

Agilent Technologies
85012C Time Domain Upgrade Package
Installation Manual



Agilent Technologies

Manufacturing Part Number: 85012-90024

Printed in USA

April 2002

Supersedes June 2001



85012-90024

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Agilent Technologies
1400 Fountaingrove Parkway
Santa Rosa, CA 95403-1799, U.S.A.

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Any adjustment, maintenance, or repair of this product must be performed by qualified personnel. Contact Agilent by internet, phone, or fax to get assistance with all your test and measurement needs.

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Safety and Regulatory Information

Review this product and related documentation to familiarize yourself with safety markings and instructions before you operate the instrument. This product has been designed and tested in accordance with international standards.

WARNING

The WARNING notice denotes a hazard. It calls attention to a procedure, practice, or the like, that, if not correctly performed or adhered to, could result in personal injury. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

CAUTION

The **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like, which, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

Instrument Markings



When you see this symbol on your instrument, you should refer to the instrument's instruction manual for important information.



This symbol indicates hazardous voltages.



This symbol indicates that the instrument requires alternating current (ac) input.



The CE mark is a registered trademark of the European Community. If it is accompanied by a year, it indicates the year the design was proven.



The C-tick mark is a registered trademark of the Spectrum Management Agency of Australia.



The CSA mark is a registered trademark of the Canadian Standards Association.

ISM1-A

This text indicates that the instrument is an Industrial Scientific and Medical Group 1 Class A product (CISPER 11, Clause 4).



This symbol indicates that the power line switch is ON.



This symbol indicates that the power line switch is OFF or in STANDBY position.

Safety Earth Ground



This is a Safety Class I product (provided with a protective earthing terminal). An uninterruptible safety earth ground must be provided from the main power source to the product input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, the product must be made inoperative and secured against any unintended operation.

Before Applying Power

Verify that the product is configured to match the available main power source as described in the input power configuration instructions in this manual. If this product is to be powered by autotransformer, make sure the common terminal is connected to the neutral (grounded) side of the ac power supply.

Typeface Conventions

Italics

- Used to emphasize important information:
Use this software *only* with the Agilent Technologies xxxxxX system.
- Used for the title of a publication:
Refer to the *Agilent Technologies xxxxxX System-Level User's Guide*.
- Used to indicate a variable:
Type LOAD BIN *filename*.

Instrument Display

- Used to show on-screen prompts and messages that you will see on the display of an instrument:
The Agilent Technologies xxxxxX will display the message **CAL1 SAVED**.

Keycap

- Used for labeled keys on the front panel of an instrument or on a computer keyboard:
Press **Return**.

[Softkey]

- Used for simulated keys that appear on an instrument display:
Press **[Prior Menu]**.

User Entry

- Used to indicate text that you will enter using the computer keyboard; text shown in this typeface must be typed *exactly* as printed:
Type LOAD PARMFILE
- Used for examples of programming code:
#endif//ifndef NO_CLASS

Path name

- Used for a subdirectory name or file path:
Edit the file *usr/local/bin/sample.txt*

Computer Display

- Used to show messages, prompts, and window labels that appear on a computer monitor:
The **Edit Parameters** window will appear on the screen.
- Used for menus, lists, dialog boxes, and button boxes on a computer monitor from which you make selections using the mouse or keyboard:
Double-click **EXIT** to quit the program.

85012C Time Domain Upgrade

The Upgrade Package

Use this package to add the time domain option to an Agilent 8510C network analyzer. This upgrade provides the same capabilities as Option 010 (ordered at time of purchase).

Firmware Features

With this upgrade installed, you can make full error-corrected reflection and transmission measurements in terms not only of frequency, but also of time. Frequency domain measurements are converted mathematically to the time domain using the Chirp Z Fast Fourier Transform technique. Refer to the *Agilent 8510C Operating and Programming Manual* for information on making time domain measurements.

Upgrade Requirements

Upgrade Package	Analyzer Model Required	Firmware Revision Required
85012C	8510C ^a	C.06.00 or greater

a. Applies to any 8510A or 8510B that has been upgraded to an 8510C.

NOTE	<p>The original 85101 display/processor incorporated a cathode ray tube display (CRT). The current design incorporates a liquid crystal display (LCD).</p> <p>The time domain option firmware is included in both the LCD and CRT 8510C operating system versions. Firmware revision C.08.XX is required if you have an 85101C display/processor equipped with an LCD. Firmware revision C.07.XX is required if you have a CRT display.</p>
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Warranty Information

Installation of an upgrade does not affect the existing instrument warranty in any way. Specifically, it does not extend the current instrument warranty. Any parts supplied in an upgrade package carry a 90-day replacement-part warranty.

Upgrade Package Contents

Item	Quantity	Agilent Part Number
Time Domain IC	1	85101-80091
Installation Manual	1	85012-90024

Equipment Required but Not Supplied

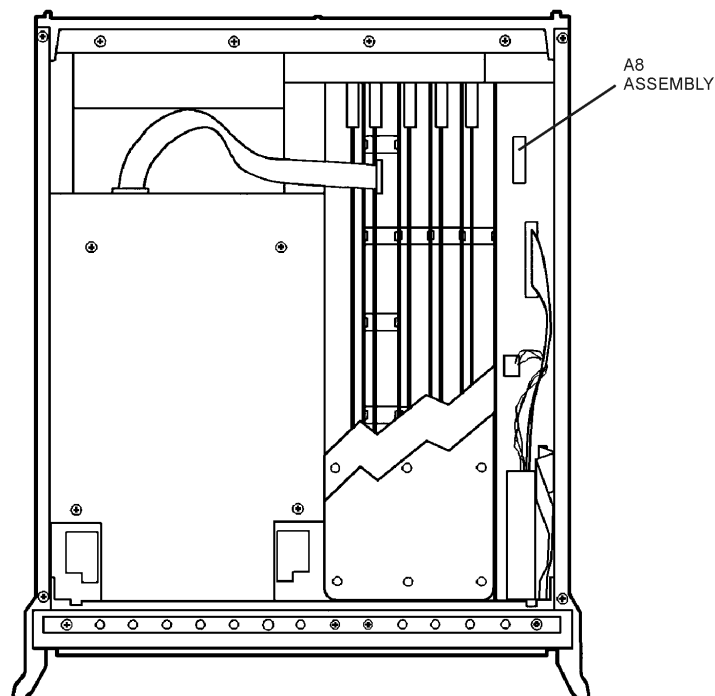
Item	Agilent Part Number
Static control mat	9300-0797
Wrist strap	9300-1367
Wrist-strap-to-mat cord (5 ft)	9300-1980

Installing Time Domain

Procedure

1. At a static-free workstation, check that the static mat:
 - a. Sits on a clean, flat, sturdy surface.
 - b. Has an earth ground connection.
 - c. Has a connected wrist strap.
2. Install the IC.
 - a. Remove the 85101C display/processor from the system.
 - b. Remove the top cover of the display/processor.
 - c. Remove the A8 assembly by grasping the knob on the A8 assembly board and pulling outward and upward. [Figure 1](#) shows the location of the A8 assembly board in an 85101C equipped with either a CRT display or an LCD.

Figure 1 A8 Assembly Location



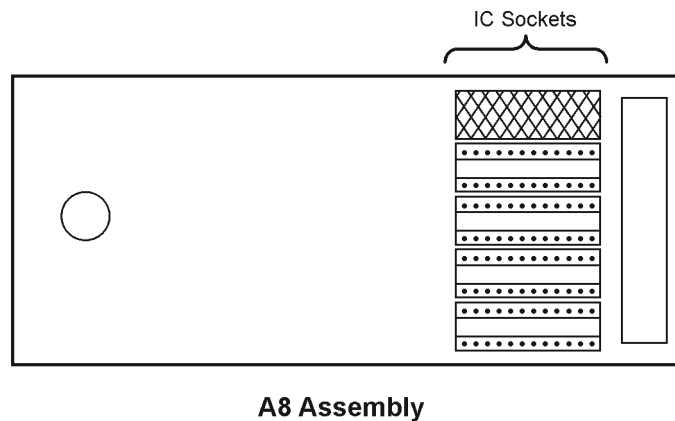
jp503j

- d. Insert the IC from the upgrade kit in any one of the empty IC sockets on the A8 assembly (see [Figure 2](#)).

NOTE	All of the sockets can be filled without any adverse effects to system performance.
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- e. Replace the A8 assembly. Push down firmly on the board and inward on the knob until it snaps in place.
- f. Replace the top cover of the 85101C.
- g. With an indelible pen, write **OPT: 010** below the serial number on the 85101C.

Figure 2 IC Installation Location on A8 Assembly



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Checking Time Domain

Use this procedure to verify that the time domain option has been installed properly.

1. Turn on the instruments in the following order:
 - a. Source (make sure that the switch is turned to power on and not standby)
 - b. Test set
 - c. 85102 IF/detector
 - d. 85101 display/processor
2. On the 85101C:
 - a. Press **INSTRUMENT STATE RECALL** and **[MORE]**, **[FACTORY PRESET]**.
 - b. Press **DOMAIN** and select **[TIME LOW PASS]**.

Does the instrument display the Set Frequency (low pass) menu? If so, the time domain option is installed properly. If not, recheck the installation of the IC.