Keysight N9042B Signal Analyzer

Option CRW
Wide IF Output Upgrade

KEYSIGHT

INSTALLATION NOTE

Notices

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Option CRW Upgrade Kit

Products Affected:	N9042B UXA Signal Analyzer
Serial Numbers:	All
Options	
To Be Performed By:	(X) Keysight Service Center
	(X) Advanced User
	( ) User
Estimated Installation Time:	1.0 Hours

Introduction

Option CRW provides a wide bandwidth IF output on the front panel labeled Wide IF Out. When Wide IF Out is enabled, the instrument functions as a down converter where the IF signal is routed to the front panel and no further processing is performed by the instrument. Therefore, no measurement results are displayed on the instrument screen or via the remote interface.

The Wide IF Out is functional at center frequencies 18 GHz or greater.

No adjustments or verification to specification is required following this upgrade.

This installation note provides instructions on licensing Option CRW and provides a functional check to verify operation.

NOTE

1. To ensure that this newly installed option has been installed properly, the procedure that follows includes a functional check.
2. Software revision A.30.06 or later is required. The latest revision of the X-Series signal analyzer software may be downloaded from:

   https://www.keysight.com/find/n9042b_software
3. This option is licensed for one instrument model/serial number combination. The license key will only install on the designated instrument.

Contents

Quantity	Description
1	Installation Note
1	Option Upgrade Entitlement Certificate

Tools Required for Installation

– Personal computer with internet access and USB port

– USB storage device

Tools Required for Manual Operation Verification

– Spectrum analyzer with at least 7 GHz upper frequency range.

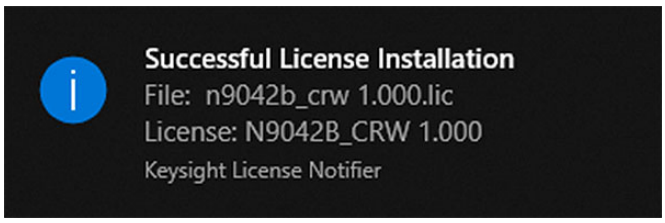
– Test cable, sma (m) to sma (m), used to connect the spectrum analyzer mentioned above to the N9042B front panel Wide IF Out connector.

– Adapter, sma (f) to Type-N (m) or whatever adapter is required to connect the sma cable mentioned above to the measuring signal analyzer input.

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.
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 1.

Figure 1 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 Installation

1. Cycle the power on the signal analyzer.
2. Press the gear icon (System) , **Show System** to display a list of installed options.
3. Verify that the newly installed option, N9042B_CRW, appears on the list.

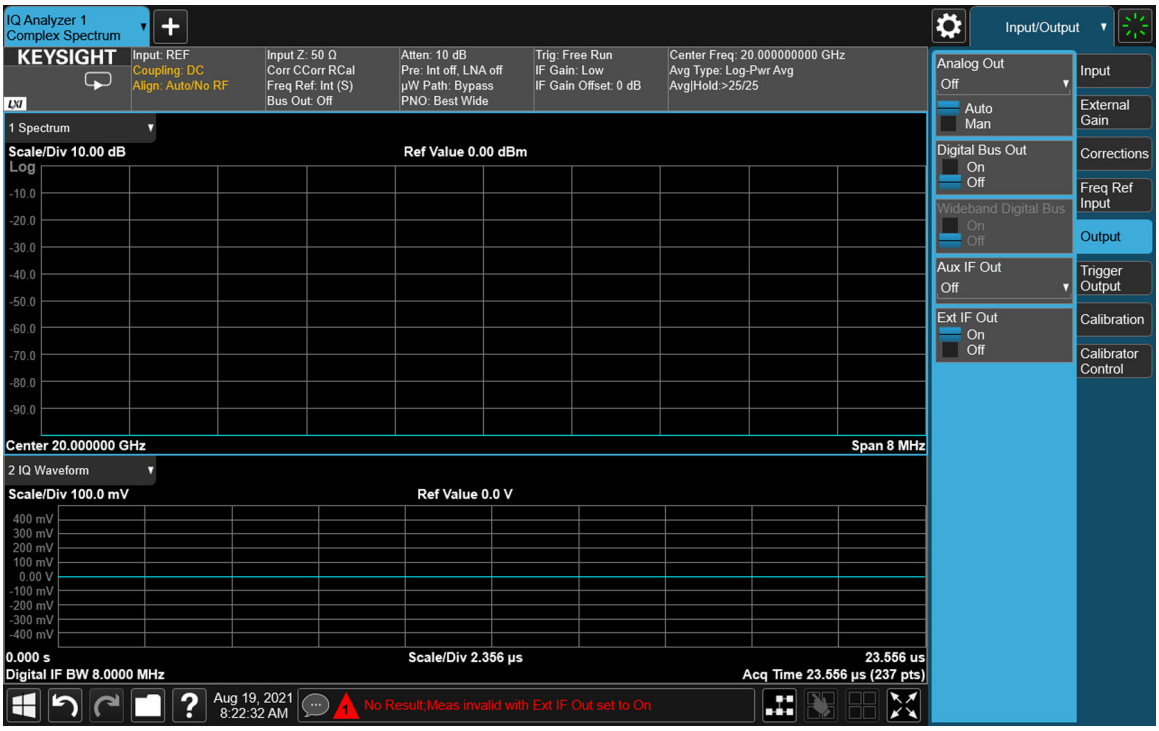
Manually Verify Operation (Optional)

Verifying that Option CRW appears in the Show System screen, which was just done; and verifying the various analyzer keys appear in the analyzer menu as outlined below is a very good indication that Option CRW will function. However if you have the equipment and want to see the Option CRW output signal displayed on a spectrum analyzer, follow the procedure below.

Set up the N9042B signal analyzer

1. Power on the N9042B instrument, or if already powered on in Spectrum Analyzer mode, press **Mode Preset**. Select **Mode**, **IQ Analyzer (Basic)** and **OK**.
2. Set up and turn on the instrument's tunable internal calibrator. Press **Input/Output**, **Calibrator Control**, **Cal Source**. Select **Tunable**. Set frequency to **20 GHz**. Select **Output On**.
3. Press **FREQ**, **Center Frequency**, and enter **20 GHz**. The calibrator signal will appear on screen at approximately -15 dBm.
4. Turn on the front panel Wide IF Out by pressing **Input/Output**, **Output**, **Ext/Wide IF Out On**.
5. A message will appear at the bottom of the screen "`No Result, Meas Invalid with Ext/Wide IF Out set to On`". You will no longer see the signal on the analyzer display since the signal path has been switched to the front panel. See Figure 2.

Figure 2 No Result Screen



Set up the measuring spectrum analyzer

NOTE The measuring spectrum analyzer must have a frequency range of at least 7 GHz. The expected IF frequency for this example will be 6.2 GHz.

1. Connect an SMA cable from the N9042B front panel Wide IF Out connector located on the left side of the instrument, to the measuring spectrum analyzer RF input.
2. On the measuring spectrum analyzer set the Center Frequency to 6.2 GHz, and Set Span to 5 GHz.
3. The measuring spectrum analyzer should display a signal at 6.2 GHz, at around -25 dBm. Signal amplitude will depend on several things such as quality of interconnect cable. The Wide IF Out port is not calibrated for amplitude accuracy.

For assistance, contact your nearest Keysight Technologies Sales and Service Office. To find your local Keysight office access the following URL:

https://www.keysight.com/find/assist

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