

Upgrading or Reinstalling Legend Series SmartImage Sensor's Firmware

Before installing FrameWork on your PC and upgrading the firmware file in the SmartImage Sensor, take the time to backup the existing system to the PC.

To back up a SmartImage Sensor system to a PC:

1. Run the older version of FrameWork and connect to the SmartImage Sensor.
2. Click on the **Products** menu.
3. Choose **Backup System to PC**.
4. When prompted, provide a filename.
5. Exit FrameWork.

Now that the old system has been fully backed up, FrameWork may be installed on the PC.

To install FrameWork on a PC:

1. Insert the FrameWork CD. The installation should automatically start.

If the CD does not automatically start, do the following:

From the **Start** menu, choose **Run**.

Type **D:\Setup.exe** (substitute the appropriate drive letter of your CD-ROM drive for **D**) and press **Enter**.

OR

Run the installation file downloaded from the DVT website

2. Follow the installation instructions on screen.

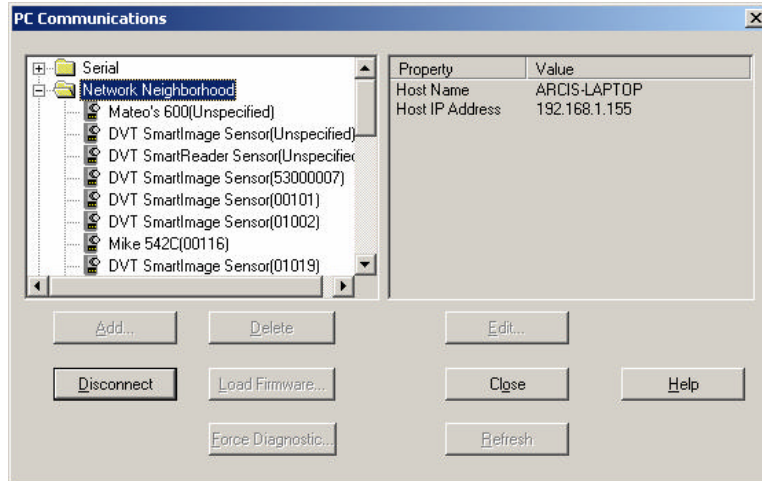
After FrameWork has been installed on the PC, the firmware file on the SmartImage Sensor must be upgraded.

Upgrading FrameWork firmware on a Legend Series SmartImage Sensor

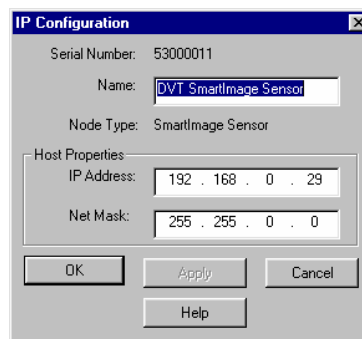
Note: The SmartImage Sensor is a stand-alone unit that runs the firmware. All SmartImage Sensors arrive from the factory with FrameWork firmware installed. This step should not be necessary unless reinstalling or upgrading firmware.

Before upgrading, start FrameWork and click Help | About to verify the version of the software being used.

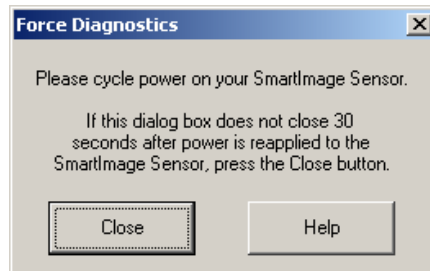
1. Start FrameWork. The “PC Communications” dialog box will come up.
2. Select “Network Neighborhood”. This will search your local network for DVT systems.



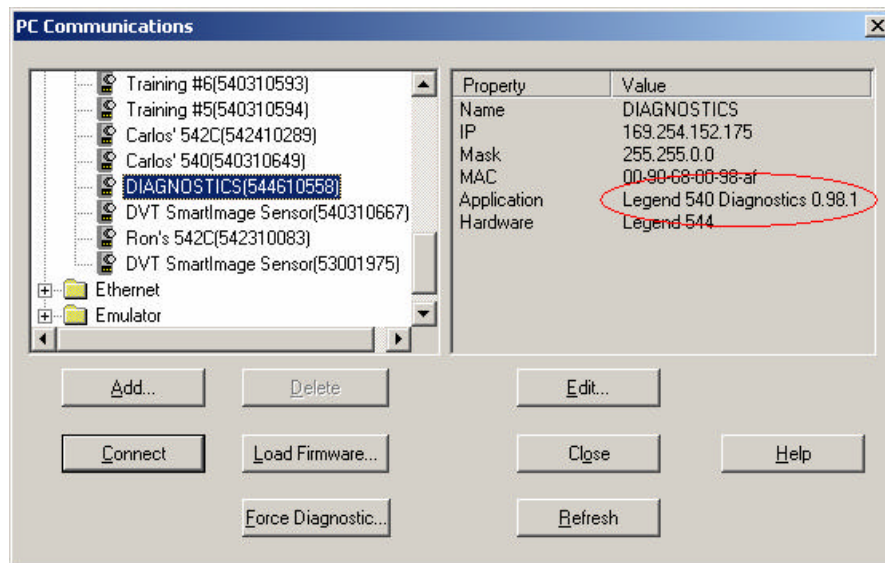
3. Highlight the appropriate sensor by choosing the system with the matching serial number and *make sure the IP address and subnet mask are compatible with your computer's IP address and subnet mask.*
4. If you need to change the IP address and/or the subnet mask of the SmartImage Sensor, click on the edit button. The following dialog box will come up and you will be able to change these parameters and the name with which this particular SmartImage Sensor is identified.



5. It is recommended that before loading firmware into the system, the user erases the content of flash memory. This will avoid potential problems that could arise when loading different firmware versions on top of one another. The first step to do this is forcing the system into diagnostics mode. Select the appropriate SmartImage Sensor under “Network Neighborhood” and click on the “Force Diagnostics” button in the “PC Communications” dialog box. FrameWork will instruct you to cycle power on the system you are trying to upgrade.

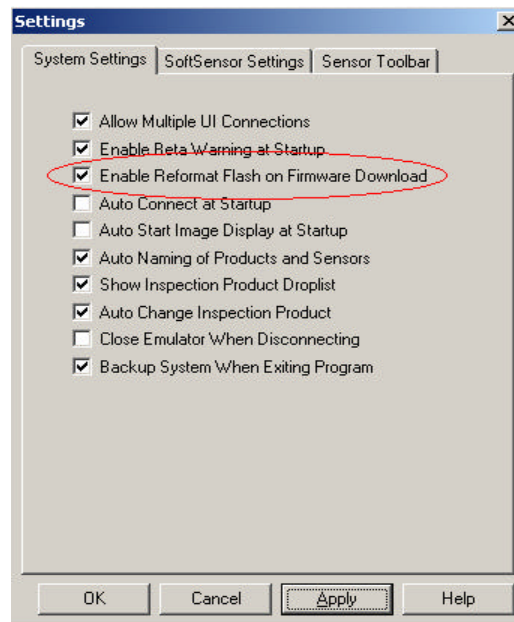


6. After the system boots up it should be in diagnostics mode. You can check this by verifying that the "Status" LED on the back of the SmartImage Sensor is blinking red. Also under "Network Neighborhood", the system should appear now as "DIAGNOSTICS".
7. When the system is forced into diagnostics mode, it resets its IP address. This means that at this point you would need to select the system, click on the "Edit..." button and reassign the appropriate IP address and net mask.
8. Now that the system is in diagnostics mode you can proceed to erase flash memory. While the SmartImage Sensor is in diagnostics, select it under "Network Neighborhood" and look at the right hand pane of the "PC Communications" dialog box to identify the diagnostics version of the system.

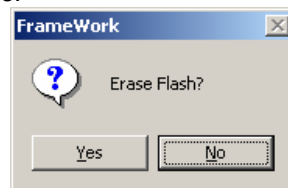


9. If this version is 0.28 or a more recent release (like in the case above) you would be able to erase flash memory and load the new firmware version from FrameWork. If your system has an older diagnostics version go to the section "Erasing flash using Telnet" at the end of this document and then continue on step 11. The mentioned section explains a fail-safe method to erase flash memory; so if your system has a recent diagnostics version but the procedure that will be described below to accomplish this task did not work, you can still refer to the technique covered at the end of the document to achieve your objective of clearing the contents of permanent memory.
10. Before proceeding, make sure that the option "Enable Reformat Flash on Firmware Download" is enabled in FrameWork. You could verify this by closing the "PC

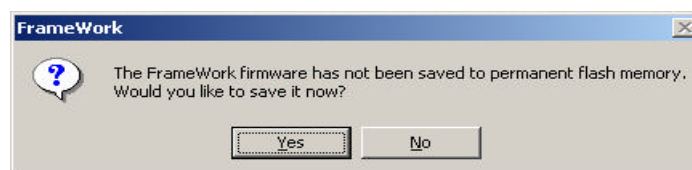
Communications” dialog box and clicking on “Options...” under the “Edit” menu in FrameWork. The option is indicated in the next figure.



11. On the “PC Communications” dialog box accessed through the “Comm” menu, click on “Network Neighborhood”, select the SmartImage Sensor on the list and click on the “Load Firmware” button. Select the firmware version that you want to load based on your model. The firmware files for all the systems are included in the FrameWork installation and their extensions would identify the sensors for which they were designed. At this point, if you are erasing flash from FrameWork, you should select “Yes” when the message shown below appears.



12. Wait for approximately 30 seconds if the progress bar closes before that, make sure the correct SmartImage Sensor is highlighted in the left hand pane and click the “Connect” button.
13. Before getting into FrameWork, the program will ask you if you would like to store the firmware to Flash Memory. Choose Yes. It will take a few seconds to store the file to flash memory. Then the Sampled Image Display will appear in the User Interface of Framework.



Erasing flash using Telnet

This is a fail-safe method to erase flash memory. You should read this section and follow the instructions explained if the diagnostics version of the system you are trying to upgrade is older than version 0.28 or if the procedure covered in steps 10-11 above did not work.

After forcing the system into diagnostics mode and reassigning the appropriate IP address and net mask, you could proceed to clear the contents of flash memory. You would use telnet or any other terminal emulator to connect to the SmartImage Sensor through Ethernet on port 23 (which is the default port for telnet.) Telnet is included as an accessory in all versions of Windows.

1. Click on "Start" then "Run..."
2. Type "telnet" and press Enter.
3.
 - a) In Windows 2000, XP and NT telnet is included as a DOS-based program. In this case you will see a DOS console appear. At the prompt, type "open" followed by a space and then the SmartImage Sensor's IP address.
 - b) In Windows 98 and ME telnet is a Windows-based application. When the program comes up, click on the "Connect" menu, then select "Remote System..." In the dialog box that appears type the IP address of your system under "Host Name", select "telnet" as the "Port" and for "Term Type" choose "VT100".
4. After you are connected, you will see some information about the system displayed. At the question mark prompt, type the following command without the quotes: "*F1bdc" (You might not see what you are typing if you do not have local echo enabled in the telnet program.)
5. You should see the message "Erasing Flash". After the process is completed, you will receive the question mark prompt. At this time, permanent memory has been erased and you could close the telnet program.