8100 Mobile Device Test System

Radio Access: LTE

Product Update

Spirent

541 Industrial Way West
Eatontown, NJ 07724 USA

Email: sales@spirent.com
Web: http://www.spirent.com

AMERICAS 1-800-SPIRENT • +1-818-676-2683 • sales@spirent.com
EUROPE AND THE MIDDLE EAST +44 (0) 1293 767979 • emeainfo@spirent.com
ASIA AND THE PACIFIC +86-10-8518-2539 • salesasia@spirent.com

Page Part Number: 71-006692, Version A0

Table of Contents

1. Introduction

1.1. Overview

This Product Update contains information on the modifications of the Test Packs supported on the 8100 Mobile Device Test System from the version 4.3.1 to version 4.4.0.

The Test Packs supported on the 8100 Mobile Device Test System v4.4.0 are:

- CDMA - LTE Mobility v1.3
- Data Retry - LTE v1.3
- Data Throughput - LTE v1.4
- RF Performance - LTE v1.5
- UMTS - LTE Mobility v1.0

8100 Mobile Device Test System - Radio Access: LTE v4.4.0 consists of the software components listed in the table below.

Software	Version
8100-B Series Platform	1.1.67
8100-B 100 Platform	1.5.350
Platform Setup Guides	1.0.2
AirAccess C2K	4.30.009
AirAccess WCDMA HS	4.42.104
AT4 Log Generator COM Interface	1.6.0.12
AT4 Logging Framework Runtime	1.6.1.4
CDMA 8960 Driver	3.3.0.17
CDMA - LTE Mobility	1.3.68
CS8 Development Library	1.1.17
Custom Report Engine	1.1.17
Data Retry - LTE	1.3.155
Data Throughput - LTE	1.4.234
Development Library Services	1.50.143
E2010S Driver V1	2.8.0008
E2010S Driver V2	2.8.0008
eAirAccess	1.40.030
Intrig Data monitor	1.2.9
RF Performance - LTE	1.5.370

Software	Version
Spirent AT Control (installed on Client Laptop)	1.5.25
Spirent Data Client (installed on the Controller PC, Client Laptop, and Application Server)	1.12.213
Spirent EPC Software	10.0.0.48.paw.19.tsu
Spirent WCE-IAPI	3.51.034
Spreadsheet Report Engine	1.5.67
SR5500 TestKit	3.51.002
TCU2 Driver	1.0.16
Test Manager	2.5.319
UMTS - LTE Mobility	1.0.6.1
Universal DM V2	4.7.1

1.2. New Features

1.2.1. CDMA - LTE Mobility

The following features have been added to the CDMA - LTE Mobility Test Packs:

- Supports tests for measurement gaps in VZW LTE-CDMA InterRAT Operations Test Plan and in VZW LTE-CDMA InterRAT Operations for SVD Test Plan.
- Supports the update for the VZW LTE-CDMA InterRAT Operations Test Plan from v5.0 to v6.0.
- Supports VZW LTE-CDMA InterRAT Operability Test Plan v1.5.
- Supports the operating bands 3, 24, 25 and 26 in addition to the operating bands that were supported in the previous release, including: 1, 2, 4, 5, 7, 10, 12, 13, 14, 17, and 20.
- Supports saving eAirAccess logs within Test Manager.
- Supports enabling RLP logging in AirAccess C2K.
- Supports Windows 7 on the Controller PC.
- Supports Spirent UICC – Milenage.

1.2.2. Data Retry - LTE

The following new features are included in the Data Retry – LTE Test Packs:

- Supports the operating bands 3, 24, 25, and 26 in addition to the operating bands supported in the previous release, including: 1, 2, 4, 5, 7, 10, 12, 13, 14, 17, and 20.

- Supports VZW Compliance Test Plan LTE Data Retry Version 9.0.
- Supports saving eAA logs from within Test Manager.
- Supports Windows 7 on the Controller PC.

1.2.3. Data Throughput - LTE

The following new features are included in this release of the Data Throughput - LTE Test Packs:

- Supports the CQI/ACK/NACK Stats collection and CQI/ACK/NACK charts in Test Manager.
- Supports L1/L2 logging collection.
- Support for Physical Layer throughput calculation/Physical Layer throughput chart.
- Supports RLC Stats collection/RLC Stats chart in Test Manager.
- Supports CQI, CFI, and UE Specified Aggregation Level as test case parameters.
- Support for real time throughput summary pane in Test Manager.
- Support for the MTU parameter in UE file.
- Supports clearing/saving the eAA OTA database.
- Supports collection of UE category information in Test Manager.
- Support for time-based FTP (optimized FTP) instead of file-based.
- Supports the Spirent UICC card.
- Supports Windows 7 on the Controller PC.
- Supports the operating bands 3, 24, 25, and 26 in addition to the operating bands supported in the previous release; including: 1, 2, 4, 5, 7, 10, 12, 13, 14, 17, and 20.

1.2.4. RF Performance - LTE

The following new features are included in this release of the RF Performance - LTE Test Packs (refer to the user manual for details):

- Optimizations have been implemented to reduce test time execution by 40%. Test Manager includes built-in intelligence to combine and execute similar tests without tearing down the LTE attach between tests.
- Supports the additional E-UTRA operating bands given in the table below.

E-UTRA Operating Band	Uplink (UL) operating band BS receive UE transmit	Downlink (DL) operating band BS transmit UE receive	Duplex Mode
	FUL_low – FUL_high	FDL_low – FDL_high	
24	1626.5 MHz – 1660.5 MHz	1525 MHz – 1559 MHz	FDD
25	1850 MHz – 1915 MHz	1930 MHz – 1995 MHz	FDD
26	814 MHz – 849 MHz	859 MHz – 894MHz	FDD

- Supports the E-UTRA channel bandwidths given in the table below.

E-UTRA Band/Channel Bandwidth						
E-UTRA Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
24	Yes	Yes	Yes	Yes	Yes	Yes
25	Yes	Yes	Yes	Yes	Yes	Yes
26	Yes	Yes	Yes	Yes	Yes	Yes

- SVLTE test cases have been updated to comply with the *Verizon Wireless Compliance Test Plan: Conformance and Performance for Simultaneous Circuit Switched Voice and Packet Data Capable LTE Multi-Mode Devices, version 4.0, issued: June 2011*.
- The following SVLTE test cases as specified in the *Verizon Wireless Compliance Test Plan: Conformance and Performance for Simultaneous Circuit Switched Voice and Packet Data Capable LTE Multi-Mode Devices, version 4.0, issued: June 2011* are now supported.

Test Number	Test Name	Test Pack	Additional Required Instruments
2.1	LTE Performance in the Presence of a 1xRTT Voice Call		
2.1.2	LTE RF Output Power Back-off Conformance Test	TP-RF-SVLTE-TP1	Agilent 8960

- The following test cases as specified in the *Verizon Wireless Compliance Test Plan, LTE 3GPP Band 13 Supplementary RF Conformance, version 10.0, issued: June 2011* are now supported.

Test Number	Test Name	Test Pack	Additional Required Instruments
2	Transmitter Tests		
2.8	Configured Output Power	TP1	

1.2.5. UMTS - LTE Mobility

There are no new features included in this release of the UMTS - LTE Mobility Test Packs.

1.3. Maintenance Updates

1.3.1. CDMA - LTE Mobility

The following maintenance updates have been added to the CDMA - LTE Mobility Test Packs:

- Supports continuing to run full test case if intermediate step fails.
- Supports not verifying data continuity.
- Supports delay while switching RAN emulators.
- Supports provisioning APN in a test case parameter.

1.3.2. Data Retry - LTE

The following maintenance updates have been added to the Data Retry - LTE Test Packs:

- Supports UE automatic attach to internet PDN.
- Supports enhanced parameters for multi-PDN settings.

1.3.3. Data Throughput - LTE

The following maintenance updates have been added to the Data Throughput - LTE Test Packs:

- *Test Manager Event* window results enhancement.
- Benchmark Report enhancement.
- Detail Report enhancement.
- Advanced Channel Models enhancement.

1.3.4. RF Performance - LTE

The following maintenance updates have been added to the RF Performance - LTE Test Packs:

- Failures seen with "VZW Supplementary RF Conformance 2.4 Spurious Emissions Band UE Coexistence" and "VZW Supplementary RF Conformance 2.9 Spurious Emissions Band UE Coexistence" have been addressed with this release of LTE RF by introducing an external filter between the spectrum analyzer and the SR8068 TCU. These external filters will be automatically shipped to the existing customers.
- The occasional throughput failures seen with Receiver Sensitivity and Receiver Blocking tests due to incorrect calculation of “FER” due to a timing issue have been addressed.

1.3.5. UMTS - LTE Mobility

No maintenance updates have been added to the UMTS - LTE Mobility Test Packs.

1.4. Known Issues

The following issues are applicable to all Test Packs on the 8100 Mobile Device Test System v4.4.0:

- There is an issue with removing the test data cards and test phones from Dell Latitude E6500/E6510/E6520 Client Laptops connected through the PCMCIA slot or USB. If the client laptop model is a Dell Latitude E6500/E6510. Refer to Section 3.1 for details.
- There is a potential conflict that can occur if the device installs a Network Interface driver. Refer to Section 3.2 for details.
- Attempting to abort calibration causes Test Manager to freeze. Refer to Section 3.3 for details.
- The log file format of the OTA messages has changed; therefore OTA messages collected with v4.3.1 cannot be decoded for viewing.
- Installation of Microsoft Security Essentials enables Microsoft Update. Microsoft Update must be disabled. This applies to the Controller PC, Client Laptop, and the Applications Server. Refer to Section 0 for details.
- Errors may be encountered if you do not update every module. If this is occurs, uninstall and then reinstall all of the modules.
- Platform Files created using previous releases are not automatically upgraded correctly in this release. Delete all previously created Platform Files and generate new Platform Files prior to executing any test cases. Refer to Section 0 for details.
- Bandwidths 1.4M, 3M, 15M and 20MHz are enabled, but have not been fully tested due to UE availability.
- Band classes 1, 2, 3, 5, 7, 10, 12, 14, 20, 24, 25, 26, and 27 are enabled, but have not been fully tested due to UE availability.

1.4.1. CDMA - LTE Mobility

The following issues are applicable to the CDMA - LTE Mobility Test Packs:

- The SIB 8 field specifying the CDMA time is not populated correctly. UEs that rely on this field to perform measurements of the CDMA systems during scheduled LTE measurement gaps may not perform correctly during tests requiring this capability.
- In the IOT test cases that test the LTE/eHRPD handover by using FTP to perform transfer verification; if the UE takes more than one minute to finish the handover, the existing FTP transfer is terminated. A new FTP transfer is then used to verify FTP transmission after the handover.

1.4.2. Data Retry - LTE

There are no known issues specifically applicable to the Data Retry - LTE Test Packs.

1.4.3. Data Throughput - LTE

The following issues are applicable to version 1.40 the Data Throughput LTE Test Packs:

- For FTP over IPv6 at maximum throughput rates greater than 25Mbps, you must use a client laptop running Windows 7 and an Application Server running Windows Server 2008.
- The Advanced Channel Model test requires the E2010 to be calibrated for 1dB tolerance limits. Call Spirent Customer Service for details.
- A test may encounter a radio link failure when the IMS PDN is enabled and the UE refreshes its subscription by sending another SUBSCRIBE. This typically happens when the test involves an FTP/UDP transfer for more than 40 minutes after attach.
- Performance degradation may be seen for high throughput test cases when RLC Stats or L1/L2 logging is enabled. We recommend that you disable RLC and L1/L2 logging only if modulation is 64QAM, MIMO is enabled, and the TB Size is 25456 or above.
- If the COM port of the UE is locked, unplug and reconnect the UE.
- CQI information in the CQI Chart and in the detail/benchmark report is not logged for the Transmission Mode 4 and Transmission Mode 6 Test Cases.
- In certain RF configurations, the calculated MAC/Physical Layer Throughput may be slightly off and should only be used as a reference.
- When a system is cabled with SR5500M, we recommend that you use the Dedicated Mode to achieve maximum RSTP range across all band classes.

1.4.4. RF Performance - LTE

The following issues are applicable to the RF Performance – LTE Test Packs:

- Microsoft Windows 7 is not supported on the Controller PC.
- LTE RF test cases will not run properly if the UE is permitted to acquire an IP address when it is connected to the Controller PC for UE automation. In this case, the internet protocol feature of the UE network interface must be disabled. Refer to Section 3.6 for details.

1.4.5. UMTS - LTE Mobility

The following issues are applicable to the UMTS – LTE Mobility Test Packs:

- IOT was performed with the only device available (Sierra Wireless U313 data card). Interoperability with other devices is not known.

- A new component from the Global Installer DVD (UE AT Interface for CS8) must be installed when upgrading the UMTS - LTE Mobility module to this release. You can select this component for installation under the *Instruments* tab, as shown in Figure 1-1.

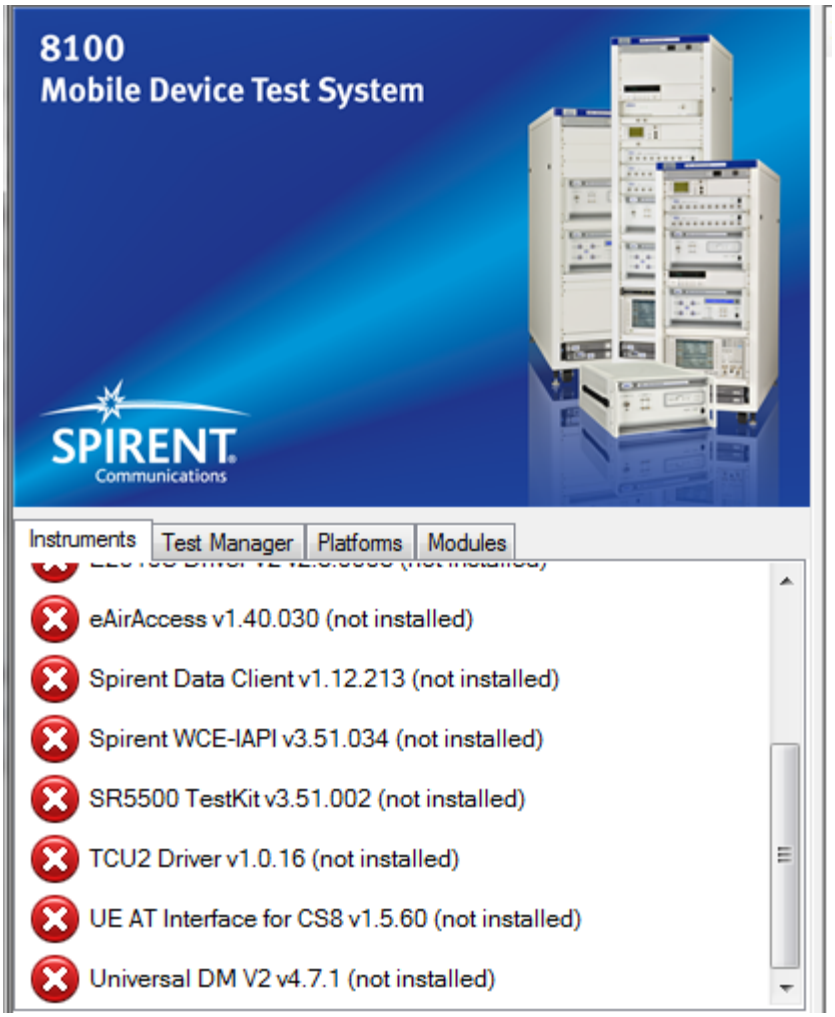

Figure 1-1: Global Installer – Instruments Tab

- Note that the Global Installer software may not correctly detect that the *UE AT Interface for CS8 SW* is installed. This is due to a naming convention mismatch. If you encounter this issue, use the Windows Control Panel to confirm that the correct software applications are installed.

2. System Upgrade Instructions

2.1. Overview

The following sections contain the steps necessary to install the LTE Test Packs and the necessary supporting software components on an existing system.

NOTE: The instructions in this document are written specifically for upgrading the configuration from version 4.3.1 to version 4.4.0 only.
If starting from any other version, you must first update the system to version 4.3.1 by referring to the appropriate product updates.
After the version 4.3.1 update is complete, continue with the upgrade instructions in this document.

These steps include:

- Downloading and unzipping the Software Update *Package* from the Customer Support website.
- Using the Global Installer application.
- Updating the Controller PC.
- Updating the Client Laptop.
- Updating the Application Server.
- Updating the EPC Server.
- Updating the E2010S.
- Updating the Cisco 1811/2600 Router Configuration.
- Updating the Dell 6248 Switch Configuration.
- Updating the Agilent ESG.
- Updating the Agilent EXA/MXA Spectrum Analyzer.
- Installing new System Cables.

2.2. Downloading/Unzipping the Software Update

To download/unzip the software update:

1. Log in to the Spirent Customer Service Center website at http://support.spirent.com using the e-mail address and password assigned to you by Spirent.
2. Select **Download Software Updates›Wireless›8100 Radio Access – LTE Testing (Version 4.4.0)›Download** to download the latest release.
3. Locate the downloaded file in Windows Explorer.

4. Right-click the file and select **Extract All** from the menu, as shown in Figure 2-1.

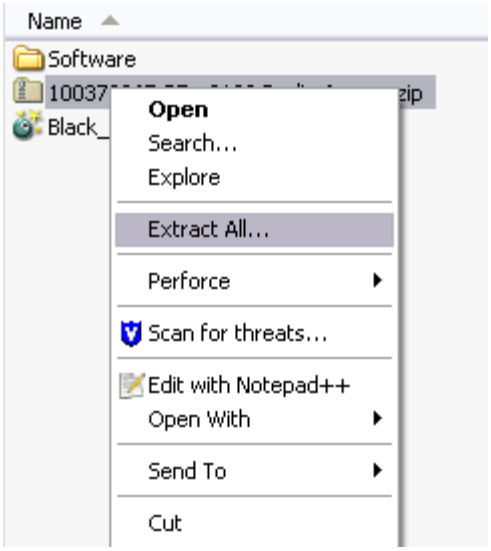

Figure 2-1: Extract All Files

5. Use the *Extraction Wizard* to extract the files to a known location, as shown in Figure 2-2.

NOTE: We recommend that you extract the zipped package files to a portable USB device. These files are needed to update multiple computers on the system.

The location of these files will be referred to as *‹8100 – LTE 4.4.0 Installer Root›* throughout the remainder of this document.

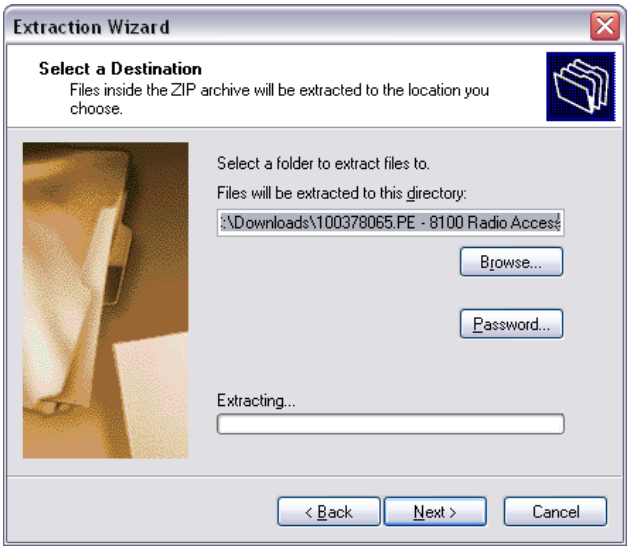

Figure 2-2: Using the Extraction Wizard

2.3. Using the Global Installer Application

This section provides information on how to use the Global Installer. This application allows you to update different computers in the system using a convenient user-interface.

To run the Global Installer application:

1. Navigate to the ‹*8100 – LTE 4.4.0 Installer Root*› folder.
2. Run the **setup.exe** file.
   The *8100 Mobile Device Test System Installer* window displays, as shown in Figure 2-3.

NOTE: The version numbers shown in following Global Installer figures may not reflect the current software version numbers.
For the correct version numbers, refer to the table on page 1.

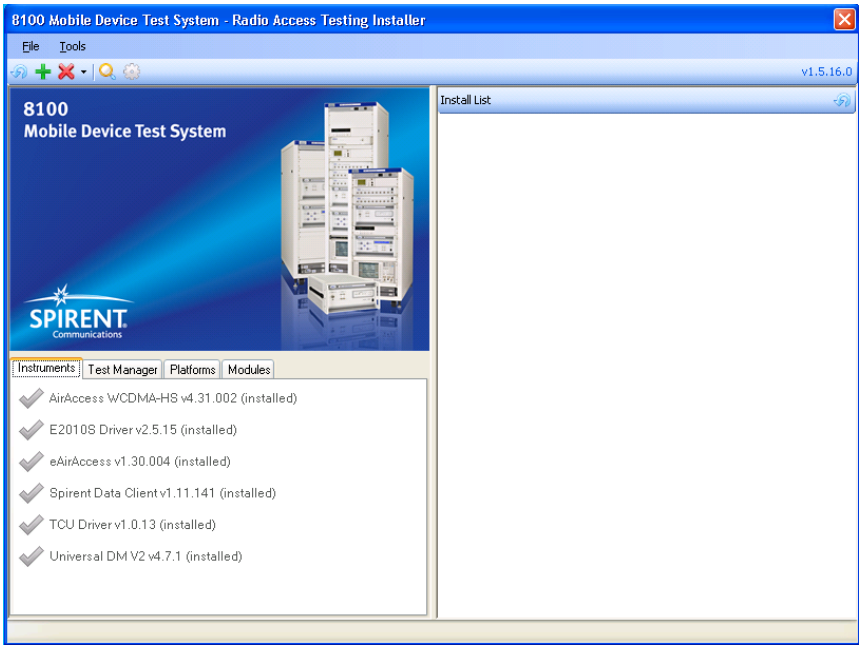

Figure 2-3: 8100 Mobile Device Test System Installer Window

The Global Installer application organizes the software components into separate tabs, shown in Figure 2-3. The icon next to each component indicates which components have been detected as installed on the system.

The following list describes the different icons used in the Global Installer:

 The software is not installed.

 A different version of the software is already installed.

 The software is selected for install (also displays on the Install List).

 The correct version of the software is already installed.

To install software components using the Global Installer application:

1. To mark a software component for installation, select the component.
   The icon changes to a green checkmark and the component is added to the Install List.

2. Add additional components as necessary.
   You can add components from different tabs prior to starting the installation.

NOTE: In some cases, the order of installation is important. Follow the instructions in the sections below regarding installation order.

3. Click the **Installation** toolbar button  to begin the installation. The progress of the install displays on the left pane. When complete, a *Summary* window displays.

2.4. Upgrading the Controller PC

Connect the device containing the unzipped installer to the Controller PC.

2.4.1. Preparing For The Update

1. Ensure that the following applications are not running:
   a. Test Stand Sequence Editor
   b. eAirAccess
   c. AirAccess C2K
   d. AirAccess WCDMA-HS
   e. Intrig IDM
   f. Universal DM V2
   g. Spirent Data Client
2. Save the existing security passwords.
   a. Start Test Manager and select **Help›About›Passwords**.
   b. Click the **Export** button and use the file browser to export the passwords to **passwords.csv**.
   c. Close Test Manager.

2.4.2. Updating Intrig Data Monitor

1. Uninstall any previous versions of IDM by selecting **Start› Add or Remove Programs**.
2. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\Controller PC\IDM* folder.
3. Execute **idm-x.x.x.exe** and accept the defaults.
4. Modify the registry entries after IDM is installed:
   a. Select **Start›Run**. Type **regedit** and press **Enter**.
   Windows 7 Users: Type **regedit** in the Search field and press **Enter**.
   b. If the *User Account Control* window displays, click **Yes** to proceed.
   c. Expand **HKEY_LOCAL_MACHINE\SOFTWARE\Intrig**. Right-click the *IDM* folder and select **Permissions**.
   d. Select the **Users** account and under *Permissions*, select **Allow** for the Full Control option, as shown in Figure 2-4.
   Click **Apply** and then **OK**.

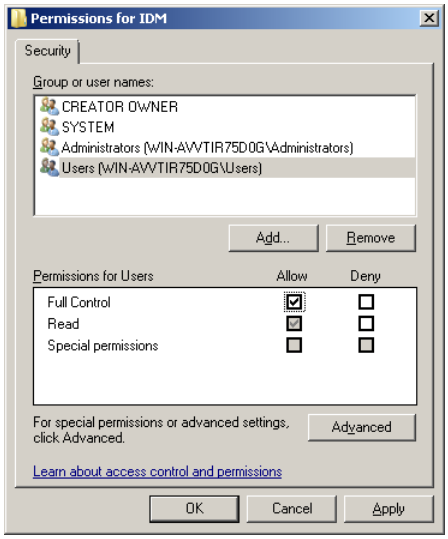

Figure 2-4: IDM Permissions Window

2.4.3. Updating Components - Global Installer

For details on how to use the Global Installer application, refer to Section 2.3.

To update components in the Global Installer:

1. If the correct version of Test Manager is not installed, select the Test Manager component.
2. Click the **Installation** toolbar button to begin the installation.
3. Navigate through all the tabs from left to right and select any components that are indicated to be out of date or missing.

NOTE: There are now two versions of the E2010S Driver. Select both for installation.

4. Click the **Installation** toolbar button to begin all installations.
5. Restart the Controller PC.

2.4.4. Installing Logging Framework

1. Uninstall any previous versions of Logging Framework components.
   a. Stop the Logging Framework by selecting **Start›All Programs›AT4 Wireless›Logging Framework Runtime›Stop Logging Framework**.
   b. An *Information* window displays verifying that Logging Framework has been stopped, as shown in Figure 2-5.

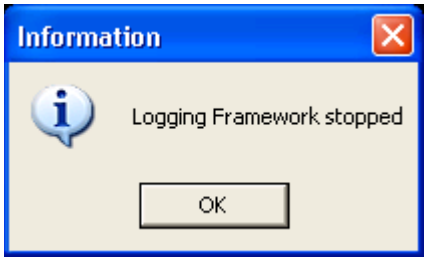

Figure 2-5: Logging Framework Information Window

c. From the Control Panel, select **Add or Remove Programs** and remove the following components:

   i. AT4 Wireless Logging Generator COM Interface

   ii. AT4 Wireless Dissectors

d. Uninstall LogAgent by selecting **Start›All Programs›AT4 Wireless›Logging Agent›Uninstall**.

2. Install the Logging Framework:

   a. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\Controller PC\Logging Framework* folder.

   b. Execute **Logging Framework Runtime Setup.exe** and accept the defaults.

   c. Execute **AT4 Wireless Dissectors Setup.exe** file and accept the defaults.

2.4.5. Completing Test Manager Configuration

2.4.5.1 Configuring Test Manager to Run as Administrator - Windows 7

NOTE: Perform these instructions only if your system includes a Windows 7 Controller PC.

1. Start the Windows 7 Task Scheduler (enter task) in the *Run Application* window, as shown in Figure 2-6.

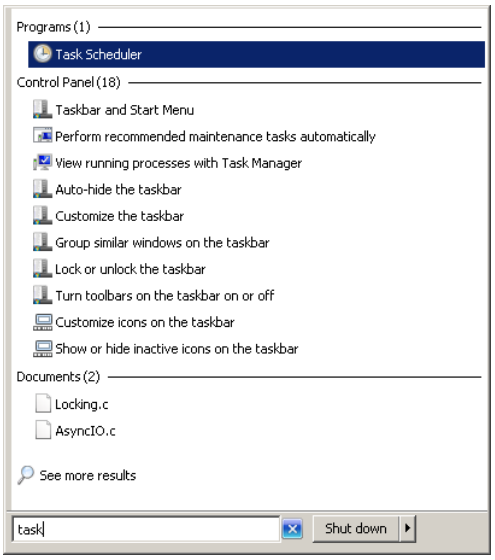

Figure 2-6: Starting Task Scheduler

2. Select the **Import Task** option from *Actions* panel, as shown in Figure 2-7.

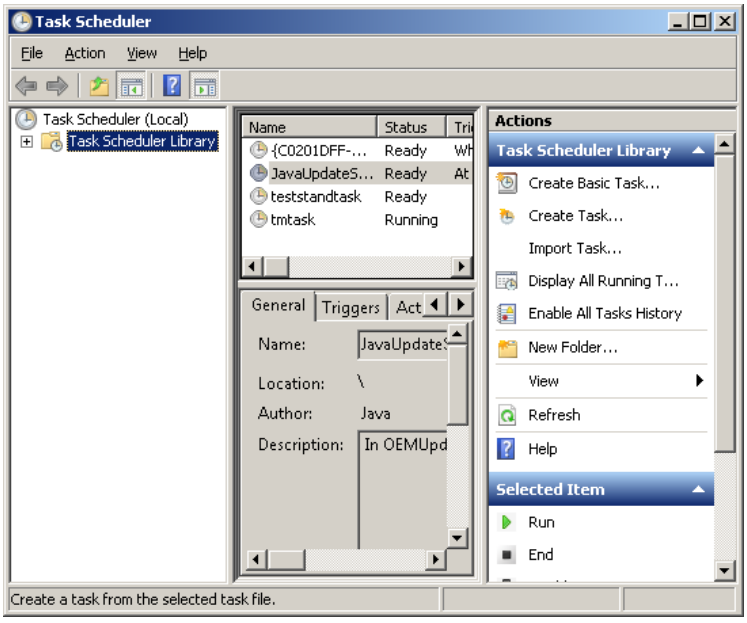

Figure 2-7: Task Scheduler Window

3. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\Test Manager\PUG Script Files* folder, select the **tmtask.xml** file and click **Open**, as shown in Figure 2-8.

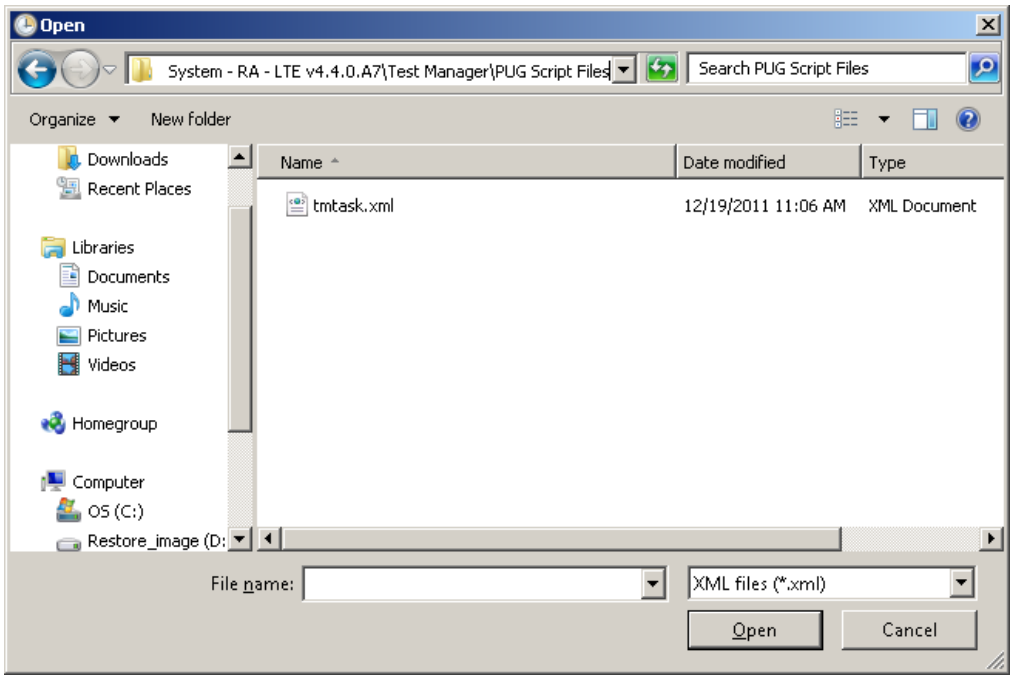

Figure 2-8: Opening the .xml File

4. A *New Task* window displays with the required parameters already populated. Click **OK** and close the Task Scheduler.

5. Replace the existing Test Manager Desktop Shortcut by navigating to the *‹8100 – LTE 4.4.0 Installer Root›\Test Manager\PUG Script Files* folder, as shown in Figure 2-9.

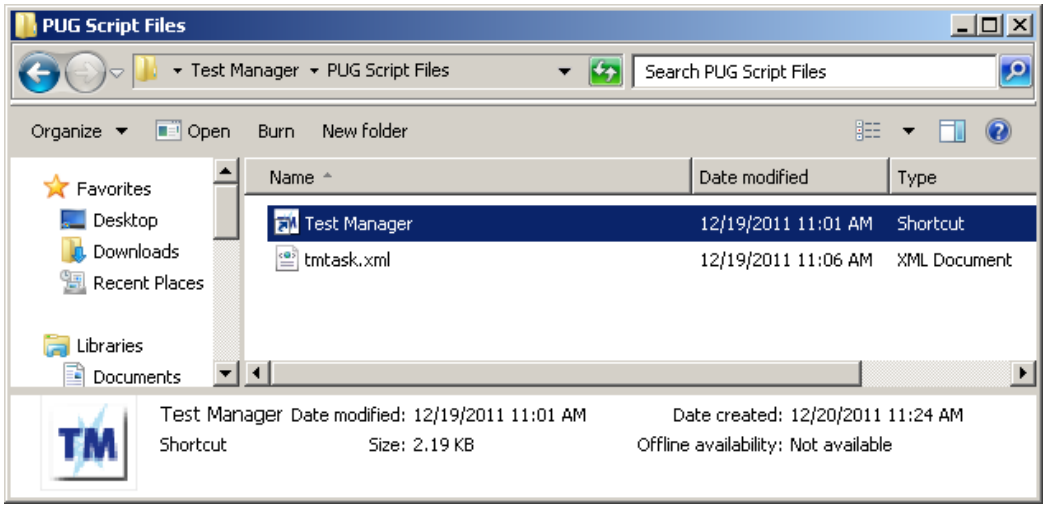

Figure 2-9: PUG Script Files

6. Copy the **Test Manager** shortcut and move it to the Desktop.
A *Copy File* window displays, as shown in Figure 2-10. Select **Copy and Replace**.

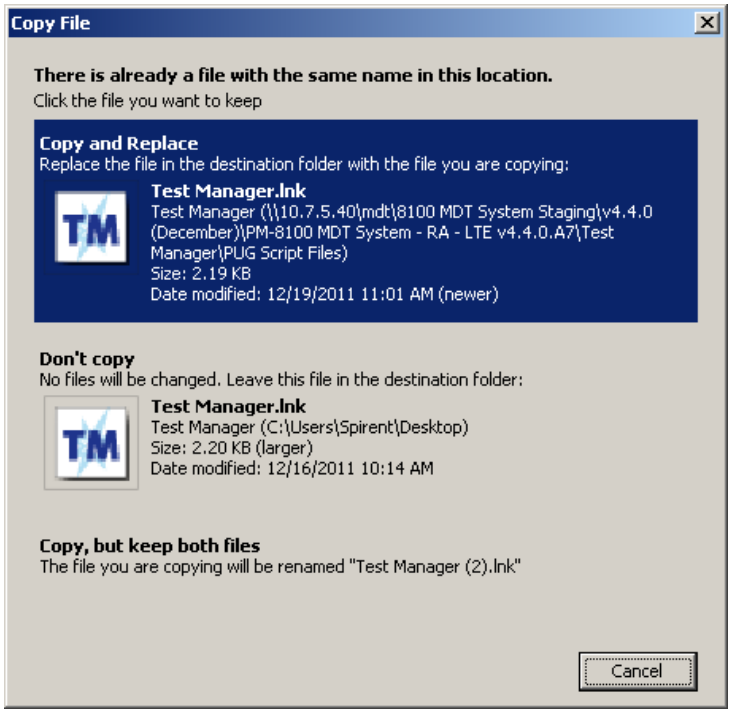

Figure 2-10: Copy and Replace Confirmation Window

7. The Test Manger application will now run with the highest administrative privileges when this icon is selected.

2.4.5.2 Updating Test Manager Passwords and User Files

1. Start Test Manager and select **Help›About›Passwords**.
2. Select and open the **passwords.csv** file exported in Section 2.4.1 on page 13.

NOTE: Contact your local Spirent Sales Manager if new or additional passwords are required for the updated features.

3. Delete all older platform files.
   In Test Manager, select **File›Open›Platform File**.
4. Create a new platform file.
   In Test Manager, select **File›New›Platform File**. Refer to Section 0 for details on creating Platform Files.
5. Update all UE Files from previous versions.
   In Test Manager, select **File›Open›UE File** and save the old UE Files again.
6. Update all Session Files from previous versions.
   In Test Manager, select **File›Open›Session File** and save the old Session Files again.
7. Run a System Calibration for the B-Series platform and/or the B-100 platform.
8. Close Test Manager.

2.4.6. Completing eAirAccess Configuration

1. Launch eAirAccess by double-clicking the desktop icon.
2. Select **Help›Enter Password**.
   The *Password* window displays, as shown in Figure 2-11.
3. Enter the appropriate password and click **OK**.

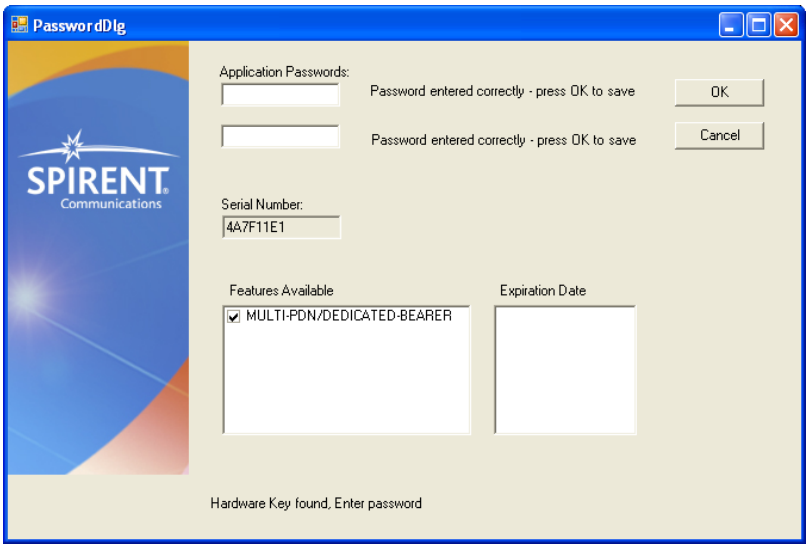

Figure 2-11: Entering the eAirAccess Password

4. Close eAirAccess.

2.4.7. Completing AirAccess C2K Installation

NOTE: Follow these instructions only if C2K instruments are included in your system.

1. Launch AirAccess C2K by double-clicking the desktop icon.
2. Select **Help›Enter Application Password**. The *Application Password* window displays, as shown in Figure 2-12.
3. Enter the appropriate password and click **OK**.

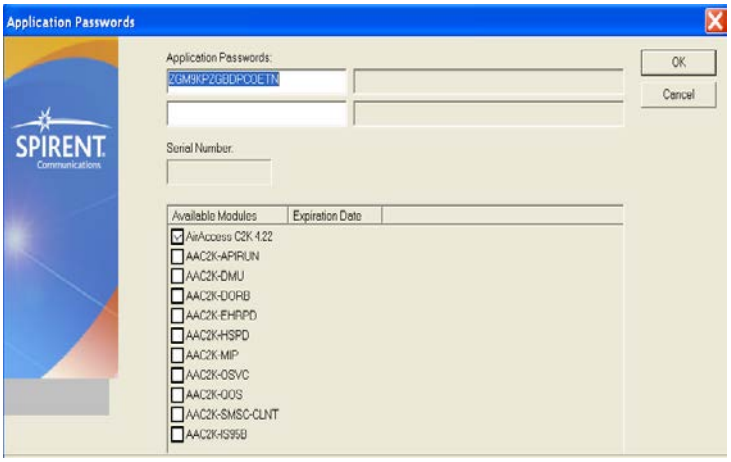

Figure 2-12: Entering the AirAccess C2K Password

4. Select **File>Install Instrument Firmware**.

5. The *SR3452, SR3462, and SR3600 Instrument* windows display, as shown in the following figures.

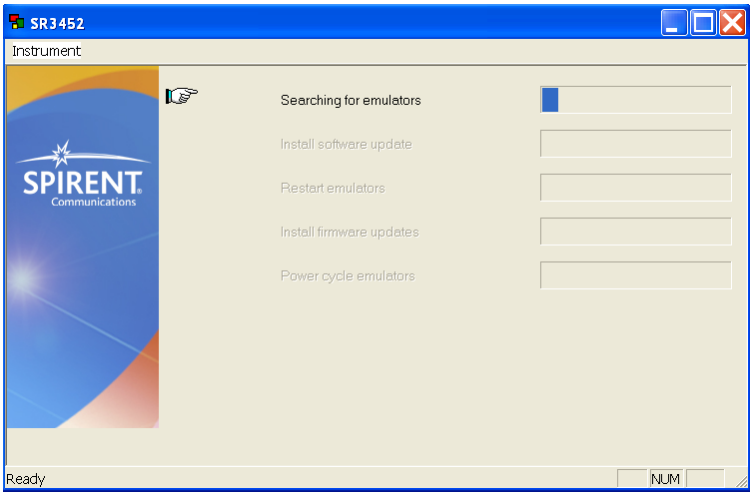

Figure 2-13: SR3452 Instrument Window

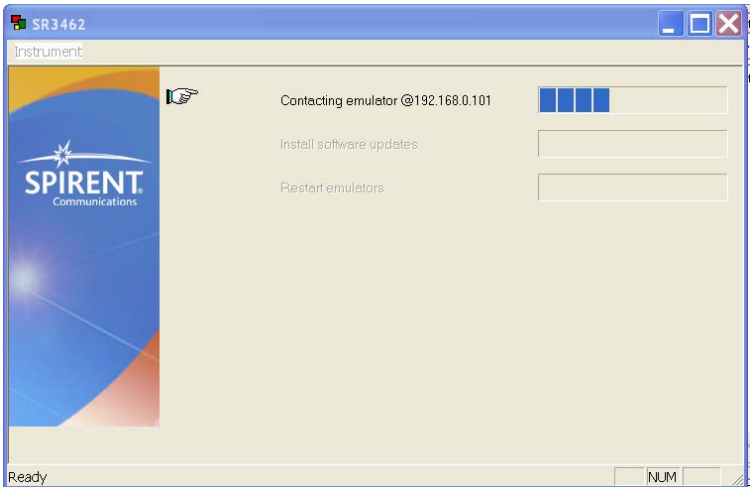

Figure 2-14: SR3462 Instrument Window

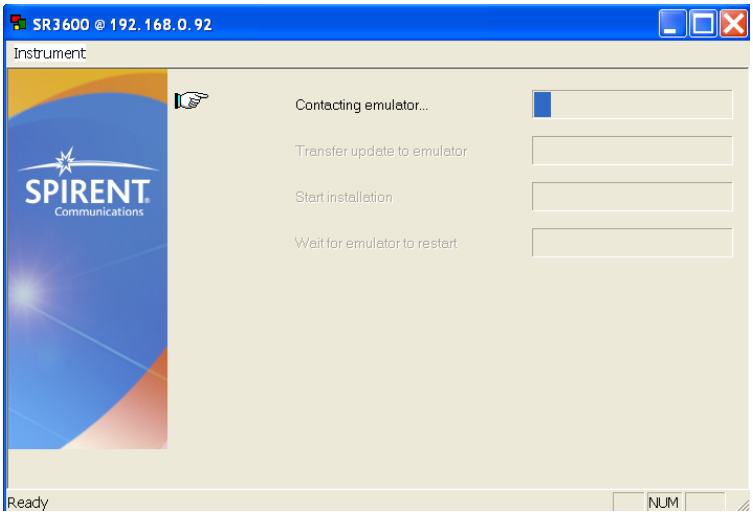

Figure 2-15: SR3600 Instrument Window

6. Wait for the installation to complete.
   A window may display prompting you to turn the instrument off and power it on again. Follow the instructions to restart the instrument and close the window.

7. Close AirAccess C2K

2.4.8. Correct Calibration Files Access Permissions - Windows 7

NOTE: Perform these instructions only if your system includes a Windows 7 Controller PC.

1. Using Windows Explorer, navigate to the *C:\ProgramData\Spirent Communications* folder as shown in Figure 2-16.

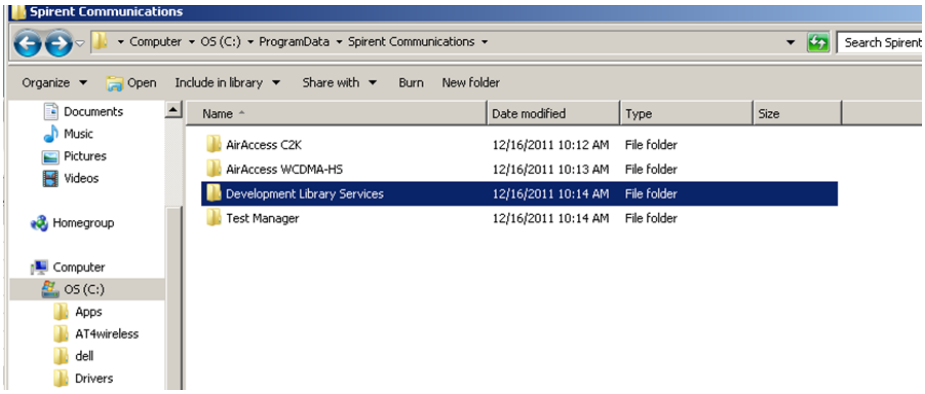

Figure 2-16: Spirent Communications Folder

2. Right-click the **Development Library Services** folder and select **Properties** from the menu.
   In the *Properties* window, select the *Security* tab.

3. Select the **Users** group to view the Permissions, as shown in Figure 2-17.

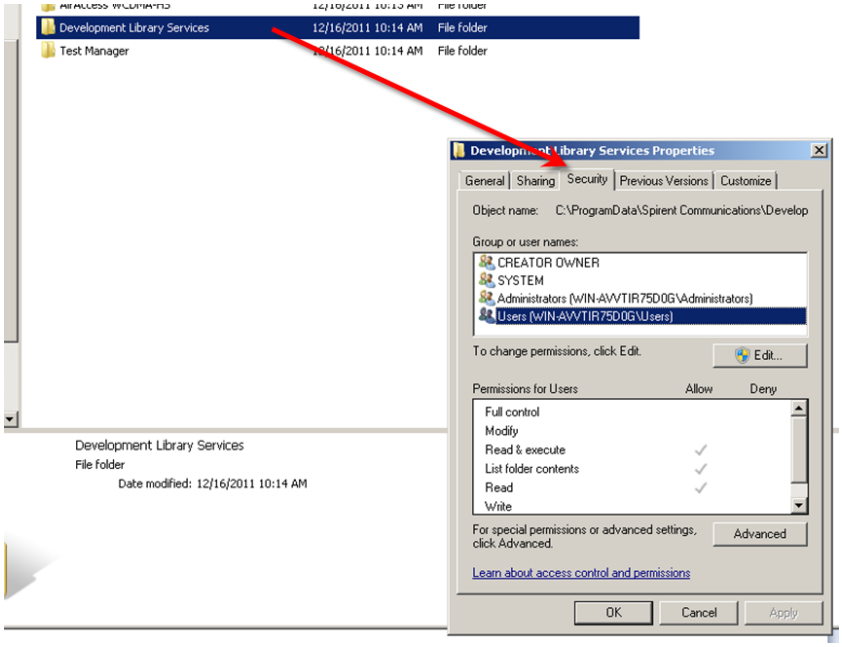

Figure 2-17: Properties Window – User Permissions

4. Click the **Advanced** button and select the User Permission entries corresponding to "Read & Execute".

5. Click the **Change Permissions** button, as shown in Figure 2-18.

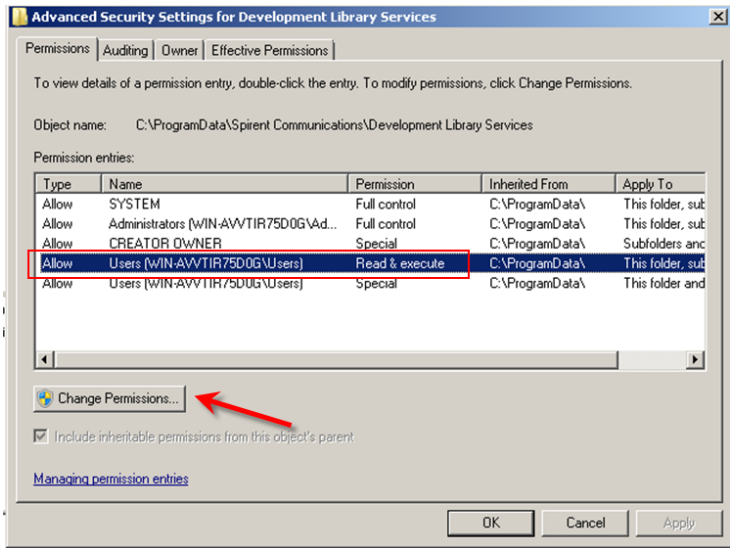

Figure 2-18: Changing the Read & Execute Permissions

6. Under *Full Control*, select **Allow**, as shown in Figure 2-19.

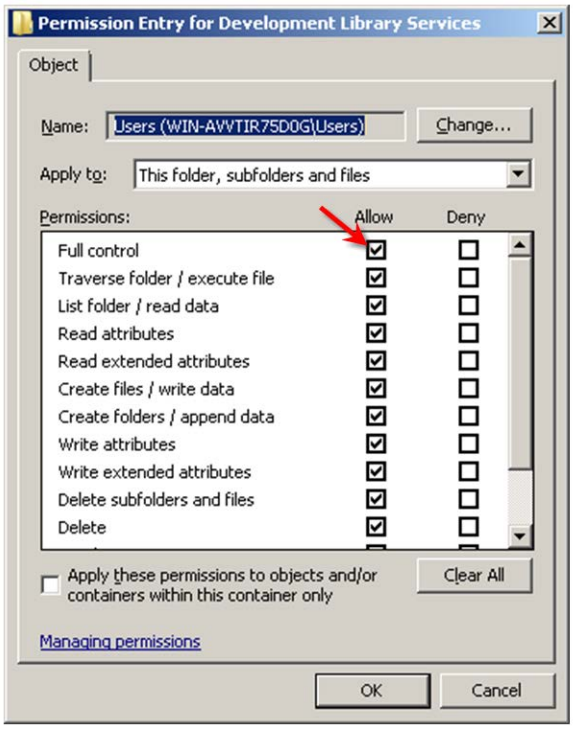

Figure 2-19: Selecting Permission Options

7. Click **OK**.

8. In the *Advanced Security Settings* window, select the **Replace all child object permissions with inheritable permission from this object** option, as shown in Figure 2-20. This option applies the change to all subfolders and files.

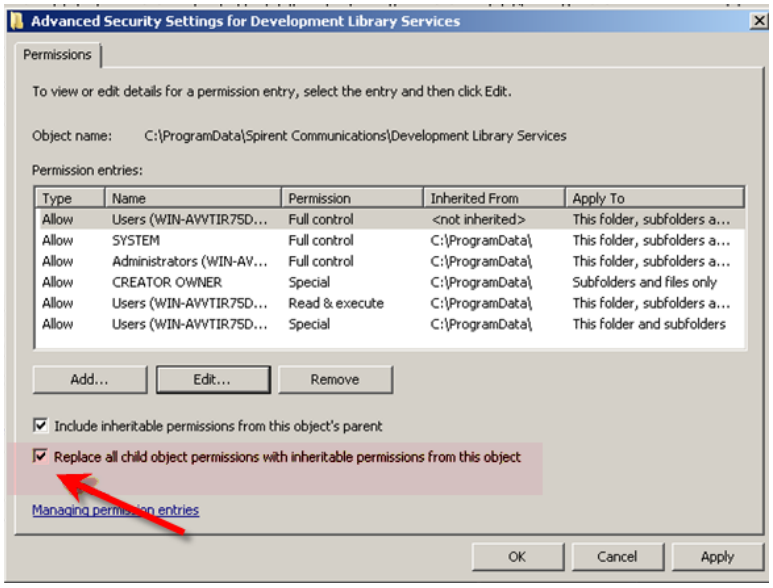

Figure 2-20: Advanced Security Settings Window

9. Verify that you have a new permission entry for *Users that allows Full Control*, as shown in Figure 2-21.
   Click **Apply** and **OK** save the settings and exit the window.

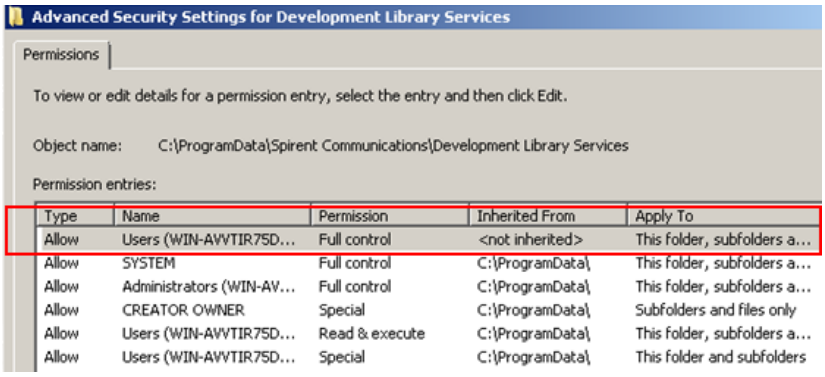

Figure 2-21: Verifying Permissions Setting

10. Calibration procedures can now be performed on existing and/or default files present in the *ProgramData**Spirent Communications**Development Library Services* folder.

2.5. Upgrading the Client Laptop

Connect the device containing the unzipped installer to the Client Laptop.

2.5.1. Updating Spirent AT Control

To update Spirent AT Control:

1. Select **Start›Control Panel›Add/Remove Programs**.
2. Uninstall the Spirent AT Control application.
3. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›**eAirAccess**Controller PC**Spirent AT Control* folder.
4. Execute **setup.exe** and accept the defaults.

2.5.2. Updating Spirent Data Client

For details on how to use the Global Installer application, refer to Section 2.3 on page 11.

To update Spirent Data Client:

1. Start the Global Installer application.
2. If the correct version of Spirent Data Client is not installed, select the **Spirent Data Client** component.
3. Click the **Installation** toolbar button to begin the installation.
4. Restart the Client Laptop.

2.6. Upgrading the Application Server

To update the Application Server:

1. Connect the device containing the unzipped installer to the Application Server.
2. From the Controller PC, use *Remote Desktop* to login to the Application Server at **192.168.0.70**.

2.6.1. Updating Spirent Data Client

For details on how to use the Global Installer application, refer to Section 2.3 on page 11.

1. Start the Global Installer application.
2. If the correct version of Spirent Data Client is not installed, select the **Spirent Data Client** component.
3. Click the **Installation** toolbar button to begin the installation.
4. Exit the Global Installer application.

2.6.2. Updating Xlight IPv6 FTP Server Configuration

1. Double click the **Xlight FTP Serve**r icon from the desktop as shown in Figure 2-22.

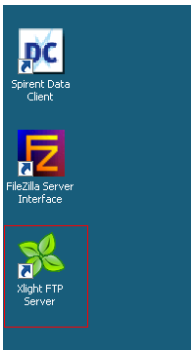

Figure 2-22: Xlight IPv6 FTP Icon

2. The *Duplicated Process* window shown in Figure 2-23 displays. Click **Yes** to proceed.

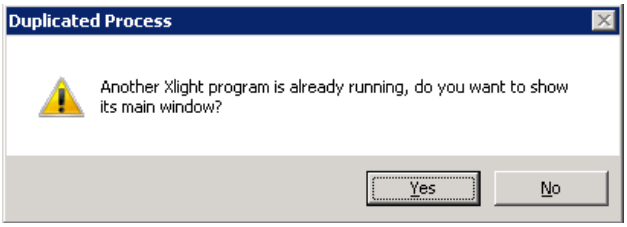

Figure 2-23: Duplicated Process Warning Window

3. Select the **fd00:0:20:1::4** IPv6 server and click the **Modify Virtual Server Configuration** button, as shown in Figure 2-24.

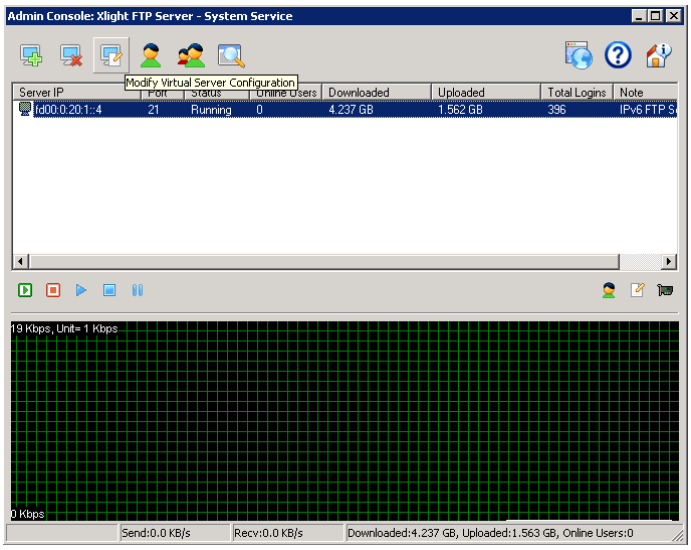

Figure 2-24: Modify Virtual Server Configuration Button

4. Under the *General* tab, change the "Maximum idle time" parameter to **120** and select the **Enable the anti-idle scheme** option, as shown in Figure 2-25.

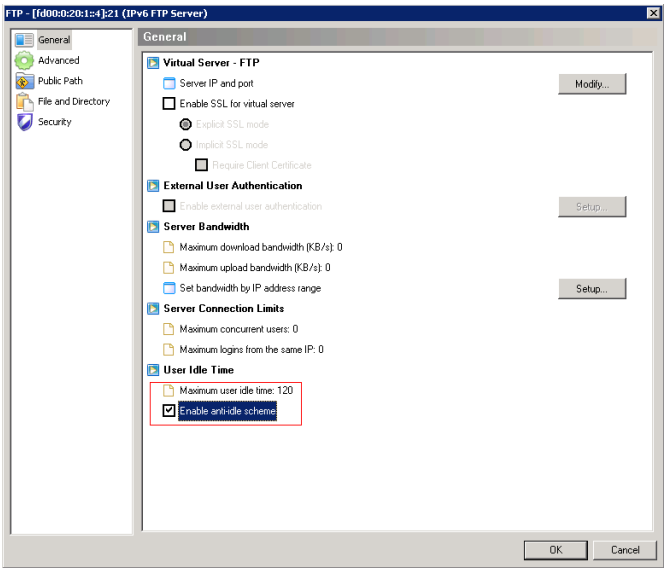

Figure 2-25: Enable Anti-idle Scheme Option

5. Click **OK** to close all Xlight windows.

2.7. Updating the EPC Server

NOTE: If the steps in Section 2.4.7 have been completed, you can skip this section.

1. From the Controller PC, navigate to **C:\Program Files\Spirent Communications\SR3600\x.x.x**, as shown in Figure 2-26.
   If there is more than one folder, open the most recent.

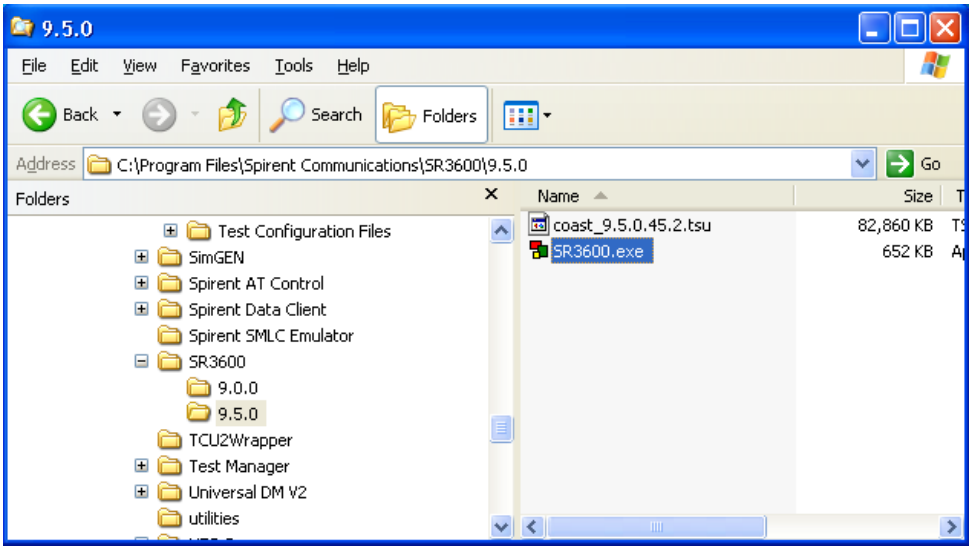

Figure 2-26: SR3600 Folder

2. Execute the **SR3600.exe** file.

3. In the *Upgrade* window, select **Instrument>Install Firmware Update** as shown in Figure 2-27.

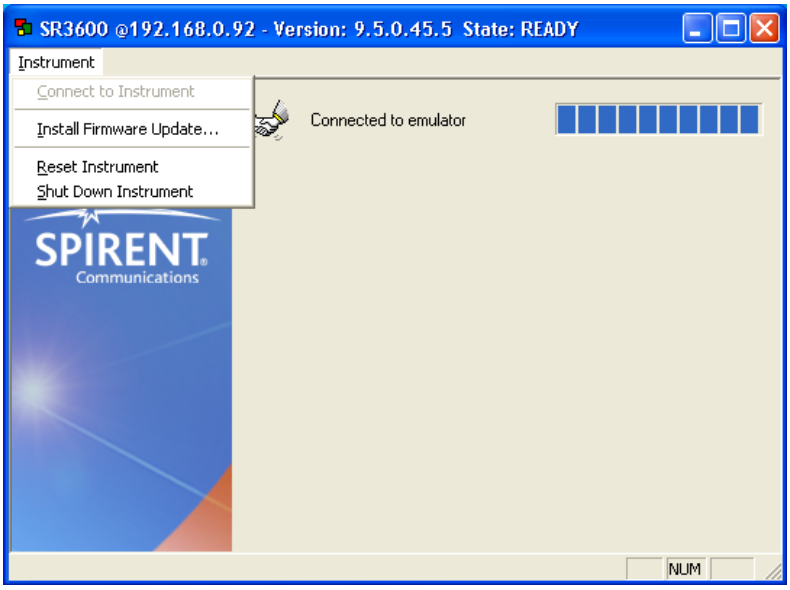

Figure 2-27: Opening the Firmware Update

4. In the *Open* window, navigate to **C:\Program Files\Spirent Communications\eAirAccess**.

5. Select the **.tsu** file and click the **Open** button, as shown in Figure 2-28.

NOTE: The version number reflected in the filename shown in Figure 2-28 may not reflect the current software version number.
For the correct version number, refer to the table on page 1.

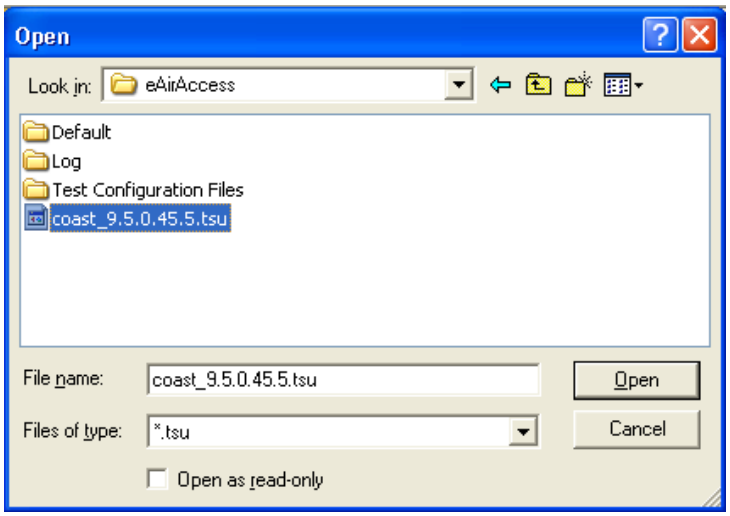

Figure 2-28: Opening the .tsu File

6. Wait for the update to complete (this will take several minutes), as shown in Figure 2-29.

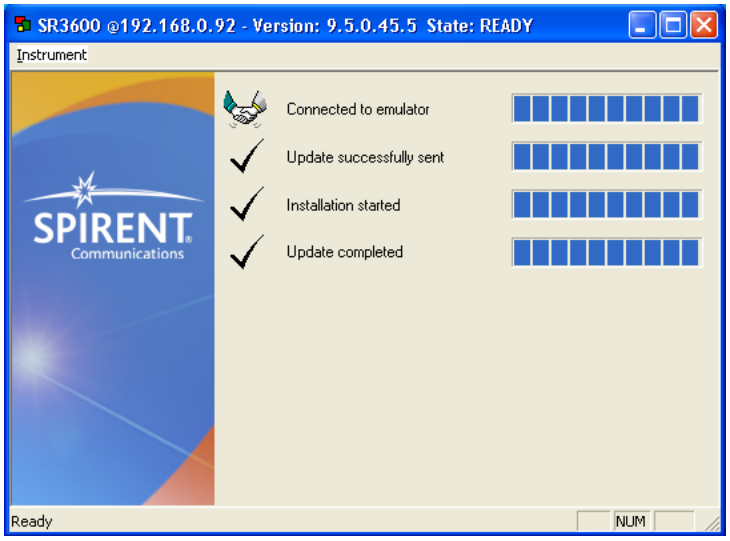

Figure 2-29: Update Status

7. Close the SR3600 tool.

2.8. Updating the E2010S

Connect the device containing the unzipped installer to the E2010S.

2.8.1. Installing Logging Framework

1. Uninstall any previous versions of Logging Framework components:
   a. Stop the Logging Framework by selecting **Start›All Programs›AT4 Wireless›Logging Framework Runtime›Stop Logging Framework**.
   b. An *Information* window displays verifying that Logging Framework has been stopped, as shown in Figure 2-30.

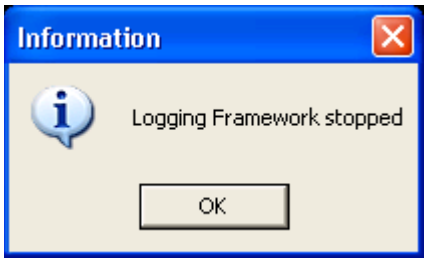

Figure 2-30: Logging Framework Information Window

   c. From the Control Panel, select **Add or Remove Programs** and remove the AT4 Wireless Logging Generator COM Interface
   d. Uninstall LogAgent by selecting **Start›All Programs›AT4 Wireless›Logging Agent›Uninstall**.
2. Install Logging Framework:
   a. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\E2010 Embedded PC\Logging Framework* folder.
   b. Execute **Logging Framework Runtime Setup Embedded PC.exe** and accept the defaults.

2.8.2. Installing Layer 3 Components

1. Uninstall any previous versions of the Layer 3 Components:
   a. Stop the Layer 3 Components by navigating to *C:\Program Files\Spirent Communications\eAirAccess\L3* and double-clicking the **killeNBEmu.bat** script.
   b. From the Control Panel, select **Add or Remove Programs** and remove the L3 Component Installer
2. Install the Layer 3 Components:
   a. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\E2010 Embedded PC\Layer 3 Components* folder.
   b. Execute **Layer3Components** and accept the default settings.

2.8.3. Installing E2010 Manager

1. Uninstall any previous versions of the E2010Manager:
   a. Open Task Manager by right-clicking the clock on the right side of the System Tray and selecting **Task Manager** from the menu.
   b. Under the *Processes* tab, select **E2010Manager.exe** and click the **End Process** button.
   c. From the Control Panel, select **Add or Remove Programs** and remove E2010Manager
2. Install E2010Manager:
   a. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\E2010 Embedded PC\E2010Manager* folder.
   b. Execute the **setup.exe** file and accept the defaults.
   c. After installing the E2010Manager, execute a hard reboot of the E2010 by pressing the power button on the front of the E2010S.
   d. When the box reboots, E2010Manager should run automatically. Verify this by opening Task Manager and confirming the **E2010Manager.exe** process is running.
   e. If E2010Manager is not running, start it manually by running the **.exe** file found under: *C:\Program Files\Spirent Communications\E2010Manager\E2010Manager.exe*.

2.8.4. Installing E2010 Core Software

2.8.4.1 Installing the E2010 License File

1. Obtain a copy of the E2010 License File for the specific E2010 being upgraded. This file can be obtained by contacting Pat Munson and giving her the unit serial number.
2. Copy the *E2010 License File* to **C:\AT4Wireless\ E2010S License**. If this folder does not exist, create it.
3. Copy the License File Installer, **‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\E2010EmbeddedPC\LTE E2010 Core\License Installer v1.0 Release 4195.exe** to **C:\AT4Wireless\ E2010S License**.
4. Run the **License_Installer_v1.0_Release_4195.exe** file to install the license. The *AT4 Wireless Licenser* window displays, as shown in Figure 2-31

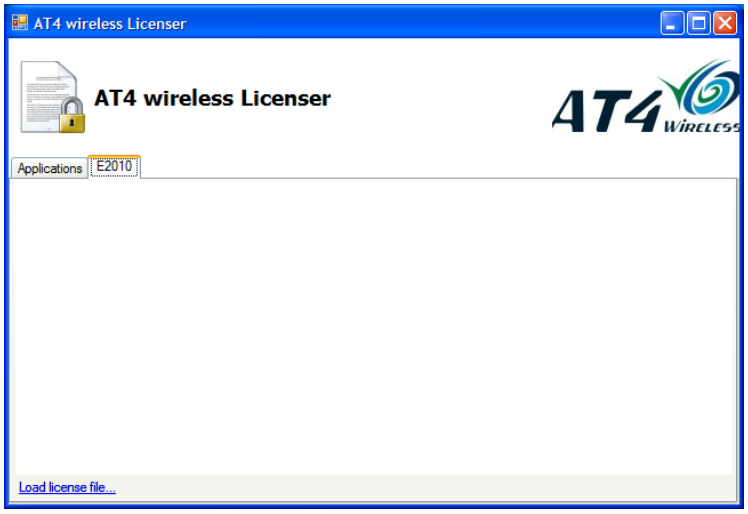

Figure 2-31: AT4 Wireless Licenser Window

5. Under the *E2010* tab, select **Load License File**.
   The *Open License File* window displays.

6. Navigate to *C:\AT4Wireless\E2010S License\ and select the E2010_SNBWTSxxxxxxx.xml.licx file* where "xxxxxxx" is the E2010S serial number. Click **Open**.

7. Run the **License_Installer_v1.0_Release_4195.exe** file.

2.8.4.2 Installing E2010S Software

1. Navigate to *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\E2010EmbeddedPC\LTE E2010 Core*, and run the **LTE_E2010_Software_Package_v2.5.1.6 setup.exe** file.

2. In *License Agreement* window, select **I accept the terms of the license agreement** and click the **Next** button, as shown in Figure 2-32.

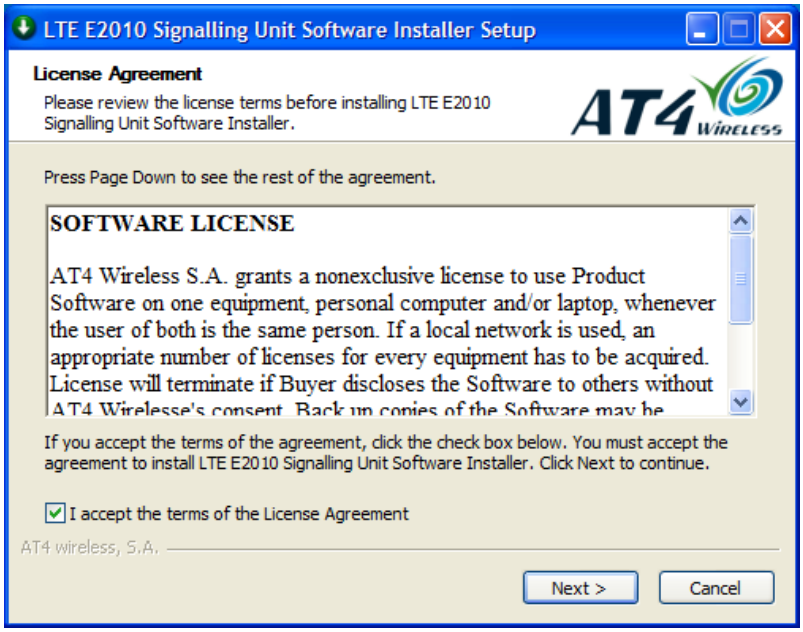

Figure 2-32: E2010 Software License Agreement Window

3. In *Choose Components* window, select all components except **Overwrite calibration**, as shown in Figure 2-33. Click the **Install** button.

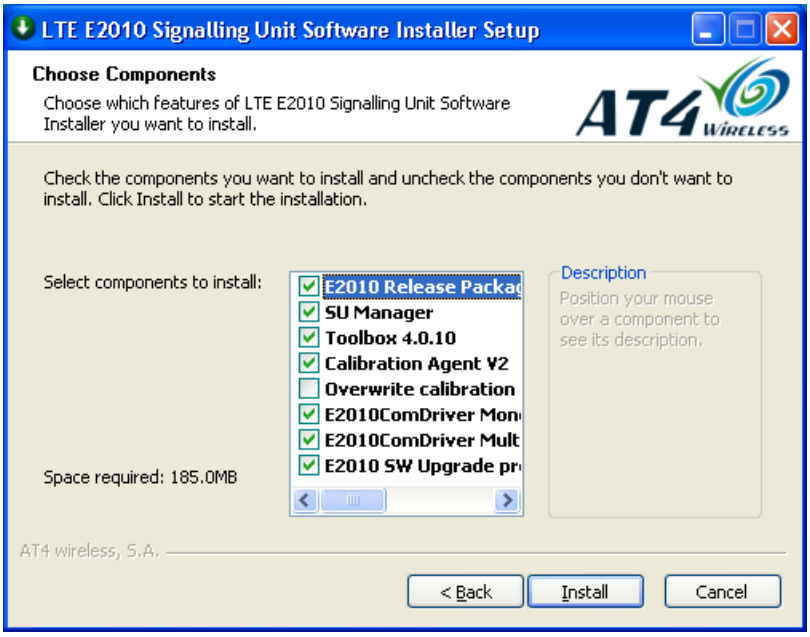

Figure 2-33: Choose Components Window

4. In the *Default AT4 Wireless LTE Product Selection* window, select **S1-AP** and click **OK**, as shown in Figure 2-34.

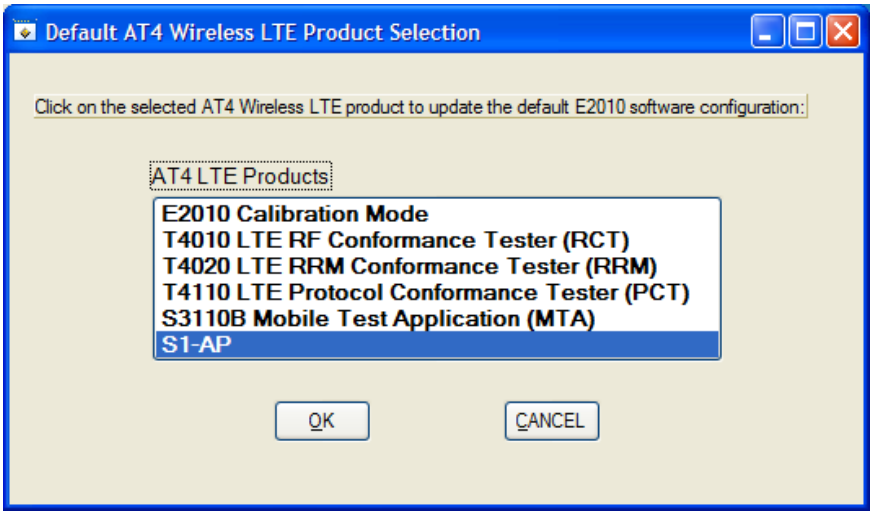

Figure 2-34: Default AT4 Product Selection Window

5. In the *SU_Manager x.x.x.x Uninstall* window, click **Yes**.
6. In *SU_Manager Uninstall Wizard Welcome* window shown in Figure 2-35, click **Next**.

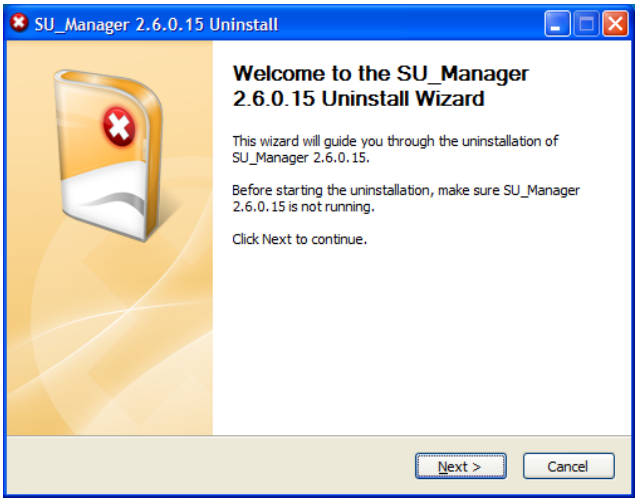

Figure 2-35: SU_Manager Uninstall Wizard – Welcome

7. In the *Uninstall SU_Manager* window, click **Next**, as shown in Figure 2-36.

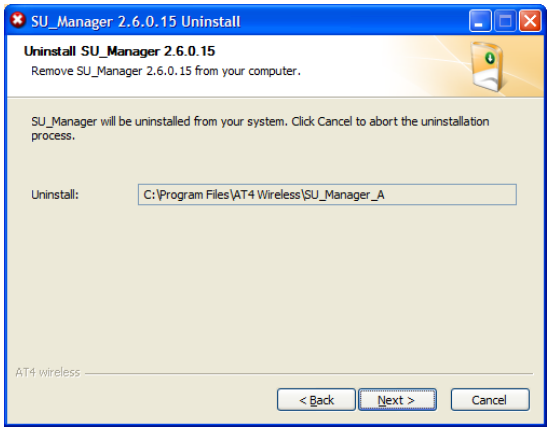

Figure 2-36: Uninstalling SU_Manager

8. The *Choose Components* window displays, as shown in Figure 2-37. Click the **Uninstall** button.

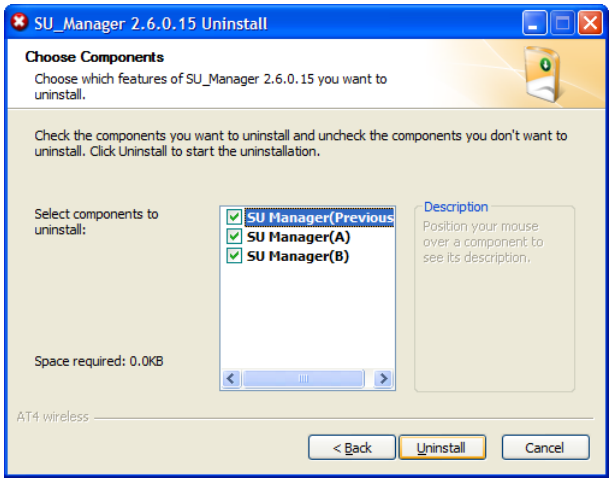

Figure 2-37: SU_Manager Uninstall Wizard – Choose Components

9. In the *Completing the SU_Manager Uninstall Wizard* window shown in Figure 2-38, click **Finish**.

Figure 2-38: Completing the SU_Manager Uninstall

10. A message displays verifying that the software was successfully removed, as shown in Figure 2-39. Click **OK**.

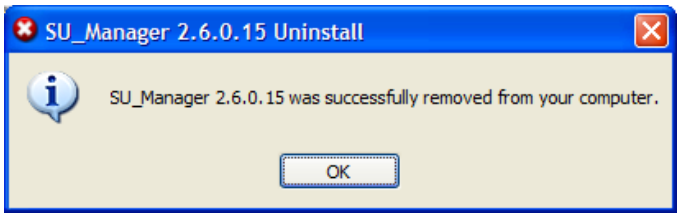

Figure 2-39: Software Successfully Removed Message

2.8.4.3 Installing AT4 Toolbox 2.0

1. In the *Installer Language* window, select **English** and click **OK**.
2. In the *AT4ToolboxInstaller_2.0 Setup* window, click **Next**.
3. In the *License Agreement* window, click **I Agree**.
4. In the *Choose Install Location* window, click **Install**.
5. In the *Installation Complete* window, click **Next**.
6. In the *Completing the AT4ToolboxInstaller_2_0 Setup* window, click **Finish**.

2.8.4.4 Updating the CAL Agent

1. In the *CAL_AGENT Uninstall* window shown in Figure 2-40, click **Yes**.

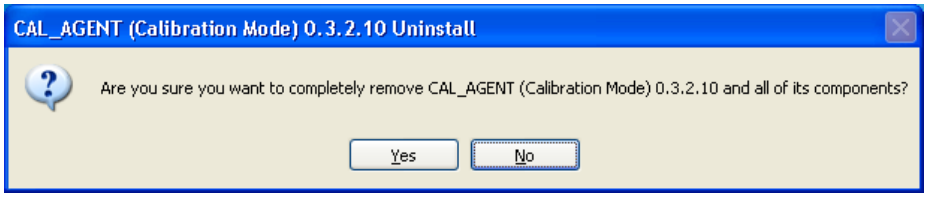

Figure 2-40: CAL_AGENT Uninstall Window

2. The *CAL_AGENT Uninstall Wizard Welcome* window displays, as shown in Figure 2-41.
   Click **Next** to proceed.

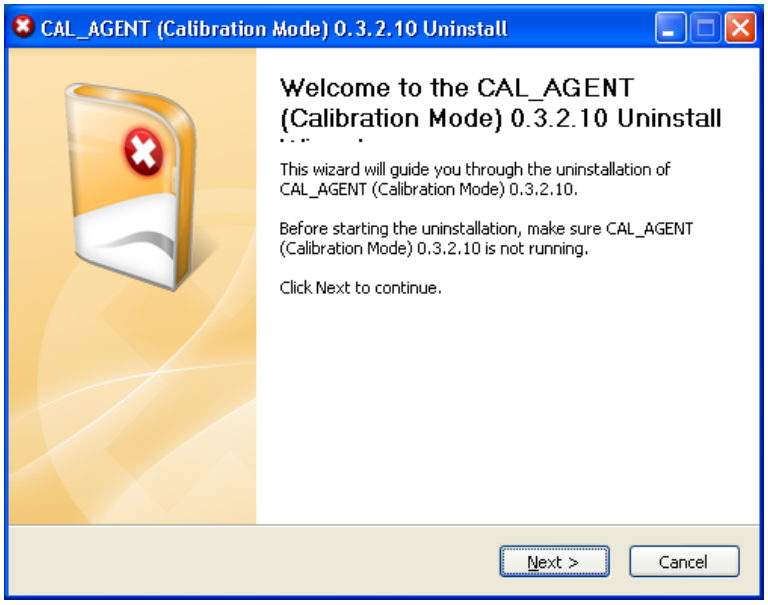

Figure 2-41: CAL_AGENT Uninstall Wizard – Welcome

3. In the *Uninstall CAL_AGENT* window, click **Next**.

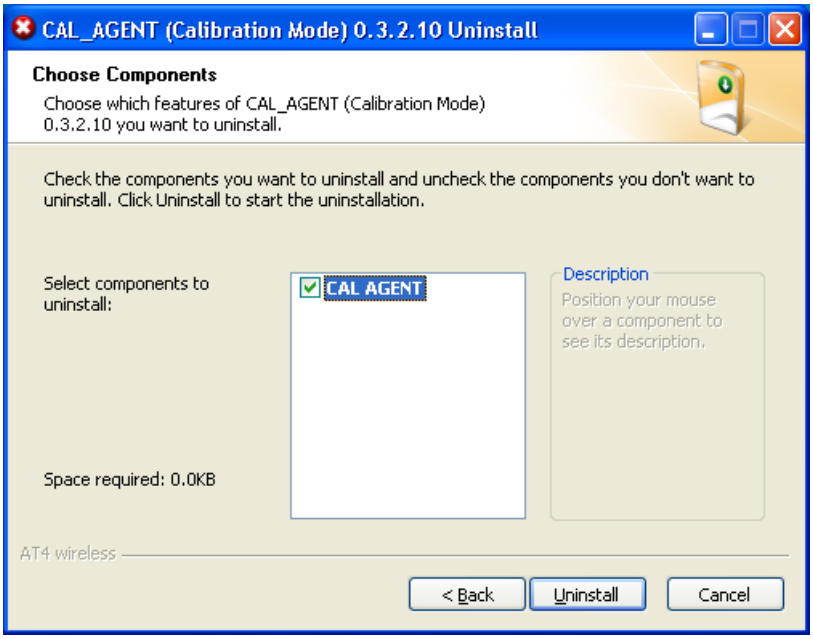

Figure 2-42: CAL_AGENT Uninstall Wizard – Choose Components

4. In the *Choose Components* window shown in Figure 2-42, click **Uninstall**.
5. In the *Completing the Uninstall Wizard* window shown in Figure 2-43, click **Finish**.

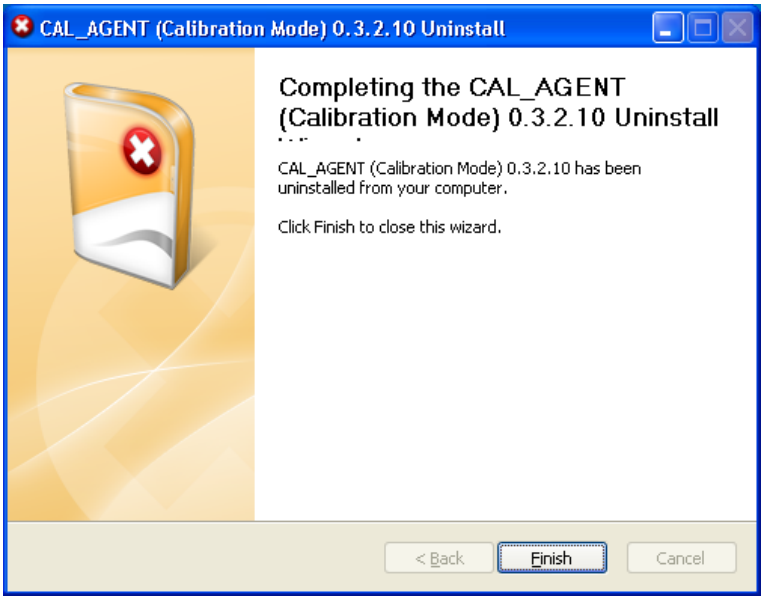

Figure 2-43: Completing the Uninstall Wizard

6. A message displays verifying that CAL_AGENT successfully removed, as shown in Figure 2-44. Click **OK**.

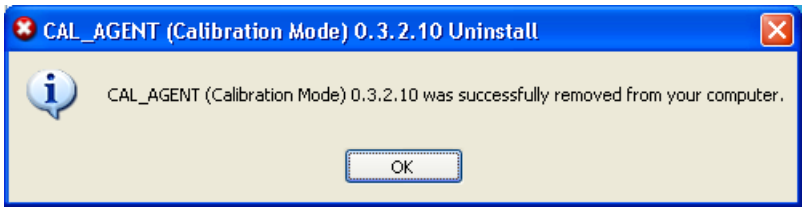

Figure 2-44: Software Successfully Removed Message

7. In the *Check Calibration Data* window shown in Figure 2-45, click **OK**.

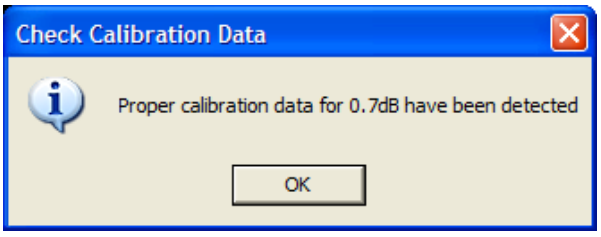

Figure 2-45: Check Calibration Data Window

8. In the *LTE E2010 Signaling Unit Software Installer Setup* window shown in Figure 2-46, click **Yes**.

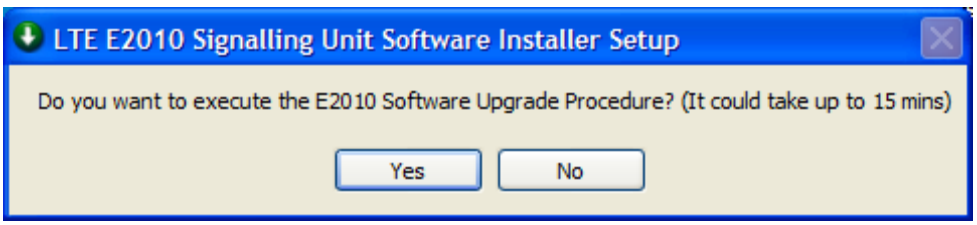

Figure 2-46: Execute the Upgrade Procedure Window

9. The *HW SET MC* message shown in Figure 2-47 displays. Click **OK**.

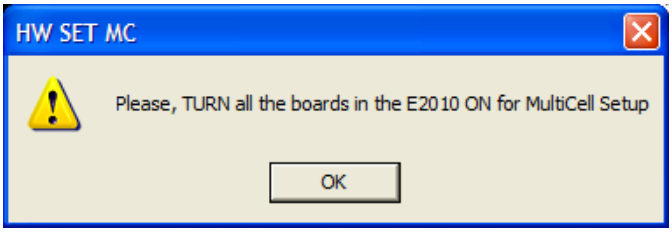

Figure 2-47: HW SET MC Message – Turn Boards On

10. The *HW SET MC* window shown in Figure 2-48 displays, click **OK**.

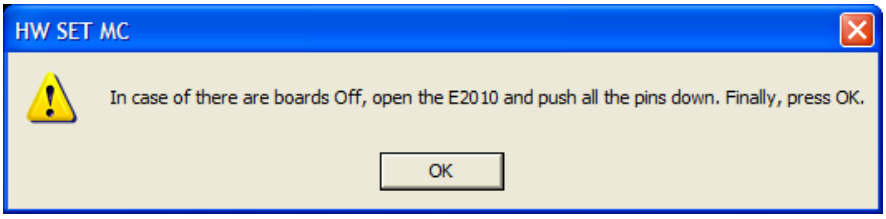

Figure 2-48: HW SET MC Message – If Boards Are Off

11. A *Command* window displays verifying the MCH Configuration Parameters, as shown in Figure 2-49.

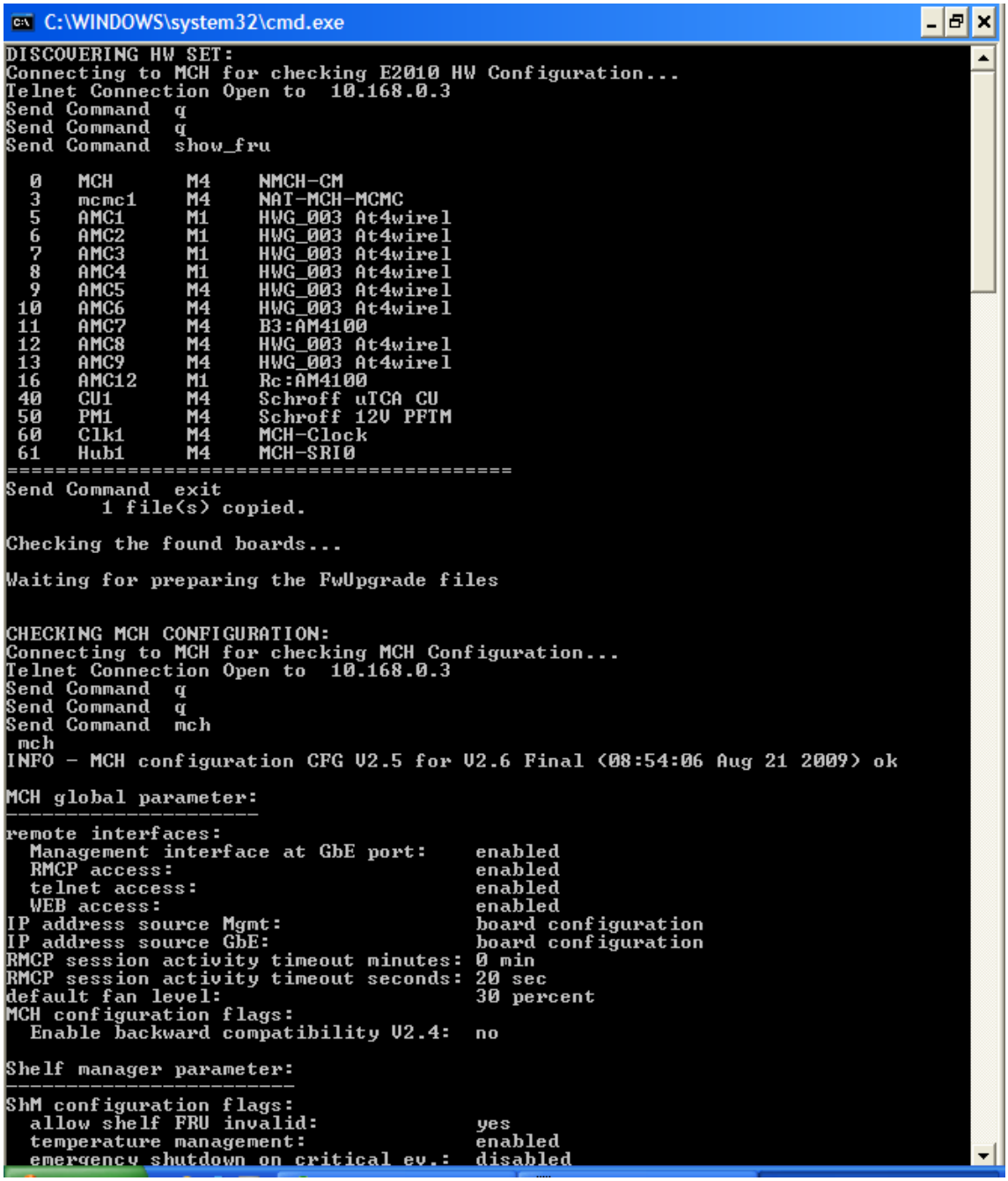

Figure 2-49: MCH Configuration Parameter Verification

12. The upgrade process will now continue for several minutes.

13. When the upgrade procedure is completed, the window shown in Figure 2-50 displays.
    Verify that the FPGAs versions match those circled in Figure 2-50 and that the E2010 has been successfully upgraded. If it is a 2 Cell unit, there will also be verification that Cell B has been successfully upgraded. Press the **Space Bar** to continue.

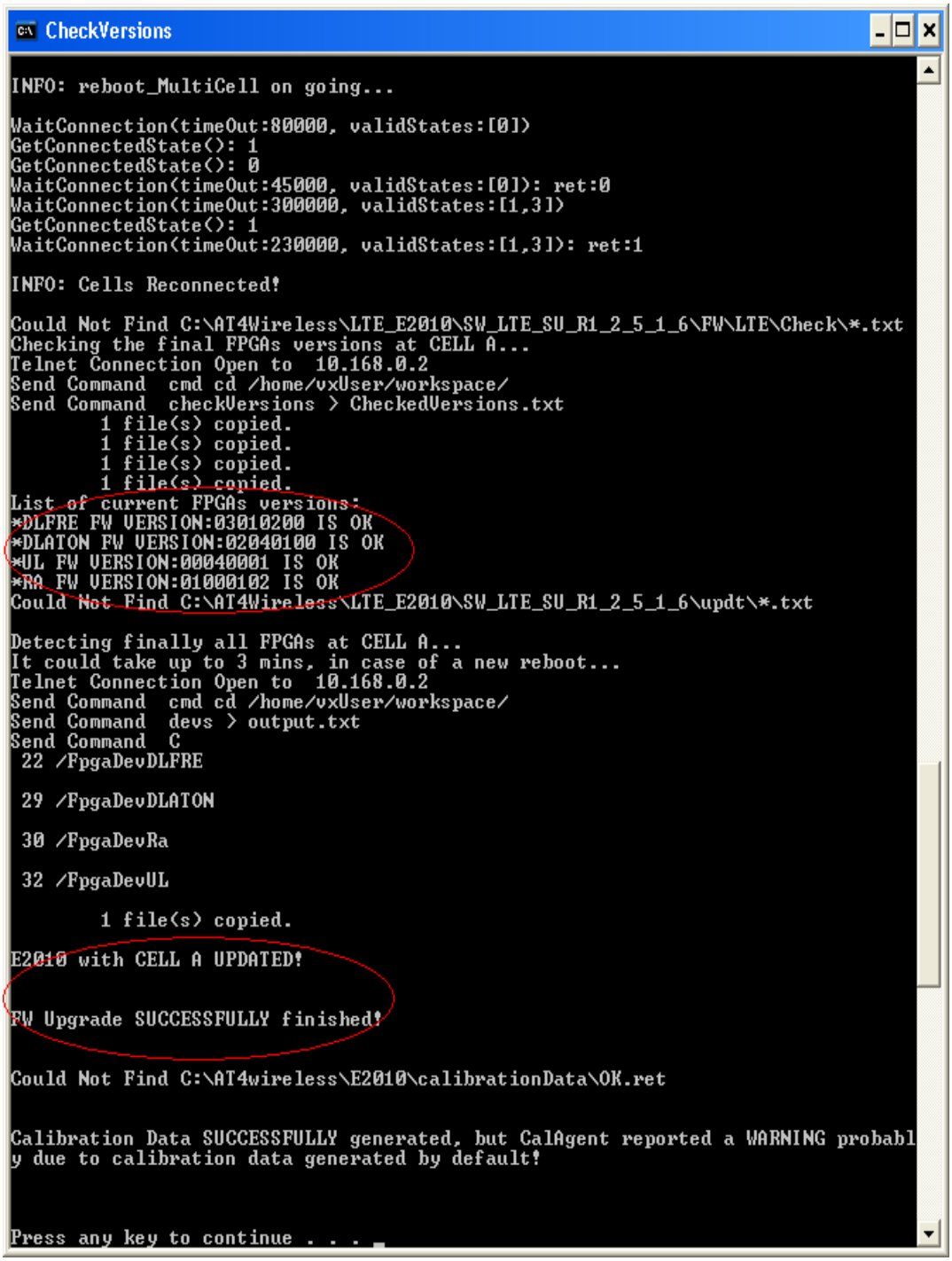

Figure 2-50: Check Versions Verification

14. In the *Installation Complete* window, click **Close**.

2.8.4.5 Applying the NetBootLoader Patch

1. Double-click the **PuTTY** icon 

on the E2010 desktop.

2. In the *PuTTY Configuration* window, load **GPP-A**, as shown in Figure 2-51.
Click **Open** to continue.

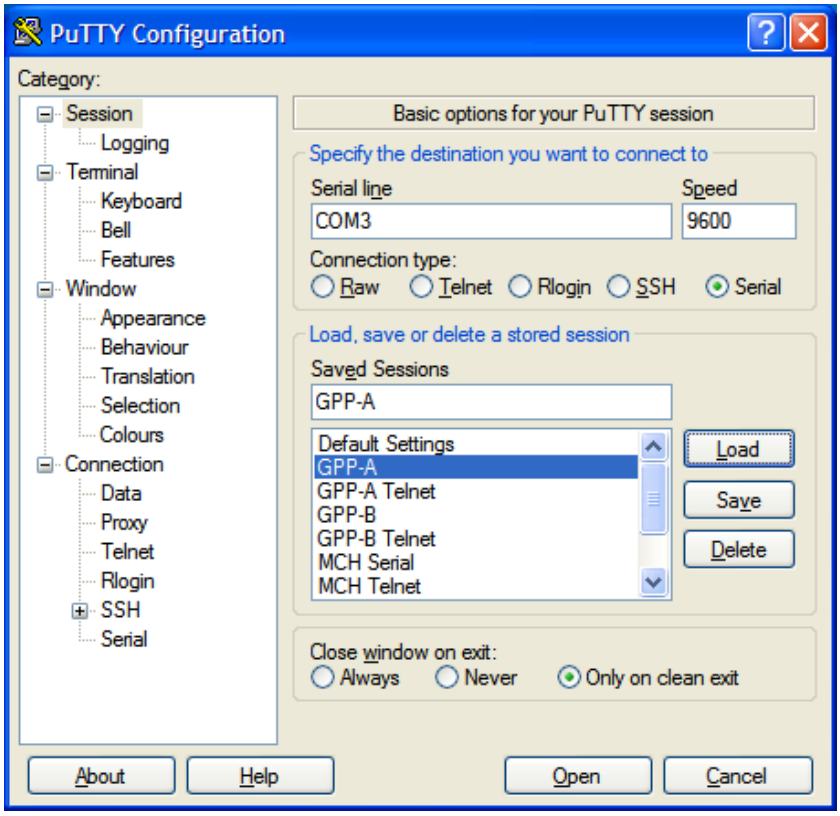

Figure 2-51: PuTTY Configuration Window

3. Click **ApplicationLauncher** on the Windows system tray, as shown in Figure 2-52.

Figure 2-52: Application Launcher Icon

4. Select **Reboot SU** to reboot the E2010.

5. This will take several minutes.
Monitor the *PuTTY* window closely. During the reboot process, the NetBootLoader version displays on the *PuTTY* window for about fifteen (15) seconds, as shown in Figure 2-53.
Make a note of the first three digits of the “Version of running NetBootLoader”. In the example given in Figure 2-53, it is “110”.

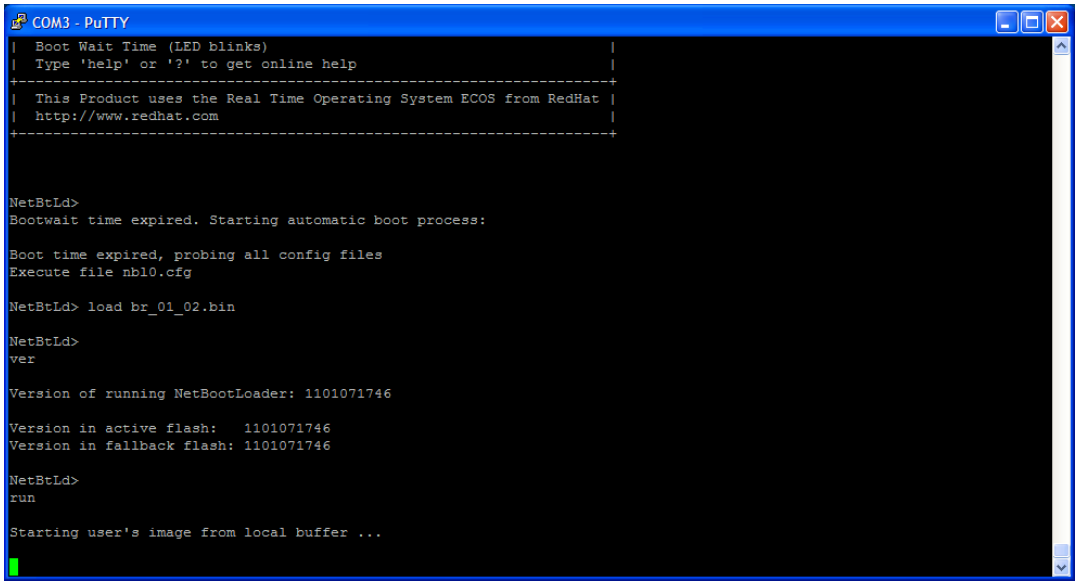

Figure 2-53: PuTTY Window – NetBootLoader Version

6. Perform the following steps only if the first three digits of the NetBootLoader version are “110”. Otherwise, skip the steps below.

   a. Under the **‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\E2010 Embedded PC\LTE E2010 Core** folder, double-click **UpdateBootscript.bat** to update the E2010 boot script.

   b. The Command Prompt window displays the updated content as shown in Figure 2-54.

   c. Before pressing any key, scroll up and verify that the lines circled in Figure 2-54 are present. Then press any key.

   d. Before pressing any key again, scroll up and verify the circled lines were added again after the last key press message.

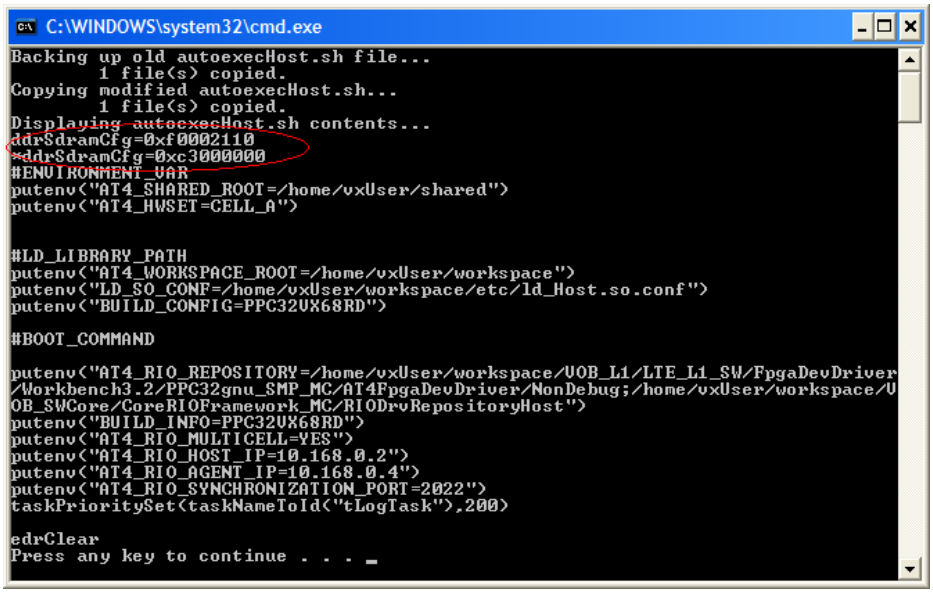

Figure 2-54: Command Window – Updated Boot Script Information

2.8.4.6 Regenerating Cal Files

1. Press the front power button on the E2010S to shut down the unit.
2. Turn off the power supply switch on the rear of the unit. Wait a few seconds and turn the power supply switch back on.
3. On the front of the E2010S, press the power button to boot up the unit.
4. Right-click the **Cal Agent** icon in the Window System Tray and select **Generate**, as shown in Figure 2-55.
   If the Cal Agent Icon is not present, select **Start›All Programs›AT4 WIRELESS›CAL AGENT›CAL AGENT**.

Figure 2-55: CAL Agent Icon

5. Generating the .cal files takes about 5-10 minutes to complete.
   To verify that the files have been generated, click the **Cal Agent** icon. The **Generate** menu item should now have a check mark. If it is disabled, the process is not complete.
6. Right-click the **SU Manager** icon from the System Tray and select **Restart Service**. Wait until the icon stops blinking.

2.8.4.7 Verifying E2010S Firmware Version

1. Open Window Explorer and navigate to:
   C:\AT4wireless\LTE_E2010\SW_LTE_SU_R1_2_5_1_6\FW.
2. Run the GetFWVersion script by double-clicking the **GetFWVersions.at4** file.
3. Verify that the firmware versions for the four FPGA match the ones shown in Figure 2-56.

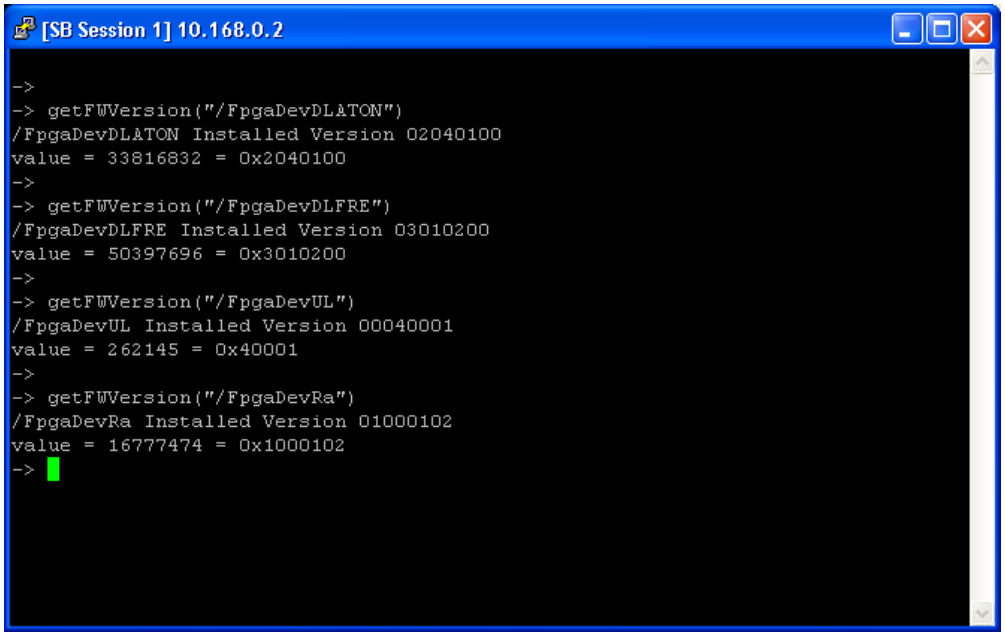

Figure 2-56: FPGA Firmware Versions

4. Close the window.

2.8.4.8 Edit UdpServerLoggingConfig.xml

1. Under *My Computer*, navigate to: **U:\VOB_SW\LTE_SW_SU\WinAgents\UdpServer**, as shown in Figure 2-57.

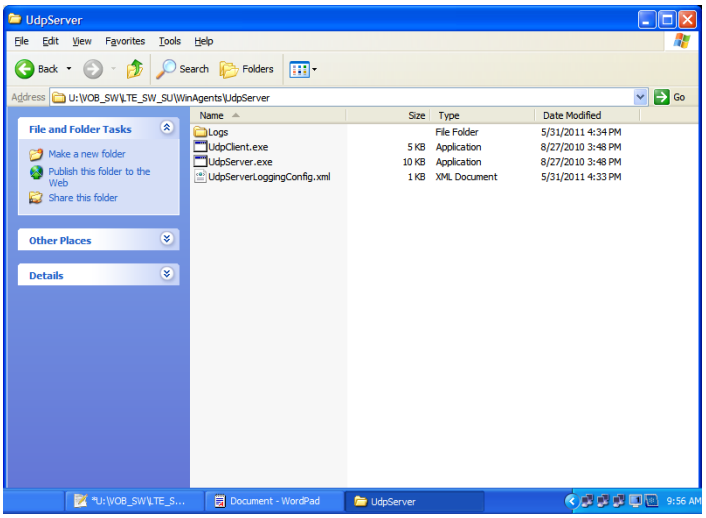

Figure 2-57: UdpServer Folder

2. Right-click the **UdpServerLoggingConfig.xml** file and select **Edit with Notepad ++** from the menu.

3. In the *Notepad* window, under the line marked *‹pcIpAddress›*, enter **192.168.0.35** for the IP address, as shown in Figure 2-58.

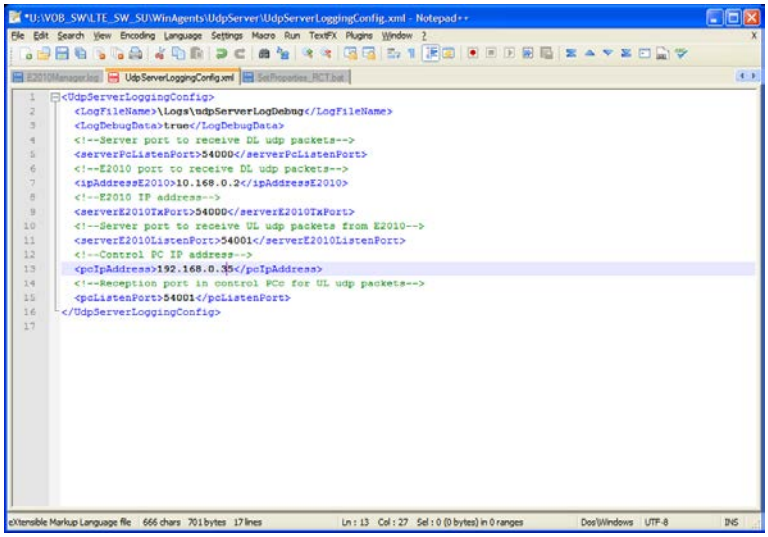

Figure 2-58: Notepad – Editing the IP Address

4. Save the document by selecting **File›Save**.
5. Close Notepad and Windows Explorer.

2.9. Updating the Router\Switch Configurations

To update the router/switch configurations, you need to upload the configuration file and restart the device. The configuration files specified are found under the *‹8100 – LTE 4.4.0 Installer Root›\Router,Switch Config Files* folder.

2.9.1. Updating the Cisco 1811 Router

Follow these instructions if your system includes a Cisco 1811 router.

1. Connect the blue RJ-45 to DB-9 cable between the CONSOLE port on the rear of the router and the COM1 serial port on a PC. This blue cable should be included in the box with the router.
2. Using the HyperTerminal application (or equivalent communication program), connect to the router on COM1 using 9600 bps, 8 data bits, no parity, and 1 stop bit.
3. Start the HyperTerminal application by selecting **Start›All Programs›Accessories›Communications›HyperTerminal**.
4. In the *Connection Description* window, enter **Cisco** in the Name field and click **OK**.
5. In the *Connect To* window, select **COM1** in the Connect using field and click **OK**.
6. Under Port Settings, select the values for each setting as shown in Figure 2-59.

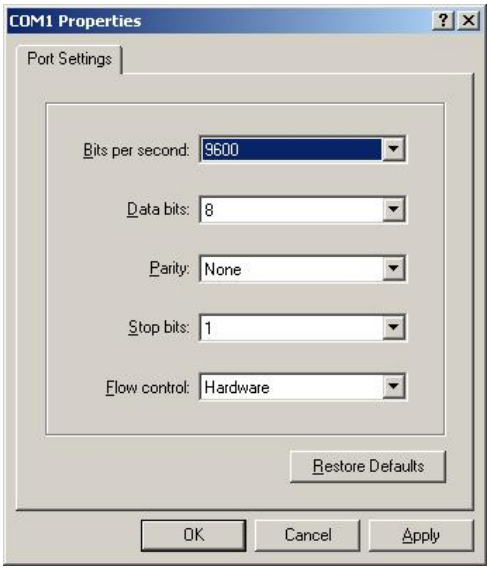

Figure 2-59: HyperTerminal COM Port Settings

7. Power on the router. Wait until the router has finished initializing.

8. HyperTerminal should display the following information:
   cisco 1811XM (MPC860P) processor (revision 0x400) with 124928K/6144K bytes of memory.
   Processor board ID JMX0845L1FA (879732514)
   M860 processor: part number 5, mask 2
   Bridging software.
   X.25 software, Version 3.0.0.
   FastEthernet/IEEE 802.3 interface(s)
   32K bytes of non-volatile configuration memory.
   32768K bytes of processor board System flash (Read/Write)
   Press RETURN to get started

9. Press **Enter**.
   HyperTerminal displays the following prompt:
   Spirent-router›
   Note that the prompt displayed may look different based on the installed firmware.

10. Type “enable” and press **Enter**.

11. The Router now prompts you to enter a password. Type “Spirent_enable”.

12. The prompt now displays the following:
    Spirent-router#

13. Press **Enter**.

14. Enter the following command:
    copy xmodem: nvram:startup-config

15. HyperTerminal now displays:
    Destination filename [startup-config]?

16. Press **Enter**.
    HyperTerminal now displays:
    Begin the Xmodem or Xmodem-1K transfer now...

17. Use HyperTerminal to transfer the supplied configuration file by selecting **Transfer›Send File**, as shown in Figure 2-60.

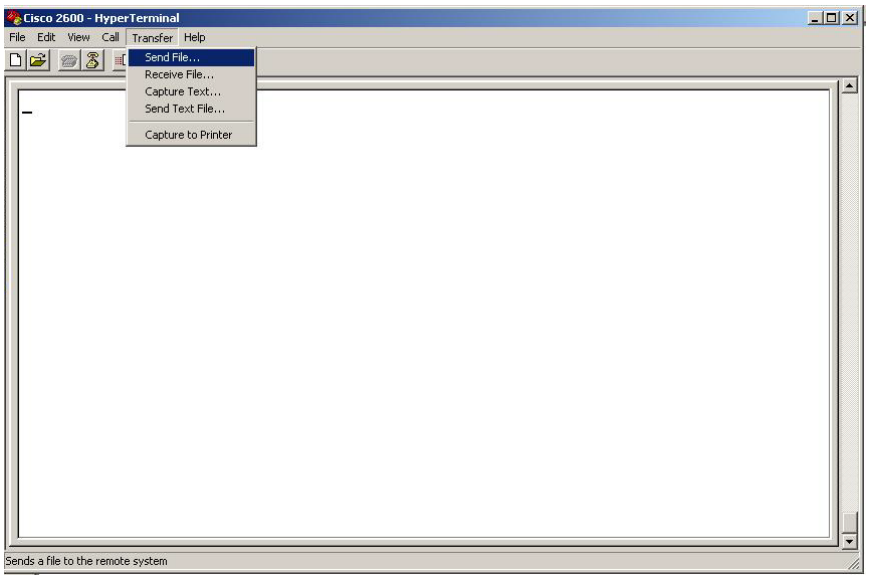

Figure 2-60: Send File Menu Command

18. In the *Send File* window, click the **Browse** button and select the **‹8100 – LTE 4.4.0 Installer Root›\Router,Switch Config Files\Cisco1811.txt** configuration file.

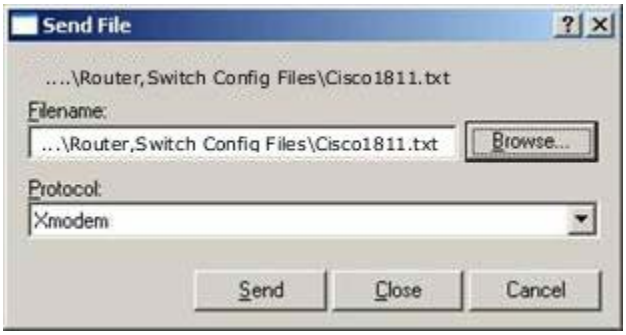

Figure 2-61: Selecting a File

19. Click **Send** and wait for the transfer to complete.

20. HyperTerminal should now display text similar to the following:
    6784 bytes copied in 56.084 secs (121 bytes/sec)
    Spirent-router#

21. Restart the Cisco Router. Enter the following command:
    reload

22. HyperTerminal now displays:
    Proceed with reload? [confirm]

23. Press the **“y”** button.

24. The router restarts.
25. Press **Enter** and verify the prompt displays the configuration file part number with the correct revision: 64_002863_vXX.
26. The upgrade is now complete.

2.9.2. Updating the Cisco 2600 Router

Follow these instructions if your system includes a Cisco 2600 router.

1. Connect the blue RJ-45 to DB-9 cable between the CONSOLE port on the rear of the router and the COM1 serial port on a PC. This blue cable should be included in the box with the router.
2. Using the HyperTerminal application (or equivalent communication program), connect to the router on COM1 using 9600 bps, 8 data bits, no parity, and 1 stop bit.
3. Start the HyperTerminal application by selecting **Start›All Programs›Accessories›Communications›HyperTerminal**.
4. In the *Connection Description* window, enter **Cisco** in the Name field and click **OK**.
5. In the *Connect To* window, select **COM1** in the Connect using field and click **OK**.
6. Under Port Settings, select the values for each setting as shown in Figure 2-62.

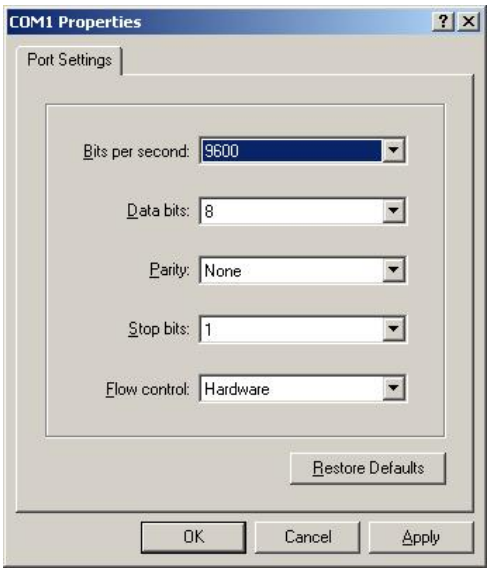

Figure 2-62: HyperTerminal COM Port Settings

7. Power on the router. Wait until the router has finished initializing.

8. HyperTerminal should display the following information:
   cisco 2610XM (MPC860P) processor (revision 0x400) with 124928K/6144K bytes of memory.
   Processor board ID JMX0845L1FA (879732514)
   M860 processor: part number 5, mask 2
   Bridging software.
   X.25 software, Version 3.0.0.
   17 FastEthernet/IEEE 802.3 interface(s)
   32K bytes of non-volatile configuration memory.
   32768K bytes of processor board System flash (Read/Write)
   Press RETURN to get started

9. Press **Enter**. HyperTerminal displays the following:
   Spirent-router›
   Note that the prompt may look different based on the installed firmware.

10. Type “enable” and press **Enter**.

11. The Router now prompts you for a password. Enter “Spirent_enable”.

12. Your prompt should now look like this:
    Spirent-router#

13. Enter the following command:
    copy xmodem: nvram:startup-config

14. HyperTerminal now displays:
    Destination filename [startup-config]?

15. Press **Enter**. HyperTerminal now displays:
    Begin the Xmodem or Xmodem-1K transfer now...

16. Use HyperTerminal to transfer the supplied configuration file by selecting **Transfer›Send File**, as shown in Figure 2-63.

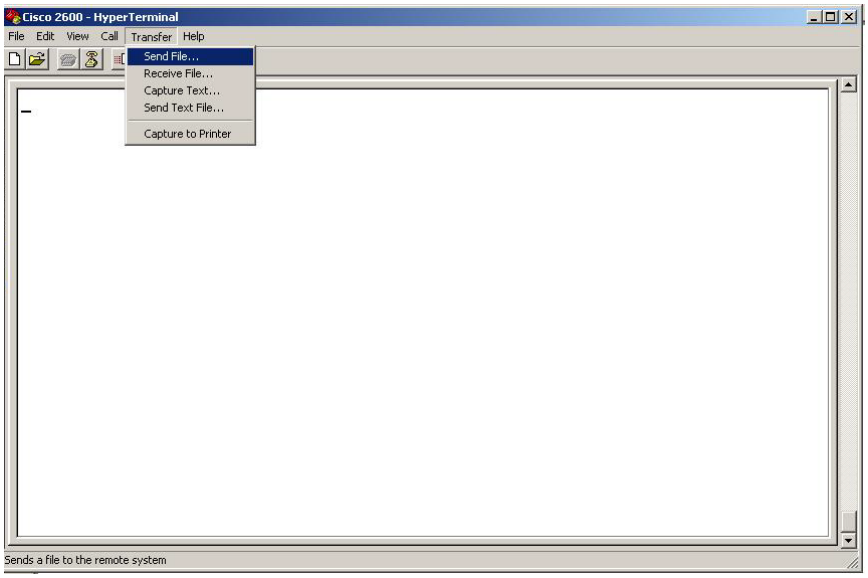

Figure 2-63: Send File Menu Command

17. In the *Send File* window, click the **Browse** button and select the **‹8100 – LTE 4.4.0 Installer Root›\Router,Switch Config Files\Cisco2600.txt** configuration file.

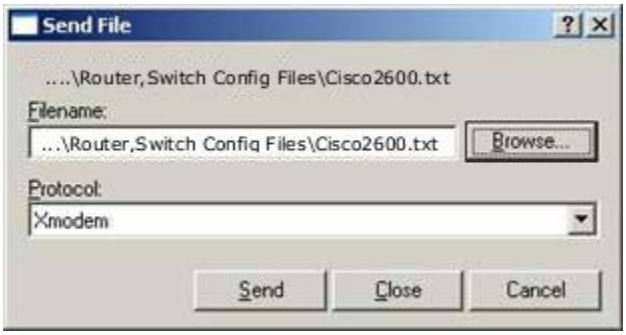

Figure 2-64: Selecting a File

18. Click **Send** and wait for the transfer to complete.
19. Once the transfer is complete HyperTerminal should display text similar to the following:
    6784 bytes copied in 56.084 secs (121 bytes/sec)
    Spirent-router#
20. Restart the Cisco Router and enter the following command:
    reload
21. HyperTerminal now displays:
    Proceed with reload? [confirm]
22. Press **“y”**.
23. The router restarts.
24. Press **Enter** and verify the prompt displays the configuration file part number with the correct revision: 64_005413_vXX.
25. The upgrade is now complete.

2.9.3. Updating the Dell 6248 Switch

1. Connect the serial cable between the 9600,N,8,1 port on the rear of the switch and the COM1 serial port on a PC. This is a standard 9 pin serial cable is included in the box with the switch.
2. Using the HyperTerminal application (or equivalent communication program), connect to the router on COM1 using 9600 bps, 8 data bits, no parity, and 1 stop bit.
3. Start the HyperTerminal application by selecting **Start›All Programs›Accessories›Communications›HyperTerminal**.
4. In the *Connection Description* window, enter **Dell** in the Name field and click **OK**.
5. In the *Connect To* window, select **COM1** in the Connect using field and click **OK**.

6. Under *Port Settings*, select the values for each setting as shown in Figure 2-65.

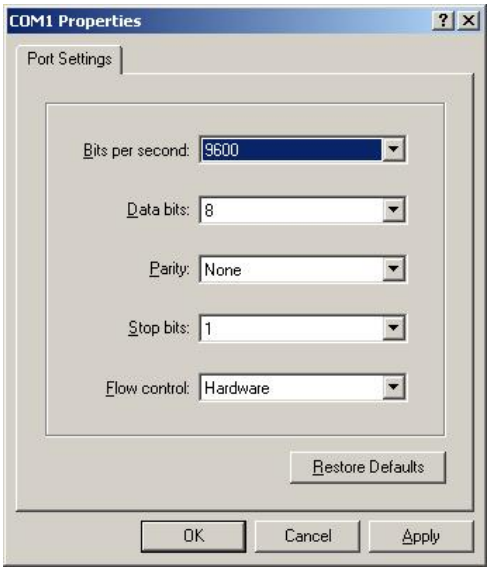

Figure 2-65: HyperTerminal COM Port Settings

7. Plug in the switch. Wait until the switch has finished initializing.

8. HyperTerminal displays the following information:
   (Unit 1 - Waiting to select management unit)›
   Applying configuration, please wait .....
   64-005XXX_vXX›

9. Type "enable" and press **Enter**.

10. Your prompt should now display:
    64-005XXX_vXX#

11. Enter the following command:
    copy xmodem nvram startup-config

12. HyperTerminal now displays:
    Mode……XMODEM
    Data Type……Config Script
    Destination Filename……startup-config

    Management access will be blocked for the duration of the transfer
    Are you sure you want to start? (y/n)

13. Press **"y"**.

14. HyperTerminal displays the following:
    Ready to RECEIVE File TempConfigScript.scr in binary mode
    Send several Control-X characters to cancel before transfer starts.
    CKCK

15. Use HyperTerminal to transfer the supplied configuration file by selecting **Transfer›Send File**, as shown in Figure 2-66.

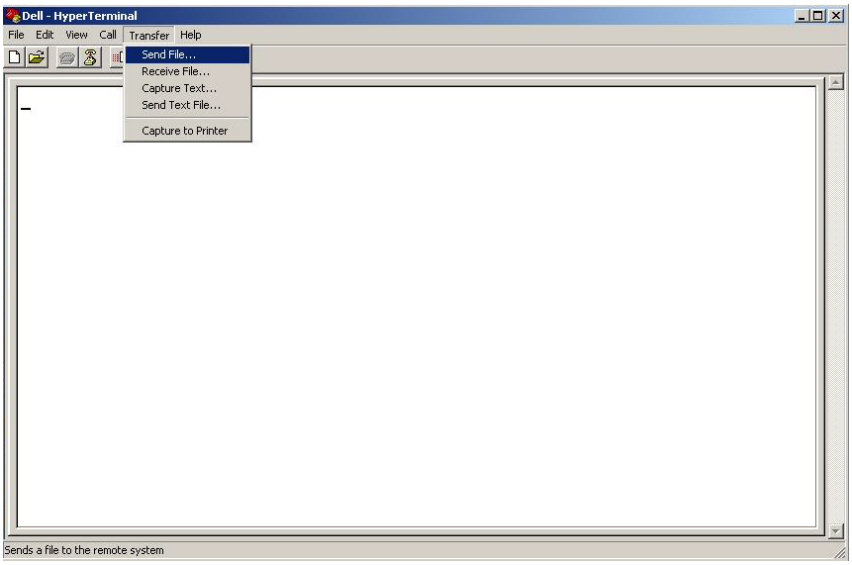

Figure 2-66: Send File Menu Command

16. In the *Send File* window, click the **Browse** button and select the **‹8100 – LTE 4.4.0 Installer Root›\Router,Switch Config Files\Dell6248.txt** configuration file.

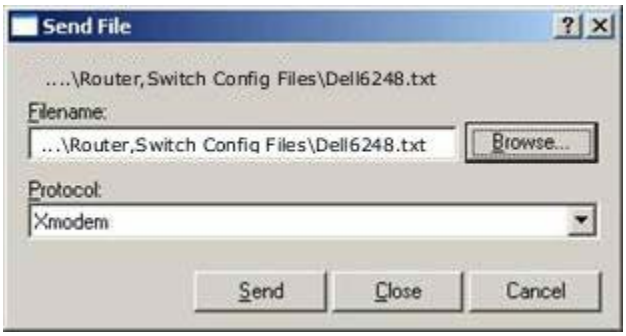

Figure 2-67: Selecting a File

17. Click **Send** and wait for the transfer to complete.

18. Once the transfer is complete HyperTerminal should display text similar to the following:
    Configuration script validated.
    Storing “startup-config” to non-volatile storage.
    This operation may take a few minutes.
    Management interfaces will not be available during this time.

19. Restart the Dell Switch:
    Enter the following command:
    Reload

20. HyperTerminal displays:
    Management switch has unsaved changes.
    Are you sure you want to continue? (y/n)

21. Press **“y”**.

22. HyperTerminal displays the following:
    Configuration Not Saved!
    Are you sure you want to reload the stack? (y/n)

23. Press **"y"**.

24. HyperTerminal displays:
    Reloading all switches.

25. The router now restarts.

26. Press **Enter** and verify the prompt displays the configuration file part number with the correct revision: 64_005467_vXX.

27. The upgrade is now complete.

2.10. Installing the Agilent ESG Waveform Files

These procedures only apply to systems equipped to execute the RF - Performance LTE test cases.

2.10.1. Overview

Some of the receiver tests make use of ESGs to generate interference signals. The files are packaged and installed in the **C:\Program Files\Spirent Communications\Test Manager\Modules\RF - LTE\Interference Waveform Files** directory. You must upload these waveform files onto the ESG before conducting tests.

NOTE: If the instructions below fail to work, It's advised to follow the instructions given in the latest Agilent ESG Manual on uploading the waveform files onto the ESG.

2.10.2. Setting Up the LAN Interface Configuration for the ESG

The ESG1 is the unit connected to P15 of the SR8048 TCU.

To assign a hostname and IP address to the signal generator, follow the instructions given below. Note that the hostname and IP address are persistent states; they are not affected by an instrument preset or power cycle.

NOTE: Ensure that the signal generator is connected to the LAN using a 10Base-T LAN cable.

2.10.2.1 Manual Configuration

1. Press **Utility›GPIB/RS-232 LAN›LAN Setup**.
2. Press **Hostname**.

NOTE: The Hostname soft key is only available when LAN Config Manual DHCP is set to "Manual".

3. Use the labeled text soft keys and/or the numeric keypad to enter the hostname. To erase the current hostname, press **Editing Keys›Clear Text**.
4. Press **Enter**.
5. Set the *LAN Config Manual DHCP* to **Manual**.
6. Press **IP Address** and enter: **192.168.0.112**.
7. Use the left and right arrow keys to move the cursor. Use the up and down arrow keys, front panel knob, or numeric keypad to enter an IP address. To erase the current IP address, press the **Clear Text** soft key.
8. Press the **Proceed with Reconfiguration** soft key, and then press **Confirm Change**. The ESG1 instrument now reboots.
9. Repeat the above steps for the ESG2 instrument using **192.168.0.113** for the IP address. ESG2 is the unit connected to P16 of the SR8048 TCU.

2.10.3. Downloading Waveform Files to the ESG

After the ESG1 restarts, perform the following steps:

1. From the Controller PC, open the Command Prompt.
2. Type **CD C:\Program Files\Spirent Communications\TestManager\Modules\RF - LTE\Interference Waveform Files**.
3. When you are prompted to enter the Username and password, keep the fields blank and press **Enter**.
4. Type **bi** on the FTP prompt and press the **ENTER** key.
5. Type **ha** on the FTP prompt and press the **ENTER** key.
6. Type **put ATSC.bin \user\waveform\ATSC.bin** and press the **ENTER** key.
7. Type **put FLO_6MHZ.bin \user\waveform\FLO_6MHZ.bin** and press the **ENTER** key.
8. Type **put LTE_5MHZ.bin \user\waveform\LTE_5MHZ.bin** and press the **ENTER** key.
9. Type **put LTE_10MHZ.bin \user\waveform\LTE_10MHZ.bin** and press the **ENTER** key.
10. Repeat the above steps for the ESG2 using **192.168.0.113** for the IP address.

2.11. Configuring the Agilent EXA/MXA Spectrum Analyzer

These procedures only apply to systems equipped to execute the RF - Performance LTE test cases.

If the Agilent ESA Series Spectrum Analyzer is part of your RACK, you can skip this section.

NOTE: If the instructions below fail to work, we recommend that you follow the instructions for configuring the IP Address given in the latest Agilent EXA/MXA Spectrum Analyzer manual.

To configure the Agilent EXA/MXA Spectrum Analyzer:

1. Login to the EXA as an administrator with the following credentials:
   User name: **administrator**
   Password: **agilent4u**
2. From the Control Panel select **Network Connections**.
3. Right-click **Local Area Connection** and select **Properties** from the menu.
   The *Properties* window displays.
4. Under the *General* tab, select the **Internet Protocol (TCP/IP)** option and click the **Properties** button.
5. In the *Properties* window, select the **Use following IP address** option and enter the following parameters:
   a. IP Address: 192.168.0.87
   b. Subnet Mask: 255.255.255.0
   c. Default Gateway: 192.168.0.1
6. Click the **OK** button to close all open windows.
7. If prompted, power-cycle the Spectrum Analyzer.

2.12.Installing New System Cables

There are two new cables are required for the 8100 system. They are described in the following sections.

2.12.1. Ethernet Cable

A new Ethernet cable is required to support RLC logging.

Connect the supplied Ethernet cable from the AUX 1 port of the E2010S to port 33x of the Dell 6248 switch. Refer to the *B200 Setup Guide* for connection guidelines.

2.12.2. Synchronization Cable

A new synchronization cable is required on systems containing CDMA equipment to support time synchronization between the LTE and CDMA networks.

Connect the supplied synchronization cable from the CDMA Trigger port of the primary SR3452 (this should be the lower unit) to the Cell A TRIG 2 port of the E2010S. Refer to the *B200 Setup Guide* for connection guidelines.

3. Known Issues - Details

3.1. Dell Latitude E6500/E6510/E6520 Client Laptop Issue

NOTE: If you have any other Client Laptop model, you can skip this chapter.

There is an issue with removing the test data cards and test phones from Dell Latitude E6500/E6510/E6520 Client Laptops connected via the PCMCIA slot or USB. The issue prevents the device from being used (after removed) until the client laptop is rebooted.

To avoid having to reboot the Client Laptop after removing a test device:

1. Before removing a device plugged into the PCMCIA slot or connected via the USB port, stop the device properly by selecting the **Safely Remove Hardware** icon from the System Tray, as shown in Figure 3-1.

Figure 3-1: Safely Remove Hardware Icon

2. Select the desired test device to safely remove it from the Client Laptop.

3.2. UE Drivers that Install a Network Interface

There is a potential conflict during data call setup, when both the Network Interface and Dial-Up Modem are enabled on the client laptop.

To avoid this conflict, we recommend that you disable the Network Interface if the TestDrive Data Connection (Dial-Up Modem) is the targeted interface for the session, as shown in the Figures below. If the Network Interface is not disabled, data call setups could fail with a RasDial exception.

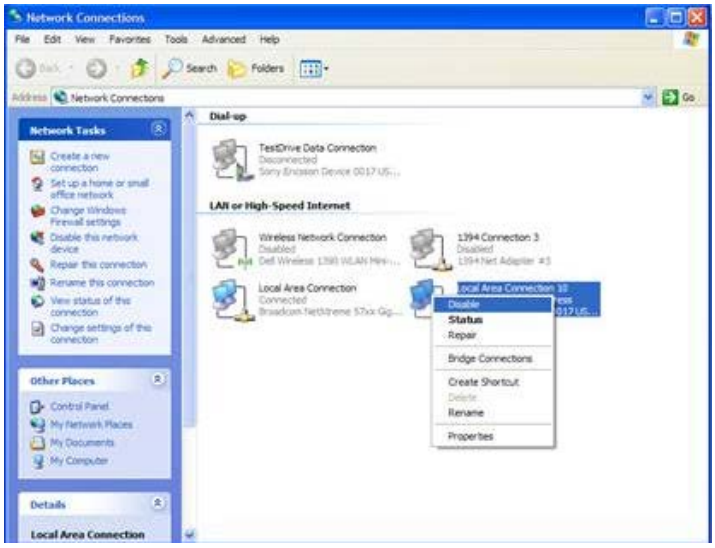

Figure 3-2: Network Connections Window – Disabling the Network Interface

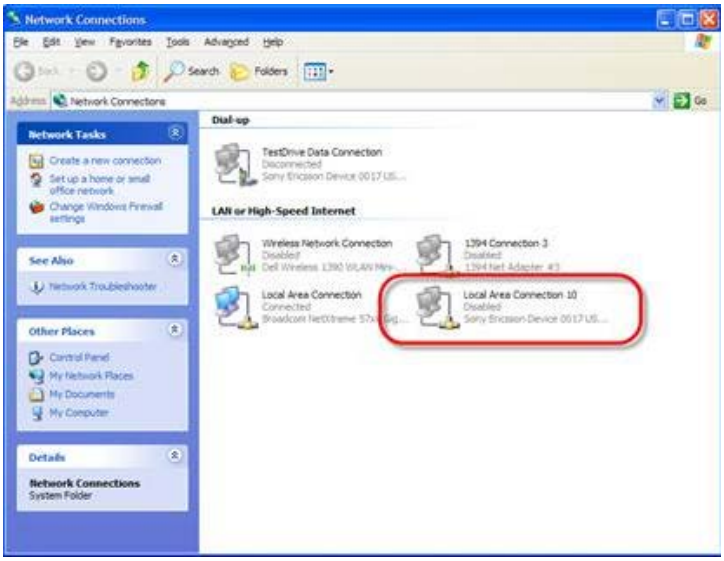

Figure 3-3: Network Connections Window – Successfully Disabled Network Interface

3.3. Unable to Abort Calibration

In the *Calibration Wizard*, clicking the **Abort** button freezes TestManager in a non-working state. You must re-launch TestManager to continue.

3.4. Disabling Microsoft Update

After installing Microsoft Security Essentials, Microsoft Update is enabled by default. Microsoft Update must be disabled on 8100 systems.

3.4.1. Windows XP and Windows Server 2003

Perform the following steps on each of the following PCs included in your system:

- Windows XP Controller PC
- Windows XP Client Laptop
- Windows Server 2003 Applications Server

To disable Microsoft Update:

1. Select **Start›Control Panel›Performance and Maintenance›System**.
   The *System Properties* window displays.
2. Under the *Automatic Updates* tab, select the **Turn off Automatic Updates** option, as shown in Figure 3-4.

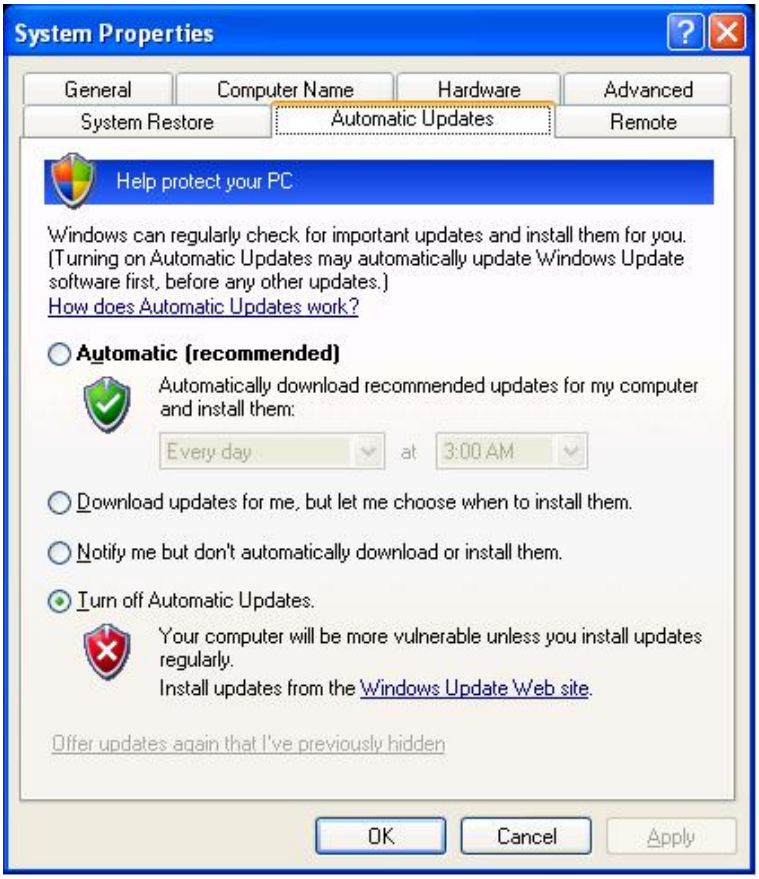

Figure 3-4: System Properties Window – Automatic Updates Tab

3. Click **OK** to save the changes and exit the window.

3.4.2. Windows 7

Perform the following steps on each of the following PCs included in your system:

- Windows 7 Controller PC
- Windows 7 Client Laptop

1. Select **Start›Control Panel›System and Security›Windows Update›Change Settings**. The *Windows Update – Change Settings* window displays.
2. Under the *Important Updates* section, select **Never check for updates**, as shown in Figure 3-5.

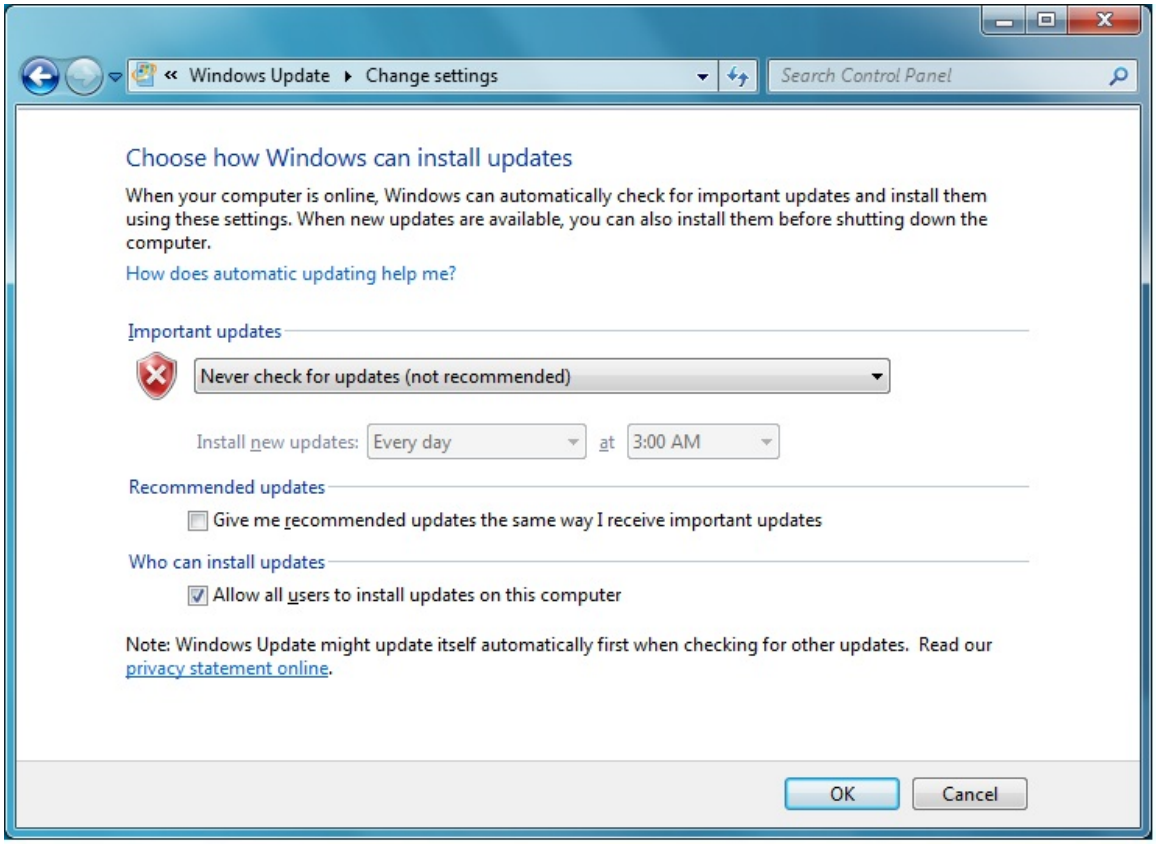

Figure 3-5: Windows Update – Change Settings

3. Click **OK** to save the changes and exit the window.
4. If a "Windows update is turned off. Click to turn on." message displays on the desktop, ignore it.

3.4.3. Windows Server 2008

If you are running Windows Server 2008 on the Applications Server, perform the following steps.

1. Select **Start›Control Panel›System and Maintenance›Windows Update›Change Settings**.
   The *Change Settings* window displays.

2. Under the *Important Updates* section, select **Never check for updates**, as shown in Figure 3-6.

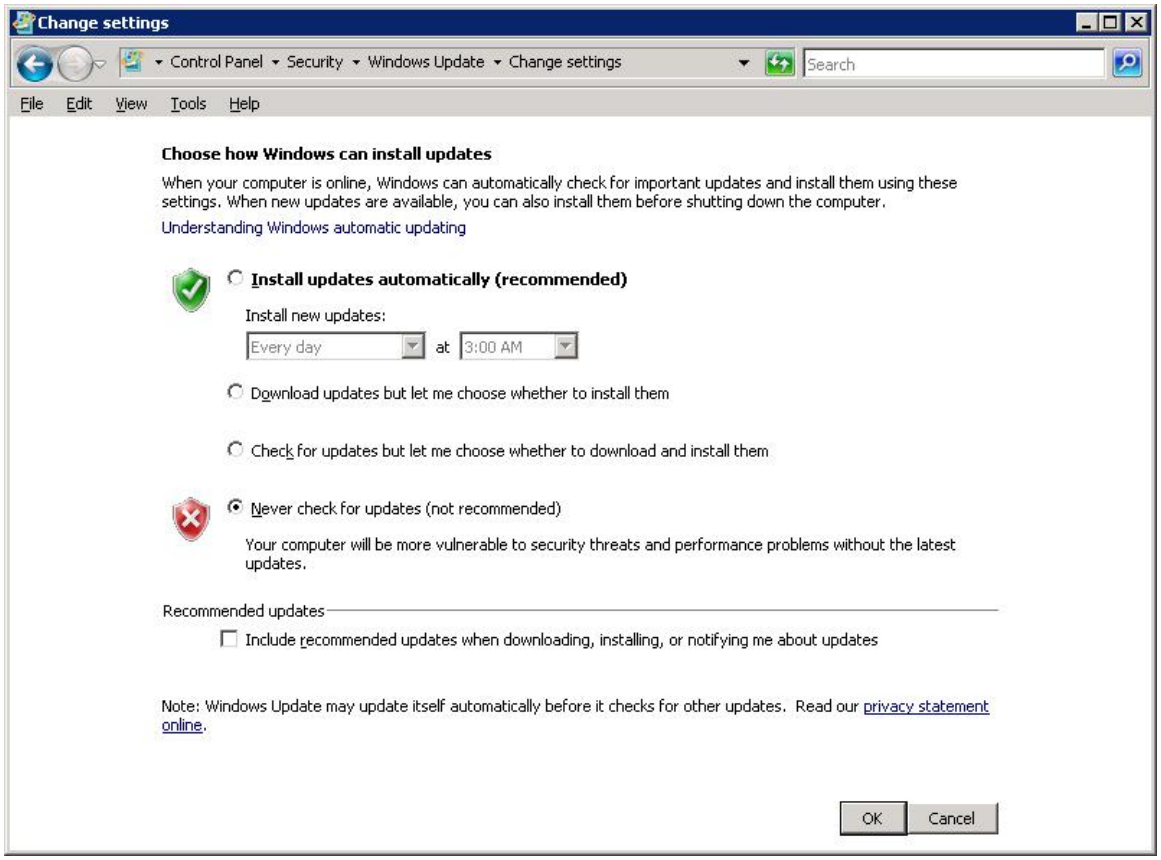

Figure 3-6: Windows Update – Change Settings

3. Click **OK** to save the changes and exit the window.

4. If a "Windows update is turned off. Click to turn on." message displays on the desktop, ignore it.

3.5. Creating a New Platform File

Platform Files created using previous releases do not automatically upgrade correctly with this release. Follow the instructions below to create a new Platform File for your test system.

1. In Test Manager, select **File›New›Platform File** as shown in Figure 3-7. The B-Series Platform file opens.

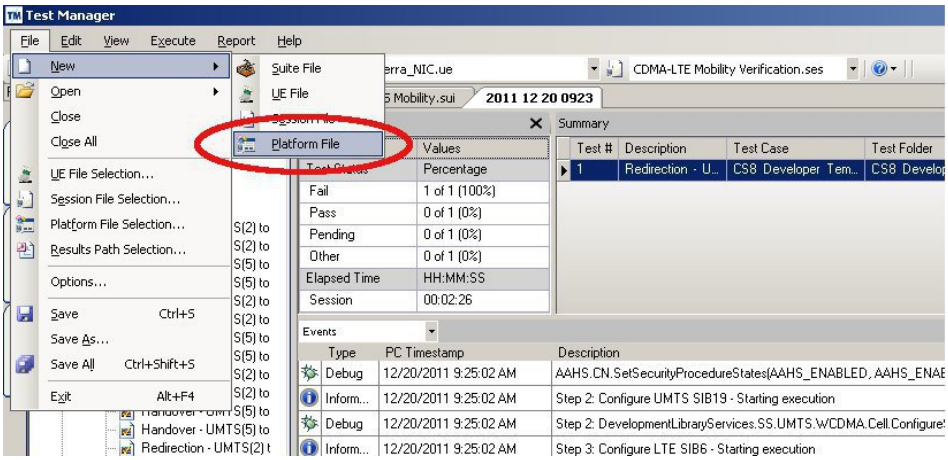

Figure 3-7: Platform File Menu Item

2. Under *Available Instruments*, enable all configured instruments.

3. Under *Network Configuration*, configure the available network options for the specific module to be tested.

4. Under *PDN Gateway*, enter **FD00:0:20:1:0:0:1:3** for the IPv6 address, as shown in Figure 3-8.

5. Under **SR8078 Test Configuration Unit**, select the LTE Mode Configuration file applicable to the test theme.

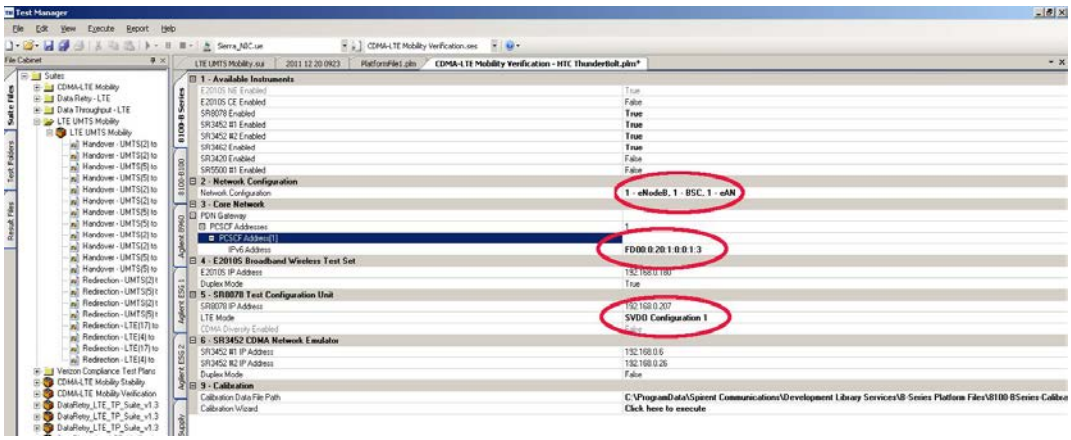

Figure 3-8: Setting Platform File Parameters

6. If you are running the LTE RF Performance Module, select the **B100** tab in the new Platform File.

7. Configure the SR8048 Test Configuration options for the system, as shown in Figure 3-9.

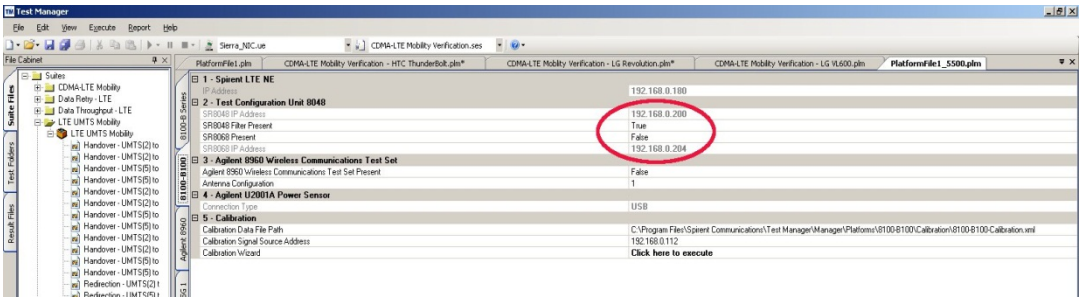

Figure 3-9: SR8048 Test Configuration Options

8. If you are running C2K SVLTE, configure the Agilent 8960 options in the Platform File.

9. When all options have been configured, save the Platform File by selecting **File>Save** in Test Manager.

10. When executing the tests, ensure that all test cases reference the Platform File you have just created.

3.6. Disabling Internet Protocol on the UE Network Connection

When running the LTE RF test cases, the UE is connected to the Controller PC for automation control. LTE UEs often establish an IP address automatically when connected to the USB port on the PC.

This can cause stability issues while running LTE RF test cases. To prevent this from occurring, perform the following steps to disable internet protocol on the UE network connection.

1. From the Control Panel, select **Network Connections** and locate the UE Local Area Connection, as shown in Figure 3-10.

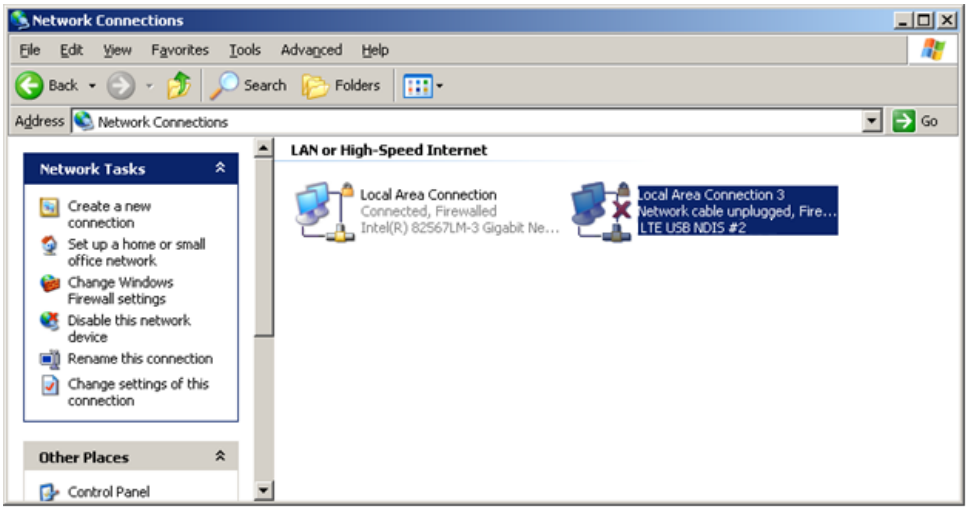

Figure 3-10: Network Connections Window

2. Right-click **Local Area Connection** and select **Properties** from the menu.
   The *Local Area Connection Properties* window displays, as shown in Figure 3-11.

3. Deselect the **Internet Protocol (TCP/IP)** option, as shown in Figure 3-11.

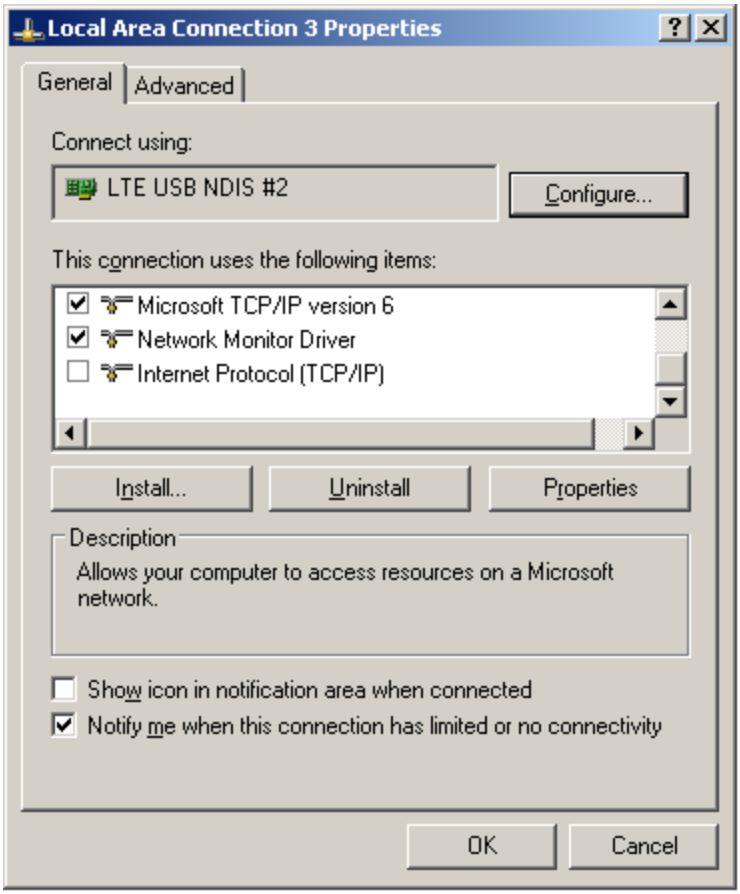

Figure 3-11: Local Area Connection Properties Window

NOTE: The Spirent Controller PC is shipped with two IP addresses: 192.168.0.35 and 192.168.0.5. We strongly recommend that you do not add any other IP addresses, especially on a different subnet.