## Instrument Software Update Instructions

# Keysight X-Series Signal Analyzers (N9000B, N9010B, N9020B, N9030B)

## <u>Purpose</u>

The purpose of this document is to outline the instrument software update procedure from the revision that is currently installed, to the latest revision available. The advantages of updating the instrument software with the current revision include:

- 1. Keeps the analyzer current and up to date.
- 2. Updating the advanced measurement applications where appropriate.
- 3. Updating the internal PC measurement boards software where appropriate.

An update to the instrument software revision **does not** require a new license key for the measurement application(s), so long as the application(s) were licensed prior to the update. This procedure will not update the 89601A or 89601B VSA measurement software.

To determine what revision of instrument software is currently installed, press [**System**], {**Show**}, {**System**} on the instrument, look for the "Instrument S/W Revision" number (for example: "A.17.15"). If the installed revision is the same as the latest revision on the web, there is no need to update the Software.

### Instrument Software Installation

**Note**: This will only update the instrument software that currently resides on the C: drive of the instrument. It will not update the version that exists on the recovery partition. Because of this, if the recovery process is performed, the instrument will revert back to the instrument software revision that was originally shipped from the factory.

## **Requirements**

To use this update procedure, the following requirements must be met:

- Instrument must be functioning properly before the update is attempted
- Must have a USB keyboard and mouse to perform tasks required to install update
- Must have the ability to login to the instrument as the **administrator**.
- Must have the ability to transfer a large file (~1.2 GBytes) to the instrument being updated.

### File Download

- 1. Go to <a href="http://www.keysight.com/find/Xseries\_software">http://www.keysight.com/find/Xseries\_software</a>
- **2.** Select the appropriate link in the Software Upgrade section of the table for the X-Series analyzer that is being updated.
- **3.** Download the executable file by clicking on the Download button and then selecting the appropriate instrument model number. Save the file to a location of your choice.

If you do not have the ability to download files directly to the C: drive of the instrument being updated, store the file on a large capacity USB storage device for transfer to the instrument. (The file size is ~1.2 GBytes.)

### Update Procedure

The default user account is *Instrument*, which does not have the required permissions to install the instrument software updates. For the process outlined below, the user must be logged in as the *Administrator*.

The X-Series automated instrument software upgrade process has an install wizard which removes the old software version and installs new software version without manual steps. The removal of the old software version and the installation of the new software version completes in approximately 40 minutes.

- 1. If the analyzer is not already running, turn the analyzer on and allow to completely boot up
- 2. Close the analyzer application by pressing [File], {Exit}
- 3. Connect a USB keyboard and mouse to the instrument.
- 4. Log out of the default user (*Instrument*) by selecting Start→Log Off→Log Off.
- 5. At the login prompt enter:
  - User name: administrator
  - Password: **agilent4u** (If the front panel label above the analyzer display says "Agilent Technologies" in the upper left-hand corner)

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• Password: **Keysight4u!** (If the front panel label above the analyzer display says "Keysight Technologies" in the upper left-hand corner)

**Important:** The password depends on the age of the disk drive installed in the instrument. Instruments labeled Agilent Technologies on the front panel may contain newer disk drives that require **Keysight4u!** for the password.

**<u>Note</u>**: If a "Found New Hardware" wizard window pops up, select "No Not at this Time" to bypass the activity.

#### Instrument Software Install

If you downloaded the instrument software update file to the instrument via LAN, access that file from the location that it was stored and proceed to step 1.

If you downloaded the instrument software update file to a USB storage device, plug that into one of the USB ports on the front of the instrument. Access the file for the removable drive, then proceed to step 1.

- 1. Double click on the file named "XSA\_Installer\_A.XX.XX.exe" that
- 2. A message appears, reminding you that you must be logged in as **administrator** and the Window XP Service Pack 3 is required. Select Yes

Agilent X	-Series Software Update
$\bigcirc$	This archive file contains the Agilent X-Series Installer. IMPORTANT: You must be logged in as Administrator before running this installer. DO NOT uninstall the previous XSA software before running this installer. This software requires Windows XP Service Pack 3. You can go to www.microsoft.com to download and install Service Pack 3 for Windows XP. Please click Yes to begin the installation or No to cancel. After clicking Yes it may take a few minutes for the installer to start.

3. A window appears showing the extraction of the software installer. When the extraction process is complete, there will be another widow that will show the progress of the software removal and installation. There is no interaction required from this point forward.

Extraction window

💴 Agilent X-Se	ries Software Update 📃 🗖 🔀
Agilent Technologies	Extracting files to temporary folder
Agilent	Extracting XSA_Installer_A.09.44.exe Installation progress
	Install

Instrument Software update windows.



The old instrument software is being removed. The "Uninstall in Progress" text will roll across the screen indicating software activity. There will be several windows appearing and disappearing. It will display "Completed Successfully" when this step is finished.

NO interaction with the instrument is required.



The new instrument software is being installed. The "Installation in Progress" text will roll across the screen indicating software activity. There will be several windows appearing and disappearing during this time. NO interaction with the instrument is required. Please be patient the total software installation process can take 35 to 40 minutes. It will display "Completed Successfully" when the software update is complete. You will be prompted to restart you instrument at the end.

#### Example of one of the windows you will see during the software update process:

**FPGA Programming: DO NOT** power off the instrument at this time for **ANY** reason. If this process is interrupted, the instrument may end up in an unusable state, and will likely need to be sent to an Keysight for repair before it will be usable again.

Updating SRCCDigital (0058.00) FPGA from version 00.00.02.14 to 00.00.03.01	
Do not turn off power or interrupt this process! <b>不要</b> 关闭电 <b>源或中断此过程!</b> <b>電源を切ったり、更新プロセスを中断したりしないで下さい。</b> 전원을 끄거나 진행되는 작업을 중단 시키지 마세요! Ne pas interrompre ni couper l'alimentation électrique! Nicht ausschalten oder abbrechen!	×
Не выключать и не прерывать процесс!	
FPGA code updates may require a significant period of time. Interrupting the FPGA update process may result in corrupt FPGA code which would require returning this instrument to Agilent for service.	
	┝╺┍╸
InstallShield — C	ancel

Software upgrade "Completed Successfully"



4. When the Software installation is complete. You will be asked to reboot the instrument. If no action is taken the instrument will automatically reboot in 5 minutes.

**<u>Note</u>**: When you press "Finish" you will see this window message indicating that the system is shutting down. This is a normal Window warning message.

System	) Shutdown
8	This system is shutting down. Please save all work in progress and log off. Any unsaved changes will be lost. This shutdown was initiated by A-N9020A-30009\Administrator
	Time before shutdown : 00:00:10 Message

- 5. After the instrument restarts it will boot up in the default "instrument " account , perform the alignments and display the measurement screen.
- 6. Check for any errors and verify that the new software version is installed. Press [**System**], {**Show**}, {**System**} on the instrument, look for the "Instrument S/W Revision"

📈 RFIO1 50 Ω	R 🚹 DC 🛛 💫 SENSE:INT RF OFF 🖉 🚹 ALIGN OF
Center Freq 1.0000	00000 GHz Center Freq: 1.00000000 GHz
	PNO: Wide 🖵 Trig: Free Run Avg Hold:>25/25 IFGain:Low Atten: 6 dB (Elec 0)
Agilent Technologies	
Agilent EXT	Agilent EXT Test Set
Product Number	E6607A
Serial Number	MY49390107
Instrument S/W Revision	A.09.47
Computer Name	A-E6607A-90107
IP Address	127.0.0.1
Host ID	E6607A,MY49390107
mDNS Enabled	Yes
mDNS Host Name	A-E6607A-90107
mDNS Service Name	Agilent E6607A Test Set - MY49390107

**Note:** If the instrument does not reboot, remove the USB storage device and cycle power. The boot order for the instrument may have been changed in the instrument BIOS previously, and the instrument may be instructed to boot from USB first, and the internal disk drive second. If this is the case, failure to remove the USB device will result in an error, as the instrument attempts to boot from it.