

**NXi Communications, Inc.**

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# **NMS AG 4000 Board**

*Installation Instructions - Windows 2000*

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# Minimum System Requirements

Before installing your NMS board, make sure that your computer meets the following minimum requirements:

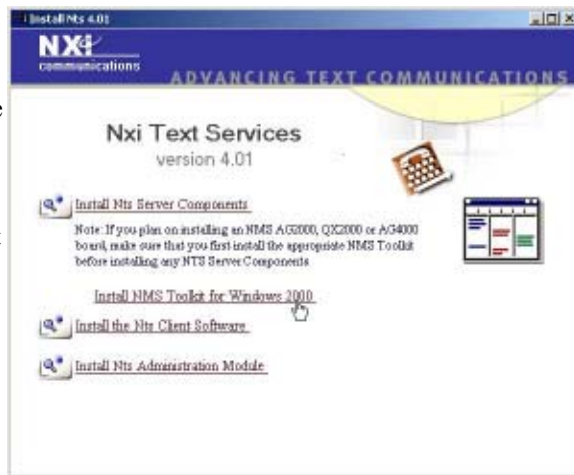
- A. An available PCI bus slot.
- B. Approximately 250 megabytes of free space on the hard disk.
- C. Windows 2000 Operating System - Service Pack 2
- D. Pentium III or better CPU running at 850 MHz or faster.
- E. At least 128 megabytes of RAM (256 megabytes is preferred).

**Note: INSTALLATION MUST BE DONE ON SITE!**

## NMS Toolkit/Driver Installation

### Step 1

Run setup.exe on the NTS4.0 CD-Rom. Click the **Install NMS Toolkit for Windows 2000** link to install the drivers for the AG 4000 board. This must be done before installing the NTS Server components.



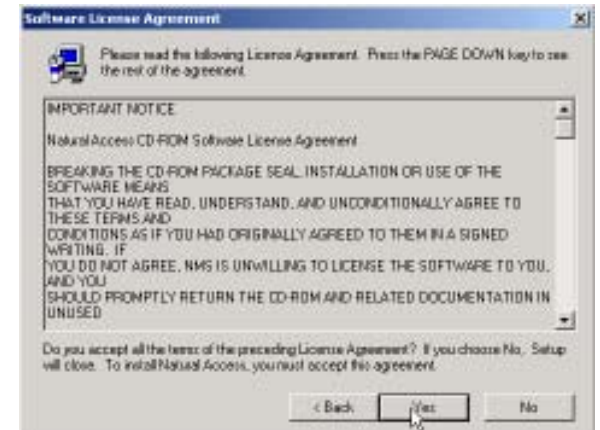
### Step 2

Click **Next**.



### Step 3

Click **Yes**.



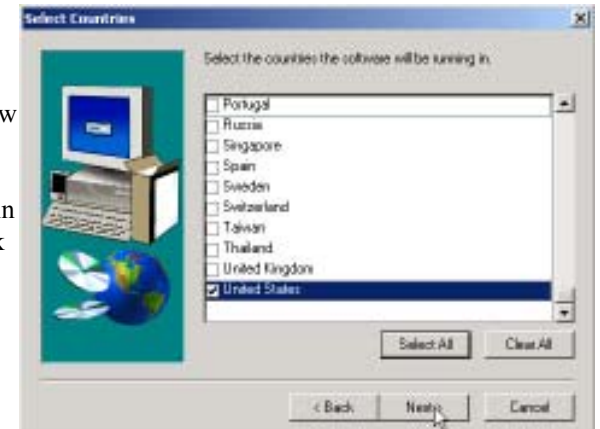
### Step 4

Check the box next to **AG and CG**. Click **Next**.



### Step 5

You must use the **End, Page Down**, or down arrow keys to see the entry for the **United States** in this list. Using the scroll bar in the window may not work properly. Check the box next to **United States** and click **Next**.



### Step 6

Click **Next**. **DO NOT** change the destination folder. Leave it as C:\NMS.



### Step 9

Select **Let Setup modify your settings**. Click **Next**.



### Step 7

Click **Next**.



### Step 10

Click **Next**.



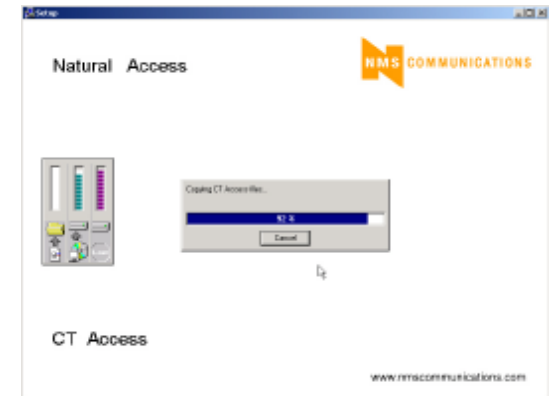
### Step 8

Select **Full**. Click **Next**.



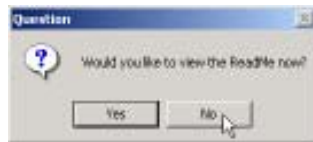
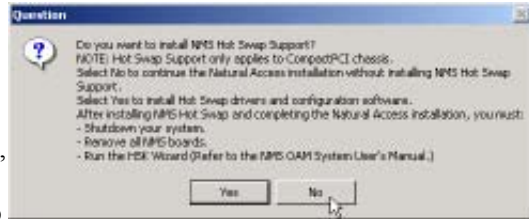
### Step 11

You should see several progress windows appear during the next few minutes.



## Step 12

You will see these three windows asking if you wish to install NMS Hot Swap Support, install Cool Edit Software, and view the ReadMe file. Click **No** on each of them.



## Step 13

If you have not yet installed the AG 4000 board in your computer, select **No, I will restart my computer later**, click **Finish**, and shut down your computer. Continue with **Step 14**.

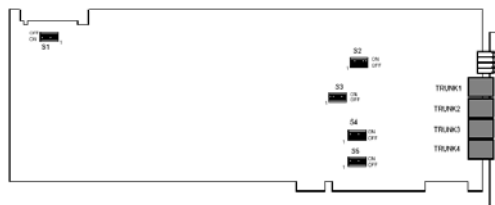
If you have already installed the AG 4000 board in your computer, restart your computer and skip to **Step 19**.



# Hardware Installation

## Step 14

Make sure that the DIP switch settings on the board are correct. The AG 4000 DIP switch block S1 is located on the back (non-component side) of the board. All the switches on block S1 should be set to OFF. The board is shipped with this as the default setting.

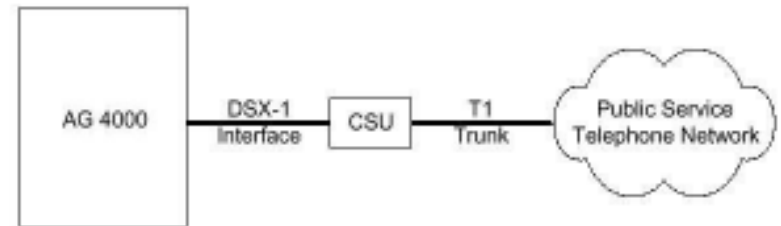


## Step 15

Turn off the computer and disconnect it from the AC power source. Make sure that both you and the computer are properly grounded. Remove the cover and set it aside. Unscrew and remove the black PCI retainer bracket on the AG 4000 board. The bracket is not needed for the board to properly fit into the chassis. Fit the board's PCI bus connector into the computer by gently but firmly pressing it into the available PCI bus slot. Make sure that the board's PCI bus connector is seated securely. Fasten the board in place using the appropriate screw or bracket (depending on your computer chassis). Replace the cover, and reconnect the computer to its AC power source.

## Step 16

Connect your AG 4000 board to your T1 line(s). The AG 4000 board connects to your T1 channel service unit (CSU) via a DSX-1 interface.\* Depending on the model of your AG 4000 board, it may be connected to one, two, or four T1 lines, each with its own CSU.



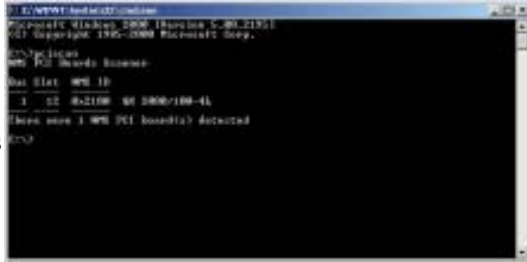
## Step 17

Turn on your computer. You will see screens indicating that Windows has detected and installed your NMS board.

\*Make sure your CSU supports a DSX-1 interface. NXi uses the ADC Satellite 931 T1 Channel Service Unit in its development and testing.

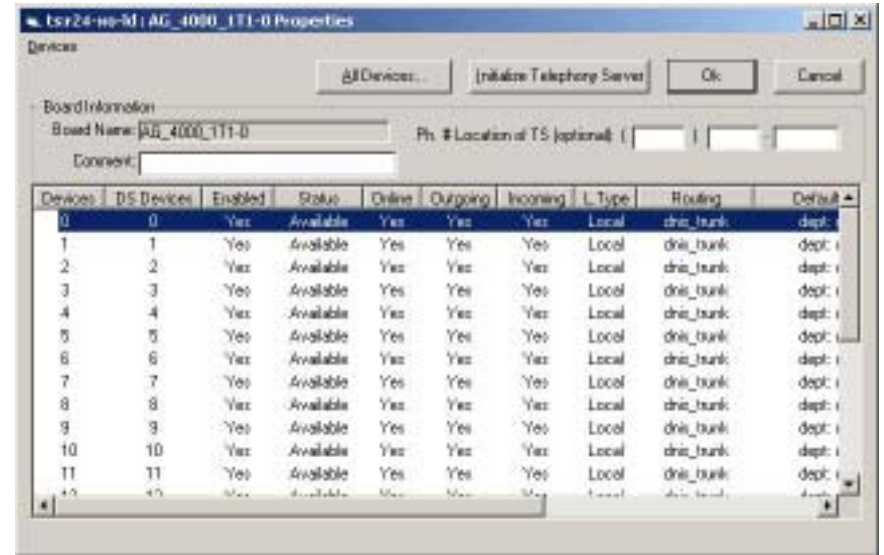
## Step 18

From a command prompt, enter the command “pciscan”, followed by the enter key. This launches a utility that searches for NMS boards in your computer. If pciscan detects your NMS board, then it is functioning correctly. You are ready to install the NTS server components.



## Step 19

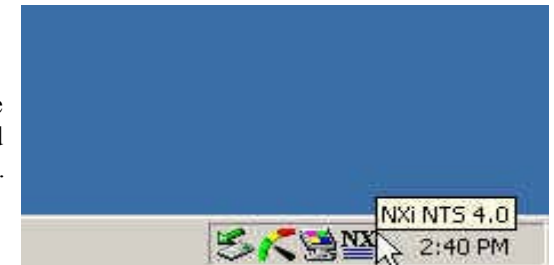
Run setup.exe on the NTS4.0 CD-Rom. When you see this screen, click **Install NTS Server Components**. Refer to the NTS 4.0 Quick Start Guide for instructions for installing these components.



If you do not see “Available” telephony devices, then your AG 4000 board might not be installed correctly. In order to test your AG 4000 installation, complete the following steps:

## Troubleshooting Step 2

On the computer with the AG 4000 board installed, open the NTS PM Console (this should be located in the system tray).



## Additional Troubleshooting Steps

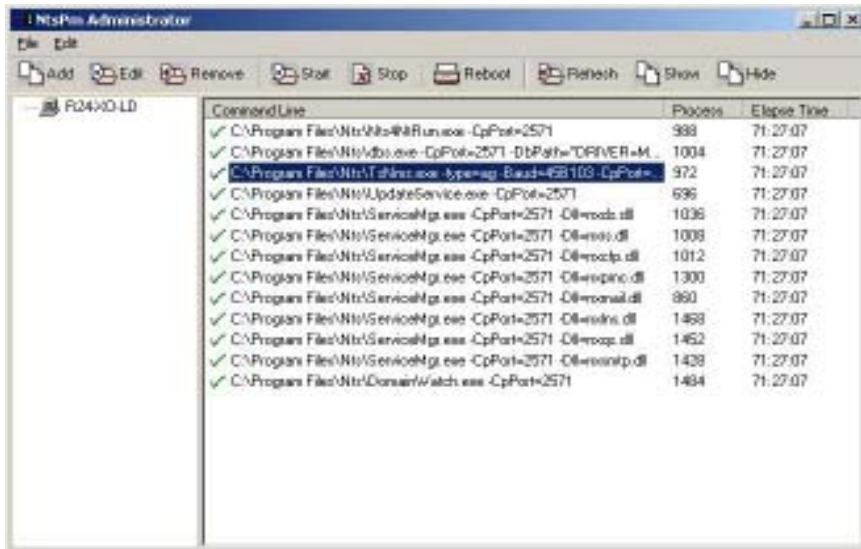
You only need to complete these steps if you have trouble with your telephony server after installing the NTS server components. Before completing these steps, however, see if shutting down and restarting the computer fixes your problem. This gives the NMS and NTS services a chance to initialize in the proper sequence.

### Troubleshooting Step 1

Run the NXiAdmin program and log it into your CP. In the tree-view on the left side of the admin screen, select **Telephony Services** -> **Local Telephony Servers**. You should see the telephony board that you installed earlier listed in the window. Right click on the entry for your telephony server and select **Properties**. You should see a screen like the one shown here.

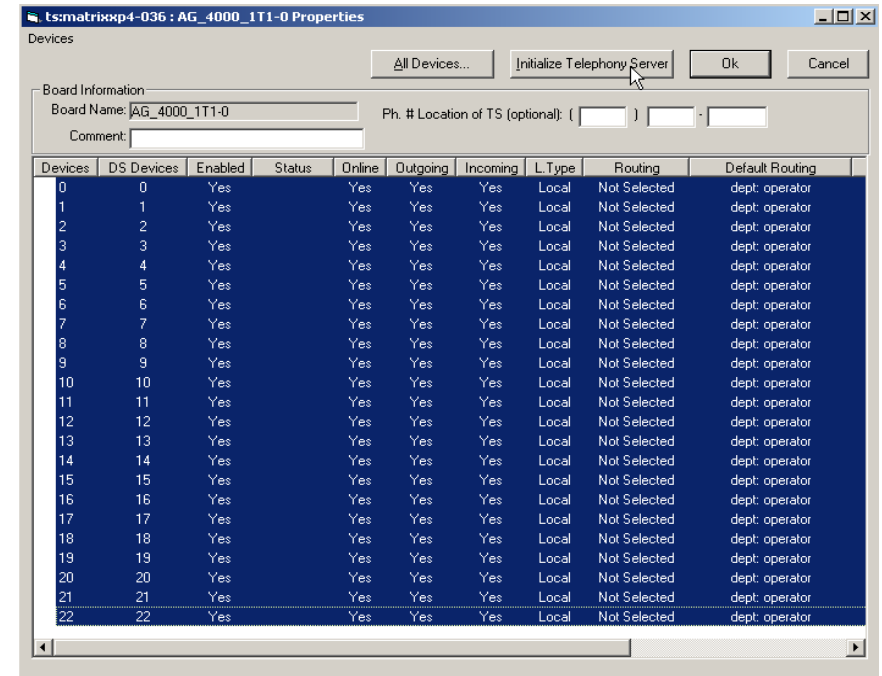
### Troubleshooting Step 3

Find the entry that includes **TsNms.exe**. Select this entry and click the **Stop** button in the menu bar. When the TsNms service is stopped, a red X will appear next to it in the console window.



### Troubleshooting Step 4

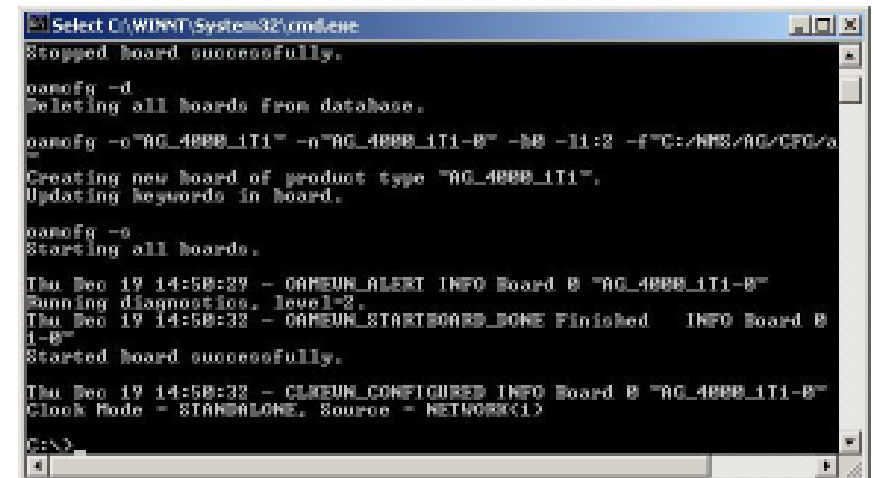
Restart the TsNms service by re-selecting **TsNms.exe** and click the **Start** button. Once the green checkmark re-appears next to TsNms.exe, re-open **Local Telephony Servers** in the **NXiAdmin** (See Troubleshooting step 1). Select all the devices and click the **Initialize Telephony Server** button. You will receive a warning, click yes to continue.



If the board still fails to show available ports continue to Troubleshooting step 5

### Troubleshooting Step 5

From a command prompt, type “oamsys”, followed by the enter key. You should see the oamsys program stop and re-initialize your AG 2000 board, as shown in this picture below.



Once the board has initialized, return to the **Local Telephony Servers** properties in the NTS Admin to see if the ports show “available” (see troubleshooting step 1). After checking the NTS Admin, Open the NTS PM Console and select **TsNms.exe**. Click the “Show” button located on the menu bar. You will see the board initializing and the device state will show “available”.

If oamsys fails, it is likely because the Natural Microsystems CT Daemon service failed to start, as shown in this example:

```

C:\WINNT\System32\cmd.exe
C:\>oamsys
oamsys -p
Can't create context, server communication error.
Verify that Natural Access Server (otdaemon) is running.

oamsys -d
Can't create context, server communication error.
Verify that Natural Access Server (otdaemon) is running.

oamsys -o"AG_4888_1T1" -n"AG_4888_1T1-B" -b0 -l1:2 -f"C:\NMS\AG\CFC/a
Can't create context, server communication error.
Verify that Natural Access Server (otdaemon) is running.

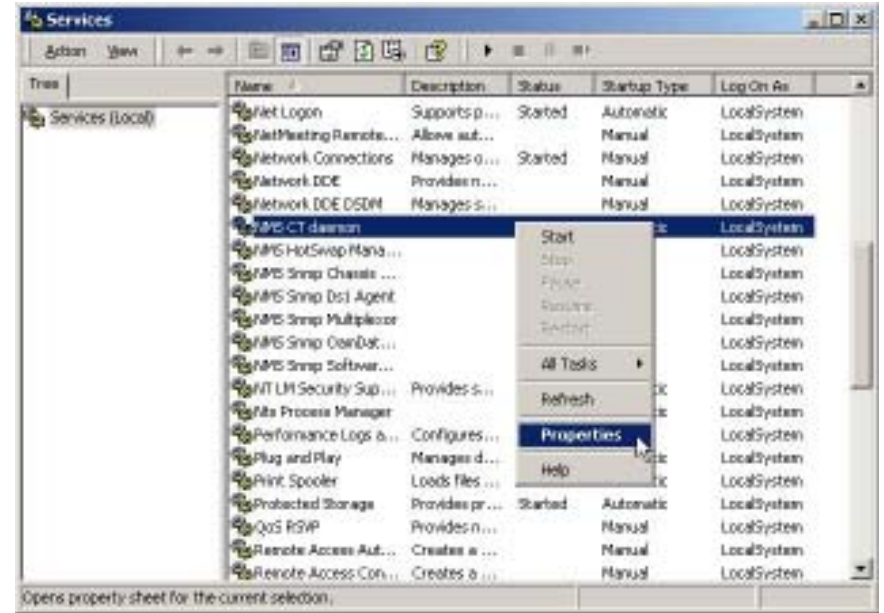
C:\>

```

If oamsys fails because CT Daemon has not started, continue with troubleshooting Step 6 to reset the CT Daemon service. If your system has failed because of another error, contact NXi Communications technical support.

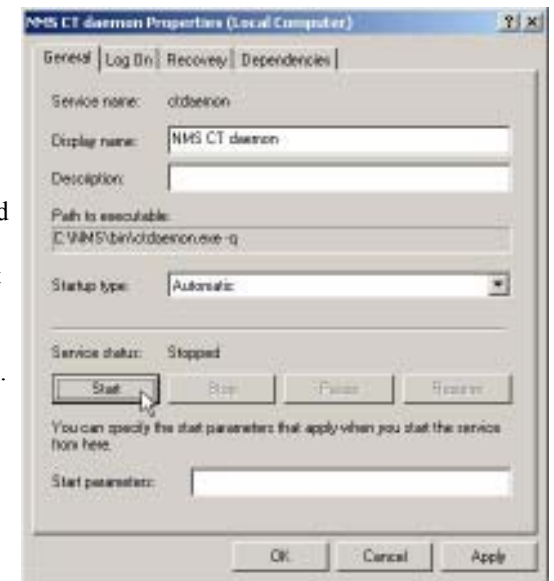
### Troubleshooting Step 6

Open **Control Panel -> Administrative Tools -> Services** and find the entry for “NMS CT Daemon” in the list of services. Right-click on this entry and select **Properties**.



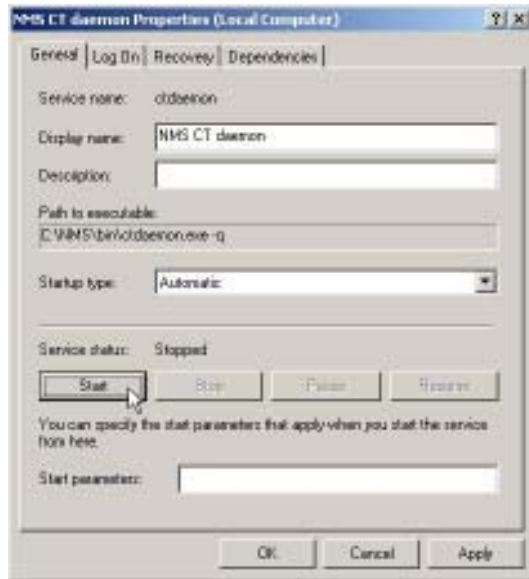
### Troubleshooting Step 7

Click **Start** on the NMS CT Daemon properties screen to start the CT Daemon service. Test your system again by trying the “oamsys” command as shown in **Troubleshooting Step 3**. If oamsys still will not run, contact NXi Communications technical support for further assistance.



### Troubleshooting Step 7

Click **Start** on the NMS CT Daemon properties screen to start the CT Daemon service. Test your system again by trying the “oamsys” command as shown in **Troubleshooting Step 3**. If oamsys still will not run, contact NXi Communications technical support for further assistance.



### Troubleshooting Step 8

In the middle of the NMS CT Daemon properties screen you will see a menu labeled **Startup Type**. Make sure that it is set to **Automatic**.

