

TruePort for Windows NT 4.0

Installation & Configuration Guide

5500026-13

Copyright statement

This document must not be reproduced in any way whatsoever, either printed or electronically, without the consent of:

Perle Systems Europe Limited,
3, Wintersells Road,
Byfleet,
Surrey
KT14 7LF,
UK

Perle reserves the right to make changes without further notice, to any products to improve reliability, function or design.

Perle CS9000, Specialix, the Specialix logo, JETSTREAM, JETSTREAM4000, JETSTREAM8500 and LANSTREAM2000 are trademarks of Perle Systems Limited.

Microsoft, Windows 95, Windows 95, Windows NT Windows 2000 and Internet Explorer are trademarks of Microsoft Corporation.

Netscape is a trademark of Netscape Communications Corporation.

Solaris is a registered trademark of Sun Microsystems, Inc. in the USA and other countries.

Perle Systems Limited, Thursday, October 25, 2001.

About this Guide

This document describes how to install and configure TruePort release 1.0 for your JETSTREAM and LANSTREAM Network Access Server (NAS) units. This software runs under the Windows NT 4.0 operating system.

This guide is intended for system administrators familiar with the Windows NT operating system.

This guide should be used in conjunction with the manuals and release notes provided with your JETSTREAM or LANSTREAM product, as follows:

- JETSTREAM 8500 Quick Start Guide
- JETSTREAM 4000 Quick Start Guide
- LANSTREAM 2000 Quick Start Guide
- JETSTREAM 4000, 8500, LANSTREAM 2000, Installation Guide
- JETSTREAM 4000, 8500, LANSTREAM 2000, Configuration Guide

Terms

The following terms are used in this guide to describe parts of the network:

Host

The LAN file server or a workstation, connected to the LAN, on which the TruePort software is installed.

Unit

Your JETSTREAM or LANSTREAM network access server

Device

The serial equipment (terminal, printer, modem, etc.) connected to the serial port on the JETSTREAM or LANSTREAM network access server

Contents

About this Guide

Contents

Chapter 1 Installation

Product Description	1
System Requirements	2
Installing TruePort	2
Starting and Exiting TruePort	2

Chapter 2 Configuration

Introduction	5
Configuring the TruePort Software	5
JETSTREAM or LANSTREAM Configuration	8
Example Configuration for a JETSTREAM 8500	10

Chapter 3 Troubleshooting

Debug	13
Statistics	13
Daemon Shutdown	13

Appendix A Contacting Perle

Making a technical support query	16
Repair procedure	19
Feedback about this manual	19
Contacting Perle technical support	20

Chapter 1 Installation

Product Description

TruePort allows you to configure up to 240 additional serial ports on an NT host. The serial ports are JETSTREAM or LANSTREAM ports, but appear as if they are directly connected to the host. The software runs an NT service on the host to simulate the serial interfaces; the remote port acts as a standard COM device with all standard functionality supported.

Note *The TruePort software is supplied separately from the JETSTREAM or LANSTREAM products.*

System Requirements

The hardware requirements of the NT host will depend on the set-up of the network and the number of additional COM ports you are going to configure. In general, the network host should be as powerful as possible.

Pre-requisites

Before installing the software check the following:

1. The NT host and network access server units must be connected to a LAN, with routing possible between them.
2. You must have system administrator level permission on your system.
3. The JETSTREAM and LANSTREAM units you wish to use must be attached to the network and have their: IP address; broadcast address; subnet mask and domain configured (See Chapter 2 of the JETSTREAM 4000, 8500, LANSTREAM 2000 Installation Guide).

Caution

The JETSTREAM or LANSTREAM units you use must be running firmware version 2.2.7 or later.

Installing TruePort

What you are about to do is add some software to your NT operating system to allow programs to access the network access server unit ports as if they were directly attached to the NT host system.

Installation from CDROM

The CDROM contains the software ready for installation. The program set-up uses the InstallShield Wizard included on the CD.

To install the TruePort software:

1. Insert the CDROM containing the TruePort software into the drive.
2. Navigate to the directory containing the TruePort software.
3. Double-click on Setup.exe, to run the InstallShield wizard, and follow the instructions on the screen. The software will be installed onto your machine and the drivers added to the operating system.

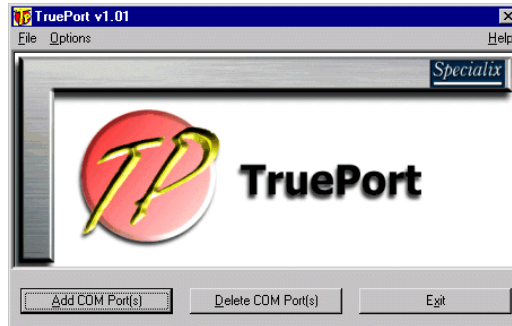
Starting and Exiting TruePort

To start the TruePort configuration software:

- From the **Start** menu, select **Programs>TruePort**.
The **TruePort** start-up screen is displayed, see below.

You are now ready to configure additional ports on the system.

Figure 1
TruePort Start-up Screen



To exit the TruePort configuration software:

- Click the **Close** button to return to the start-up screen, if applicable.

Note *Any changes defined on the screen will be lost, unless they have already been applied by clicking the Add/Delete button.*

- Click the **Exit** button on the start-up screen, to close the software.

Using the On-line Help

The TruePort software is supplied with context sensitive on-line help. This can be accessed by pressing the **F1** key or selecting the **Help** option, when you require help.

Chapter 2 Configuration

Introduction

After installing the TruePort software you will need to:

- Configure the TruePort host software for the number and type of additional COM ports required.
- Configure the JETSTREAM or LANSTREAM lines for use with the TruePort software.

Note If you add or delete any com ports from the system you will need to restart the system to use the revised configuration.

Configuring the TruePort Software

Using TruePort, any serial port on a JETSTREAM 4000, 8500 or LANSTREAM can be configured to act as a COM port directly connected to the host. TruePort achieves this by using a unique TCP/IP port number for each additional COM port configured. These port numbers must be unique to the NT host and by convention we use numbers starting at 10000.

The TruePort software provides an easy to use graphical interface which allows you to add or delete additional COM ports to or from the host. Any ports configured are added to the NT Registry.

Note The configured ports can be viewed in the Ports dialogue, from the Windows NT - Control Panel. Refer to **Checking the COM Port Settings** topic in the TruePort on-line help.

Port Operating Mode

Additional ports configured with the TruePort software can be set-up to run in two modes:

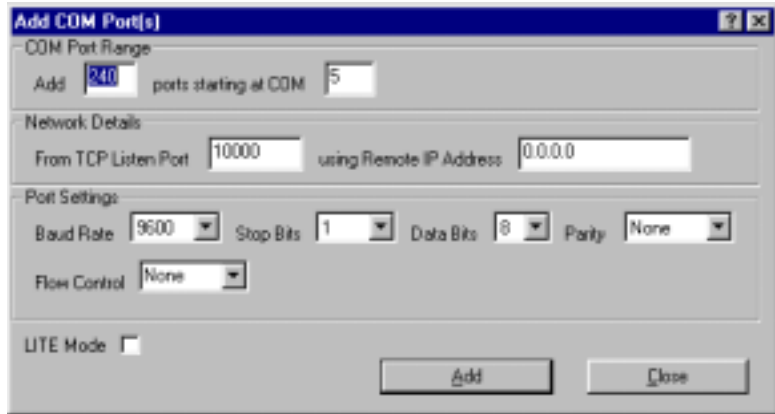
- **TruePort mode**
This is the default operating mode for any ports configured using the TruePort software. It provides a complete COM port interface between the attached serial device and the network.
- **LITE mode**
This mode provides a simple raw data interface between the device and the network. Although the port will still operate as a COM port, control signals are ignored. In this mode the serial communications parameters must be configured on the Network Access Server.

Adding COM Ports to the Host

To configure additional COM ports on the host:

1. Start the TruePort software, if it is not already running.
2. Click the **Add COM Ports** button.
This displays the **Add COM Port(s)** dialogue.

Figure 2
Adding COM Ports Dialogue



3. Set the number of COM ports you wish to define in the **Add** text box and the COM port number of the first port, in the **ports start at COM** text box, in the **COM Port Range** dialogue.

Note The first additional port will be COM 5, as the NT host can have 4 COM physically fitted.

4. Enter the first port number for that range of ports (e.g. 10000) into the **TCP Listen Port** field.

Note The software automatically generates sequentially incremented port numbers for the rest of the range of ports being configured.

5. Enter the IP address of the JETSTREAM or LANSTREAM unit into the **Remote IP Address** field.
6. Configure the parameters of the serial devices connected to the COM ports in the **Port Settings** dialogue.

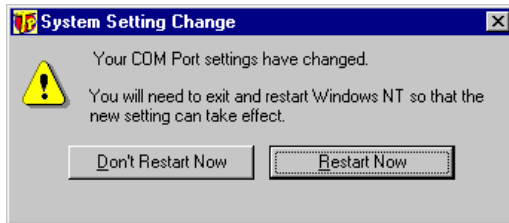
Note All ports defined in the same batch must use the same serial communication parameters. These can be changed later from the Windows NT - Control Panel.

7. If a raw data connection is required, see Port Operating Mode on page 5, select the **LITE Mode** check box.
8. Click the **Add** button, to add these ports to the system registry.

You can then add further ports in the same way as above or return to the TruePort start-up screen by clicking the **Close** button.

9. In the TruePort window, click on the **Exit** button.

If you have added or deleted any com ports from the system, you are now prompted to restart the system to use the revised configuration by the System Setting Change window as shown in the next picture.



Note that this window is only displayed if you have made any changes.

10. In the System Setting Change window, click on the **Restart Now** button.

Your system will now restart using the revised port configuration.

JETSTREAM or LANSTREAM Configuration

The JETSTREAM or LANSTREAM configuration consists of two parts:

- Configuring the unit to recognise the host.
- Configuring the serial ports for use with TruePort.

The 'Service' on each port can be configured as either 'Silent Raw' or 'Direct Raw'. In Silent Raw mode, the connection is established automatically, while in Direct Raw mode the user has to explicitly start each connection at boot time.

Adding the Host

The host must be added to the JETSTREAM or LANSTREAM. This can be performed using the `add host` Command Line Interface (CLI) command, e.g.

```
add host NT4 192.152.247.61
```

Alternatively, the host may be added to the unit using either the 'Text Menus' or the JETSET configuration software. This host is then configurable for TruePort.

Configuring the Unit Ports

The lines you will use to connect to the host must be set up as follows:

```
Host: The name of the NT host
Service: SILENT RAW or DIRECT RAW
Host Port: 10000 for TruePort port 1;
10001 for TruePort port 2;
etc.
```

To configure the JETSTREAM or LANSTREAM unit(s), match the TCP/IP ports on the unit(s) to the TCP/IP ports specified in the corresponding COM n entries on the NT host.

It is recommended that:

- The ports are configured sequentially, starting at TCP/IP port 10000.
- The ports are configured so that it is easy to tell which port is on which unit.

Remember to save the configuration on each unit.

Example of Configuring the Unit Ports

In this example we will configure a 24 port JETSTREAM 8500 and a 16 port LANSTREAM 2000, with the ports configured in `Silent Raw` mode.

Configuring the first unit (24 port JETSTREAM 8500) ...

```
$ telnet testjs1
Trying...
Connected to testjs1.perle.com.
Escape character is '^]'.
Telnet connect to JS8500 testjs1

Perle JETSTREAM 8500
version 2.2.7

Login: admin
Password:
JS_8500# set line 1 service silent raw NT4 10000
JS_8500# set line 2 service silent raw NT4 10001
JS_8500# set line 3 service silent raw NT4 10002
...
```



```
JS_8500# set line 24 service silent raw NT4 10023
JS_8500# save
JS_8500# logout
Connection closed by foreign host.
```

Configuring the second unit (16 port LANSTREAM 2000) ...

```
$ telnet testjs2
Trying...
Connected to testjs2.perle.com.
Escape character is '^]'.
Telnet connect to LS2000 testjs2
```

```
Perle LANSTREAM 2000
version 2.2.7
```

```
Login: admin
Password:
LS_2000# set line 1 service silent raw NT4 10024
LS_2000# set line 2 service silent raw NT4 10025
LS_2000# set line 3 service silent raw NT4 10026
...
LS_2000# set line 16 service silent raw NT4 10039
LS_2000# save
LS_2000# logout
Connection closed by foreign host.
$
```

This sets ports 1 to 40 to connect to the host NT4 without user intervention. The connection will be made to TCP ports in the range 10000-10039, which should correspond to the **Remote TCP Port** numbers you configured on the NT host, using the TruePort software.

Using Direct Raw Mode

If you require the user to explicitly start a connection, then you should define the mode for that line as 'Direct Raw' using the CLI command:

```
set line 1 service direct raw NT4 10000
```

This causes the user to be prompted to press return before the connection is made.

Example Configuration for a JETSTREAM 8500

This was performed using the following equipment.

1. JETSTREAM 8500 running version 2.2.7
2. Hyperterminal terminal emulator directly connected between COM 2, on the host, and the JS8500 Admin port.
3. Windows NT version 4.0

Note *A similar method applies to the LANSTREAM 2000*

Attach the JETSTREAM 8500 to the Network

Attach the JETSTREAM 8500 to the network and verify that it has an IP address, broadcast address and subnet mask.

If not, using our values we added these using the following CLI commands while logged in as admin:

```
set server internet 195.49.144.4
set server broadcast 195.49.144.255
set server subnet 255.255.255.0
save
```

and then rebooted the JETSTREAM. The internet, broadcast and subnet addresses should be replaced with those used on your network.

Install the TruePort Software

The software is distributed on CDROM. Install it as follows:

1. Insert the CDROM containing the TruePort software into the drive.
2. Navigate to the directory containing the TruePort software.
3. Double-click on Setup.exe to run the InstallShield wizard and follow the instructions on the screen. The software will be installed onto your machine and the drivers added to the operating system.

Set-up TruePort Ports on the NT Host

Each JETSTREAM port must be configured on a different TCP port via the TruePort configuration software.

Configure the JETSTREAM Ports

Log in to the JETSTREAM 8500 as admin and configure the serial ports to work with the ports defined in Set-up TruePort Ports on the NT Host on page 12, by entering the following commands:

```
JS_8500# set line 1 service silent raw NT4 10000
JS_8500# set line 2 service silent raw NT4 10001
JS_8500# set line 3 service silent raw NT4 10002
etc.
```

Chapter 3 Troubleshooting

When TruePort is running, the TruePort daemon icon is shown in the Windows NT Systray. Clicking the right mouse button on this icon displays a pop-up menu allowing you access to various statistics and troubleshooting screens.

Debug

Debug is available from the TruePort daemon. Selecting the **Debug Level** menu option invokes a window in which you can select the items for which Debug is required. It is available for either all ports or for a specified port.

Event Logging

A log of all TruePort activity can be displayed by selecting **Event Log** from the TruePort daemon pop-up menu. Logging of activity for a specific port or for particular aspects of the TruePort system can be specified using the Debug Level dialogue.

Statistics

Selecting the **Daemon Statistics** option, from the TruePort pop-up menu, invokes the Statistics window. This displays the date/time and the number of ports configured and connected. Clicking the **Refresh** button updates the details on the screen. Click **Close** when done.

The **Port Statistics** option displays a window in which you can view the port settings for individual ports. Enter the port number into the box at the top of the screen and press the **Refresh** button, to view the settings of the required port. Click **Close** when done.

Version Information

Clicking the **Version** button, from the pop-up menu, displays the software versions of both the daemon and the TruePort driver.

Daemon Shutdown

The daemon can be shut down by selecting **Shutdown Daemon** from the pop-up menu.

Appendix A Contacting Perle

You need to read this appendix if you want to contact Perle for technical support or any other queries about this product.

you want to...

This appendix includes the following sections;

- [Making a technical support query on page 16](#)
- [Repair procedure on page 19](#)
- [Feedback about this manual on page 19](#)
- [Contacting Perle technical support on page 20](#)

Internet access

[Click here to access the our website at the following URL:
http://www.perle.com](http://www.perle.com)

Email

[Click here to email Perle at the following address;
Email: ptac@perle.com](mailto:ptac@perle.com)

Making a technical support query

This section contains the following information about making a query:

- [Who to contact on page 16](#)
- [Information needed when making a query on page 17](#)
- [Making a support query via the Perle web page on page 17](#)

Who to contact

If you bought your product from a registered Perle supplier, you must contact their Technical Support department; they are qualified to deal with your problem.

If you are a registered Perle supplier, and bought your product from Perle, contact Perle Technical Support using the details given in [Contacting Perle technical support on page 20](#).

Information needed when making a query

When you make a technical support enquiry please have the following information ready;

Hint
Print out this page and fill in the table provided with the basic information you need.

Item	Write details here
Product name and version	
Problem description	
Operating system version	
Driver version	
Details of any other cards installed in your system	
Your name	
Company Name	
Country	
Phone number	
Fax number	
Email address (if available)	

Making a support query via the Perle web page

If you have an internet connection, please send details of your problem to Technical Support using the email links provided on the Perle web site in the 'Support' area.

See also [Contacting Perle technical support on page 20](#) for email links and other contact details for the Perle technical support centres.

[Click here to access our website at the following URL:
http://www.perle.com](http://www.perle.com)

Repair procedure

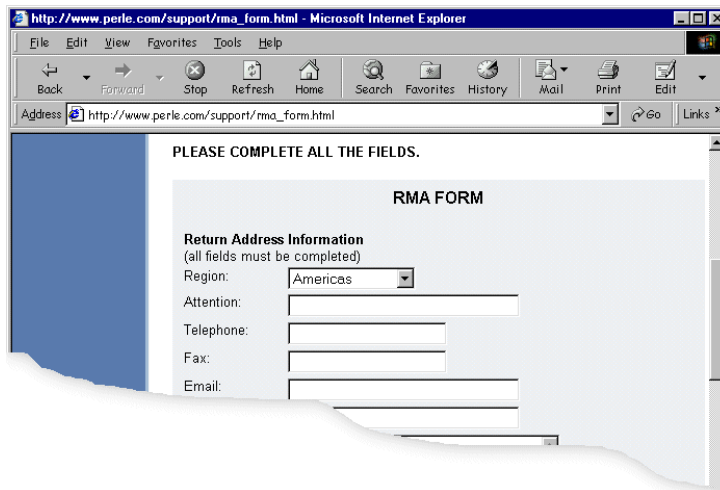
Before sending a unit for repair, you must contact your Perle supplier. If, however, you bought your product directly from Perle you can contact directly. See [Contacting Perle technical support on page 20](#) for contact information.

Customers who are In Europe, Africa or Middle East can submit repair details via a website form shown in the next picture. This form is on the Perle website, www.perle.com, in the **Support** area.

Click here to access our web site at the following URL:
http://www.perle.com/support/rma_form.html

In the USA and Asia contact the office shown in the Technical Support section.

Website RMA (Return Material Authorisation) form



The image shows a screenshot of a Microsoft Internet Explorer browser window displaying the RMA Form on the Perle website. The browser's address bar shows the URL http://www.perle.com/support/rma_form.html. The page content includes the following text and form fields:

PLEASE COMPLETE ALL THE FIELDS.

RMA FORM

Return Address Information
(all fields must be completed)

Region:

Attention:

Telephone:

Fax:

Email:

Feedback about this manual

If you have any comments or suggestions for improving this manual please email Perle using the following address;

docfeedback@perle.com

Please include the *title*, *part number* and *date* of the manual (you can find these on the title page at the front of this manual).

Contacting Perle technical support

Note

Perle offers free technical support to Perle Authorised Distributors and Registered Perle Resellers.

To access technical support please visit the Perle website at www.perle.com/support.

If you are unable to find the information you require, please feel free to contact our technical support teams by email using the addresses shown in the next table.

Region	Address	Email
North America	Perle Systems Ltd. 60 Renfrew Drive Markham Ontario Canada L3R OE1	Email: ptac@perle.com
Europe	Perle Systems Europe Ltd. 3 Wintersells Road Byfleet Surrey KT14 7LF UK	Email: ptac@perle.com
Asia	Perle Asia Pacific (Pte) Ltd. 101 Cecil Street #19-10/11 Tong Eng Building Singapore 069533	Email: ptac@perle.com
Worldwide	Perle Systems Ltd. 60 Renfrew Drive Markham Ontario Canada L3R OE1	Email: ptac@perle.com