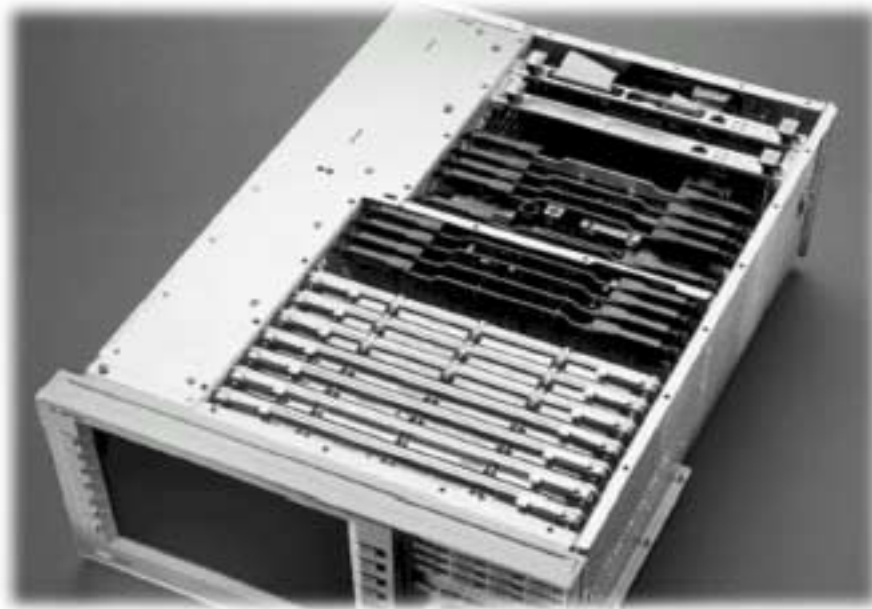# Installation Note

Agilent Technologies 8960 Wireless Communication Test Set
Add Fast Switch capability and speed improvement
Kit Part Number: E5515BU-285 and E5515CU-285

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Agilent Technologies 8960 Wireless Communication Test Set
Add Fast Switch capability and speed improvement
Kit Part Number: E5515BU-285 and E5515CU-285

Products Affected:	E5515B and E5515C
Serial Numbers:	E5515B <GB4507; E5515C <GB4508
Options Required:	N/A
Applications Supported:	All
To Be Performed By:	(X) Agilent Technologies Service Center
	(X) Personnel Qualified by Agilent Technologies
	( ) Customer
Estimated Installation Time:	2.0 hours
Estimated Verification Time:	0.5 hours

Introduction

NOTE: *If upgrading to a Fast Switching application, you must install the Fast Switching Application and update all other Applications to the latest revisions before changing the hardware included with the upgrade kit. Do not switch to the Fast Switching Application without changing the hardware included with the upgrade. The upgrade will fail if you change the order of these steps.*

Installation includes the following major steps:
1. Upgrade Existing Applications.
2. Remove Non-compatible Applications
3. Disassembly
    a. Remove the instrument covers.
    b. Remove the old boards.
4. Assembly
    a. Replace ADC Samplers.
    b. Install new Boards.
    c. Install Option Label
5. Replace covers.

Installation Kit Parts List

Item	Qty	Description
1	1	Label
2	1	ADC Board
3	1	Protocol Processor
4	1	DSP Assy
5	1	Installation Instructions (this document)

Label should have **285 002** printed on it.

Tools Required

- TORX T-15 and T-20 drivers
- PC with LAN capabilities
- PLCC –Extractor (if E5515C)

Safety Considerations

WARNING	**Before you disassemble the test set, turn the power switch off and unplug the power cord. Failure to unplug the test set can result in personal injury.**
CAUTION	Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation.

Install New and Upgrade Existing Applications:

1. Upgrade all existing Applications to the latest revision if not compatible (see Table 1) and switch to one of the new revisions. All non-compatible Applications must be upgraded to work with the new boards that are included in this upgrade kit.
2. Follow the Firmware installation instructions that come with the Applications.

E1960A	GSM	**NOT SUPPORTED**
E1961A	AMPS/136	A.09.xx or greater
E1962B	CDMA 2000 TA	B.08.xx or greater
E1963A	W-CDMA TA	A.06.xx or greater
E1964A	GPRS TA	**NOT SUPPORTED**
E1966A	1xEV-DO TA	A.03.xx or greater
E1968A	GSM/GPRS/EGPRS TA	A.04.xx or greater
E1985A	GSM/GPRS_AMPS/136_W-CDMA	**NOT SUPPORTED**
E1985B	GSM/GPRS_AMPS/136_W-CDMA	B.05.xx or greater
E1985C	GSM/GPRS_CDMA2000_AMPS/136	C.03.xx or greater
E1985E	CDMA2000_1xEV-DO	E.02.xx or greater
E1987A	Fast Switch	A.01.xx or greater
E6590A	GSM/GPRS RF Modem	A.02.xx or greater
E6701A	GPRS Lab App	**NOT SUPPORTED**
E6701B	GSM/GPRS Lab App B	**NOT SUPPORTED**
E6701C	GSM/GPRS Lab App C	C.04.xx or greater
E6701D	GSM/GPRS Lab App D	D.01.xx or greater
E6702A	CDMA 2000 Lab App A	**NOT SUPPORTED**
E6702B	CDMA 2000 Lab App B	B.02.xx or greater
E6703A	W-CDMA Lab App	**NOT SUPPORTED**
E6703B	W-CDMA Lab App B	B.02.xx or greater
E6703C	W-CDMA Lab App C	C.01.xx or greater
E6706A	1xEV-DO Lab App	A.02.xx or greater
E6785A	GSM/GPRS_W-CDMA Lab App	**NOT SUPPORTED**
E6785B	GSM/GPRS_W-CDMA Lab App B	B.02.xx or greater
E6785C	GSM/GPRS_W-CDMA Lab App C	C.01.xx or greater

Table 1

If an application is not in Table 1 then it is already compatible with the upgraded hardware.

Remove Non-compatible Applications:

1. Remove all non-compatible Applications from the test set. Removing older Application revisions prevents improper operation of the test set. The test set must be connected to the PC LAN port to use these tools, see Table 1 for compatibility.
    a. Run the Agilent 8960 File Utility
    b. Select the Direct Connection (Single test set) button.
    c. Select the Test Application tab.
    d. Highlight the old revision(s) of Application(s) and select the Delete From test set button. <u>Do not delete the new and updated applications just loaded</u>.

Disassembly:

Remove outer cover and top cover for the 8960

1. Remove handles and rear bumpers.
2. Remove the screws on the rear panel holding outer cover.
3. Slide outer cover off.
4. Remove the 26 screws holding the top cover on and remove the cover.

Remove the old boards

1. Remove the old Protocol Processor, ADC and DSP boards. Refer to the *Replaceable Parts List (E5515A/B/C/T)* in the *Troubleshooting and Repair* section of the 8960 Assembly Level Repair area at: www.agilent.com/find/8960toolbox for board location.

Assembly:

Step A) ADC Assembly

1. Move the ADC sampler boards from the old ADC.
2. Attach the ADC Samplers to the new ADC.
3. Install the ADC into the 8960.

Install Protocol and DSP Boards

1. If option 003 is in the instrument, the LSS Digital Board will need to be removed from the old Protocol Processor and attached to the new Protocol Processor.
2. Install the Protocol Assembly into J1, J3 slots.
3. Install the DSP Assembly into the J8, J16 slots.

Install Option Label

1. Install the option label, 7121-7884, on the back of the instrument.
    a. Write **<u>285</u>** on the label if blank.
    b. Don't cover up the old option label if the options on the old label are not also on the new label.

NOTE: *If the test set does not power up because of an inoperative processor, replace the processor first; and then use the Agilent 8960 File Utility to re-install the Test Application. Select the TEST SET RECOVERY function on the bottom of the OPTIONS screen. Follow the instructions on the screen.*

Replace covers:

1. Replace the top cover and secure it with the 26 screws.
2. Slide the outer cover on.
3. Replace the outer cover screws on the rear panel.
4. Attach the rear bumpers and handles.

Questions and concerns: contact Agilent Technologies Support:
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