

## Application Note 91

Communicating to devices via non-Systech port servers

**Subject:** Configuring NativeCom ver 5.02 and later for third party port servers including the 7700 Xpress card. PMCS 6.11 and later discontinues support for the GE32GTWY server. Use of the GE32MODB server with NativeCom ver 5.02(and later) replaces this server. This allows consolidation of two servers into one.

**Applies to:** PMCS versions 6.11 and later with use of non-systech port servers. Examples of this include the EPM 7700 Xpress card, GEFANUC VersaMax SE, Xplex server and other devices capable of Telnet and/or Raw TCP encapsulation. Also for use with the PMCS Modbus Emulator/Simulator(released 2<sup>nd</sup> Qtr 2002). Please note that most programs can access the Commports created by NativeCom.

**Prerequisites:** Requires NativeCOM 5.02 or later with license for generic port server support. A basic understanding of PMCS, TCP/IP and Ethernet is also required.

### Introduction:

The **NATIVECOM** Networked COM ports software makes remote serial communication ports (e.g. EIA-232/422/485 ports on a terminal server) available to PC programs as local COM ports. Applications from a PC running Microsoft Windows 95, Windows 98, Windows NT, or Windows 2000® can access and use the remote serial ports. Figure 1 illustrates a typical configuration, with three COM ports remotely located on a terminal server.

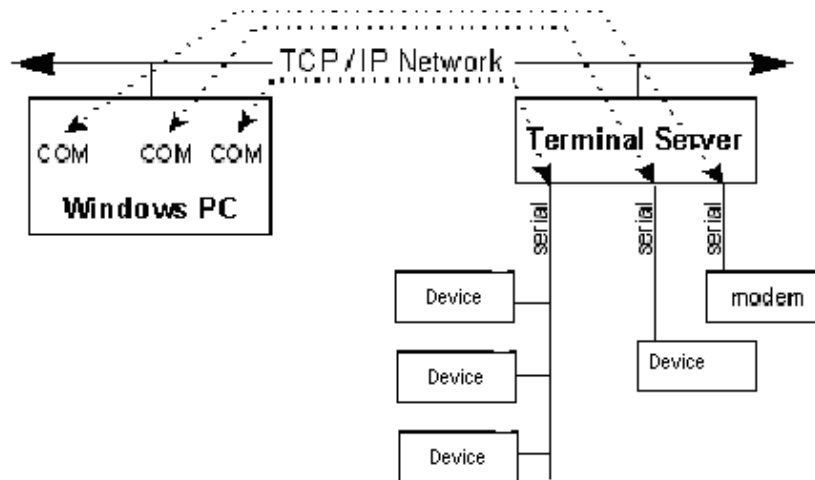


Figure 1: COM Ports Redirected to A Remote Terminal Server

The **NATIVECOM** Networked COM port software package runs on the Windows 95, Windows 98, Windows NT, and Windows 2000 PC and uses standard TCP/IP and Telnet protocols to communicate with any terminal server that supports reverse Telnet capability (terminal server software is not part of the **NATIVECOM** COM ports software package).

## Installing the *NATIVECOM* Software:

The *NATIVECOM* Networked COM ports software is available on the PMCS CD that was provided with your port server or can be downloaded from the Systech web site ([www.systech.com](http://www.systech.com)).

- Locate the file called NativeCOM\_5.02.exe either on the CD or download it at [www.systech.com](http://www.systech.com) web site.
- Double click the file, NativeCOM\_5.02.exe.
- InstallShield will provide instructions for the rest of the installation. If upgrading from a previous version of NativeCom please install in the same directory as the earlier version.
- After installation, you must reboot before you can configure *NATIVECOM* Networked COM ports. Once configured, Both PC and the port server must be rebooted for the configuration changes to take effect.

During uninstall, a warning is displayed if any *NATIVECOM* ports remain configured. All *NATIVECOM* ports must be removed prior to uninstall.

The uninstall process removes all related files and registry entries from the system.

## Overview

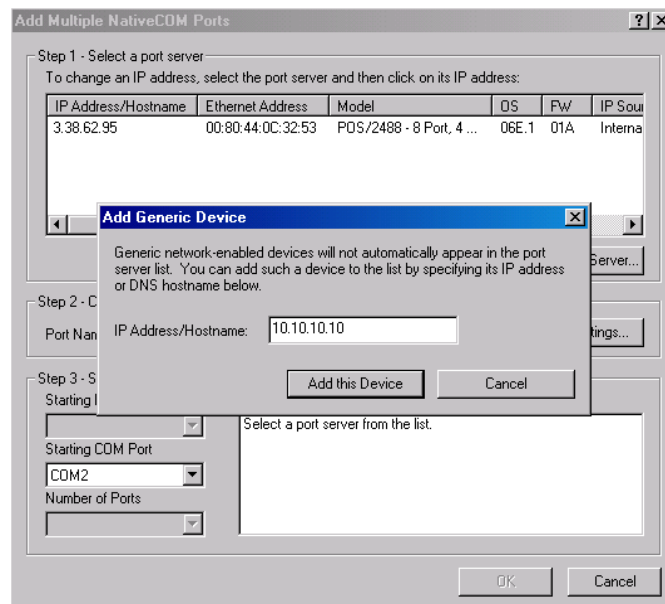
Configuration includes the following basic three steps:

1. Install the *NATIVECOM* COM port software on the PC where the PMCS server resides.
2. Connect the port server to your network (described in the Administrator's Guide packaged with your port server).
3. Configure one or more redirected COM ports.

## Adding ports from a generic port server:

For detailed instructions on configuring the NativeCom with standard GE Ethernet gateways manufactured by Systech please see PMCS appnote79.pdf located on the PMCS CD or see section 3 of the NativeCom users guide. The instructions below are intended as a guide for adding generic ports servers into the NativeCom configuration. The process for modifying or deleting ports for a generic port server are identical to the standard gateways and are described in appnote 79 and/or in the NativeCom users guide.

To add a group of NativeCOM ports from a single port server, click “Add Generic Device” in the port server section of the main control panel window. If the software license hasn’t been installed an “Enter license” window will appear. Please enter the license number that was included in the box containing the gateway. Once the license is entered the “Add Generic Device” window will appear. Enter the TCP/IP address of the generic device and click on “Add device”.



If the generic device is not attached to the Ethernet or has not been configured with the entered IP address a message box will appear stating that the IP address could not be contacted. Click on “yes” to continue.

Step 1 in the NativeCom window: It should now contain the IP address you entered above. Please select the IP address with the mouse.

Step 2 in the NativeCom window: Reserved for a name for the generic server. This name is strictly for documentary purposes and has no technical purpose but it must be entered. Please see the documentation of the device to see if it supports Raw TCP or Telnet. The majority of port servers use Raw TCP.

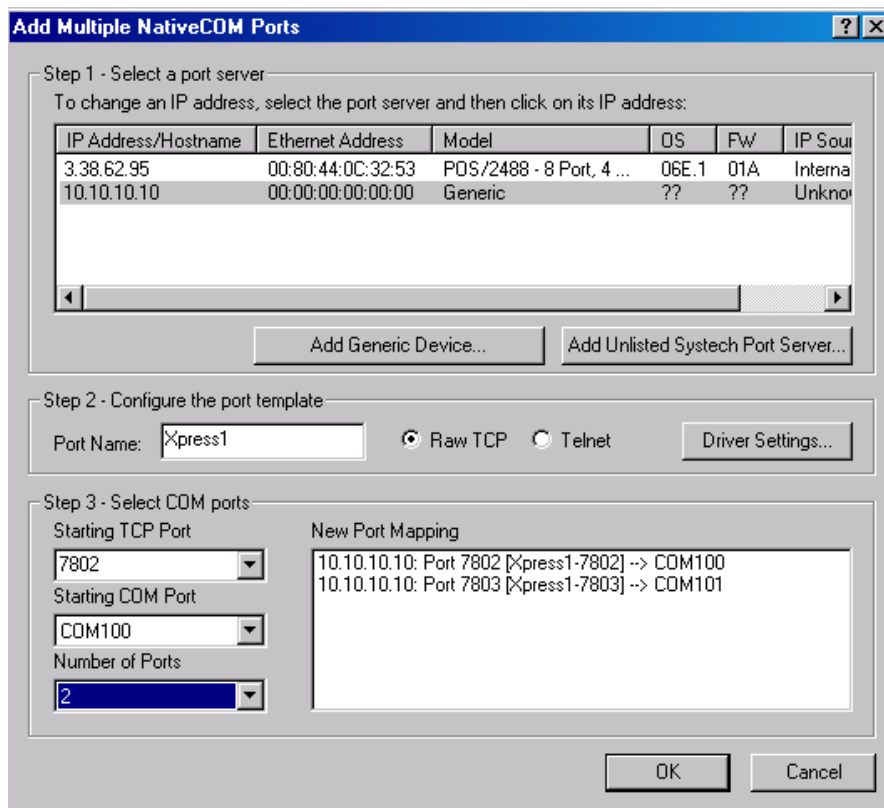
Step 3 in the NativeCom window: Please enter the starting TCP/IP port of the first serial port of the generic server. This port number is different for every serial port on a specific device. Please see the devices documentation for a description of how the serial port is mapped to a TCP/IP port. The example below is for a EPM 7700 Xpress card.

The ports on a Xpress card are mapped as follows:

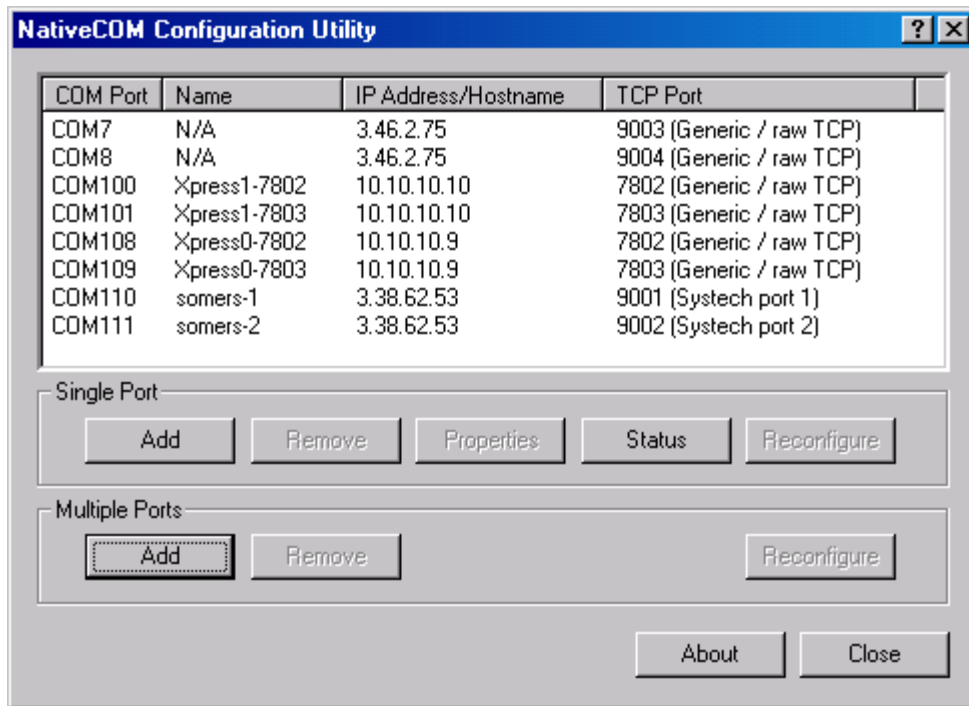
Com 1 is unavailable and is a local port for the meter

Com 2 on the Xpress card is TCP/IP port 7802 and will be mapped to Commport 100 on the PC

Com 3 on the Xpress card is TCP/IP port 7803 and will be mapped to Commport 101 on the PC



Once a PC COM port is assigned to a server it will no longer be available for configuration to any other server. Select “OK” when all the port servers and their ports have been assigned. After NativeCom is finished adding comports to the PC the NativeCom window should look like the one below. Please note that this window has a mixture of standard GE Ethernet Gateways(Systech), 2 Xpress cards and a generic device. The PC must now be rebooted.



Last revised: 11 Jan 2002