

8100 Mobile Device Test System
Configuration Guide
for the E5515C (Agilent 8960) Test Set
Application Note 107



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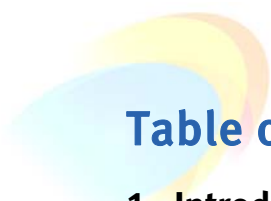


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1. Introduction

The purpose of this document is to provide instructions on installing the Agilent 8960 (E5515C) test set into the Spirent 8100 Mobile Device Test System. Also included in this document are procedures for determining the Hardware and Software options currently supported by the E5515C.

To date there are (2) types of 8960 hardware configurations in the field:

- Standard Hardware
- T-Hardware (which supports HSPA data rates)

Beginning in October, 2008, Agilent will release a new 8960 (E5515C) identified as the *5.8 High Speed Data Hardware Platform*. All 8960 units (E5515C) shipped after October 2008 will have the 5.8 hardware platform.

Spirent supports the standard Hardware and new 5.8 Hardware configurations. Customers that currently have the 8960 with T-Hardware option are required to upgrade to the 5.8 Hardware platform.



2. Installing the Optional 8960 (E5515C)

To install and configure the Agilent 8960 E5515C test set to support the Spirent 2.5G test cases:

1. Follow the instructions given in Section 1.1 of the *8100 Mobile Device Test System Field Verification Procedure* Application Note. Open the *Rack Setup Guide*.
2. Reference the *Rack Setup Guide* for the recommended physical location and mounting methodology for the 8960.
3. Power-up the 8960 and allow the equipment to complete the boot-up process.

2.1.1. Determining the Hardware Version

1. Locate the serial number of the 8960 (E5515C) on the back of the unit near the AC power outlet, as shown in Figure 1.
2. If the serial number is \geq **MY48360001**; the unit is equipped with 5.8 High Speed data hardware. In this case, proceed to Section 2.1.2 on page 4.
3. If the serial number is $<$ **GB45070001**, or has any US serial number, it may require a hardware upgrade to run or enable certain features. The unit may also have been previously upgraded with either a T hardware option, or the High Speed data support option.
4. Review Figure 4, if the unit has a single LAN connection, the 8960 is a standard HW version and does not support high speed data. If the unit has two LAN ports, the 8960 (E5515C) **may** have the required high speed HW installed, further verification steps are needed.
NOTE: population of the second LAN port on the rear of the 8960 does not guarantee that the unit is equipped with the high speed hardware.

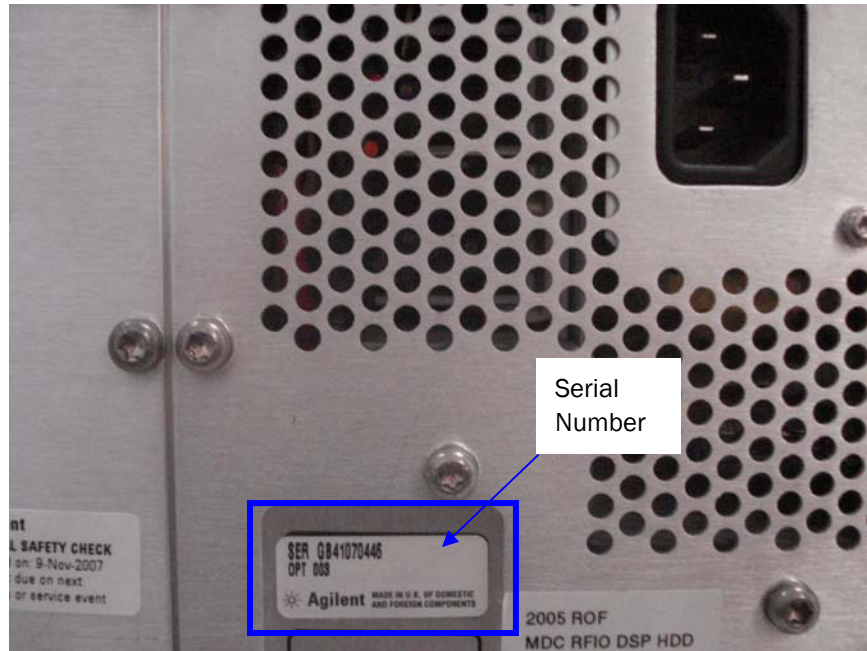


Figure 1: 8960 (E5515C) Serial Number Location

2.1.2. Setting the IP Configuration

1. Access the 8960 system Configuration Menu by selecting: **Local>System Configuration>Instrument Setup (F1)**.
2. If the 8960 is equipped with the high speed hardware, as determined in Section 1.1.1, there will be two LAN IP addresses within the Configuration window, as shown in Figure 2.
3. Set the items in the 8960 configuration menu to the following values:
 - a. GPIB 14
 - b. LAN IP Address 192.168.0.44
 - c. Subnet Mask 255.255.255.0
 - d. Default Gateway. 192.168.0.1
 - e. LAN 2 IP Address 192.168.0.45

NOTE: In this configuration the LAN port is only used for protocol logging, firmware downloads and screen captures. The data server must be connected to the LAN 2 port. Each LAN port must have a unique IP address but they must be on the same sub-net.

System Config Screen																										
Control	Configuration Summary	Utilities																								
Instrument Setup ▾	<table border="1"> <thead> <tr> <th colspan="2">Instrument Information</th> </tr> </thead> <tbody> <tr> <td>Application:</td> <td>Fast Switch Lab App U</td> </tr> <tr> <td>Special Application</td> <td>E6785U U.01.01</td> </tr> <tr> <td>Format:</td> <td>UCDMA</td> </tr> <tr> <td> GPIB Address:</td> <td>14</td> </tr> <tr> <td> Lan IP Address:</td> <td>192.168.1.23</td> </tr> <tr> <td> Subnet Mask:</td> <td>255.255.255.0</td> </tr> <tr> <td> Default Gateway:</td> <td></td> </tr> <tr> <td> Last Calibration:</td> <td>15 Jul 2008</td> </tr> </tbody> </table>		Instrument Information		Application:	Fast Switch Lab App U	Special Application	E6785U U.01.01	Format:	UCDMA	GPIB Address:	14	Lan IP Address:	192.168.1.23	Subnet Mask:	255.255.255.0	Default Gateway:		Last Calibration:	15 Jul 2008						
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LAN IP Address 2 (Data+)	192.168.1.24																									
Close Menu		User Calibration Summary																								
		1 of 2																								

Figure 2: 8960 (E5515C) LAN Configuration Screen, High Speed HW Installed

4. If the 8960 is not equipped with the high speed hardware, as determined in Section 1.1.1, there will be a single LAN IP address within the configuration screen, as shown in Figure 3.
5. Set the items in the 8960 configuration menu to the following values:
 - a. GPIB 14
 - b. LAN IP Address 192.168.0.45
 - c. Subnet Mask 255.255.255.0
 - d. Default Gateway. 192.168.0.1

NOTE: In this configuration the LAN port is used for both protocol logging, firmware downloads, screen captures, and connection to the data server.

System Config Screen						
Control	Configuration Summary				Utilities	
Instrument Setup ▾	Instrument Information				Message Log	
	Application:	GSN/GPRS Lab App E				
		E6701E	E.01.18			
Format Switch ▾	Format:	GSN/GPRS				
	GPIB Address:	14				
	Lan IP Address:	192.168.0.45				
	Subnet Mask:	255.255.255.0				
Application Selection	Default Gateway:	192.168.0.1				
	Last Calibration:	20 May 2006				
	Instrument Setup		Value			
	GPIB Address				14	
	LAN IP Address				192.168.0.45	
	Subnet Mask				255.255.255.0	
	Default Gateway				192.168.0.1	
RF IN/OUT Amp'd Offset	Display Mode				Track	
	Display Brightness				High	
	Beeper State				Off	
Close Menu	Date (yyyy.mm.dd)				2008.09.24	
		Active Cell		Sys Type: GPRS		
				Logging: No Conn		
		ExtRef	Offset	Help		
					1 of 2	

Figure 3: 8960 (E5515C) LAN Configuration Screen, Standard HW Configuration

2.1.3. Connecting the 8960 to the System

- Follow the instructions given in Section 1.1 of the *8100 System Field Application Note*.
Open the *Rack Setup Guide*.
- Using the *Rack Setup Guide*, connect the Ethernet and timing reference cables as shown in the diagram.
 - For a 5.8 High Speed unit or a T-Hardware unit, as determined in the previous sections, connect the Ethernet cable from the router to LAN 2 port on the back of the 8960 (E5515C).
 - For a standard unit connect the Ethernet cable to the LAN or LAN 1 port as shown in Figure 4.
- Perform the Ping Test instructions in Section 1.1.4 of the *8100 System Field Application Note*.

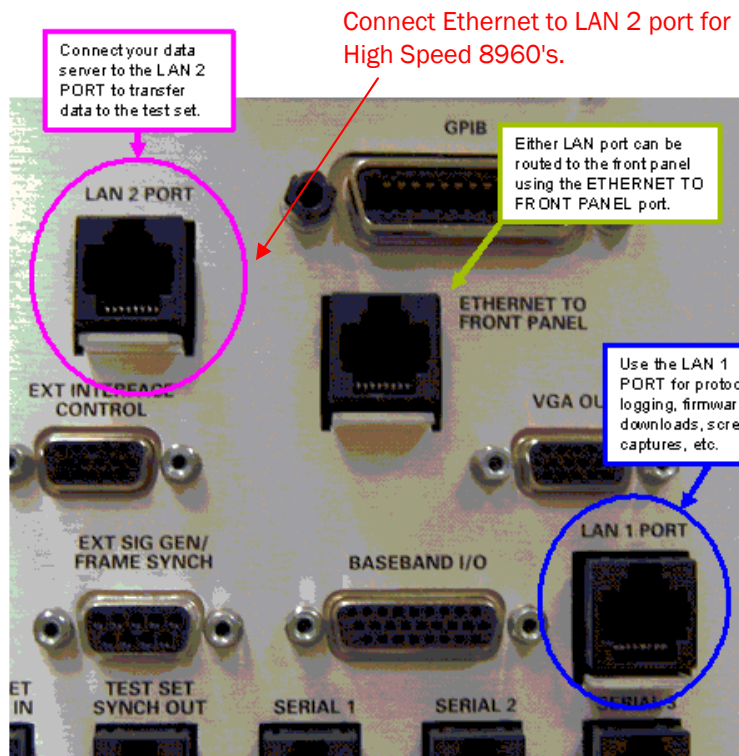
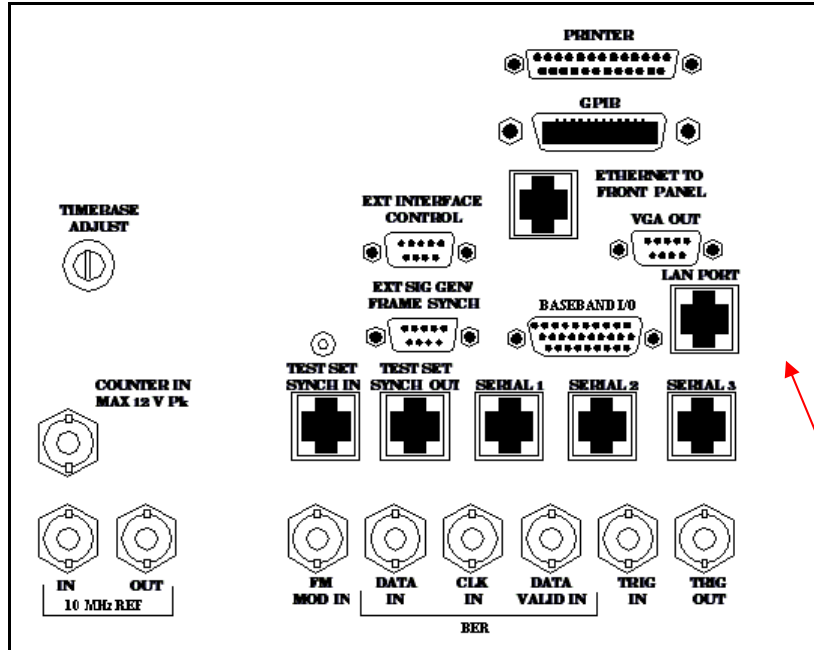


Figure 4: 8960 (E5515C) Rear Panel Connection Options.

2.1.4. Verifying the Firmware Revisions

1. Access the 8960 System Configuration Menu by selecting: **Local>System Configuration>Application Selection (F3)**.
2. The 8960 *System Configuration* window, shown in Figure 5, displays the current active Lab Application version and the available Lab Application versions.
3. To select the Lab Application model and revision, press the **Application Setup** Soft Key. Use the Knob to highlight the desired application then press the Knob to select.
4. To switch between Lab Applications, press the **Application Switch** soft key, highlight the desired application, and select **Switch Now**.

System Config Screen											
Control		Configuration Summary						Utilities			
Application Switch ▾		Instrument Information						Message Log			
		Application: GSN/GPRS Lab App E		E6701E		E.01.18		Active Lab App Version			
		Format: GSN/GPRS									
Application Setup ▾		GPIB Address: 14									
		Lan IP Address: 192.168.0.45									
		Subnet Mask: 255.255.255.0									
		Default Gateway: 192.168.0.1									
		Last Calibration: 20 May 2006									
		Application, Revision, License									
		GSN/GPRS Lab App D, D.03.46, L									
		GSN/GPRS Lab App E, E.01.18, L									
Close Menu											
		Active Cell				Sys Type: GPRS					
						Logging: No Conn					
		ExtRef		Offset		Help					
								1 of 2			

Figure 5: 8960 Application Window

5. To upload a Lab Application to the 8960 (E5515C):
 - a. Obtain the license agreement from Agilent.
 - b. A specific Lab Application executable file is provided with the agreement.
 - c. Currently, Spirent only supports Lab App **E6701E E.01.18** for standard units and E6701F F.01.15 for 5.8 High Speed units. Spirent does not support the T hardware options for the 8960. Refer to the following table for support information.

8960 (E5515C) HW Configuration	Required Lab Application	Spirent Support Status
Standard	E6701E E.01.18	Yes
T Hardware SN > GB45070001 or any US model	E6701T T03.08 or E6701U U.00.34	No
5.8 High Speed Data SN > MY48360001	E6701F F.01.15	Yes

- d. Establish an Ethernet connection to the 8960, as described in Section 1.1.3.
For T-hardware or 5.8 High Speed Units you must connect to LAN1 port.
- e. Open the **Lab App** executable file, select **Run**, and follow the directions to extract the files onto the computer.
This step creates a directory that contains file utilities and release information.
- f. In the newly created directory, run the **8960_File_Utility.exe**. The *Agilent File Utility* displays, as shown in Figure 6.
- g. Select the **Direct Connection (Single Test Set)** option.

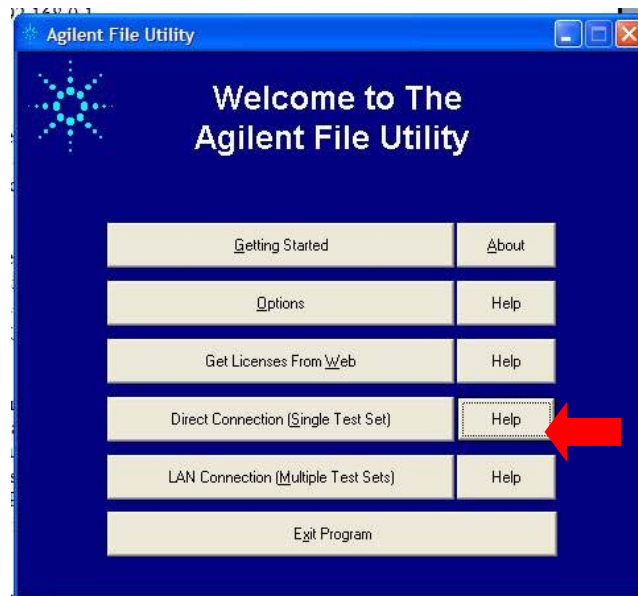


Figure 6: Agilent File Utility

- h. Enter the IP address for the 8960, as shown in Figure 7. For a T hardware or High Speed unit; this would be the IP address of the LAN 1 port.

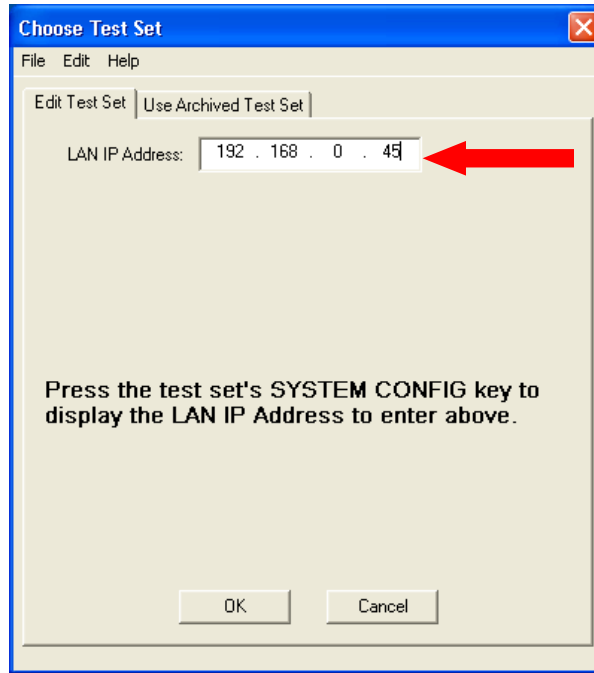


Figure 7: Test Set IP

- i. Click **OK**. The file utility retrieves the active Lab App versions on the test set and the version locally installed from the previous steps.
- j. Highlight the locally stored version of Lab App, as shown in Figure 8, then select **Upload To Test Set**.

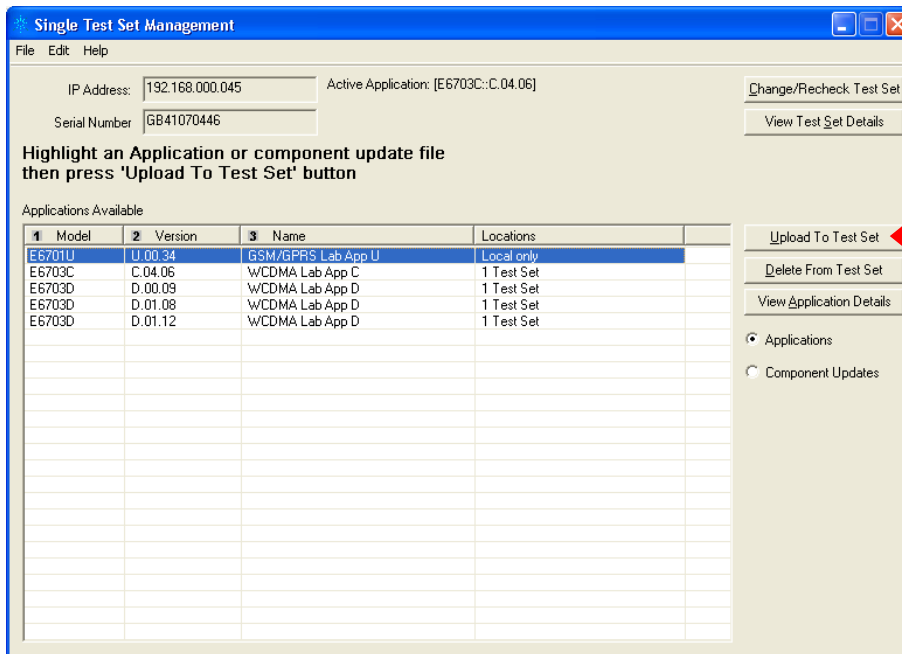


Figure 8: Lab Application Upload

- k. Select the **Make Application active and reboot** option, as shown in Figure 9.

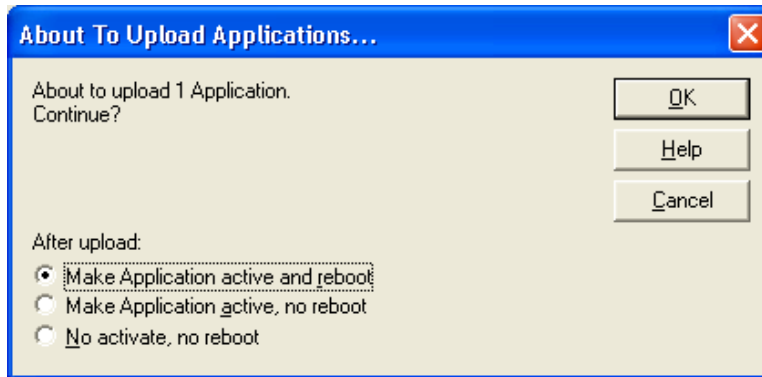


Figure 9: Upload Option Window

- l. The file utility checks for hardware and Lab App compatibilities. If problems are identified, an Agilent File Utility window displays, as shown in Figure 10.

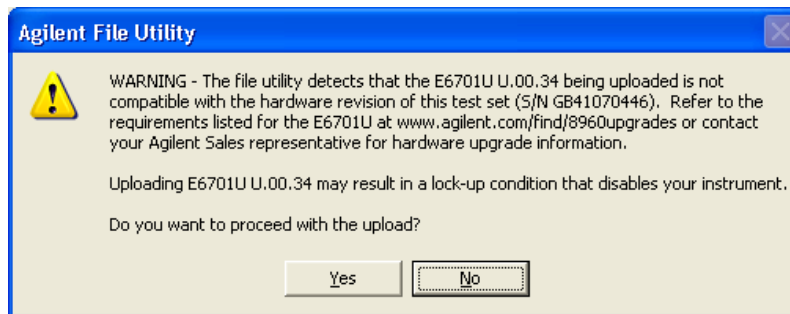


Figure 10: Upload Warning Window

- m. If this window displays, do not proceed with the operation. Click **No** and exit the File Utility. Proceed to Step 6.
- n. If the operation completes without issues, the uploaded Lab Application displays in the Application menu, as described in Step 3 of this section.

The following steps outline the procedure to capture the specific configuration of the 8960 (E5515C). This information can then be provided to the Agilent Service Representative.

1. Establish an Ethernet connection to the 8960, as described in the previous steps.
2. Open an internet browser window and enter the following in the address line; along with the IP address of LAN or LAN 1 port, depending on your hardware configuration: **http://192.168.0.xx/iconfig**.
3. The 8960 returns the specifics on what is included in the test set.
4. Using the File tab of your browser, save this file (include the serial number in the file name). Ensure that "Web Page, complete (*.htm, *.html)" is selected in the **Save As Type** list.

5. Contact your local Agilent Support Representative for questions or issues pertaining to the 8960 configuration.
<http://wireless.agilent.com/rfcomms/upgrades/8960/>