



plug & play instruments
oscilloscopes

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Updating Cleverscope

Important

Please look at the serial number on the back of the unit:

If the serial number is less than 4000, you **must** load firmware version 53xx.csf into it. The unit will need to be returned to the factory if you load any other versions.

If the serial number is greater than 4000, you **must** load firmware version 64xx.csf into it. The unit will need to be returned to the factory if you load any other versions.

If you already have Cleverscope installed, use Auto to acquire a signal (which gets the CS328A Cleverscope Acquisition Unit – CAU - information into the PC memory), and then use the menu Help/About Cleverscope to get the App Version Number and Firmware version number. Record these for use below.



If the App Version number starts with 3.2 or 3.3 please see the heading ‘To update an old installation’ below before starting.

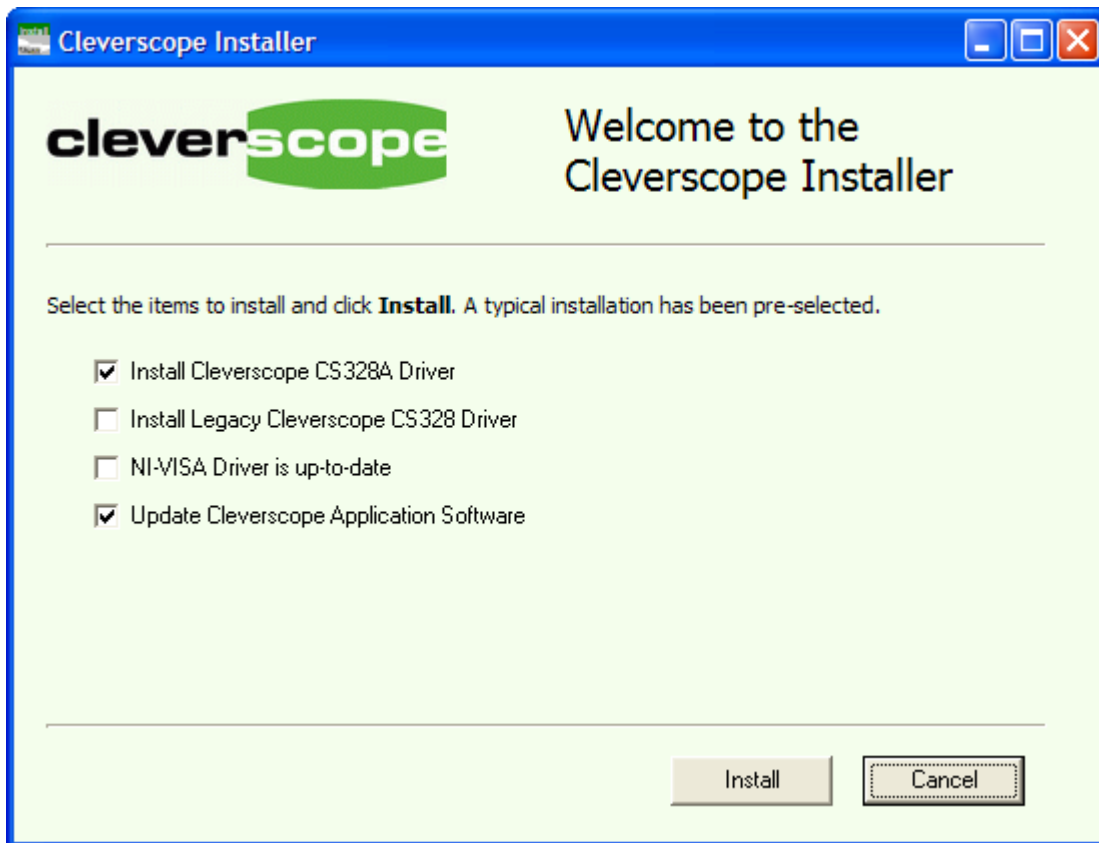
Please note: if you are using application 4.624 or earlier we have updated the USB drivers to use National Instruments NI-VISA® drivers. If you do not have the Visa run-time installed, you will need to install it. The Installation update program (see the next section) will do this for you.

To update an existing Cleverscope Application

You can update an existing application by downloading the Cscope Update v64xx.zip file from the download page of the Cleverscope website at <http://www.cleverscope.com/download/>. This file is considerably smaller than a full install.

The update is provided as a Windows compressed folder. Drag the ‘Cscope Update 46xx’ update folder out of the compressed folder and store it somewhere convenient. (You can also use Winzip, but the Windows system uncompress is easier). Open the folder, and run ‘setup.exe’.

The Cleverscope Installer window will open, and you are presented with four choices. Those choices that are already up to date will not be ticked. However, you can still force an update if required by ticking the option.



Click 'Update Cleverscope Application Software', and the installer will update your current copy of Cleverscope, and any drivers you have chosen. Once finished, click the 'Finished' button to exit the installer.

This completes the application update process. This process does not update the firmware.

Some Cleverscope releases require the firmware inside the application unit to be up to date to take advantage of the latest features (you can always use earlier versions of the firmware without the added functionality).

Look inside the release, into the Executables folder. You will see a file of the format 'cscope_fw64xx.csf'. The xx gives the current firmware version number. Compare this with the current firmware version. If they are not the same, you will need to update the firmware to gain full advantage of any changes.

The next section details how to update the firmware.

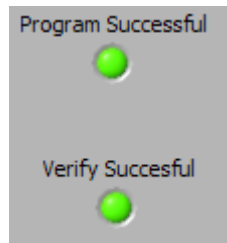
To update the firmware in your Cleverscope Acquisition Unit

When you did the update above, a firmware file of the form 'cscope_fw53xx.csf' (for CS328/0) or 'cscope_fw64xx.csf' (for CS328A/0A) will have been loaded into your Cleverscope directory. Look at the four digits 53xx/64xx. Are they the same as the Firmware version number currently in the CAU (see intro above). If not you should update the CAU firmware.

To do this, carry out the following steps:

1. Connect the CAU, and cycle the power on it (turn it off, wait 5 seconds, turn it on), to ensure a fresh start.
2. Start 'Cleverscope Rom Loader.exe', a file that is included in the update, and will be in your Cleverscope directory. **Important:** do **not** run any other applications, write CD's or do printing while the update is in progress. If power is lost to the CAU during the update you may have to return the unit to the factory.
3. Click on 'Program Cleverscope using .csf file'. Navigate to the Cleverscope directory. Choose the newest cscope_fw53xx.csf or 64xx.csf file (the programmer will only let you choose the correct file). The programmer should now write the firmware to the CAU in 3% increments, and light the 'Program Successful' light when complete.

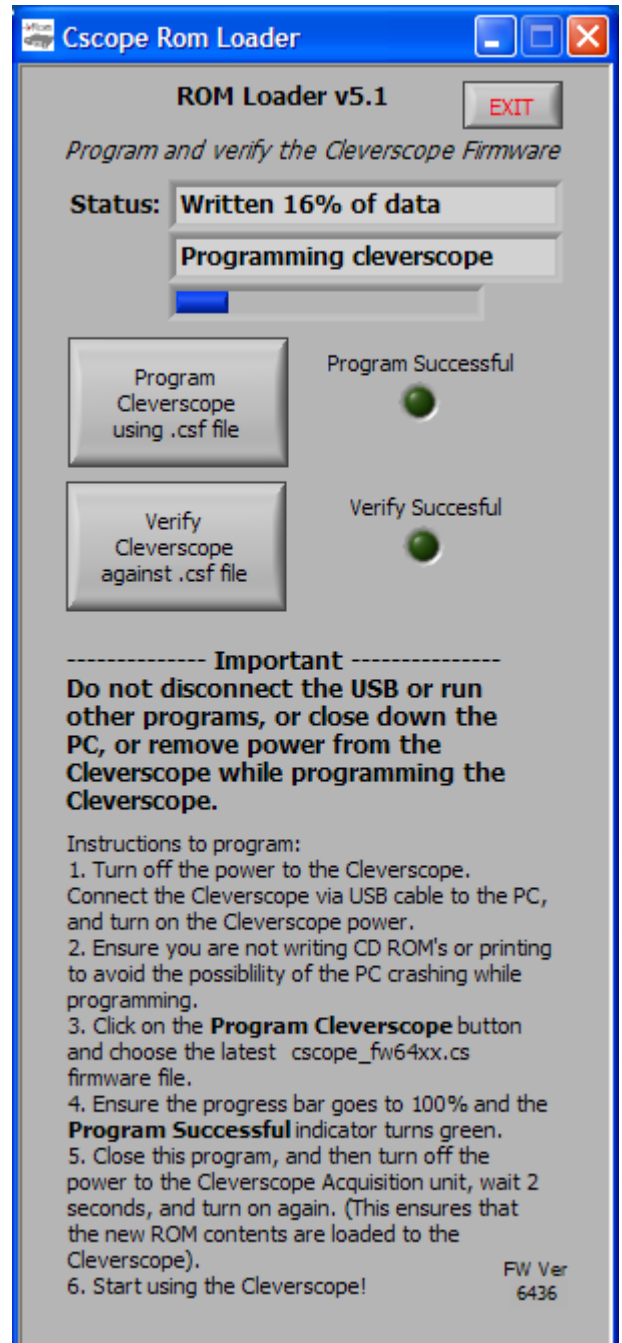
ROM Loader will then proceed to automatically verify the download. If the program and verify were successful you should see:



If not please repeat this step.

4. You may verify the correct .csf file is loaded at anytime by clicking on the 'Verify Cleverscope against .csf file' button.
5. Close Rom Loader.
6. **Important:** Turn off the power to the CAU. Wait 5 seconds. Turn the power to the CAU back on again. This forces the FPGA inside the CAU to reload the firmware from ROM. Verify that the green power light is on.

Your firmware update is now complete.



To install Cleverscope for the first time

If you are installing Cleverscope for the first time on a new PC, you can get the latest installation from the website at <http://www.cleverscope.com/resources/>. Look for the [Full WinXP/Vista Install](#).

Cleverscope no longer supports Win98. If you need a Win98 version, please look at the resources page (<http://www.cleverscope.com/resources/>) for the last version available.

Steps are:

1. Download the installation zip. Drag the contained folder out of the zip and put it into a temporary folder somewhere.
2. Open the folder, and run setup.exe. You will see the Cleverscope Installer (as on page 2). Tick the options you want (make sure you click 'Install Legacy Cs328 driver' if you have the classic CS328 (with a serial number less than 4000). Follow the prompts, and Cleverscope should be installed, including pre-installed USB drivers. If required, please click the 'Continue Anyway' button while installing the USB drivers.
3. Connect up the acquisition unit - you'll need to plug in the power adaptor, and the USB cable to a spare port.
4. The PC should discover the USB connection and display 'Cleverscope CS328 MSO' or similar. Just wait after this for Windows to load the driver request dialog. (It might take some seconds as some installations go looking on the internet for a driver). Once the dialog comes up, choose to find the driver automatically. Windows will find the driver and install it. It will warn you that it is not digitally signed. Just carry on - we are still waiting for the digital certificate, and no harm will come to your machine. After some more work Windows should announce that the hardware is installed. For Vista this process should happen automatically.
5. Startup Cleverscope (it will be in the Start Menu. You can drag it to the desktop if desired).
6. Click on 'Auto' in the Cleverscope Control Panel, and the graph should become live.
7. Exit Cleverscope (File/Exit) or close button.
8. Now follow the section 'Using the CS328 acquisition unit' , page 18 of the manual to set up the probes. The manual will be in your start menu bar, or in the program files\cleverscope directory.

To update an old installation

If your application begins with 3.2 or 3.3, you have an old run time library. You will need to do a new install to obtain the new run time library.

Please carry out the following steps:

1. Rename the 'program files\cleverscope' directory to 'program files\cleverscope_old'. Do **not** un-install the old application.
2. Carry out the steps in 'To install Cleverscope for the first time', above.
3. Update the firmware in your CAU, by following the steps in 'To update the firmware in your Cleverscope Acquisition Unit'.

If you are one of the very few customers with a CAU with a serial number beginning with 'A00' please contact Cleverscope at support@cleverscope.com before attempting an upgrade.

Using Windows 98SE, ME and NT

If you use Windows 98SE, ME or NT you will need to download the correct installation or update from the Cleverscope website. You can find these at <http://www.cleverscope.com/resources/>. These operating systems are no longer supported, and are only available for the classic CS328.