

**RSA5100B Series Real-Time Signal Analyzers
RSA5BUP Option 300 High Performance Real Time Upgrade
Instructions**

www.tektronix.com



075-1058-00

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Contacting Tektronix

Tektronix, Inc.
14150 SW Karl Braun Drive
P.O. Box 500
Beaverton, OR 97077
USA

For product information, sales, service, and technical support:

- In North America, call 1-800-833-9200.
- Worldwide, visit www.tektronix.com to find contacts in your area.

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Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the *General Safety Summary* located in the RSA5100B Service manual (Tektronix part number 077-0903-XX) before performing any service procedures.

Do not service alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect power. To avoid electric shock, switch off the instrument power, then disconnect the power cord from the mains power.

Use care when servicing with power on. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections.

Kit description

This kit describes the installation of the Option 300 High Performance Real Time option in an RSA5100B Series Real-Time Signal Analyzer. This kit installs a new DPX board that enables enhanced DPX performance and trigger functionality. It replaces the standard DPX board in the instrument.

Products

RSA5103B. All serial numbers.

RSA5106B. All serial numbers.

RSA5115B. All serial numbers.

RSA5126B. All serial numbers.

Kit parts list

Quantity	Part number	Description
1	075-1058-XX	RSA5BUP OPTION 300 UPGRADE INSTRUCTIONS
1	863-0946-XX	CIRCUIT BD ASSY; ENHANCED RTT/DPSA BOARD, TESTED, OPTION, PB-FREE, 3894770XX WIRED
1	NS ¹	DATA SHEET; SOFTWARE OPTION KEY AUTHORIZATION CERTIFICATE, UPGRADE KITS
1	NS ¹	LABEL, MANUFACTURED; OPTION KEY UPGRADE LABEL 2.100 X 2.700, SAFETY CONTROLLED

¹ NS – Not saleable

Installation instructions

This section contains all procedures needed to remove the existing DPX board and replace it with the Option 300 DPX board in RSA5100B Series instruments.

Minimum tool and equipment list

The following tools are required to install the Option 300 upgrade. All tools are standard tools that should be readily available.

Table 1: Tools required for installation

Name	Description
Screwdriver handle (magnetic)	Torque driver handle. Accepts 1/4-in. hex-head driver tips
T15 TORX tip	TORX driver tip for T15 size screws on the instrument covers
T20 TORX tip	TORX driver tip for T20 size screw heads
T25 TORX tip	TORX driver tip for T25 size screw heads

These instructions are for qualified service personnel who are familiar with servicing the product. If you need further details for disassembling or reassembling the product, refer to the *RSA5100B Series Real-Time Signal Analyzers Service Manual*, Tektronix part number 077-0903-XX.

Update instrument software

Update the instrument to the latest available application software prior to installing the new Option 300 board.

1. Select **Help > About Tektronix Real Time Signal Analyzer** to check the software version.
2. Use your Web browser to go to: www.tektronix.com/software.
3. Search for your instrument's model number and follow the link to the software.
4. If the installed software is older than that available, download the software.
5. Follow the instructions on the Web page to install the software.

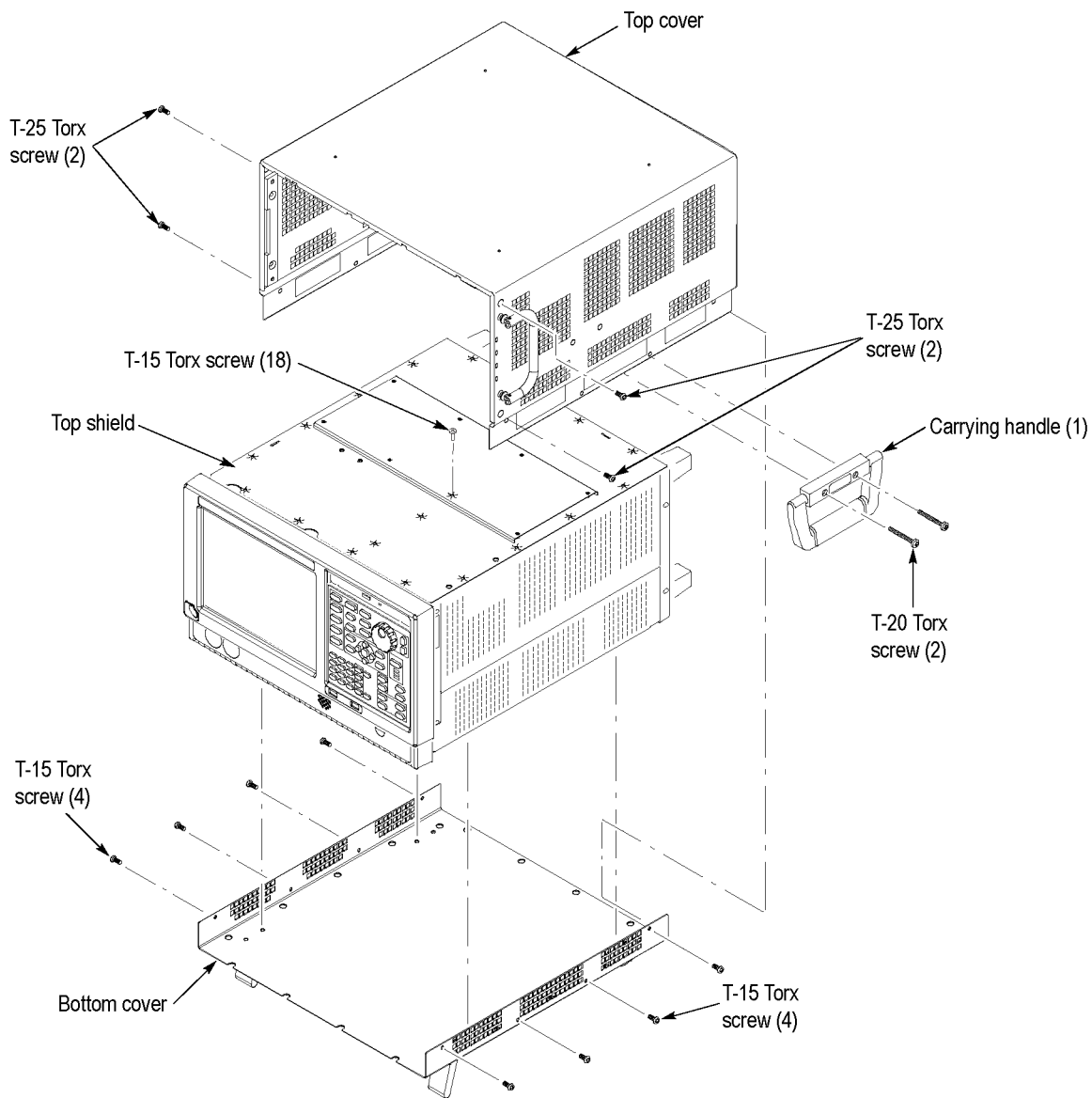
Remove cosmetic covers and shield

NOTE. Right-side or left-side references in these instructions assume you are viewing the instrument from the front panel.



WARNING. To avoid electric shock which may result in injury or loss of life, switch off the instrument power, then disconnect the power cord from the mains power.

1. Power down the analyzer.
2. Remove the power cord.
3. If it is installed, pull the front protective cover off the instrument.
4. Remove the two T20 TORX driver screws that attach the plastic carrying handle to the side of the instrument. (It is not necessary to remove the black metal handles.) (See Figure 1.)
5. Remove eight T-15 Torx-head screws, four along each side, that attach the top and bottom covers to the instrument.
6. Remove four T-25 Torx-head screws, two on each side, near the front edge of the top cover (next to the folding handles).
7. Carefully tip the instrument up and set it on its rear feet.
8. Remove the bottom cover.
9. Remove the top cover as follows:
 - a. Pull the cover straight back with a short, firm jerk about 1 inch.
 - b. Pull the sides of the top cover outward, flexing them slightly to clear the instrument chassis.
 - c. Pull the front cover away from the instrument.
10. Carefully return to instrument to rest on its bottom feet.
11. Remove the 18 T15 screws that attach the top shield to the chassis and remove the shield.



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Figure 1: Removing covers

Replace the existing DPX board

1. Locate the currently installed DPX board in Slot 5 (behind the CPU board). (Slots are numbered starting at the rear of the instrument with Slot 1.)
2. Flip up the board ejectors and remove the installed DPX board from the instrument. Place the board into a static-shielded bag for safe storage.

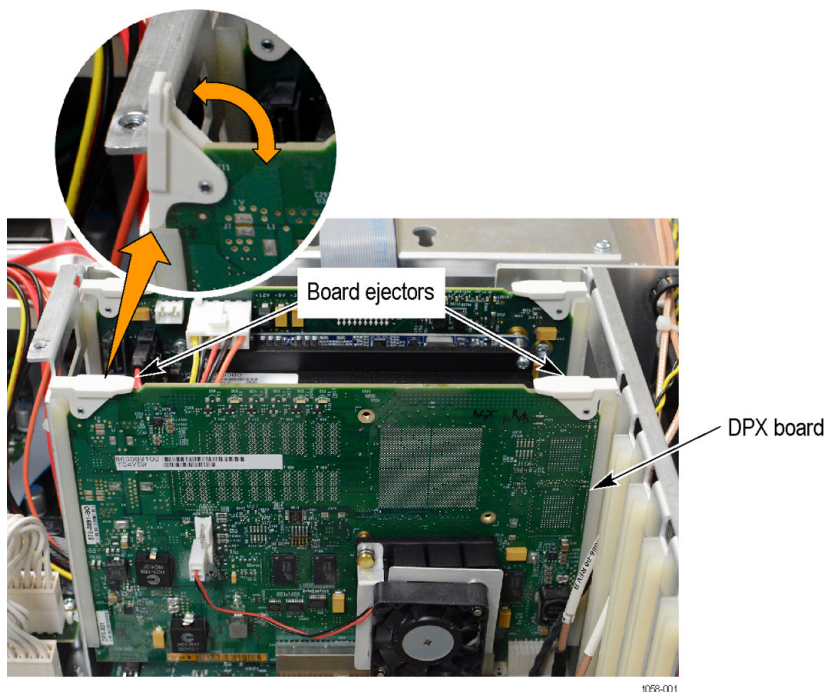


Figure 2: Standard DPX board

3. Install the new Option 300 DPX board as follows:

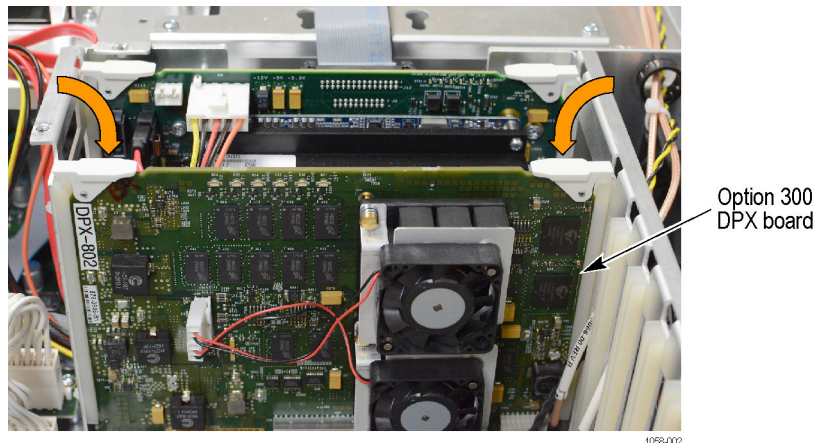


Figure 3: Option 300 board installed

- a. Fold the board ejectors down toward the board edge.



CAUTION. Be careful not to bend the connector pins on the Digital Interface board. To prevent damage to the connector pins, gently slide and then connect the Option 300 DPX board into the Digital Interface board connector.

- b. Slide the new Option 300 DPX board, provided in the kit, into the now empty Slot 5. Be careful not to bend the CPCI connector pins on the Digital Interface board.
4. Reinstall the top internal cover. (See Figure 1.)
- Place the top internal cover onto the instrument, aligning the two protrusions on the cover with the two slots in the chassis.
 - Replace the 18 T15 screws that attach the top internal cover to the chassis. Torque these screws to 8.0 in/lb.

Reinstall top shield and cosmetic covers

Reinstall the top and bottom covers as follows. (See Figure 1.)

1. Place the top shield on top of the instrument and reinstall the eighteen T15 Torx-head screws.
2. Place the top cover over the top of the instrument and slide it toward the front panel. Make sure that the top cover wraps around the flanges on the rear panel on all three sides.
3. Place the instrument on the rear feet, so the front panel is facing up and the top is toward you.
4. Reinstall the four T25 Torx head screws (two on each side) near the front edge of the top cover (next to the folding handles) that attach the top cover to the instrument. Torque these screws to 8.0 in/lb.
5. Rotate the instrument so the bottom faces you.
6. Place the bottom cover on the instrument, with the flip feet towards the front.
7. Align the four screw holes on each side in the top and bottom covers with the holes in the chassis, and install eight T15 screws, four on each side. Torque these screws to 8.0 in/lb.
8. Position the plastic carrying handle and its bracket on the right side of the instrument, and install the two T20 screws that attach it in place. Torque these screws to 8.0 in/lb.

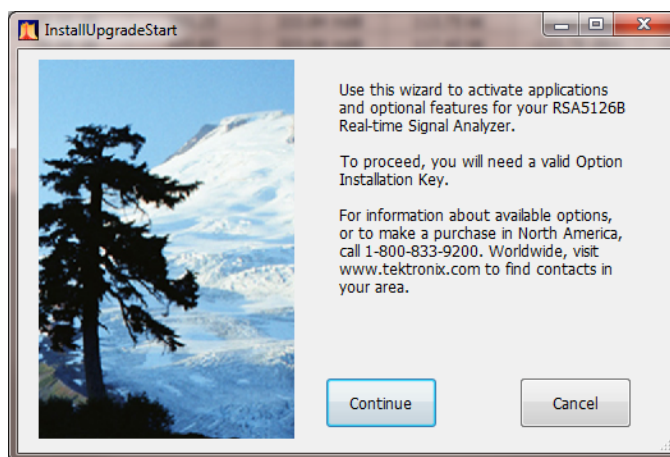
Install the option key

To activate the High Performance Real Time functionality option, you must enter a new option key.

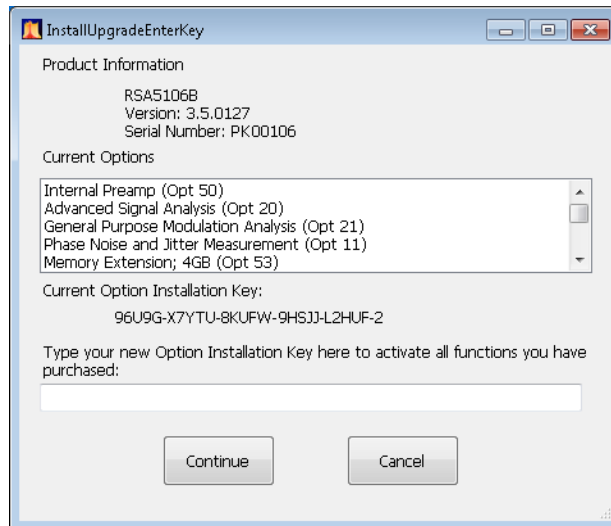
1. Power on the analyzer.

NOTE. *When the analyzer application launches, it may display an error message indicating that the current option key does not support the new option hardware. Click OK to clear the error message.*

2. In the signal analyzer application, select **Tools > Install Upgrades** to start the upgrade installation process.
3. Click Continue from the Install Upgrades introduction screen.



4. Enter the option key provided by Tektronix, and follow the on-screen instructions to install the option.



5. Power off the instrument, then power back on.
6. Select **Help > About Tektronix Real Time Signal Analyzer**.
7. In the installed Options window, verify that Option 300 is listed. It may appear as Advanced DPX (Opt 300).
8. Click **OK**.

Attach labels

Please attach all labels provided in this kit on the instrument's rear panel.

Attach the option key label

Place the new option key label over the existing label on the rear panel.

Attach the product/option label

Place the new product label over the existing label on the rear panel.

■ **End of Document** ■