

Keysight Licensed Functionality Upgrade Kit

For ALL License-Enabled Options,
for ALL N522xA and N524xA Microwave Network
Analyzers, and for ALL N5264A Microwave Receivers

Notices

© Keysight Technologies, Inc.
2007-2015

No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Keysight Technologies, Inc. as governed by United States and international copyright laws.

Trademark Acknowledgments

Manual Part Number

N5242-90006

Edition

December 2015

Printed in USA/Malaysia

Published by:
Keysight Technologies
1400 Fountaingrove Parkway
Santa Rosa, CA 95403

Warranty

THE MATERIAL CONTAINED IN THIS DOCUMENT IS PROVIDED "AS IS," AND IS SUBJECT TO BEING CHANGED, WITHOUT NOTICE, IN FUTURE EDITIONS. FURTHER, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, KEYSIGHT DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED WITH REGARD TO THIS MANUAL AND ANY INFORMATION CONTAINED HEREIN, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. KEYSIGHT SHALL NOT BE LIABLE FOR ERRORS OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE FURNISHING, USE, OR PERFORMANCE OF THIS DOCUMENT OR ANY INFORMATION CONTAINED HEREIN. SHOULD KEYSIGHT AND THE USER HAVE A SEPARATE WRITTEN AGREEMENT WITH WARRANTY TERMS COVERING THE MATERIAL IN THIS

DOCUMENT THAT CONFLICT WITH THESE TERMS, THE WARRANTY TERMS IN THE SEPARATE AGREEMENT WILL CONTROL.

Technology Licenses

The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license.

U.S. Government Rights

The Software is "commercial computer software," as defined by Federal Acquisition Regulation ("FAR") 2.101. Pursuant to FAR 12.212 and 27.405-3 and Department of Defense FAR Supplement ("DFARS") 227.7202, the U.S. government acquires commercial computer software under the same terms by which the software is customarily provided to the public.

Accordingly, Keysight provides the Software to U.S. government customers under its standard commercial license, which is embodied in its End User License Agreement (EULA), a copy of which can be found at

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

The license set forth in the EULA represents the exclusive authority by which the U.S. government may use, modify, distribute, or disclose the Software. The EULA and the license set forth therein, does not require or permit, among other things, that Keysight: (1) Furnish technical information related to commercial computer software or commercial computer software documentation that is not customarily provided to the public; or (2) Relinquish to, or otherwise provide, the government rights in excess of these rights customarily provided to the public to use, modify, reproduce, release, perform, display, or disclose commercial computer software or commercial computer software documentation. No additional

government requirements beyond those set forth in the EULA shall apply, except to the extent that those terms, rights, or licenses are explicitly required from all providers of commercial computer software pursuant to the FAR and the DFARS and are set forth specifically in writing elsewhere in the EULA. Keysight shall be under no obligation to update, revise or otherwise modify the Software. With respect to any technical data as defined by FAR 2.101, pursuant to FAR 12.211 and 27.404.2 and DFARS 227.7102, the U.S. government acquires no greater than Limited Rights as defined in FAR 27.401 or DFAR 227.7103-5 (c), as applicable in any technical data.

Safety Notices

CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, 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.

WARNING

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

Keysight Licensed Functionality Upgrade Kit
License-Enabled Options, and N522xA and N524xA Microwave Network
Analyzers, and N5264A Microwave Receivers
Installation Note

Getting Assistance from Keysight

By internet or phone, get assistance with all your test and measurement needs.

Contacting Keysight

Assistance with test and measurements needs and information on finding a local Keysight office are available on the Web at:

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

If you do not have access to the Internet, please contact your Keysight field engineer.

NOTE

In any correspondence or telephone conversation, refer to the Keysight product by its model number and full serial number. With this information, the Keysight representative can determine whether your product is still within its warranty period.

About Installing the Upgrade

Products affected	All N522xA and N524xA microwave network analyzers and all N5264A microwave receivers
Installation to be performed by	Keysight service center, personnel qualified by Keysight, or customer
Estimated installation time	5 minutes
Estimated verification time	5 minutes

Items Included in the Upgrade Kit

Check the contents of your kit against the following list. If any of these items is missing, contact Keysight Technologies. Refer to **“Getting Assistance from Keysight” on page 3**.

Table 1 Contents of Upgrade Kit

Quantity	Description	Part Number
1	Installation Note (this document)	N5242-90006
1	Option Entitlement Certificate	5964-5145

List of Upgrades to Which This Installation Note Applies

This installation note applies to all of the upgrades in the following list. Do not be alarmed if your upgrade does not appear in the list. Additional upgrades may have been introduced since this document was printed.

If your upgrade kit contains only a Option Entitlement Certificate and this installation note, the instructions contained here will allow you to install your upgrade.

- 007 - Add automatic fixture removal
- 008 - Add pulsed-RF measurements
- 010 - Add time domain operation
- 015 - Add dynamic uncertainty for S-parameter measurements
- 020 - Add IF inputs for antenna and mm-wave
- 021 - Add pulse modulator to internal 1st source
- 022 - Add pulse modulator to internal 2nd source
- 025 - Add four internal pulse generators
- 028 - Add noise figure measurements using standard receivers
- 080 - Add frequency offset
- 082 - Add scalar-calibrated converter measurements
- 083 - Add frequency converter measurements
- 084 - Add embedded LO application
- 086 - Add gain compression application
- 087 - Add intermodulation distortion application
- 088 - Add source phase control
- 089 - Add differential and I/Q devices application
- 090 - Add spectrum analyzer application
- 093 - Add spectrum analyzer (mm) up to 120 GHz (Applies to all models except: N5221A, N5241A, N5249A, and N5264A)
- 094 - Add spectrum analyzer (mm) above 120 GHz (Applies to all models except: N5221A, N5241A, N5249A, and N5264A)
- 095 - Add vector spectrum analyzer application
- 118 - Add fast CW mode
- 301 - Add application for use with standard CalPods
- 302 - Add application for use with temperature-characterized CalPods
- 303 - Add multiport capability for CalPods

Getting Assistance from Keysight
List of Upgrades to Which This Installation Note Applies

- 304 - Add CalPod as ECal Capability
- 460 - Add integrated TMSA application
- 510 - Add nonlinear component characterization
- 514 - Add nonlinear X-parameters
- 518 - Add nonlinear pulse envelope domain
- 520 - Add arbitrary load impedance X-parameters
- 551 - Add N-port calibrated measurements
- 897 - Add perpetual Keysight inclusive calibration
- 898 - Add perpetual standards compliant calibration
- LFX - Add low frequency extension (N5241A and N5242A only)

License Key Redemption

NOTE

The enclosed Option Entitlement Certificate is a receipt, verifying that you have purchased a licensed option for the analyzer of your choice. You must now use a Keysight Web page to request a license key for the instrument that will receive the option.

To enable the option product(s), you must request license key(s) from: <http://www.keysight.com/find/softwarelicense>. To complete the request, you will need to gather the following information:

- From the certificate
 - Order number
 - Certificate number
- From your instrument(s)
 - Model number
 - Serial number
 - Host ID

The instrument information is available in the network analyzer - press **Help**, then click About Network Analyzer.

If you provide an email address, Keysight will promptly email your license key(s). Otherwise, you will receive your license key(s) via postal mail.

Installation Procedure for the Upgrade

Installation Requirements

- The network analyzer must be in proper working condition prior to installing this option. Any necessary repairs must be made before proceeding with this installation.
- This installation does not require removal of the analyzer's protective outer covers.
- The analyzer must be powered up and operating to perform this installation. The Network Analyzer program must be running.
- This installation requires that a keyboard and a mouse be connected to the network analyzer.

Verify the Serial and Option Numbers

Refer to the license message you received from Keysight:

- Verify that the analyzer's model and serial numbers match those on the license message you received from Keysight.

If the model number, serial number, or option number do not match those on the license message you received from Keysight, you will not be able to install the option. If this is the case, contact Keysight for assistance. Refer to **“Getting Assistance from Keysight” on page 3**.

Enable the Option

1. Press **System**, then **Service**, then **Option Enable**.
2. In the Select Desired Option list, click the option listed on the license message you received from Keysight. For example 080 - Frequency Offset.
3. Using the keyboard, enter the license key in the box provided. The license key is printed on the license message you received from Keysight. Enter this key exactly as it is printed on the message.
4. Click Enable.
5. Click Yes in answer to the displayed question in the Restart Analyzer? box.
6. When the installation is complete, click Exit.

Verify that the Option Is Enabled

Once the analyzer has restarted and the Network Analyzer program is again running:

1. On the toolbar, click Help, then click About Network Analyzer.
2. Verify that the option you enabled is listed after “Options:” in the display. Click OK.

NOTE

If the option has not been enabled, perform the **“Enable the Option”** procedure again. If the option is still not enabled, contact Keysight Technologies. Refer to **“Getting Assistance from Keysight” on page 3**.

This information is subject to change without notice.
© Keysight Technologies 2007 - 2015
December 2015



N5242-90006
www.keysight.com