Agilent E4406A Vector Signal Analyzer Firmware Upgrade Procedure

Purpose:

The purpose of this document is to provide a step-by-step procedure for obtaining and installing the latest revision of firmware into an Agilent E4406A VSA Series Transmitter Tester.

Procedure:

Be sure to follow all the parts of this procedure to complete this upgrade process:

- Download the firmware update package into your PC
- Remove previously installed firmware update package on your PC
- Install new firmware update package on your PC
- Download the firmware into the E4406A

Requirements to Install Firmware

- Microsoft Windows based Personnel Computer with Local Area Network (LAN) card.
- Windows NT 4.0 or greater, Windows 98
- Crossover cable if PC or analyzer is not connected to network.
  Use a CAT, RJ45 cable with cross pinning, Agilent p/n 8121-0545
- CD-ROM drive

Download the firmware update package into your PC

1. Download the executable file to start the firmware upgrade procedure.

   A "Save As" dialogue text box will appear. This will allow you to store the Firmware Upgrade Executable in a directory of your choice.

2. Print out these instructions.

Remove previously installed firmware update package on your PC

3. Check for previously installed firmware update package on your PC.

    Here is a Windows NT example:

    > Press [Start], Settings, click on [Control Panel]
    > Click on [Add/Remove Programs]
    > Look for "E4406A Update Program" in the list. If you find it, highlight it, and click on [Add/Remove].
    > Assure the "Remove" icon is selected, and then follow the un-installation instructions.

Install new firmware update package on your PC

4. Double click on the firmware update package which was stored locally.

    This will extract the files and install the update software on your PC.

5. Follow the on screen instructions.

    We recommend using the default directories and file names in this program.

    Once the install wizard completes the down load, press [Finish]

6. Load JVM on your computer.

    You will be given an opportunity to load Java Virtual Machine (JVM). The program cannot detect if JVM has been previously installed.   JVM needs to be loaded in order to run the firmware update program. After loading, JVM you will be asked to reboot your computer. It is not necessary to reboot your computer.

Download the firmware into the E4406A

7. Click on Start, Programs, Agilent Firmware Updates, and then select E4406A Update.

   You must use the Help Screens and read the instructions carefully. The help screens are very important since some instruments will have LAN addresses and be connected to a LAN, other instruments will not, or the PC and the instrument may not share the same subnet. The help text will guide you through changing IP addresses if needed. The crossover cable procedure requires changing the IP address on both the PC and the E4406A.

Important Program Notes

- Operating System Must be Loaded if upgrading from firmware revisions before A.05.30.

  When the program asks you to choose components to be loaded, it will automatically check the "operating system version, core firmware version" check box.

- Instrument Configuration

  The program will save the instrument configuration files after a directory is created. Creating the directory takes about 15 seconds.

- External Keyboard vs. Keypad

  Newer E4406As that have a serial number beginning with US4 do not require the use of an external keyboard for the normal process. You will use the instrument **front panel keypad**. The on-screen instructions includes a table showing keypad verses keyboard commands.

- Stopping Instrument Boot Process

  The instrument boot process needs to be stopped in order to download the new firmware. A message will appear on the analyzer as the boot process starts. This message reads: "To Discontinue, Press Any Key Within 2 Seconds". When you see this message, repeatedly press any numeric key (0-9) on the analyzer's keypad until the "Main Menu: Enter Command" prompt appears. Then follow the Firmware Update Program's instructions for the keypad.

- How Long?

    The download process takes about 20 minutes once the LAN cable is connected and the instrument is communicating with the PC.

- **WARNING!! Do not cycle instrument power or exit the update program once the firmware down load has begun.**

    If for some reason the program is interrupted, you must perform the process for a nonfunctional instrument. Start the Firmware Update Software. Follow the procedure. The software will not be able to find the instrument. A check box for the Nonfunctional Instrument Process will appear. Check this box and follow the instructions. See Help for more information.