

NET232

Quick Start Guide

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Disclaimer and Revisions

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Date	Rev.	Author	Comments
10/01/04	A	GR	Preliminary Release
03/14/06	B	GR	New release of Device Installer.
08/06/08	C	GR	New release of Device Installer 4.2.0.0
10/20/09	D	GR	Remove USB
10/19/10	E	GR	Update for general installation procedures

1. Quick Start

Follow this guide to get your unit up and running fast.

The NET232 kit contains the following items:

- NET232 Serial to Ethernet Adapter
- DB9-F to DB9-F Null Modem Adapter (NET232-DTE only)
- DB9-M to DB9-M Gender Changer (NET232-DCE only)
- +9VDC Power Supply (or similar power supply)
- CD with NET232, Device Installer, Comm Port Redirector user guides and other technical documents.

1.1 Setup

The NET232 comes in several versions. The NET232-DTE is the 9-pin Male DTE version and the NET232-DCE is the 9-pin Female DCE version. (Other options available on special order)

For the 9-pin Female DCE version, connect the RS-232 cable to the serial interface of your PC. The 9-pin Male DTE version will require the null-modem adapter.

Note: You don't need the serial port for configuration. It is an alternate method for setup.

Connect your network ethernet cable to the NET232 RJ45 jack. Do not connect directly to your PC. The NET232 should be connected to a router or server.

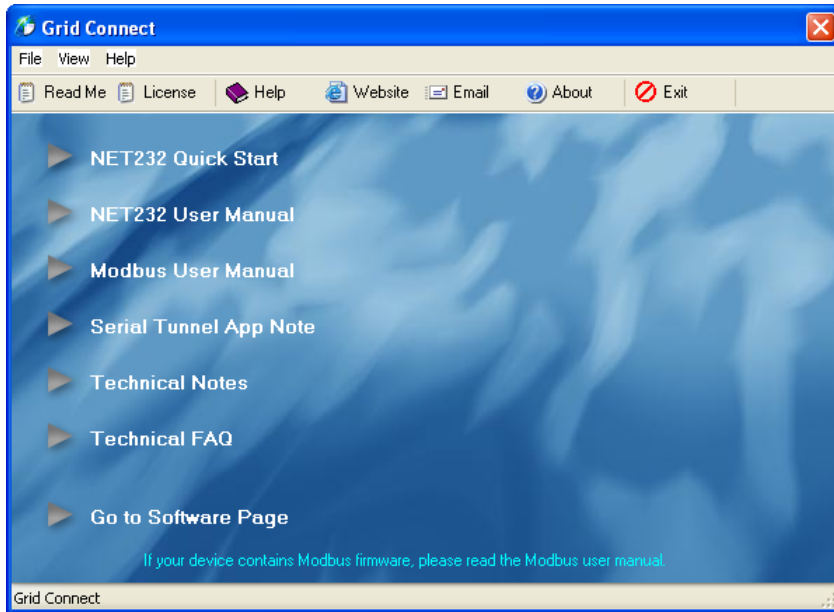
Connect the 9VDC power supply to the NET232. Verify the Green power LED is ON. Unplug the unit while you install Device Installer software.

1.2 Install Device Installer

1. Insert the product CD into your CD-ROM drive. The CD will automatically start and display the main window.

If the CD does not launch automatically:

- a) Click the Start button on the Task Bar and select Run.
- b) Enter your CD drive letter, colon, backslash, autorun.exe (e.g., D:\autorun.exe).



2. Click the **Read Me** button for important information about the product.
3. Click the **Go to Software Page** button to go to the software installation page.
4. Click the **Device Installer** button. The installation wizard window displays.
5. Respond to the installation wizard prompts.

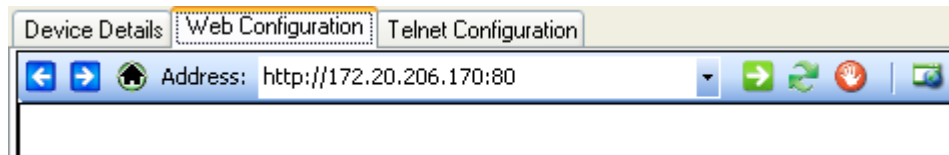
Note: For more information about Device Installer, see the Device Installer User Guide on the product CD. Device Installer also contains excellent online help.



6. Restart your system.

1.3 RUN Device Installer

Note: Make note of the hardware (MAC) address on the product label. Device Installer will show a MAC address for each device found on the network.

1. Click Start/Programs. Locate and run Device Installer.
2. Apply power to the NET232. Wait for a few seconds while the unit connects to the network.
3. Click the Search icon. The list of device servers displays.
4. Double-click your device in the list. The window will expand to display three tabs.
5. Click the Web Configuration tab.



6. To view the Web-Manager in the current DeviceInstaller window, click the **Navigate** icon . To open the Web-Manager in a web browser, click the **External Browser** icon .
7. If a password window appears, press **Enter**.

1.4 Configure with Web Manager

Please see the Device Installer user manual for details on using the Web Manager. This section presents some basic setup parameters necessary to get the unit operational.

You must configure the unit so that it can communicate on a network with your serial device. For example, you must set the baud rate to match the baud rate of your device. You should also assign it a fixed IP address for your network.

The unit's configuration is stored in nonvolatile memory and is retained without power. You can change the configuration at any time. The unit performs a reset after you change and store the configuration.

1.4.1 Network Configuration

The unit's network values display when you select **Network** from the main menu.

Network Settings

Network Mode:

IP Configuration

☐ Obtain IP address automatically

Auto Configuration Methods

BOOTP: ☒ Enable ☐ Disable

DHCP: ☒ Enable ☐ Disable

AutoIP: ☒ Enable ☐ Disable

DHCP Host Name:

☒ Use the following IP configuration:

IP Address:

Subnet Mask:

Default Gateway:

Ethernet Configuration

☒ Auto Negotiate

Speed: ☒ 100 Mbps ☐ 10 Mbps

Duplex: ☒ Full ☐ Half

Manually assign an IP address to the unit and enter related network settings.

To assign an IP address manually:

1. Select **Use the following IP configuration.**
2. Enter the following (as necessary):

IP Address	Assign IP address in decimal-dot notation. The IP address must be set to a unique value in the network. Example: 172.20.206.150
Subnet Mask	A subnet mask defines the number of bits taken from the IP address that are assigned for the host part. Example: 255.255.255.0
Default Gateway	The gateway address, or router, allows communication to other LAN segments. The gateway address should be the IP address of

	the router connected to the same LAN segment as the unit. The gateway address must be within the local network.
Auto Negotiate	Set to Auto Negotiate. With this option, the Ethernet port auto-negotiates the speed and duplex with the hardware endpoint to which it is connected. This is the default.

4. When you are finished, click the **OK** button.
5. On the main menu, click **Apply Settings**.

1.4.2 Channel 1 Configuration

The Channel 1 configuration defines how the serial port responds to network and serial communication.

To configure the channel's serial settings:

1. On the main menu, click **Serial Settings** (under **Channel 1**) to display the Serial Settings window.

Serial Settings

Channel 1

☐ Disable Serial Port

Port Settings

Protocol: RS232 Flow Control: None

Baud Rate: 9600 Data Bits: 8 Parity: None Stop Bits: 1

Pack Control

☐ Enable Packing

Idle Gap Time: 12 msec

Match 2 Byte Sequence: ☒ Yes ☐ No Send Frame Immediate: ☒ Yes ☐ No

Match Bytes: 0x00 0x00 (Hex) Send Trailing Bytes: ☒ None ☐ One ☐ Two

Flush Mode

Flush Input Buffer

With Active Connect: ☐ Yes ☒ No

With Passive Connect: ☐ Yes ☒ No

At Time of Disconnect: ☐ Yes ☒ No

Flush Output Buffer

With Active Connect: ☐ Yes ☒ No

With Passive Connect: ☐ Yes ☒ No

At Time of Disconnect: ☐ Yes ☒ No

OK

2. In the available fields, enter the following information:

Port Settings

Protocol	Must be RS232 for the NET232
Flow Control	Flow control manages data flow between devices in a network to ensure it is processed efficiently. Too much data arriving before a device is prepared to manage it causes lost or retransmitted data. None is the default.
Baud Rate	The unit and attached serial device, such as a modem, must agree on a speed or baud rate to use for the serial connection. Valid baud rates are 300, 600, 1200, 2400, 4800, 9600 (default), 19200, 38400, 57600, 115200, 230400, 460800, or 921600.
Data Bits	Indicates the number of bits in a transmitted data package. The default is 8 .
Parity	Checks for the parity bit. The default is None .
Stop Bits	The stop bit follows the data and parity bits in serial communication. It indicates the end of transmission. The default is 1 .

Pack Control

Enable Packing	The standard algorithm is optimized for applications in which the unit is used in a local environment, allowing for very small delays for single characters, while keeping the packet count low. Enable this option if you have problems sending small packets of data.
Idle Gap Time	Select the maximum time for inactivity. The default time is 12 milliseconds.

3. When you are finished, click the **OK** button.
4. On the main menu, click **Apply Settings**.

1.4.3 Connection Settings - TCP

To configure a channel's TCP settings:

1. On the main menu, click **Connection**. The Connection Settings window for the channel displays.

Network

Server

Serial Tunnel

Hostlist

Channel 1

Serial Settings

Connection

Email

Trigger 1

Trigger 2

Trigger 3

Configurable Pins

Apply Settings

Apply Defaults

Channel 1

Connect Protocol

Protocol: TCP

Connect Mode

Passive Connection:

Accept Incoming: Yes

Password Required: Yes No

Password:

Modem Escape Sequence Pass Through: Yes No

Active Connection:

Active Connect: None

Start Character: 0x0D (in Hex)

Modem Mode: None

Show IP Address After RING: Yes No

Endpoint Configuration:

Local Port: 10001

Remote Port: 0

Auto increment for active connect

Remote Host: 0.0.0.0

2. In the available fields, enter or modify the following information:

Connect Mode: Active Connection

Active Connect	<ul style="list-style-type: none">- With Any Character: Attempts to connect when any character is received from the serial port.- Auto Start: Automatically connects to the remote IP address and port after booting up. (Use this ONLY for a serial tunnel application. That is when two NET232s are connected in tunnel mode.)
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Endpoint Configuration

Local Port	Enter the local port number. The default setting is 10001. This works for most applications.
Remote Port	Enter the remote port number. If you are connecting two NET232 devices in Tunnel Mode, enter the remote port of the other device here. The other device can also use port 10001 .
Remote Host	Enter the IP address of the remote device. If you are connecting two NET232 devices in Tunnel Mode, enter the remote IP address of the other device here. Otherwise, leave it blank.

3. When you are finished, click the **OK** button.
4. On the main menu, click **Apply Settings**.

1.5 Quick Test

This quick test is designed to demonstrate the following:

- The ability of the unit to move data from the serial port (or USB port) to the ethernet port
- The ability of the unit to move data from the ethernet port to the serial port (or USB port)

Use Device Installer to locate the unit on your network. Note the **IP address**.

Start a session of HyperTerminal or other terminal emulation program. In the **Connect To** dialog box, go to the **Connect using** field and select the Com port that is connected to the NET232 and click OK. In the **Port Settings** dialog box, enter 9600, 8, None, 1, None and click OK. This is the serial port terminal.

Note: Make sure the status line at the bottom of the Hyperterminal window does not show any AUTO functions. If there is one, go back and reconfigure the terminal settings and the communication settings.

Change the Emulation from Auto detect to VT100. The status line at the bottom of the Hyperterminal windows should show VT100 and 9600 8-N-1.

Start another session of HyperTerminal. In the **Connect To** dialog box, go to the **Connect using** field and select **TCP/IP (Winsock)**. Enter the IP address of the NET232 and enter **10001** for the Port number and click OK. This is the Ethernet terminal.

Resize the two HyperTerminal windows so you can see both on your screen. Now you can enter data in one terminal and see it appear in the other.