

Keysight Technologies

N9030B PXA Signal Analyzer

Option RTS, Streaming

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N9030-90087

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Option RTS, Streaming

Products Affected	UXA N9030B
Serial Numbers:	All
To Be Performed By:	(X) Keysight Service Center () Personnel Qualified by Keysight () Customer
Estimated Installation Time:	2.0 Hours
Estimated Adjustment Time:	0.0 Hours
Estimated Verification Time:	1.5 Hours

Introduction

This installation note explains how to install Real Time Streaming (Option RTS) hardware and license onto the N9030B signal analyzer. This kit is not to be used on the N9030A.

Hardware Requirements

- These options must be previously installed:
- Option B1X, B85, B2X or B5X
 - Option RT1 or RT2, Real Time Analysis
 - Option MPB, Microwave Preselector Bypass

The option is licensed for one instrument model number/serial number combination. The license file that is downloaded from the web will only install on the designated instrument.

NOTE

This upgrade requires instrument software version A.17.71 or later

To verify the current version, press **System, Show, System** and look for the "Instrument S/W Revision".

The latest revision of the X-Series software may be downloaded from:

http://www.keysight.com/find/xseries_software.

Also look at the Options section of the screen and assure these options are present:

B85 or B1X or B2X or B5X

RT1 or RT2

MPB

Contents

Quantity	Description	Keysight Part Number
1	Installation Note	This note
1	Option Upgrade Entitlement Certificate	-----
1	WB DIF Extension Board assembly (streaming board)	N9020-60272
1	Bracket, WB DIF Extension	N9020-00067
9	Screw, M3 x 0.5 8 mm long	0515-0372
2	Flex Cable Assembly	N9020-60278
1	Gasket, EMI	N9020-20178

Tools Required

- Personal computer with internet access and USB port
- USB storage device with > 2 GB free memory
- T-10 TORX Driver
- T-20 TORX Driver
- 5/16-inch torque wrench
- 9/16-inch open-end wrench
- Keysight Calibration and Adjustment Software, N7814A (revision E.16.00 or later)
- Test equipment and computer supported by the Keysight Calibration and Adjustment Software
- N9030B Signal Analyzer Service Guide.

Initial Instrument Functionality Check

Power on the instrument and allow the instrument to boot up, run the alignments and display the measurement screen. The instrument will probably display a spectrum analyzer screen and you will see the instrument sweeping.

There should be no alignment failures. If there are failures, investigate and fix the problem before continuing.

Instrument Software Installation

Upgrade the software to the latest revision. Software installation assures that any software related changes to the instrument files will be performed by the software installation.

To verify the current version, press **System, Show System** and look for the "Instrument S/W Revision".

The latest revision of the X-Series Signal Analyzers software may be downloaded from:

http://www.keysight.com/find/xseries_software

Hardware Installation

1. Power down the instrument, wait until the standby light comes on, and remove the power cord.
2. Remove the instrument side strap handles, feet, outer case, top brace, and right side chassis (RF side bracket). Save all screws for reuse.
3. This procedure assumes the Wideband Digital IF and Wideband Analog IF assemblies (Option B1X or B85 or B2X or B5X) are already installed.

Install the flex cable into the Wideband Digital IF connector on instruments with one Wideband Digital IF (Option B2X, B1X, B85)

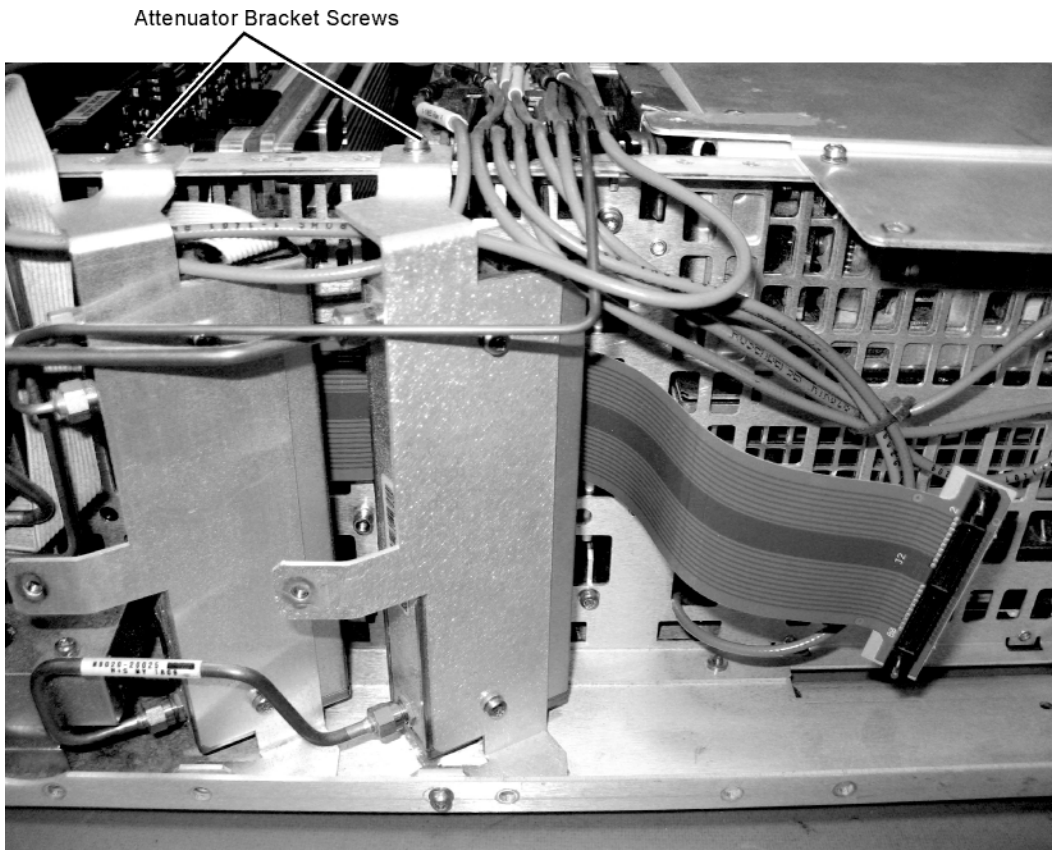
1. Refer to **Figure 1**. Remove the two screws holding both top attenuator brackets to the chassis. This is to allow room for the flex cable to be routed in back of the attenuators.
2. Locate one of the Flex Cables in the kit. Notice one end of the flex cable has a connector that has NO locator pins, and the other end of the flex cable has two locator pins.
3. Starting at the attenuator near the back of the instrument, push the end of the flex cable that does not have the locator pins behind both attenuators and through the opening in the instrument frame where the Wideband Digital IF is located in motherboard slot 5.
4. Locate the connector on the right side of the Wideband Digital IF, and carefully align the flex cable over the two alignment pins on the PC board connector. Press the cable into the Wideband Digital connector.
5. Re-install the two attenuator bracket screws

Install the flex cables into the Wideband Digital IF connector on instruments with two Wideband Digital IF assemblies (Option B5X)

1. Refer to **Figure 1**. Remove the two screws holding both top attenuator brackets to the chassis. This is to allow room for the flex cable to be routed in back of the attenuators.
2. Locate both Flex Cables in the kit. Notice one end of the flex cable has a connector that has NO locator pins, and the other end of the flex cable has two locator pins.
3. Starting at the attenuator near the back of the instrument, push the end of the flex cable that does not have the locator pins behind both attenuators and through the opening in the instrument frame where the Wideband Digital IF is located in motherboard slot 5.
4. Locate the connector on the right side of the Wideband Digital IF, and carefully align the flex cable over the two alignment pins on the PC board connector. Press the cable into the Wideband Digital connector.

5. Again, starting at the attenuator near the back of the instrument, push the end of the second flex cable that does not have the locator pins behind both attenuators. This cable will route next to the attenuators and on the outside of the flex cable previously installed. The cable will route between the frame and the small ribbon cable, and through the opening in the instrument frame where the second Wideband Digital IF is located in motherboard slot 7.
6. Locate the connector on the right side of the Wideband Digital IF, and carefully align the flex cable over the two alignment pins on the PC board connector. Press the cable into the Wideband Digital connector.

Figure 1 Attenuator Bracket Screws

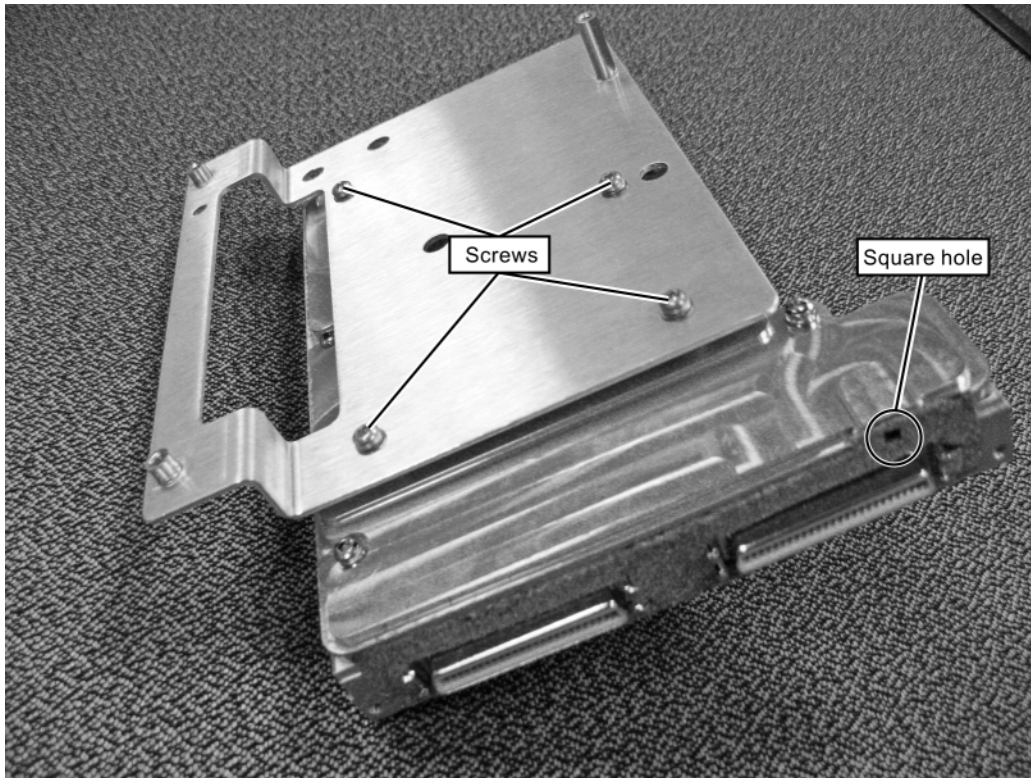


Install the WBDIF Extension board and Bracket

1. Locate the WBDIF Extension board and the bracket in the kit. Attach the WBDIF Extension board to the bracket with four screws from the kit. See **Figure 2**. Torque to 9 inch-pounds.
2. Locate the gasket in the kit. Notice the gasket has a small square hole and needs to be aligned with the square hole on the WBDIF Extension Board casting. There is an LED in the casting, and the small square hole allows the LED to be visible from the rear panel.

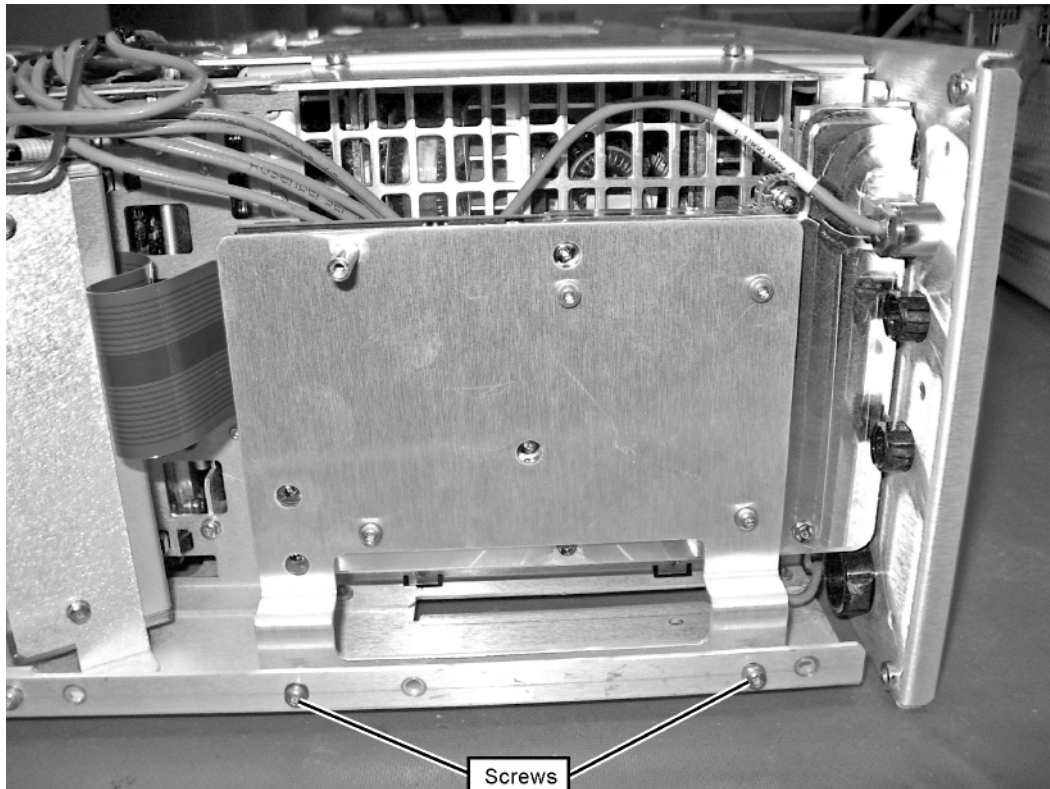
The gasket is fragile. Carefully peel off the backing from the gasket and apply the sticky side of the gasket over the two WBDIF Extension board connectors. See **Figure 2**.

Figure 2 WBDIF Extension Board and Bracket



3. On the rear panel, remove the label covering the two connector slots.
4. Position the WBDIF Extension board near the right side rear of the instrument. See **Figure 3**. Locate the flex cable that is attached to the Wideband Digital IF board in slot 5. Insert this flex cable into the WBDIF Extension board J1 connector. J1 is near the center of the WBDIF Extension board.

Figure 3 Install Bracket into Chassis



5. For instruments that have two Wideband Digital IF assemblies, locate the flex cable that is attached to the Wideband Digital IF in slot 7. Insert the flex cable into the WBDIF Extension board connector J2. J2 is near the edge of the WBDIF Extension board.
6. Locate 2 screws from the kit. Attach the board and bracket to the instrument frame as shown in **Figure 3**. The gray flexible cables are routed along the instrument chassis.
Be sure no gray cables are pinched.
Assure the board connectors go through the opening in the rear frame and the gasket seats.
Torque to 9 inch-pounds.
7. Locate two screws from the kit and install them above and below the rear panel I and Q connectors. Torque to 9 inch-pounds.

Complete Hardware Installation

1. Replace the RF side cover. Install one of the screws from the kit through the side cover and into the WBDIF Extension board bracket.
2. Replace the top brace. When installing the top brace assure cables do not get smashed under the top brace. Torque to 9 inch-pounds.
3. Plug in the instrument and allow to boot up. The power on check will assure the instrument can find the WBDIF Extension assembly. Press **System, Show, Hardware** and assure the Wideband Extension is contained in the list of assemblies.
4. Power down the instrument. Once the instrument is completely shut down, remove the power cord.
5. Replace the instrument cover, feet, and side handles.

License Installation Procedure over USB

1. Locate the Option Upgrade Entitlement Certificate from the kit.
2. Redeem the Option Upgrade Entitlement Certificate by following the instructions on the Certificate.
3. After redeeming your Option Upgrade Entitlement Certificate you will receive an email with an attached License File.
4. Locate a USB storage device. Perform a virus scan on this device before use.
5. Save the License File to the root directory of the USB storage device.
6. Connect the USB storage device to the signal analyzer USB port. Windows will detect the new hardware and may display the configuration menu shown in **Figure 4**. This menu may be configured according to your preferences.

Figure 4 USB Storage Device Configuration Menu



7. The signal analyzer will automatically consume the License File (this may take a few minutes). When the License File is consumed the Keysight License Manager will display a "Successful License Installation" message as shown in **Figure 5**.

Figure 5 Successful License Installation



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Alternate Installation Procedure

The License File can be manually installed over USB or LAN by placing the license file in the following folder on the signal analyzer

C:\Program Files\Agilent\licensing

Verify the License Installation and Hardware

1. Cycle power on the signal analyzer and wait until the analyzer boots to the measurement application screen.
2. Press **System, Show System** to display a list of installed options.
3. Verify that the installed options list contains the newly installed N9030B-RTS.
4. Press **System, Show Hardware**. Verify there is an entry for the WB DIF Extension assembly.
5. Press **MODE/MEAS**, choose **Real-Time Spectrum Analyzer**. Press **OK**.
6. Press **Input/Output, Output, Wideband Digital BUS ON**. Look at the rear panel streaming connectors, and assure the green Streaming LED is on.

Utilities, Adjustments, and Performance Verification Tests

Utilities Required

None

Adjustments Required

Adjustment Name
None

Performance Testing Required

Verification Test Name
Input Attenuator Switching Uncertainty
IF Frequency Response UWBIF

For assistance, contact your nearest Keysight Technologies Sales and Service Office. To find your local Keysight office access the following URL, or if in the United States, call the following telephone number:

<http://www.keysight.com/find/assist>

1-800-829-4444 (8 am - 8 pm ET, Monday - Friday)

