

Keysight Licensed Functionality Upgrade Kit

For ALL License-Enabled Options,
for ALL N522xB Microwave Network Analyzers,
for ALL N523xB Microwave Network Analyzers,
for ALL N524xB Microwave Network Analyzers, and
for ALL N5264B Microwave Receivers

NOTICE: This document contains references to Agilent Technologies. Agilent's former Test and Measurement business has become Keysight Technologies. For more information, go to www.keysight.com.



Notices

© Keysight Technologies, Inc.
2007-2021

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

N5242-90024

Edition

Edition 1, May 2021

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
Upgrade Kit for all N522xB, N523xB, and N524xB Microwave Network
Analyzers, and N5264A/64B Microwave Receivers
Installation Note

Licensed Functionality Upgrade Kit Installation Instructions

NOTE

IMPORTANT! This license installation process assumes your PNA is a "B" model instrument. (i.e., that you purchased a "B" model instrument or have completed the "A" model to "B" model upgrades process.) Do not attempt to use this process to install licenses on a "A" model instrument.

NOTE

IMPORTANT! If you are upgrading your "A" model instrument to a "B" model, refer to:

- for the N522xA PNAs, refer to <http://literature.cdn.keysight.com/litweb/pdf/N5242-90023.pdf>
 - for the N523xA PNAs, refer to <http://literature.cdn.keysight.com/litweb/pdf/N5222-90115.pdf>
 - for the N524xA PNAs, refer to <http://literature.cdn.keysight.com/litweb/pdf/N5232-90105.pdf>
-

Getting Assistance from Keysight

Getting Assistance from Keysight

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

Contacting Keysight

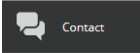
Assistance with test and measurements needs and information on finding a local Keysight office are available on the Web at: <http://www.keysight.com/find/assist>

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.

If You Have Problems With the Upgrade Kit Contents

Keysight stands behind the quality of the upgrade kit contents. If you have problems with any item in the kit, refer to www.keysight.com and the **Contact Keysight** () link.

What you will find in this Install Note

NOTE

If you are already familiar with this software application upgrade installation process, proceed to “[Quick Reference for Software Application or Hardware Option Installation](#)” on page 5.

- Quick Reference for Software Application or Hardware Option Installation [page 5](#)
- About Installing the Upgrade. [page 6](#)
- License Key Redemption. [page 15](#)
- Details on Entering the Software Entitlement Certificate(s) (SECs) Into Your KSM User Profile [page 19](#)
- Details on Redeeming Licenses for Specific PNA Instruments at KSM Web Site [page 22](#)
- Details on Installing License Files [page 25](#)
- Contacting Keysight [page 4](#)

Quick Reference for Software Application or Hardware Option Installation

This section is for customers who are familiar with the software application upgrade installation process. Below is an outline of the process required to add a software application.

- **“License Key Redemption” on page 15**

Overview: Locate the Software Entitlement Certificate(s) for the upgrade software applications you have purchased. Keysight may have sent the certificate(s) via email or you may have been given paper copies.

- **“Details on Entering the Software Entitlement Certificate(s) (SECs) Into Your KSM User Profile” on page 19**

Overview: You use the online KSM web application to enter SECs in your KSM User Profile.

- **“Details on Redeeming Licenses for Specific PNA Instruments at KSM Web Site” on page 22**

Overview: In this section, you assign your purchased software application upgrade(s) to specific PNA serial number(s). The instructions for this section assume you are continuing at the KSM web site immediately following **“Details on Entering the Software Entitlement Certificate(s) (SECs) Into Your KSM User Profile” on page 19**.

- **“Details on Installing License Files” on page 25**

About Installing the Upgrade

About Installing the Upgrade

Products affected.....	All N522xB, N523xB, and N524xB microwave network analyzers and all N5264B microwave receivers
Installation to be performed by.....	Keysight service center, personnel qualified by Keysight, or customer
Estimated installation time.....	30 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 4.**

Table 1 Contents of Upgrade Kit

Quantity	Description	Part Number
1	Installation Note (this document)	N5242-90024
1	Software 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 Software Entitlement Certificate and this installation note, the instructions contained here will allow you to install your upgrade.

NOTE

Some hardware and software options are not supported on some of the instrument models. Some of the software applications are dependent on other software applications being installed. See also

<http://literature.cdn.keysight.com/litweb/pdf/5992-1465EN.pdf>.

Most model numbers have five orderable license types: 1FP, 1TP, 1FY, 1TY, and TRL. Refer to “License Types” on page 9. Refer to “License Types” on page 9.

Hardware Options

NOTE

This installation note is not to be used for any model upgrade: option 613, 626, 650, or 690. If any of these model upgrades are being performed, complete that process using the installation note that came with its kit, before adding any of these hardware or software options.

- 020 - Add IF inputs on the rear panel for antenna and mm-wave
- 021 - Add pulse modulator to internal 1st source
- 022 - Add pulse modulator to internal 2nd source
- 029 - Add noise figure measurements (PNA-X models only)
- XSB - Add third source (PNA-X models with Option 422/423 only)

Application Software

- S93007A/B - Add automatic fixture removal
- S93010A/B - Add time domain analysis
- S93011A/B⁴ - Add enhanced time domain analysis
- S93015A/B - Add dynamic uncertainty for S-parameter measurements
- S93025A/B - Add basic pulsed-RF measurements
- S93026A/B - Add advanced pulsed-RF measurements with narrowband detection mode
- S93027B - Add mechanical noise tuner control
- S93029A/B - Add noise figure measurements with vector correction

List of Upgrades to Which This Installation Note Applies

- S93080A/B - Add frequency offset
- S93082A/B - Add scalar-calibrated converter measurements
- S93083A/B - Add scalar and mixer/converter measurements
- S93084A/B - Add embedded LO
- S93086A/B - Add gain compression measurements
- S93087A/B - Add intermodulation distortion application
- S93088A/B - Add source phase control
- S93089A/B - Add differential and I/Q devices application
- S930317B¹ - Add Phase noise measurement up to 70 GHz
- S930321B² - Add Phase noise measurement up to 125 GHz
- S930700B³ - Add modulation interference, up to 8.5 GHz
- S930701B³ - Add modulation interference, up to 13.5 GHz
- S930702B³ - Add modulation interference, up to 26.5 GHz
- S930704B³ - Add modulation interference, up to 43.5 GHz
- S930705B³ - Add modulation interference, up to 50.0 GHz
- S930707B³ - Add modulation interference, up to 67.0 GHz
- S930900B - Add spectrum analysis, up to 8.5 GHz
- S930901A/B⁴ - Add spectrum analysis, up to 13.5 GHz
- S930902A/B⁴ - Add spectrum analysis, up to 26.5 GHz
- S930904A/B⁴ - Add spectrum analysis, up to 43.5 GHz
- S930905A/B⁴ - Add spectrum analysis, up to 50.0 GHz
- S930907A/B⁴ - Add spectrum analysis, up to 67.0 GHz
- S930909A/B⁴ - Add spectrum analysis, up to 90.0 GHz
- S93093A/B⁴ - Add extended spectrum analysis, up to 110 GHz

-
1. Direct Digital Synthesizer (DDS) source is required. (S/N prefix 6021 or later, or upgraded unit with N52xxBU-2S7 or 4S7)
 2. This is for N5290A/91A or N5292A with N5293AX/95AX frequency extenders configuration. Direct Digital Synthesizer (DDS) source is required on PNA/PNA-X (S/N prefix 6021 or later, or upgraded unit with N52xxBU-2S7 or 4S7).
 3. Requires N522xB with any Options, except Options 200/210/400/410.
Requires N524xB with any Options. Requires a supported VSA. Refer to the B model Configuration Guide, <https://www.keysight.com/us/en/assets/7018-05185/configuration-guides/5992-1465.pdf>.
 4. Requires adjustment after installation. Refer to [Required Post Repair Adjustments on page 18](#).

- S93094A/B⁴ - Add extended spectrum analyzer to above 110 GHz
- S93110A/B - Add active hot parameters
- S93111A/B - Add active hot parameters restricted to 50 GHz
- S93118A/B - Add fast CW mode
- S93551A/B - Add N-port calibrated measurements
- S93898A/B - Add built-in performance software
- S93460A/B - Add true mode stimulus
- S94510A - Add nonlinear component characterization¹
- S94511A - Add nonlinear component characterization, restricted to 50 GHz¹
- S94514A - Add nonlinear X-parameters
- S94518A - Add nonlinear pulse envelope domain
- S94520A - Add arbitrary load impedance X-parameters
- S94521A - Add arbitrary load control, X-parameters
- S94522A - Add arbitrary load control, device characterization

License Types

This section contains:

- **“Description of B Model Licensing Terms Used in the Document” on page 10**
- **“A Model License Types” on page 11**
- **“B Model License Types” on page 11**

1. NVNA.msi must be installed when you install S94510A and S94511A. Refer to **Installing Options S94510A and S94511A on page 17**.

Description of B Model Licensing Terms Used in the Document

NOTE

IMPORTANT! If you purchase license type 1Ux and lose your USB stick, you will be required to re-purchase your licenses. But, if your USB stick is damaged, you can return your damaged USB stick to Keysight for a replacement USB stick and licenses without re-purchasing your licenses.

This section contains the common B model licensing terms that you will see in this document and in the Keysight Software Manager (KSM) webpage on www.keysight.com/find/ksm.

License Term (#ab)			Description
1st Position (#)	2nd Position (a)	3rd Position (b)	
1	-	-	Indicates a license purchase (e.g, 1FP, 1TP).
-	F	-	Fixed (Node-Locked/Single Instrument/single HostID). These licenses are not transferable to other instruments (e.g., 1FP, 5FP.)
-	N	-	Floating (Intranet) license – Licenses are assigned to a customer’s local server using the server’s MAC address. Licenses are assigned and tracked using Keysight License Manager 6 or greater, which is loaded onto the server (e.g., 1NP, 1NF). Refer to https://www.keysight.com/find/licensemanager .
-	T	-	Transportable – Licenses/HostIDs are transferable between instruments managed via a KSM Network connection (e.g., 1TP, 1TF). Refer to www.keysight.com/find/ksm .
-	U	-	USB portable licenses - Licenses are assigned to a Keysight USB memory stick (dongle). Licenses are portable from one instrument to the next via the USB stick. Once the licensed USB stick is removed from an instrument, the licenses are no longer available (deactivated) on that instrument. To reactivate, re-insert the licensed USB stick. For Keysight-provided E8900-D10 USB sticks, you need to download Licensing USB drivers here: Keysight Licensing USB Driver .
-	-	F	6 month license
-	-	L	12 month license
-	-	P	Perpetual license – no renewal is required.
-	-	X	24 month license
-	-	Y	36 month license

A Model License Types

All A models—except for S93093A, S93094A, S93110A, S94510A, and S94511A—have five software license types:

NOTE

S93093A, S93094A, S93110A, S94510A, and S94511A only have 1FP and 1FY due to export control.

- 1FP: Fixed perpetual
- 1TP: Transportable perpetual
- 1FY: Fixed license, 12 months
- 1TY: Transportable, 12 months
- TRL: Trial, 30-day

B Model License Types

All B models—except for S93110B—have twenty software license types:

NOTE

S93093B, S93094B, and S93110B only has 1FP, 1FF, 1FL, 1FX, and 1FY due to export control.

- 1FP: Node-locked perpetual license
- 1TP: Transportable perpetual license
- 1NP: Floating perpetual license
- 1UP: USB portable perpetual license
- 1FF: Node-locked 6 month license
- 1TF: Transportable 6 month license
- 1NF: Floating 6 month license
- 1UF: USB portable 6 month license
- 1FL: Node-locked 12 month license
- 1TL: Transportable 12 month license
- 1NL: Floating 12 month license
- 1UL: USB portable 12 month license
- 1FX: Node-locked 24 month license
- 1TX: Transportable 24 month license
- 1NX: Floating 24 month license
- 1UX: USB portable 24 month license

License Types

- 1FY: Node-locked 36 month license
- 1TY: Transportable 36 month license
- 1NY: Floating 36 month license
- 1UY: USB portable 36 month license
- TRL: Trial, 30-day

About Installing the Upgrade

All software application upgrades covered by these instructions are software only, so no additional hardware is required.

NOTE

These instructions are not for downloading firmware upgrades. To download firmware, go to the following Web site:
<http://na.support.keysight.com/pna/firmware>
 Locate the table column titled "Firmware," and click on the Current Firmware link.

NOTE

For USB Portable FlexNet ID host licenses that use Keysight-provided E8900-D10 USB sticks, you need to download Licensing USB drivers here:
[Keysight Licensing USB Driver](#).

Here are a few terms you need to be familiar with before using the instructions:

- Keysight Software Manager (KSM): A Keysight Web application that allows customers to redeem their Software Entitlement Certificate for a license file (*.lic), and access their online account. First time users must create a User Profile. Returning users simply provide a login and password. KSM is located on the Web at:
<http://www.keysight.com/find/softwaremanager>
- Keysight License Manager (KSM) 6: A Keysight software application that allows customers to verify their license file(s) (*.lic). To download the KSM 6 software, refer KSM on the Web at:
<http://www.keysight.com/find/softwaremanager>
- Host ID:
 - For Fixed/Node-locked and Transportable licenses, the Host ID is a continuous string of instrument model and serial number, separated by a comma (no spaces). The host ID is referred to as the "New License Notifier Host ID host" in KSM. Similar to this example:
New License Host Notifier Host ID host: N5242B,MY12345678
 - For Floating licenses, the Host ID is the server MAC address. The host ID is referred to as the "MAC Address host" in KSM.
MAC Address host: 012345678901
 - For USB licenses, the Host ID is the USB stick's serial number. The host ID is referred to as the "USB Portable FlexNet ID host" in KSM.
USB Portable FlexNet ID host: 10-12345678
- License: A permit from Keysight, in the form of a license key file (*.lic), that allows customers to activate an software application upgrade. A single license key file may contain licenses for many PNA instruments.
- SEC (Software Entitlement Certificate): A certificate that contains the Order Number and the Certificate Number a customer must submit in KSM to get a license. It also contains a list of each software application upgrade purchased, its description, and the quantity purchased. One SEC can contain software application upgrades for many PNA instruments.

About Installing the Upgrade

- Software application Upgrade: Additional features for PNA instruments, offered as “software applications,” that can be purchased as upgrades, after the initial purchase of the instrument.
- Redeem: To receive a license key file from Keysight (via email) in exchange for providing SEC information in KSM.
- User Profile: Customer contact information in KSM. When a User Profile is created, the customer creates a login and password to use for easily accessing KSM in the future.

For additional information on licensing, refer to

<https://literature.cdn.keysight.com/litweb/pdf/5951-5739.pdf>.

NOTE

KSM may display screens that are different than those described in “[Details on Entering the Software Entitlement Certificate\(s\) \(SECs\) Into Your KSM User Profile](#)” on page 19 and “[Details on Redeeming Licenses for Specific PNA Instruments at KSM Web Site](#)” on page 22 of this document. If this happens, follow the instructions provided on the KSM screens.

License Key Redemption

NOTE

Ensure that you are connected to an external server, before attempting to download your email and license key file.

NOTE

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

To enable the option product(s), you must request license key file(s) from the Keysight Software Manager: <http://www.keysight.com/find/softwaremanager>:

To complete the request, you will need to gather the following information:

- From the certificate
 - Order number
 - Certificate number
- From your instrument (Fixed/Node-locked and Transportable licenses only)

(Instrument information is available in the network analyzer - on the toolbar, click Help, then click About Network Analyzer.)

 - Model number
 - Serial number
- From your local server (Floating licenses only)
 - MAC address

NOTE

IMPORTANT! Firmware A.13.35 and above must be loaded on your PNA and Keysight License Manager 6 must be loaded onto your company server. Refer to: <http://www.keysight.com/find/licensemanager>.

- From your Keysight-supplied E8900-D10 USB memory stick (USB portable licenses only)
 - Embedded serial number

Using the information just gathered, you must request license key(s) from the Keysight Software Manager: <http://www.keysight.com/find/softwaremanager>.

Also, refer to:

- [“Details on Entering the Software Entitlement Certificate\(s\) \(SECs\) Into Your KSM User Profile” on page 19](#) and
- [“Details on Redeeming Licenses for Specific PNA Instruments at KSM Web Site” on page 22](#)

You will need to provide an email address, to which Keysight will promptly email your license key file. Refer to [“License Key Redemption”](#).

Installation Procedure for the Upgrade

Installation Requirements

- The PNA must be a "B" model instrument.
- The network analyzer must be in proper working condition prior to installing this license key file. 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 should **not** be running.
- This installation requires that a keyboard and a mouse be connected to the network analyzer.

Verify the License Contents

Refer to the license message you received from Keysight:

- For Fixed/Node-locked and Transportable licenses, verify that the analyzer's model and serial numbers match those on the license message you received from Keysight.
- For floating licenses, verify that the server MAC address matches that on the license message you received from Keysight.
- For USB portable licenses, verify that the E8900-D10 USB memory stick serial number matches that on the license message you received from Keysight.

If the model number, serial number, MAC address, E8900-D10 USB 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 license key file. If this is the case, contact Keysight for assistance. Refer to **"Getting Assistance from Keysight" on page 4.**

Installing Options S94510A and S94511A

NOTE

NVNA.msi must be installed, when you install S94510A and S94511A.

To install NVNA.msi on your PNA, refer to <http://na.support.keysight.com/pna/nvna/>.

On the PNA-X, after downloading the NVNA.msi:

1. Open a Windows Explorer browser window.
2. Click D://Firmware/NVNA.msi.
3. Double-click to start the NVNA installer.

Required Post Repair Adjustments

Required Post Repair Adjustments

This section discusses the required post repair instructions that are applicable for the SA and TDR software upgrades.

Table 1-1

Product Number	Adjustment Required After Installation
S93011A/B	Default System Cal
S930900A/B	IF Response Adjustment
S930901A/B	
S930902A/B	
S930904A/B	
S930905A/B	
S930907A/B	
S930909A/B	
S93093A/B	
S93094A/B	

Details on Entering the Software Entitlement Certificate(s) (SECs) Into Your KSM User Profile

In this section, you use the online KSM web application to enter SECs in your KSM User Profile.

NOTE

There are two sets of instructions in “**Details on Entering the Software Entitlement Certificate(s) (SECs) Into Your KSM User Profile**”. One set is for a new KSM user who must create a User Profile, and a second set for a returning KSM user who must enter a login and password previously created.

This section contains the following:

- “**Instructions for a new KSM user:**” on page 19
- “**Instructions for a Returning KSM user:**” on page 20

Instructions for a new KSM user:

1. Go to the following Web site: <http://www.keysight.com/find/softwaremanager>

Screen 1

2. Click **Register**. The registration process creates a User Profile, and requires entry of the order number and certificate number found on an SEC.

Screen 2

3. Enter an email address and password. Use an email address where Keysight can send you license files (*.lic).
4. Click **Create Account** or **Add Capability** (i.e., **Add Capability** is displayed, if you have previously established a myKeysight account).
 - If you select **Create Account**, you will be prompted to enter the following information:
 - Name
 - City
 - State/Province
 - Company Name
5. Enter the Order Number and Certificate Number found on one SEC. You can cut and paste these numbers from a PDF copy of the SEC you may have received via email.
6. Click **Continue** >.

Screen 3

7. This screen displays information from the SEC you just specified in the previous instructions. The "Quantity Purchased" column shows the quantity of a particular option upgrade you purchased. The "Quantity Remaining" column shows the quantity of licenses for a particular option upgrade that remain to be redeemed. Verify that this information is correct.
8. Click **Complete Registration**.

Multiple Screens

9. On the screen that is displayed you will have the choice of adding a new SEC certificate or requesting a new license for your instrument from your license summary list (i.e., click View drop-down, to view your License Summary):
 - If you have more SECs to enter, click **You can add a new certificate**
 - a. Click **Continue >**.
 - b. Follow the screen prompts
 - Else, click **You can request new licenses** choice and follow the screen prompts.

Instructions for a Returning KSM user:

1. Go to the following Web site: <http://www.keysight.com/find/softwaremanager>

Screen 1

2. Enter the email address and password you used previously when you created your User Profile.
3. Click **Login**.

Screen 2 – Keysight Software Manager (KSM) Welcome screen

4. On the screen that is displayed you will have the choice of:
 - "You can add a new certificate" (SEC) or
 - "You can request a new license" for your instrument from your license summary list
 - "View:" the drop-down enables you to view your available licenses, MAC addresses, and host instruments/PCs summary.
5. Click **You can add a new certificate**.
6. Follow the screen prompts for entering a new Software Entitlement Certificate (SEC).

Multiple screens

7. The remaining screens for allow you to enter additional SECs. The screen will vary depending on the status of SECs entered previously. Follow the displayed instructions.
8. A screen that displays the question “Do you want to add another certificate to your profile?” will eventually be displayed.
 - Select **Yes** if you have more SECs to enter.
 - Click **Continue** > and follow instructions on subsequent screens.
 - Select **No** if you have no more SECs to enter.
 - Click **Continue** > and proceed to [“Details on Redeeming Licenses for Specific PNA Instruments at KSM Web Site”](#) on page 22.

Details on Redeeming Licenses for Specific PNA Instruments at KSM Web Site

In this section, you assign your purchased option upgrade(s) to specific PNA host ID(s) and serial number(s), MAC address, or a E8900-D10 USB stick serial number. The instructions in this section assume you are continuing at the KSM web site immediately following [“Details on Entering the Software Entitlement Certificate\(s\) \(SECs\) Into Your KSM User Profile” on page 19.](#)

NOTE

The instructions in this section [“Details on Redeeming Licenses for Specific PNA Instruments at KSM Web Site”](#) assume that SECs for licenses to be redeemed have already been entered in your KSM User Profile. If this has not been done, go to [“Details on Entering the Software Entitlement Certificate\(s\) \(SECs\) Into Your KSM User Profile” on page 19.](#)

NOTE

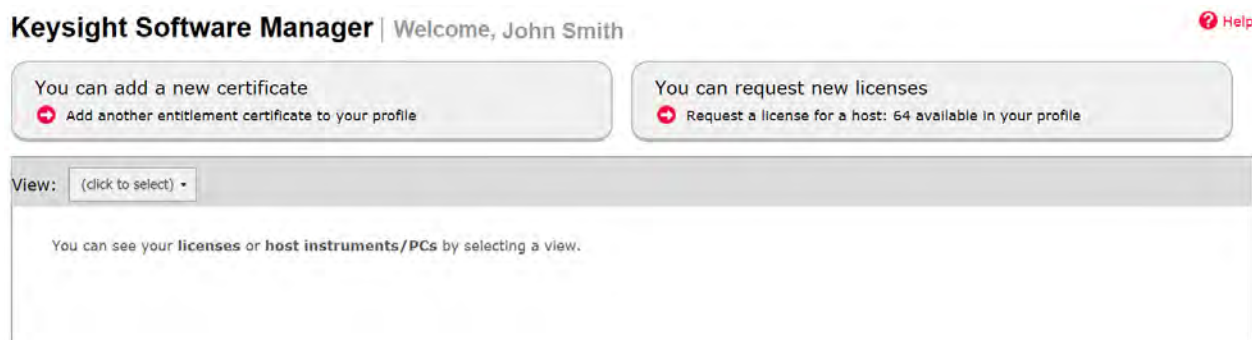
If you have previously completed [“Details on Entering the Software Entitlement Certificate\(s\) \(SECs\) Into Your KSM User Profile” on page 19](#) and have logged off the KSM Web site, begin with [“Instructions for Returning KSM Users”](#) in [“Details on Entering the Software Entitlement Certificate\(s\) \(SECs\) Into Your KSM User Profile” on page 19.](#)

Screen 1 – Keysight Software Manager (KSM) Welcome Screen

1. Optional: In the "View:" section, click the down arrow in the box displaying **(click to select)**.
A list of the current licenses, server MAC addresses, and host instruments/PCs is displayed for your reference.
2. Click or press the following on Screen 1 – KSM welcome screen (Refer to [Figure 2](#) and to Procedure on p. [23](#)):

[“Keysight Software Manager: Request Licenses – “Add a new License Notifier Host ID host...”, “Add a new MAC Address host...”, “Add a new USB Portable FlexNet ID...”.”](#)

Figure 2 KSM Welcome Screen



Keysight Software Manager: Request Licenses – "Add a new License Notifier Host ID host...", "Add a new MAC Address host...", "Add a new USB Portable FlexNet ID...":

Procedure:

1. In the "Keysight Software Manager: Request Licenses" window that opens, in the "Select the host to assign licenses to" section, click the **Click to add or select a host** drop-down.
2. Click one of the following:
 - **Add a new License Notifier Host ID host...**
 - **Add a new a new MAC Address host...**
 - **Add a new USB Portable FlexNet Serial Number/Host ID host...**
3. Click one of the following:
 - In the **License Notifier Host ID:** box that is displayed, enter your instrument's model and serial number, separated by only a comma—no spaces). Example:
 - **New License Host Notifier Host ID host:** N5242B,MY12345678
 - In the **MAC Address Host:** box that is displayed, enter your server's MAC address.
 - **MAC Address Host:** 012345678901
 - In the **USB Portable FlexNet ID** box that is displayed, enter your Keysight-provided E8900-D10 USB-stick's serial number.
 - **USB Portable FlexNet ID:** 10-12345678
4. In the **Select the licenses to assign** section, scroll down until you see hardware option(s) and or software application(s)—similar to this [example](#)—and then click the box to select:
 - S93007B-1FL Automatic Fixture removal, node-locked, 12 month license
 - S93083B-1TP Add scalar and mixer/converter measurements, transportable, perpetual license
 - S93010B-1NL Time domain analysis, floating (single site), 12 months license
 - S93007B-1UP Automatic Fixture removal, USB portable, perpetual license

NOTE

IMPORTANT: To avoid the loss of an option license, ensure that you have the correct model, software application(s), and hardware option(s) combination(s) checked.

5. Click **Assign Licenses**
6. In the "Assigned licenses:" section that opens, listing all of the License Notifier Host ID (node-locked and transportable licenses), MAC Address (floating licenses), E8900-D10 USB Portable FlexNet ID (USB portable licenses), and associated instrument information, verify the following:

- **License Notifier Host ID (node-locked and transportable licenses):** contains the correct "B" model and serial number
 - the associated N52xxB hardware option lists the correct "B" model number
 - the software application(s)
- **MAC Address host (floating licenses):** contains your company's server's MAC address
- **USB Portable FlexNet ID (USB portable licenses):** contains the Keysight-provided E8900-D10 USB stick's serial number

If any of the information listed in the "Assigned licenses:" section is incorrect, click **Remove** next to the incorrect License Notifier Host ID: or software application(s) to remove them from the "Assigned Licenses" list.

7. If there are multiple "B" model PNAs that are upgrading hardware options and or software applications, repeat steps 1 through 6.

Else, continue to next step.

8. Refer to the type of license that matches yours:

- Once you have verified the License Notifier Host ID, hardware option(s), and software application(s) upgrades are correct, click **Continue** > (an email is sent to you with an license key file for each specific License Notifier Host ID'd PNA).
- Once you have verified the MAC Address host, hardware option(s), and software application(s) upgrades are correct, click **Continue** > (an email is sent to you with an license key file for each specific MAC Address host).
- Once you have verified the USB Portable FlexNet ID, hardware option(s), and software application(s) upgrades are correct, click **Continue** > (a Keysight-provided E8900-D10 USB stick is sent to you with a specific USB Portable FlexNet ID (serial number)).

9. Keysight will promptly email your license key file(s) to your profile's email address or a serialized E8900-D10 USB stick to your profile's business address.

Details on Installing License Files

NOTE

You will need a USB flash drive (stick) and—if applicable—your Keysight-provided E8900-D10 USB flash drive (stick). Additionally, for the portable licenses, you will need to download [Keysight Licensing USB Driver](#), and install it on each PNA where the licenses will be used.

Procedure Requirements

- The analyzer must be powered up and operating to perform this procedure.
- The Network Analyzer program must **not** be running.
- A keyboard and mouse must be connected to the network analyzer.

1. Choose one of the following:

For all types of files, locate the email(s) you received from Keysight which contain license file attachments. These emails are a result of completing the section, [“Details on Redeeming Licenses for Specific PNA Instruments at KSM Web Site” on page 22](#).

2. Choose one of the following:

- Fixed/Node-locked, Transportable, Floating licenses, and USB Portable licenses: Copy the license file(s) from the email(s) to a USB storage device.
More than one license file may be copied to the USB flash drive.

NOTE

For Fixed/Node-locked or Transportable licenses, a single file may contain licenses for more than one feature.

3. Choose one of the following:

- Fixed/Node-locked and Transportable:
 - a. Save the .lic file, that is attached to your Keysight email message, to a portable mass storage device (e.g., USB memory drive).
 - b. Connect the USB storage device to the instrument.
 - c. Keysight License Manager on the instrument will automatically read and install the license.
A popup window will say that the license has been installed.
 - d. If this does not happen, press Windows Start on the instrument, Select All > Keysight License Manager > Keysight License Manager.
 - e. Click the Tools icon on the top bar and select **Install License File**.
 - f. Navigate to the .lic file and click **Open**.

Else, continue to step [4](#).
- Floating: Insert the USB storage device into a server’s USB slot.

Details on Installing License Files

- a. Save the .lic file, that is attached to your Keysight email message, to a portable mass storage device (e.g., USB memory drive).
 - b. Connect the USB storage device to the server that is hosting Keysight License Manager 6.
 - c. Press Windows Start on the instrument: **Select All > Keysight License Manager 6 > Keysight License Manager 6.**
 - d. Click **Add/remove a license on your local machine.**
 - e. In the License Setup Wizard dialog box, select **Add a floating license server to be used by other machines**, and click **OK.**
 - f. In the next window, click **Browse...**, navigate to the .lic file and click **Open.**
 - g. Click **Next >**. Wait about 10 seconds for the next screen.
 - h. Click **Finish.**
 - i. To verify the installation, click **View Licenses** and click **Refresh.**
Else, continue to step 4.
- Portable: Insert the USB storage device into any or all of your PNA's USB drive slots that you are going to want to use your Portable license files.
- a. Save the .lic file, that is attached to your Keysight email message to a portable mass storage device (e.g., USB memory drive).
 - b. Connect the USB storage device to the instrument.
 - c. Press Windows Start on the instrument: **Select All > Keysight License Manager 6 > Keysight License Manager 6.**
 - d. Click **Add/remove a license on your local machine.**
 - e. In the License Setup Wizard dialog box, click **OK.**
 - f. In the next window, click **Browse...**, navigate to the .lic file and click **Open.**
 - g. Click **Next >**. Wait about 10 seconds for the next screen.
 - h. Click **Finish.**
 - i. To verify the installation, click **View Licenses** and click **Refresh.**
Else, continue to step 4.
4. If your licenses did not load automatically via USB stick:
- Fixed/Node-locked, Transportable, and Portable: load the license key file(s), manually move your license file(s) to C:\Program Files\Agilent\licensing.
 - Floating, manually move your license files to C:\Program Files\Agilent\licensing on your server.
- It may take Keysight License Manager 6 ~5 seconds to enable the licenses.
5. Disconnect the USB flash drive from the PNA.

6. Restart the PNA application.

NOTE

Attempting to re-install a license file that is already installed may generate a “Corrupt Media” error message. Ignore this message.

Verify the PNA Analyzer Program is Running with the Correct Options

Once the Network Analyzer program is running:

1. Choose one of the following:

- **Node-locked and Transportable:** On the analyzer, click or press to open the KLM software from your PNA’s Windows taskbar by pressing **Start > More Programs > Keysight License Manager folder > Keysight License Manager** and verify the options are correct.
- **Floating:** Keysight License Manager (KLM) 6 must be loaded onto your server and your PNA to verify floating licenses. Refer to <http://www.keysight.com/find/softwaremanager> and for additional information on server administration, refer to <https://literature.cdn.keysight.com/litweb/pdf/5951-5739.pdf>.

After loading KLM 6 onto both your PNA and your server, on the analyzer, click or press to open the KLM 6 software from your PNA’s Windows taskbar by pressing **Start > More Programs > Keysight License Manager folder > Keysight License Manager 6** and verify KLM 6 has been updated with your server’s MAC address information.

- **Portable:** On the analyzer, click or press to open the KLM software from your PNA’s Windows taskbar by pressing **Start > More Programs > Keysight License Manager folder > Keysight License Manager 6** and verify the options are correct.

In any one of the PNAs with the license loaded, insert the Keysight-provided E8900-D10 serialized USB device (stick) to use your feature(s).

2. Press OK.

NOTE

If if the option(s) have not been enabled or if your older options have not been removed, contact Keysight Technologies. Refer to “[Getting Assistance from Keysight](#)” on page 4.

- ### 3. After successful installation of all upgrades, some features require some adjustments to ensure the instrument meets its specified performance. Refer to the following Web site: <http://na.support.keysight.com/pna>.

Locate the table column titled "Updates & Upgrades", from the dropdown click on the appropriate link for your instrument’s option. In the column titled “Adjustments required after installation” and find the adjustments required for your option upgrade.

Details on Installing License Files



This information is subject to change without notice.

© Keysight Technologies 2007-2021

Edition 1, May 2021

N5242-90024



www.keysight.com