapter box to the network.
- Power cable for the adapter box.

2 Confirm Software Settings

Review setup procedure in the topic Run Ethernet Device Installer to view the software settings and correct them if necessary.

3 Contact TigerStop Customer Support

If you are not successful in correcting the problem, please contact TigerStop's Customer Support team at 1-360-245-0661 x 238. Our service technicians are available during regular business hours (Mon-Fri 7am~4pm PST) at our assembly plant in Vancouver, WA, U.S.A. All incoming service calls and/or email are acknowledged, and most challenges are resolved, within the same business day.

Serial Extender

Description and Use

The Serial Extender allows your computer to communicate with your Level 2 (or higher) TigerStop when the total cable distance is up to 1000 feet (Fig. 1). You should use an SX when your TigerStop is separated from your computer by at least 75 feet. A CAT-5 cable is used to connect the extender Receiver to the Sender.

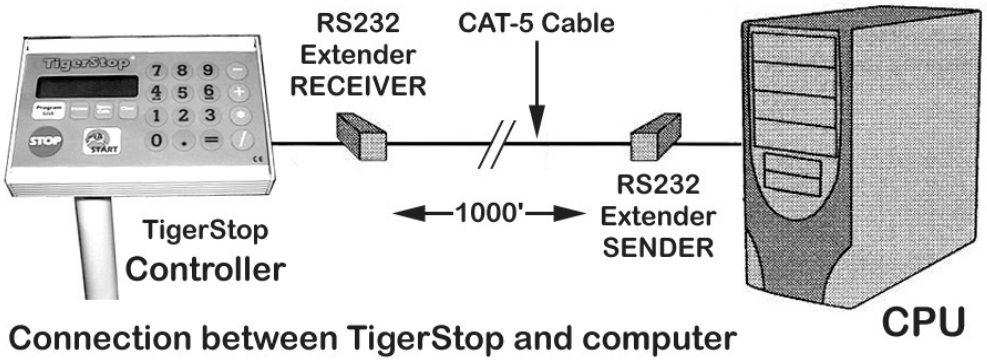


Fig. 1

Fig. 2

Fig. 3

Fig. 4

Components included in the SX

- The SX comes packed in a white carton (Fig. 2) and when shipped with a new TigerStop will be found next to the accessory box.
- Inside the carton, you will find a blue product booklet, a serial cable, the RS extender sender and receiver, and (in a small white box) the power supply (Fig. 3).
- TigerStop adds a second serial cable (Fig. 4), so you will have everything you need. It is also packed in the carton.
- The RS extender receiver is marked with an R, and the sender is marked with an S (Fig. 5).

Serial Extender Hook Up

HowToDoIt

1. Run one serial cable from your computer to RS232 Sender.
2. Run the other serial cable from TigerStop controller to RS232 Receiver.
3. Run CAT-5 cable (not supplied) between RS232 Sender and Receiver.

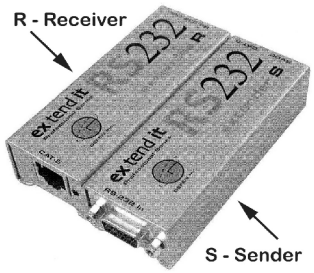


Fig. 5

4. Plug the 5v power supply (Fig. 6) into RS232 Sender.
5. Restart your computer only after making all the connections.

Fig. 6