

## Using this Reference

This Quick Set-Up Reference is supplementary to the SmartWORKS User's Guide. It details essential information about installing a SmartWORKS NGX board and establishing connectivity between a board, and customer premises equipment. For information on how to configure the board, refer to the SmartWORKS User's Guide that is included on the product CD-ROM.

To identify and locate board hardware such as LEDs, and audio jack connectors, refer to the information below.

For hardware installation, software installation, and connectivity between a board, a PBX, and customer premises equipment, refer to the next page.

**NOTE:** This unit is for use only with compatible UL listed PCs or servers.

## Agency Approvals

Agency approvals and homologations are available on the SmartWORKS CD ROM.

## LED Descriptions

### The SmartWORKS NGX:

**CR1:** DSP started LED. If the LED is ON, the board downloaded successfully. This doesn't occur until the first time an application starts.

**CR2:** Three stage channel monitoring LED with the following occurrences:

"GREEN," indicating all channels are connected, synchronized, and functioning properly.

"AMBER," indicating one or more channels is not synchronized.

"RED," indicating no channels are synchronized

**CR7:**TDM clock termination LED. "ON" indicates the boards TDM clocks are being terminated. The TDM clocks can be terminated via the control panel.

**CR17:**Three stage power and board initialization monitoring LED with the following occurrences:

"ON," indicates that the board has successfully loaded.

"OFF," indicates no communication to the board.

"BLINKING," indicates the board is ready to be downloaded. After the DLL is loaded the board should automatically be downloaded. If the LED continues to flash, the board could not be downloaded successfully or is in a panic state.

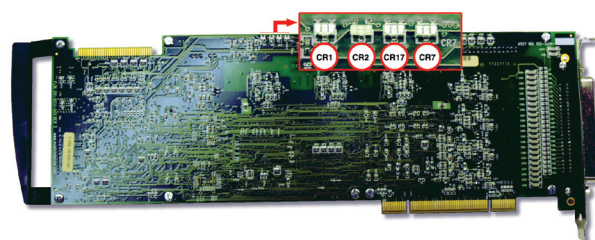
**Note:** Invoking the MTBlinkBoard() API function causes the LED to blink. The total number of times it blinks equals the board number + 1. Use this function to match board location in a chassis with its board number.

## System Requirements

The computer must meet the following requirements prior to installing the SmartWORKS NGX:

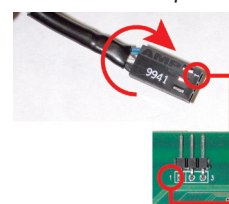
Hardware System Requirements:	Operating Systems:
<ul style="list-style-type: none"> <li>· Pentium IV or equivalent 400 MHz or better</li> <li>· ATX PCI motherboard or passive backplane with 3.3V ATX power supply</li> <li>· PCI 2.2 bus/PCI express</li> </ul>	<ul style="list-style-type: none"> <li>· Windows 2000 SP 3</li> <li>· Windows XP SP 1</li> <li>· Windows 2003 Server 32-Bit</li> <li>· Linux (Call for availability)</li> </ul>

## SmartWORKS NGX LEDs

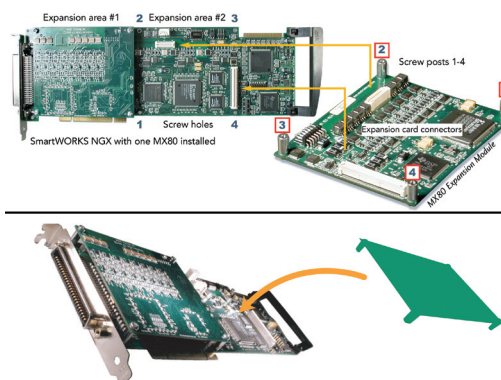


## Jumper J8

The SmartWORKS NGX series can be used with an optional 3-pin to 3.5mm adapter.




## Installing an MX80 Daughter Card



## Hardware and Software Installation

Switch off the power and remove power cords before opening the computer case. Do not re-attach power cords or switch on power to the computer while the computer case is removed.

Exercise ESD Precautions: Wear an ESD wrist strap. 

Install the Card: Secure the card in a PCI slot with a chassis screw.

After the PC is powered back up, cancel out of the Windows "Found New Hardware" screen. Place the SmartWORKS CD into the CD ROM and allow the board installation to finish. If multiple boards are connected with a MVIP or H.100 cable, they must be configured as Master or Slave. Refer to the *SmartWORKS Developer's Guide* for more information.

*Adding an additional SmartWORKS board to an existing system MAY impact the board and channel numbering of all boards. Refer to the SmartWORKS Developer's Guide for more information.*

## Install the Software:

Choose Products > SmartWORKS Series > Install Software > Install Software.

When prompted, select **Automatically Upgrade Firmware** and **Configure Boards**. For configuration details, refer to the SmartWORKS User's Guide.

*The computer must be re-booted each time a new AudioCodes board or SmartWORKS software is installed.*

## Board Configuration:

Open the SmartControl Panel Applet (located on your PC's Control Panel).

Select the **Board** tab and set the following:

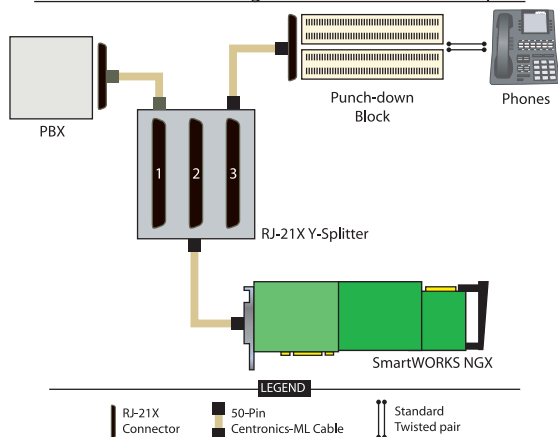
**PBX Type** - (also required for each daughter card) Select the PBX model this NGX is tapping from the Drop-down menu. Click **APPLY** (this step is required!). Once the Apply button is used, the proper firmware used for this PBX is automatically installed onto this system. The board's drivers must be restarted.

**DChannel** - this must be enabled to allow the reporting of D-channel events

**TDM Encoding** - This depends on the settings of the local PBX. (refer to your PBX documentation). Generally speaking, the following holds true:  $\mu$ -Law is used in North America and Japan, A-Law is used in Europe and in areas outside of North American influence.

**NOTE:** When changes are made in the Control Panel board drivers must be restarted for the changes to take effect. Use the Windows Device Manager to restart board drivers or reboot the PC.

SmartWORKS NGX Wiring Solution # 1: RJ-21X Y-Splitter



## Verify Setup:

1. Run the SmartWORKS Control Panel.
2. Click on the **Board** tab. Select the board number that represents the NGX board. Verify that the board information is displayed correctly.
3. Click on the System tab. Verify that the settings are correct.

## Verify Events:

**NOTE:** Check that the board is configured to generate D-channel events. Go to Control Panel and look under the **Board** tab. *DChannel* must be enabled. Verify that the system is set up to monitor a call on the first channel.

**Run SmartView:** From the Start Menu select **Programs > Ai-Logix > SmartWORKS > SmartView.exe**.

**Open Channels:** From the Tool Bar, select **System > MTSysStartup**. This opens the board and all channels.

At this point, the system is set up to operate and capture events. Do the following:

1. Highlight the first channel using the SmartView Interface.
2. From the Toolbar, select **Settings** then select **MT(Get/Set)EventFilters...**
3. Enable all options by placing a check in each box.
4. Pick up a phone connected to this channel and place a call.
5. Look for events in the SmartView Event Viewer window.

If no events are generated - verify the following:

1. Use SmartView to look for errors on the line indicating a connectivity issue: **FramerStatistics > MTGetNGXFramerStatistic...**
2. Check the tap and verify that the wiring matches the pin-out schematic provided.
3. Monitor another channel to verify that the channel is not bad.

## Check Recording:

1. Using SmartView, highlight the tapped channel.
2. Initiate a phone call and keep the line open.
3. From the Tool Bar select, **Media > MTRecFile...**

Set the following:

- File Name: [Filename].wav - the .wav extension must be appended to the file name
- Data Format: This must be set as MSGSM.

- Click the Advanced button: Under the MS Wave Option, select **RIFF Format**.

4. Stop recording: from the toolbar select **Channel Functions > MTStopChannel()**.
5. You can play this back using any standard Media Player.

If the recording contains static or noise:

1. View the tap connection and verify that there are no loose lines.
2. Check whether the actual phone line contains static, it may just be a bad line.
3. Send the recording to AudioCodes for evaluation.

SmartWORKS NGX Pin Out Diagram

