

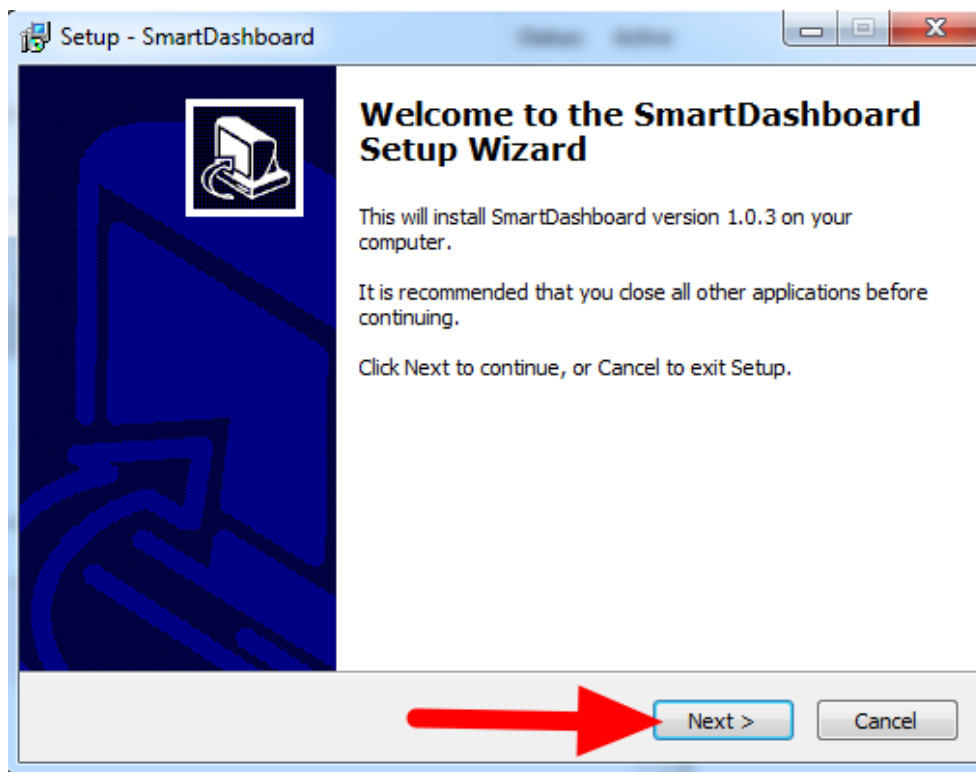
Smart Dashboard Standalone/Vision Installer

This article details the installation of the SmartDashboard with Vision extensions, including the configuration of the Driver Station necessary to launch the installed dashboard.

Download the latest Installer

Download the latest version of the installer from [this page](#). As of the last revision of this guide, the latest installer is version 1.0.3

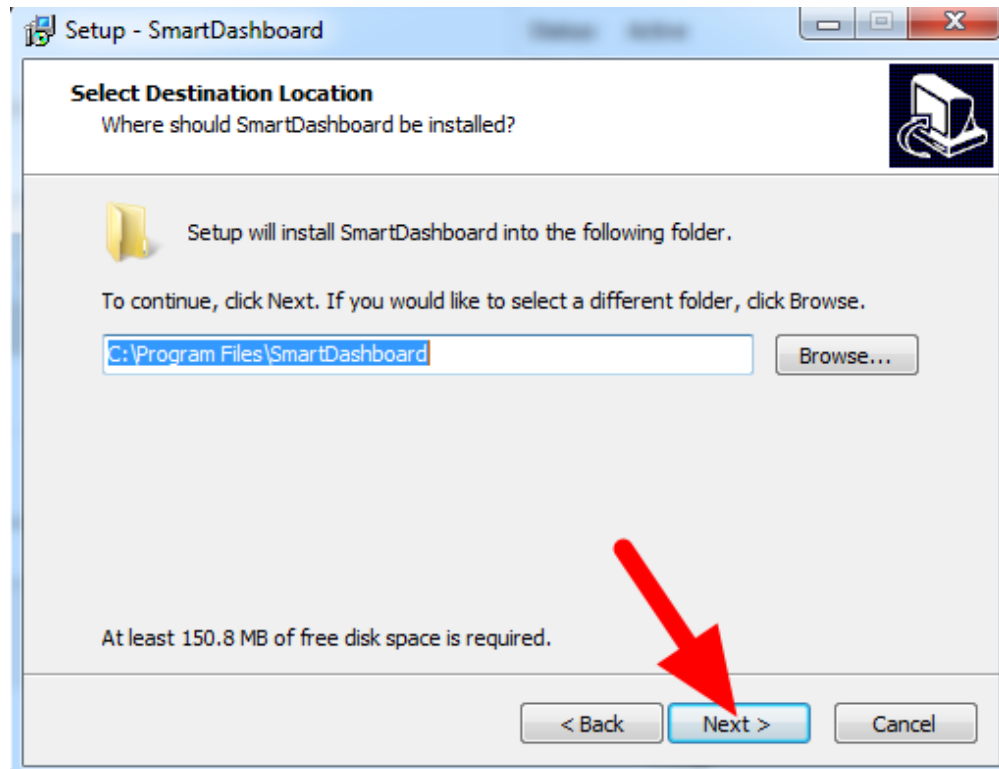
Run Setup



Locate the downloaded installer (setup.exe) and double-click to launch the installer. Click **Run** and/or **Yes** if one or more security prompts appear. Click **Next** to proceed.

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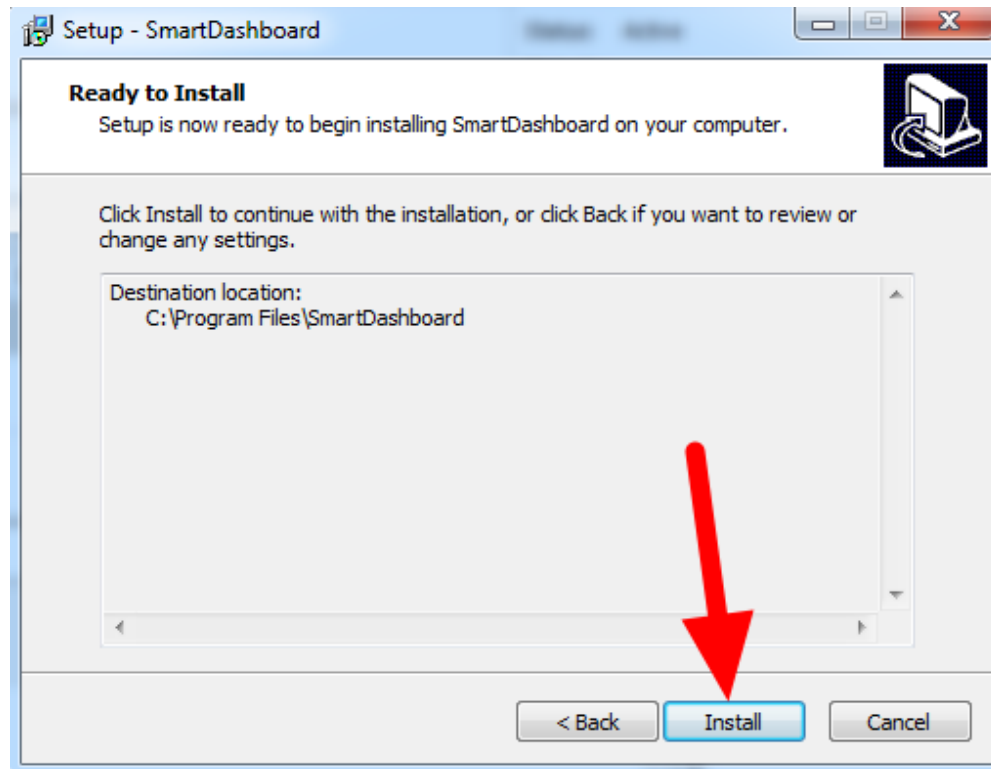
Install Directory



Select an install directory **the default is recommended**, then click **Next**.

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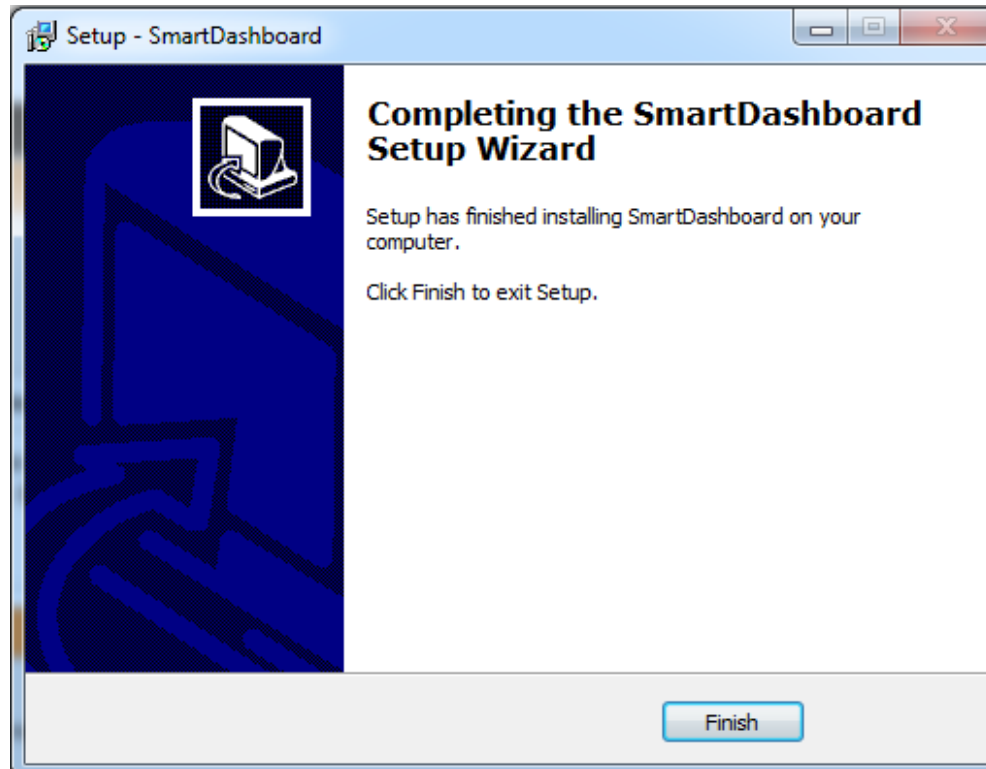
Start Installation



Click **Install** to begin the installation.

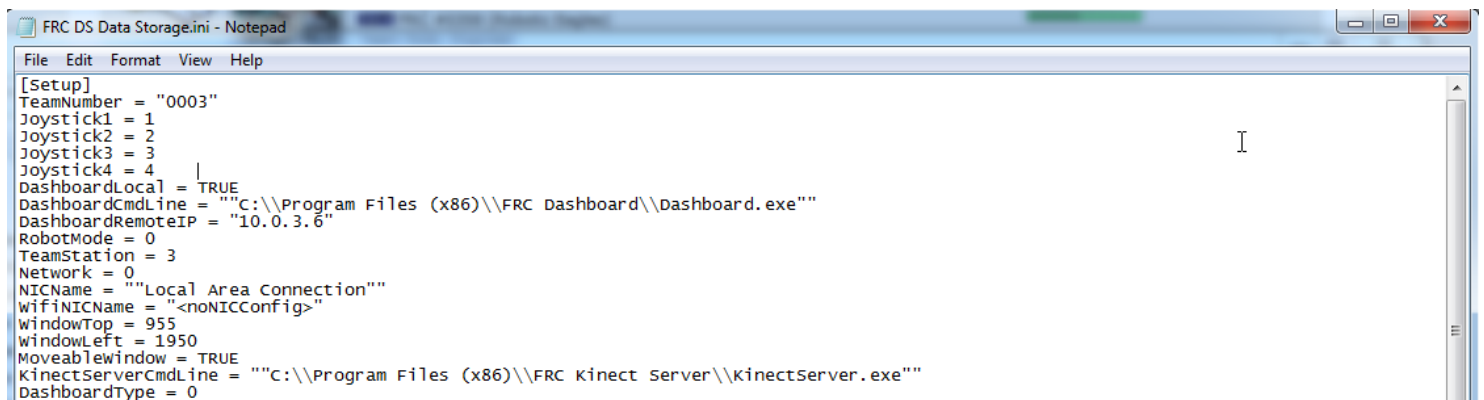
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Installation Complete



When the installation completes, click **Finish** to exit the installer.

Locate Driver Station Configuration



Locate the **FRC DS Data Storage.ini** file on your PC. On Windows 7 this file should be located in C:\Users\Public\Documents\FRC and on Windows XP it should be in C:\Documents and Settings\All Users\Shared Documents\FRC). Double click on the file to open it in Notepad.

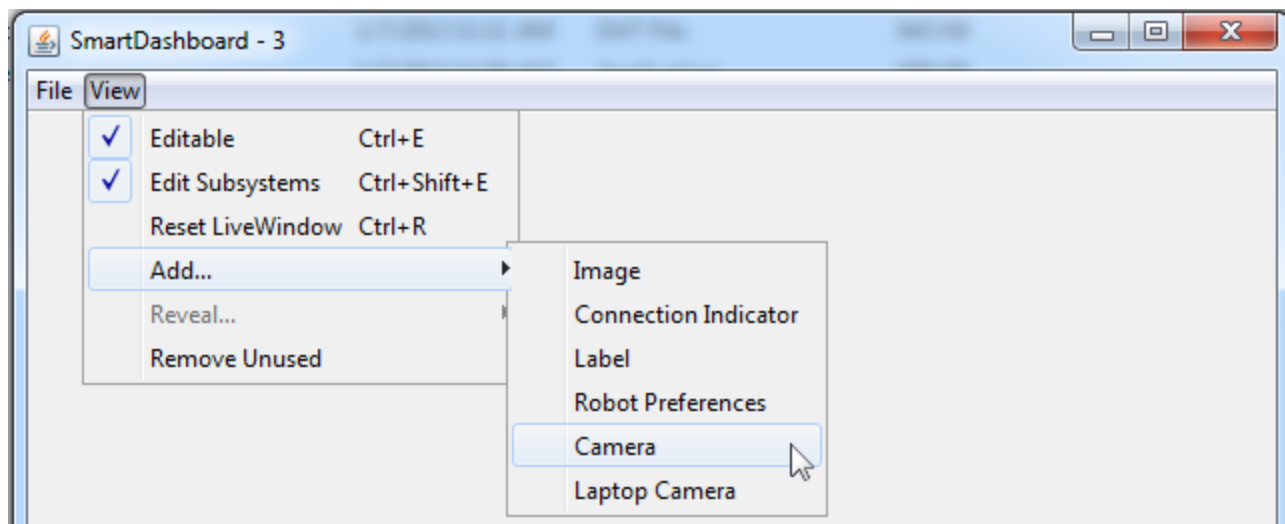
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Modify the DashboardCmdLine



Locate the line beginning with **DashboardCmdLine** and modify it to point to the installed SmartDashboard (note that the SmartDashboard is installed to Program Files on both 32 and 64 bit machines, not Program Files (x86)!). Note the double quotes and double slashes used. The Driver Station should now launch the Smart Dashboard automatically.

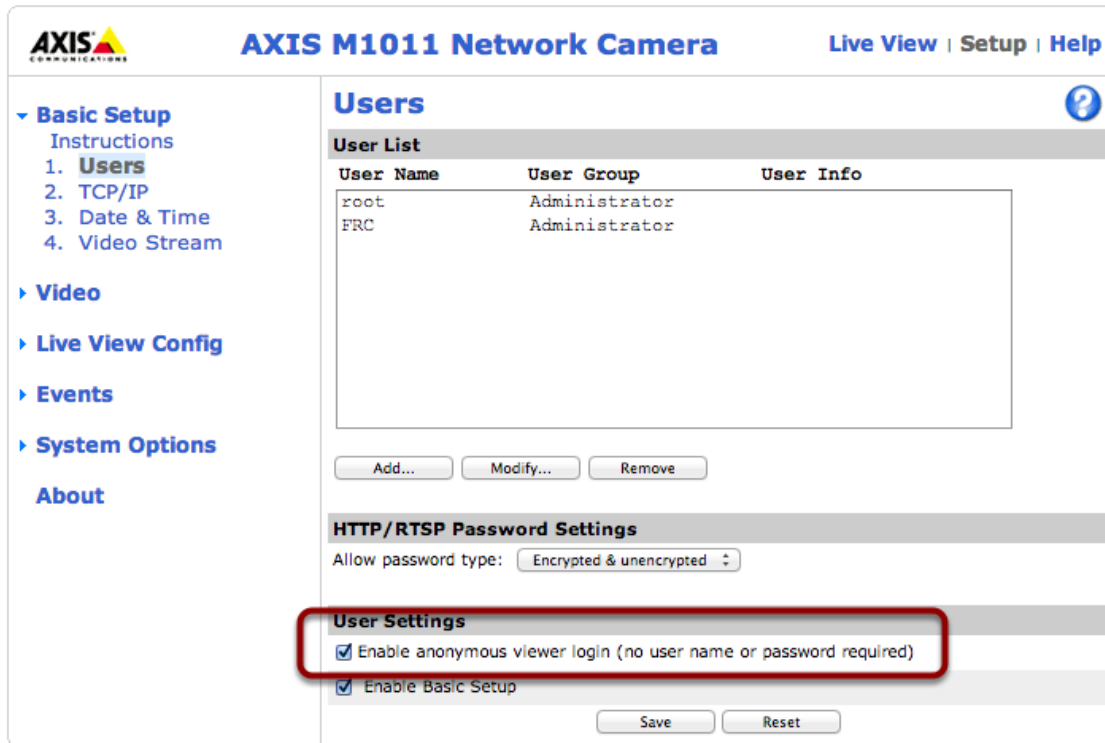
Adding a Camera Image to the SmartDashboard



To add a camera image to the SmartDashboard, click **View >> Add >> Camera**. The camera IP address will default to 10.XX.YY.11 where XXYY is the 4 digit version of the configured team number. If you need to change this IP, make sure the Dashboard is set to Editable (also in the View menu), then right click on the Camera widget and select **Properties**.

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Anonymous Viewing



The screenshot shows the web interface for an AXIS M1011 Network Camera. The left sidebar contains a navigation menu with the following items: Basic Setup (expanded), Instructions, 1. Users, 2. TCP/IP, 3. Date & Time, 4. Video Stream, Video, Live View Config, Events, System Options, and About. The main content area is titled 'Users' and includes a 'User List' table with columns 'User Name', 'User Group', and 'User Info'. The table lists two users: 'root' and 'FRC', both with the group 'Administrator'. Below the table are buttons for 'Add...', 'Modify...', and 'Remove'. Underneath is the 'HTTP/RTSP Password Settings' section with a dropdown menu set to 'Encrypted & unencrypted'. The 'User Settings' section, which is highlighted with a red rectangle, contains two checked checkboxes: 'Enable anonymous viewer login (no user name or password required)' and 'Enable Basic Setup'. At the bottom of the settings are 'Save' and 'Reset' buttons.

User Name	User Group	User Info
root	Administrator	
FRC	Administrator	

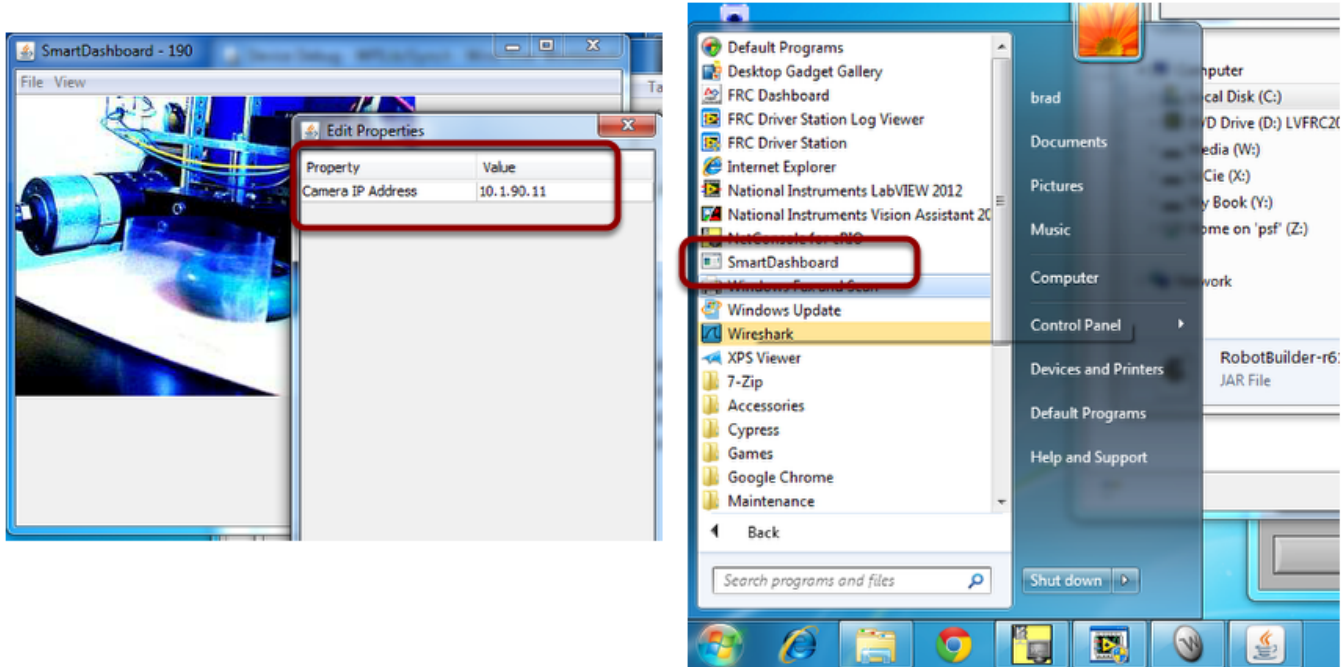
User Settings

- ☒ Enable anonymous viewer login (no user name or password required)
- ☒ Enable Basic Setup

The most common cause of camera connection issues with the SamrtDashboard is not setting the camera to accept anonymous connections. For more information on setting the camera to receive anonymous connections see the [Configuring an Access Camera](#) document.

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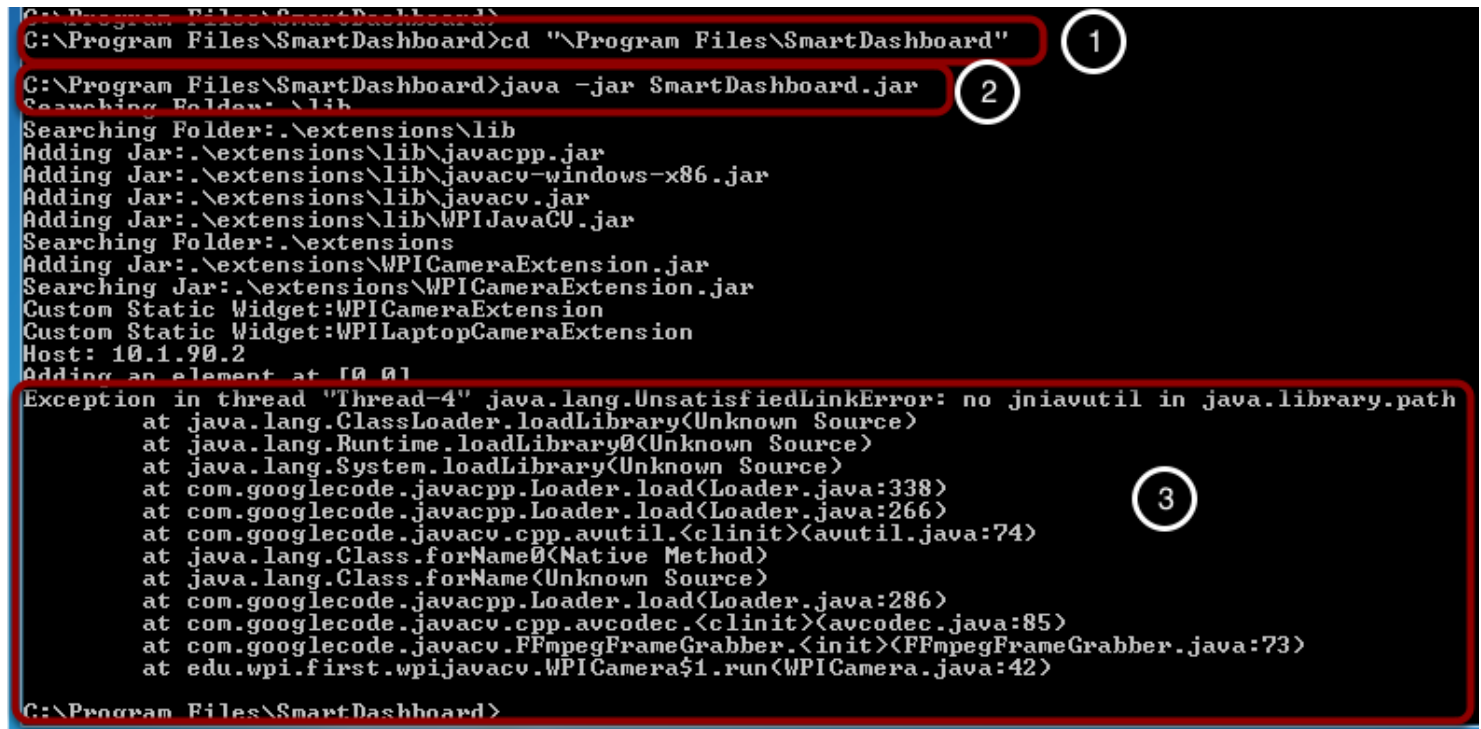
Possible problems getting the camera to work



If you are using the camera plugin for SmartDashboard there are a few common errors that prevent it from working:

1. Be sure that you have set the camera for Anonymous viewing from the previous step.
2. Be sure to add the camera as shown a few steps back with the correct IP address.
3. Be sure to **run the version of the SmartDashboard from the start menu - not the one in the sunspotfrcsdk/tools folder.**

Camera not appearing on 64-bit Windows systems



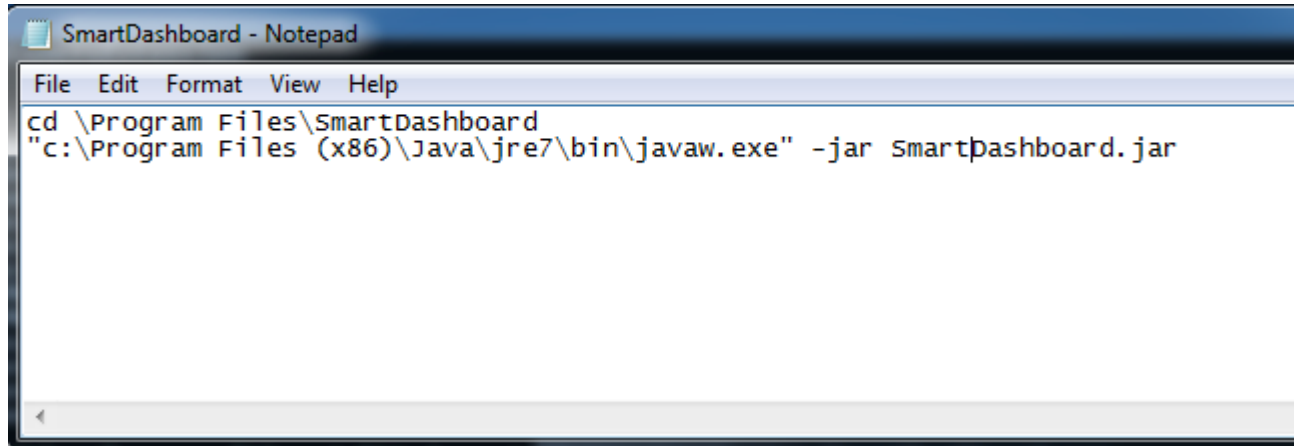
```
C:\Program Files\SmartDashboard>cd "%Program Files\SmartDashboard%"
C:\Program Files\SmartDashboard>java -jar SmartDashboard.jar
Searching Folder: \lib
Searching Folder:.\extensions\lib
Adding Jar:.\extensions\lib\javacpp.jar
Adding Jar:.\extensions\lib\javacv-windows-x86.jar
Adding Jar:.\extensions\lib\javacv.jar
Adding Jar:.\extensions\lib\WPIJavaCV.jar
Searching Folder:.\extensions
Adding Jar:.\extensions\WPICameraExtension.jar
Searching Jar:.\extensions\WPICameraExtension.jar
Custom Static Widget:WPICameraExtension
Custom Static Widget:WPIlaptopCameraExtension
Host: 10.1.90.2
Adding an element at [0 0]
Exception in thread "Thread-4" java.lang.UnsatisfiedLinkError: no jniavutil in java.library.path
    at java.lang.ClassLoader.loadLibrary(Unknown Source)
    at java.lang.Runtime.loadLibrary0(Unknown Source)
    at java.lang.System.loadLibrary(Unknown Source)
    at com.googlecode.javacpp.Loader.load(Loader.java:338)
    at com.googlecode.javacpp.Loader.load(Loader.java:266)
    at com.googlecode.javacv.cpp.avutil.<clinit>(avutil.java:74)
    at java.lang.Class.forName0(Native Method)
    at java.lang.Class.forName(Unknown Source)
    at com.googlecode.javacpp.Loader.load(Loader.java:286)
    at com.googlecode.javacv.cpp.avcodec.<clinit>(avcodec.java:85)
    at com.googlecode.javacv.FFmpegFrameGrabber.<init>(FFmpegFrameGrabber.java:73)
    at edu.wpi.first.wpilibj.WPICamera$1.run(WPICamera.java:42)
C:\Program Files\SmartDashboard>
```

If you try to load the camera extension and everything is configured correctly as shown in the previous steps, the problem might be a mismatch between the SmartDashboard extensions and your JVM. Run the SmartDashboard in the CMD window as shown here. If you see the error shown here, then the problem is that it is running with a 64-bit JVM and trying to load 32-bit plugins.

1. Change the current directory to the SmartDashboard installation directory.
2. Run the SmartDashboard using the "java -jar" command.
3. If you see this error, then the problem is the 64-bit JVM.

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Running the SmartDashboard with 32 bit Java



If you have both the 64 bit and 32 bit Java installed on your system, you can create a .CMD (command) file that will run SmartDashboard using the 32-bit Java installation. Find the 32-bit Java installation, probably in \Program Files (x86)\Java\jre7\bin\javaw.exe and note the path to javaw.exe. Then create a command file in the SmartDashboard installation directory (\Program Files\SmartDashboard) that is as shown in the illustration above. Make sure the paths in this file match the ones on your system. You can then copy and paste this command file to the Start Menu on your system and use it when you need to run SmartDashboard.

We'll try to have a better solution for this soon, but this will get you going.