

Keysight Technologies N9020A and N9030A Signal Analyzers

Option RBE, Resolution Bandwidth Extended Upgrade

Notices

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Manual Part Number

N9020-90288

Edition

Edition 1, February 2017

Printed in USA/Malaysia

Published by:

Keysight Technologies, Inc.
1400 Fountaingrove Parkway
Santa Rosa, CA 95403

Option RBE, Resolution Bandwidth Extended

Products Affected	N9020A, MXA Signal Analyzer N9030A, PXA Signal Analyzer
Serial Numbers:	All
Options Required:	N90x0A-B85, B1A, or B1X
To Be Performed By:	(X) Keysight Service Center (X) Personnel Qualified by Keysight (X) Customer
Estimated Installation Time:	0.5 Hours
Estimated Adjustment Time:	0.0 Hours
Estimated Verification Time:	0.0 Hours

Introduction

This installation note explains how to license Option RBE, Resolution Bandwidth Extended on the instrument model numbers shown above.

Option RBE extends the standard 8 MHz RBW in Spectrum Analyzer mode, Swept SA measurement, when in Zero Span. The available RBW range is determined by the wide bandwidth option currently installed in the instrument. For example after Option RBE is licensed, instruments with Option B1X have an extended RBW range of 10 MHz to 133 MHz when Wide Bandwidth is selected under the BW menu.

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.

Contents

Quantity	Description	Keysight Part Number
1	Installation Note	This note
1	Option Upgrade Entitlement Certificate	5964-5178

Tools Required

- Personal computer with internet access and USB port
- USB storage device with > 2 GB free memory

Initial Instrument Functionality Check

1. 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.
2. There should be no alignment failures. If there are failures, investigate and fix the problem before continuing.

Installation Procedure

Analyzer Information

1. Connect a power cord to the analyzer and turn on the analyzer.
2. After the analyzer has completed turning on, press **System, Show System**. Make note of the following information from the Show System screen:

Product Number _____

Serial Number _____

Instrument S/W Revision _____

3. Check for the presence of the options listed below in the Show System screen. Put a check mark after each option listed below that appears in the Show System menu. The “x” in “N90x0A” could be either 2 or 3 for an MXA or PXA, respectively.

N90x0A-85, B1A, or B1X _____

4. Refer to the data in **step 2** above. Verify that the Product Number in **step 2** is appropriate for the upgrade being installed:

Option RBE Upgrade	Product Number (Step 2)
N9020AK-RBE	N9020A
N9030AK-RBE	N9030A

If the Product Number in **step 2** is not appropriate for the Option RBE upgrade, **do not proceed** with the installation.

5. Refer to the data in **step 2** above. If the Instrument S/W Revision is earlier than A.19.25, you must upgrade to revision A.19.25 or later. Keysight recommends that you update to the latest instrument software version to ensure that you have the latest defect fixes. To check the latest instrument software version, visit the following website:

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

6. Refer to the data in **step 3** above. Verify that N90x0A-B85, B1A, or B1X is checked (currently installed). Option RBE requires the wide bandwidth hardware and license for any one of these options be installed.

If N90x0A-B85, B1A, or B1X is not installed, do not proceed with the installation of this kit. For information on how to order bandwidth upgrade kits, refer to the X-Series upgrade pages at

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

License Installation Procedure over USB

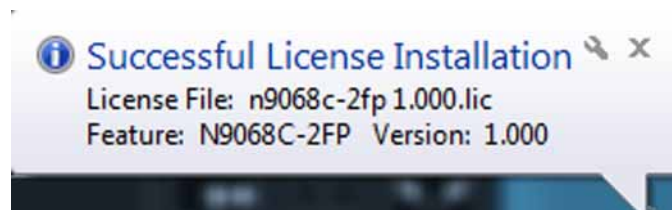
1. Locate the Option Upgrade Entitlement Certificate (5964-5178) from the kit.
2. Redeem the Option Upgrade Entitlement Certificate by following the instructions on the Certificate.
3. After redeeming your Option Upgrade Entitlement Certificate you will receive an email with an attached License File.
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 1**. This menu may be configured according to your preferences.

Figure 1 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 2**.

Figure 2 Successful License Installation



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 N90x0A-RBE.

Instrument Software Installation

This upgrade requires instrument software version A.19.25 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 Signal Analyzers software may be downloaded from:

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

Verify Option RBE Functionality

1. Press **MODE, Spectrum Analyzer**.
2. Press **Meas, Swept SA**.
3. Press **Span, Zero Span**.
4. Press **BW** key. Under the BW menu locate the **Wide Band width On/Off** selection, and toggle to **On**.

The Res BW value should be 10 MHz. You can increase the RBW using the arrows or by direct input.

When Wide Bandwidths are On:

- The minimum RBW is 10 MHz. The Wide Bandwidths selection must be Off to select RBWs 8 MHz or narrower.
- The maximum RBW depends on the max information bandwidth: 70 MHz for B85/B1A, 133 MHz for B1X.

Option RBE, Resolution Bandwidth Extended

Utilities, Adjustments, and Performance Verification Tests

Utilities Required

None

Adjustments Required

None

Performance Testing Required

None

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)



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Edition 1, February 2017

N9020-90288

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