Agilent N5110B Baseband Studio
for Waveform Capture and Playback

Recommended PC configuration procedure
for hard disk drive (HDD) playback

The configuration procedure listed below is for the convenience of customers who need to assemble a PC workstation that can perform HDD playback. The N5110B Baseband Studio for Waveform Capture and Playback hard disk drive (HDD) playback rate and duration are not guaranteed, although factory tests at Agilent achieved a HDD playback rate of 40 MSa/s over an 8+ hour duration using the PC configuration described in this procedure. This rate is realized when the play back occurs one time through the hard drive, so you may experience some variations with repeated playback.

This procedure includes the installation of the N5101A Baseband Studio PCI card and driver. For more information, see the *N5101A Baseband Studio PCI card installation Guide*.

PC Configuration Components:
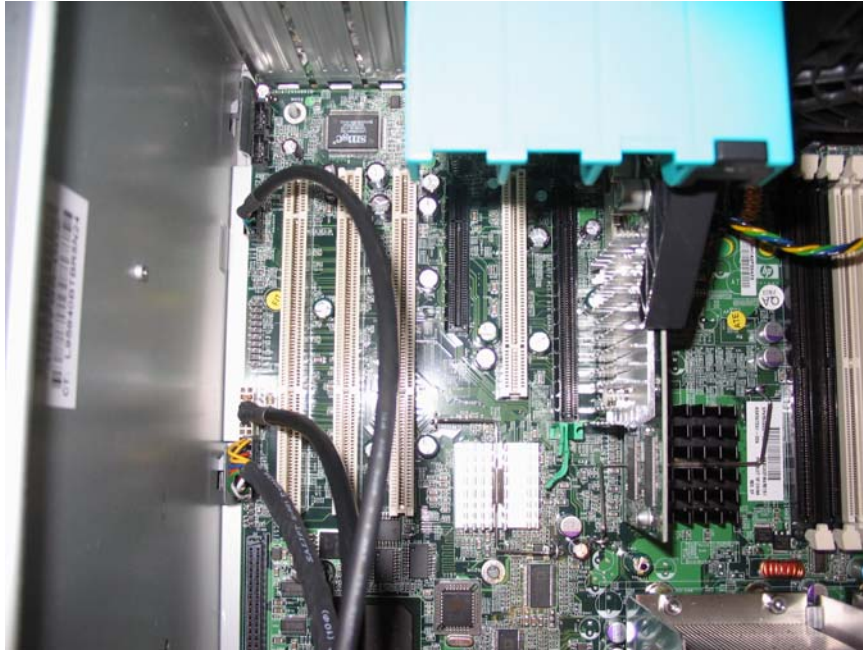
Pre-configured HP XW8200 PC workstation with:
        Windows XP Pro OS
        Intel Xeon 2.8GHz/1MB 800FSB processor
        2nd processor: Intel Xeon 2.8GHz/1MB 800FSB processor
        1GB (2x512) DDR2-400 ECC Reg RAM
        Hard drive #1: 74GB SATA/150 10K
        NVIDIA Quadro NVS 280 64 PCI-E video card
        48X CD-ROM
        Floppy disk drive
        Integrated Intel Pro MT 10/100/1000 LAN
        No Sound Card
        Hard drive #2: 73GB U320 SCSI 15000 RPM
        Hard drive #3: 73GB U320 SCSI 15000 RPM
        Hard drive #4: 73GB U320 SCSI 15000 RPM
        Hard drive #5: 73GB U320 SCSI 15000 RPM
        HP PS/2 Standard keyboard
        HP PS/2 Scroll Mouse
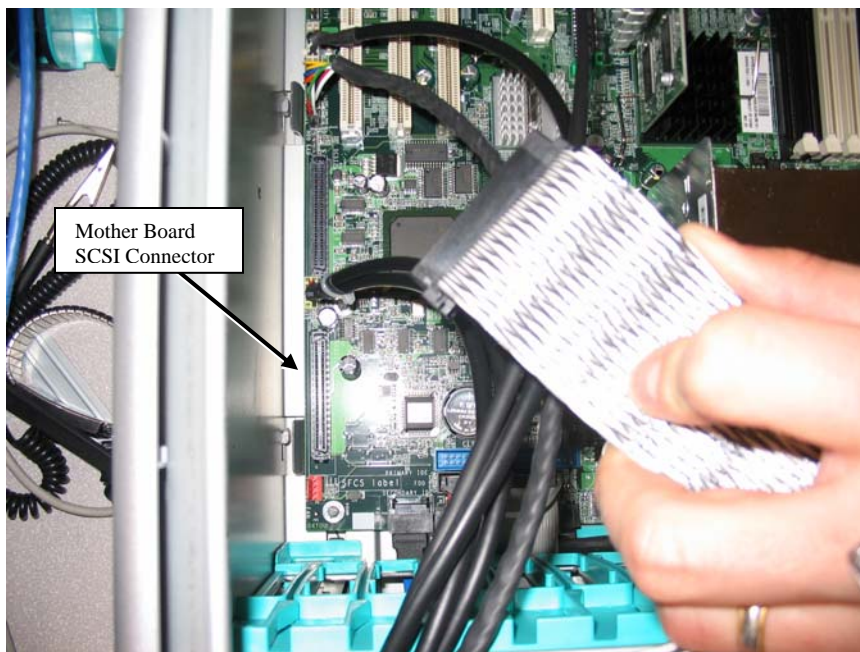   No Monitor

Additional hardware components:
        Agilent N5101A Baseband Studio PCI card with Option 022
        PCI-X Adaptec 2230 SLP SCSI RAID Card
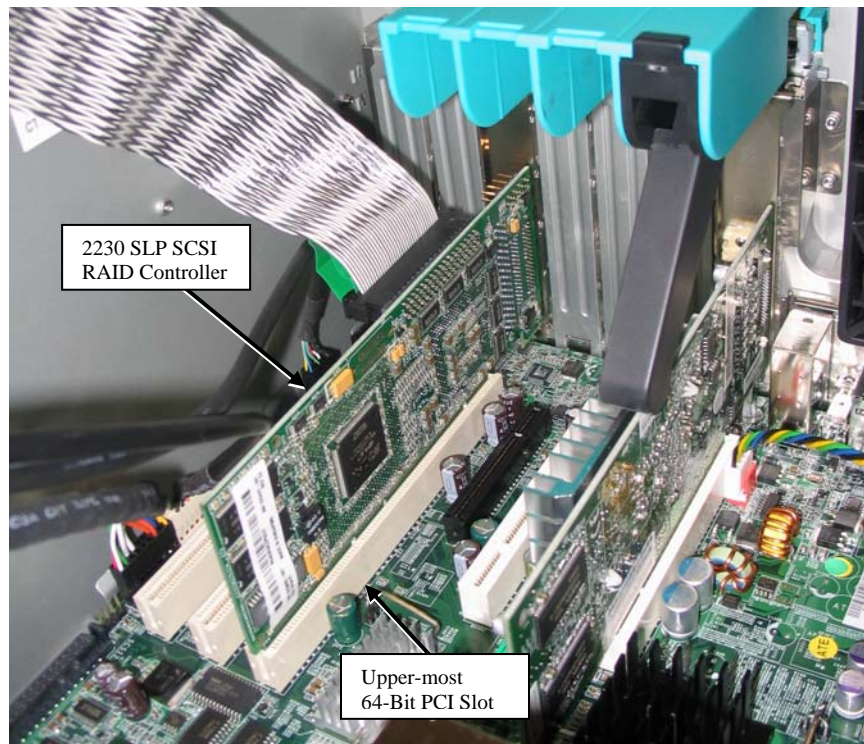
Configure and Install the Hardware Components
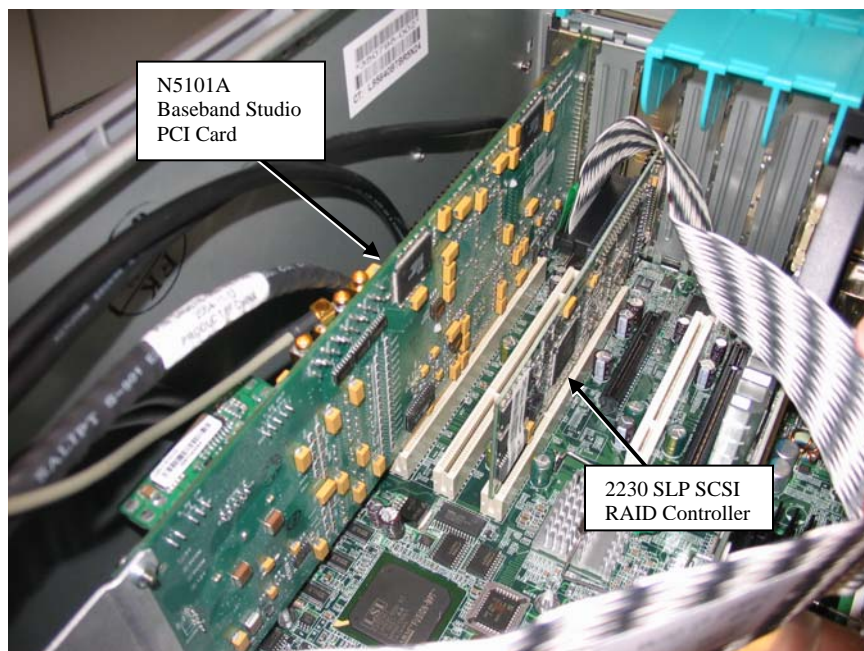
1. Unpack and open the case of the xw8200

2. Disconnect the SCSI cable from the mother board

Mother Board
SCSI Connector

3. Install the Adaptec 2230SLP SCSI RAID controller card in the upper-most 64-bit PCI slot, and attach the SCSI cable removed from step two to the 2230SLP.

2230 SLP SCSI RAID Controller

Upper-most 64-Bit PCI Slot

4. Install the N5101A card in the lower 64bit PCI slot.
    NOTE: Option 022 (2GB DRAM) is required. N5101A PCI cards may vary in appearance.

N5101A Baseband Studio PCI Card

2230 SLP SCSI RAID Controller

Configure and Install the Software Components

1. Replace the cover and setup the PC. Press F9 during boot up to see details.

2. Press 'ctrl-A' to enter the Adaptec Configuration Utility

    a. Select drives 2 through 5 (using insert) and initialize them

    b. Create an array

        i. Select drives 2 through 5

        ii. Choose RAID0 (stripped)

        iii. Choose a name to label the array

        iv. Set the block size to 64kB

    c. Accept the changes and exit the utility

3. After configuring the RAID0 array and completing the boot sequence, install the Adaptec 2230SLP driver and the N5101A driver. Refer to the *N5101A Baseband Studio PCI card installation Guide* if you need a copy of the N5101A driver.

4. Install Agilent IO libraries runtime. See the help system's *Installation* section for more information.

5. Install N5110B software and license file. See the help system's *Installation* section for more information.

6. Install .NET Framework 1.1 runtime. See the help system's *Installation* section for more information.

7. Add the new RAID0 volume

    d. If this is not done automatically

    e. Go to the Disk Management CMM

    f. Initialize and convert

    g. Create a new volume

    h. Assign a letter

    i. Format the RAID0 array with the following settings:

        i. NTFS

        ii. 64kB block size

        iii. Uncheck "Perform Quick Setup"

8. Be sure to turn off Windows Automatic Updates

9. If the system has Virus protection software be sure to exclude the RAID0 drive from any realtime/active search/protection lists.

10. For maximum performance, we recommend that you close all other programs (including background applications) while performing capture or playback operations.