

## POWERLINK® G3 Firmware Upgrade Instructions for POWERLINK G3 Controllers

Retain for future use.

### INTRODUCTION

This instruction bulletin describes how to upgrade firmware to your POWERLINK G3 Controller using DLF3000 Firmware Upgrade Utility or FTP (File Transfer Protocol–2000/3000 level controllers only).

### DOWNLOADING THE FIRMWARE PROGRAM MODULE AND THE UPGRADE UTILITY (DLF3000)

Follow the instructions in this section to download and install the firmware program module and the latest firmware upgrade utility (DLF3000) for your system.

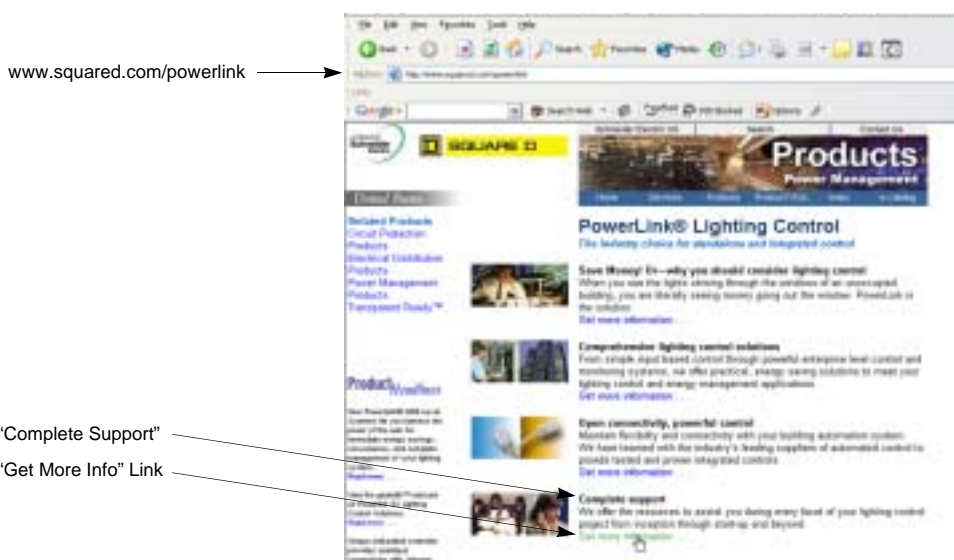
**Table 1: Download Locations and Firmware Transfer Methods for POWERLINK G3 Controllers**

Controller Level	Software/Firmware Download Location	Firmware File Transfer (PC to Controller)	Connection Type
500, 1000	www.SquareD.com/POWERLINK	DLF3000	Serial
2000, 3000		DLF3000 FTP (file transfer protocol)	Serial or Ethernet Ethernet Only

NOTE: DLF3000 is also available on the PCS 101 Software CD

Follow the steps below to download and install the upgrade files (NF3000G3 program module and DLF3000 setup file).

1. On the web, go to [www.SquareD.com/POWERLINK](http://www.SquareD.com/POWERLINK).
2. Click the “Get more info” link under “Complete Support”.



3. Click the link for your system (3000 level shown).

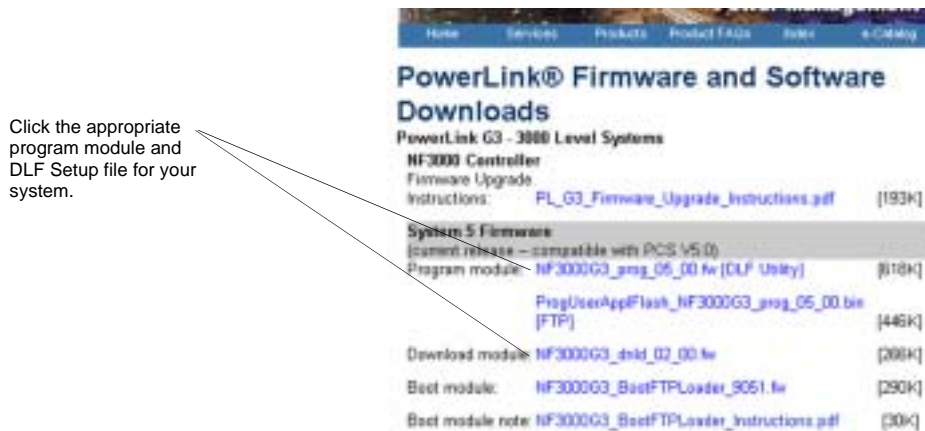


4. Click the “Downloads” link



5. Click the **appropriate program module (firmware file) and DLF setup (install) file links** to download the files to your local hard drive.

**NOTE:** Select the \*.bin file for use with FTP (2000/3000 level systems only) and the \*.fw file for use with DLF3000.



## Installing the Firmware Upgrade (DLF3000 version 3.02)

### Before you begin

You must uninstall earlier versions of the DLF utility (if any) from your PC.

1. Save any work you have open and close all other applications.
2. On your Windows® task bar, click **Start > Settings > Control Panel**.
3. Click the **Add/Remove Programs** icon and select the DLF program and remove it.

### Installing the Upgrade

To **install** DLF3000:

1. Double click the **DLFsetup.exe** file
2. Follow the steps in the install wizard. DLF3000 and all associated files will be installed onto your hard drive.
3. You will be prompted to restart your computer. Click **OK/Restart**.

If you are unsure if the version of your device is supported by this utility, or if you would like assistance in obtaining the latest firmware files, contact our Technical Support Center:

Phone: (615) 287-3400

Fax: (615) 287-3405

E-mail: powerlink.support@us.schneider-electric.com

## UPGRADING THE FIRMWARE

After you have installed DLF3000, you may upgrade the firmware in your controller. The firmware upgrade does not overwrite your controller settings, but we recommend that you use PCS101 to save your configuration files before you upgrade the new firmware.

You have three ways to upgrade firmware to your controller:

- via the serial port, see “Download via the Serial Port” on page 3.
- via Ethernet (MODBUS/TCP), see “Download via Ethernet (DLF3000)” on page 7.
- via Ethernet (FTP—built in to 2000/3000 level controllers). See “Download via Ethernet (FTP)” on page 10. *This option does not require DLF3000.*

**NOTE:** The instructions that follow give you the quick steps to perform the upgrade. It’s assumed that you are performing the firmware installation for the first time. If you need more detailed instructions, the DLF3000 help file contains a tutorial that details these steps.

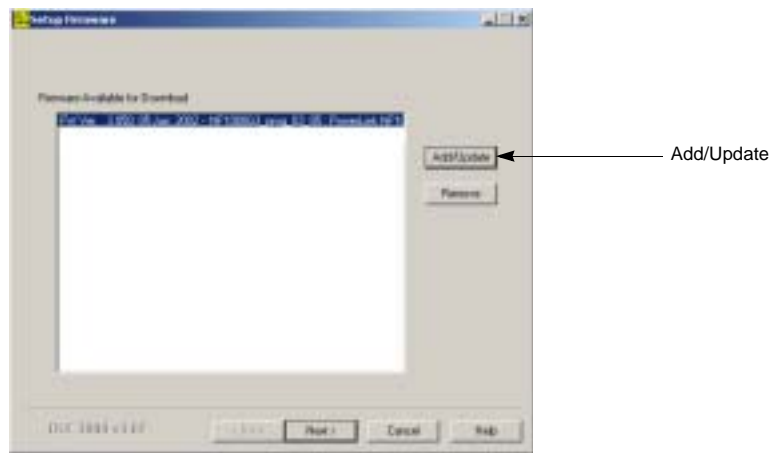
### Download via the Serial Port

This section describes the steps to upgrade the firmware via the controller’s serial port:

**NOTE:** Before you begin, make sure that you have obtained the latest firmware files for your controller system and have saved them to your hard drive.

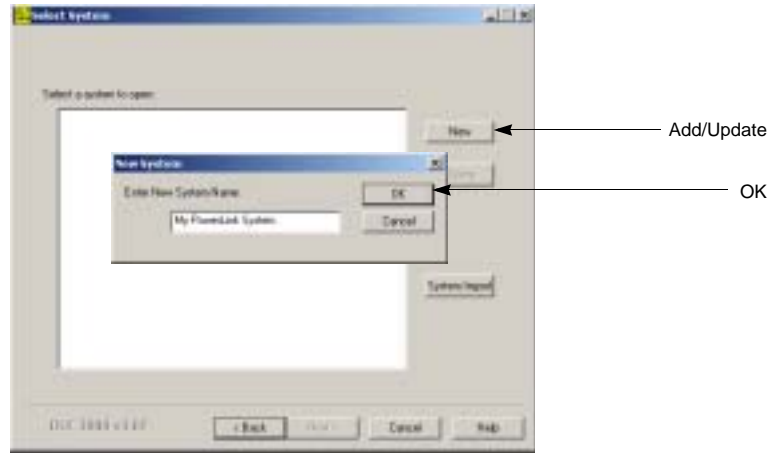
### Selecting the Firmware File

1. Launch **DLF3000**. From the Windows task bar, click **Start > Programs > DLF3000** and select **DLF3000**.
2. Click **Add/Update** to browse to the location where you have saved the firmware files.
3. Select the firmware from the Setup Firmware dialog.
4. Click **Next** to display Select System dialog.



### Configuring the Serial System

1. Click **New** on the Select System dialog to create a system and enter the **name** of your system.
2. Click **NEXT** to display Setup Connections and Devices dialog.
3. Click **Add** in the Communications Connection Defined box to display the Add Communications Connection dialog.
4. Create a **name** for the connection to the system and select **Serial Driver**.
5. Click **Continue** to display the Communications Connections–Serial dialog.



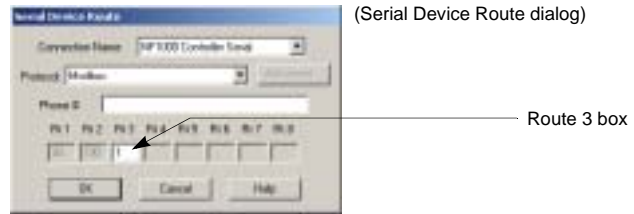
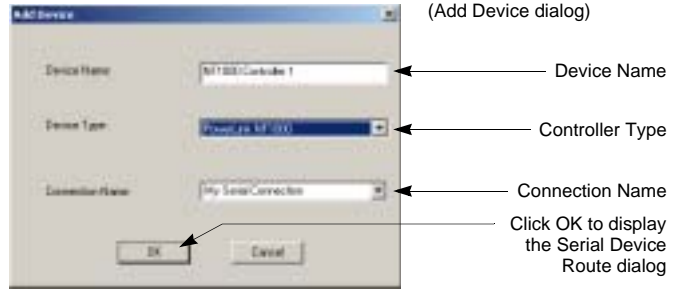
6. For all controllers, select **Modbus/Jbus (2-Wire with No Echo)**, parity **None**, and baud rate **19200**. Leave all others as default.  
**NOTE:** Controllers as shipped from the factory with a baud rate of 19.2 k and parity of None. Use these settings unless your controller communication parameters have changed.
7. Click **Test Port**, then click **OK** when the test is complete.  
**NOTE:** If the test results are not successful, make sure that you have closed other applications that may use the serial port. Repeat the test.
8. Click **OK** to close the Communications Connections–Serial dialog.



### Adding the Devices to the Serial System

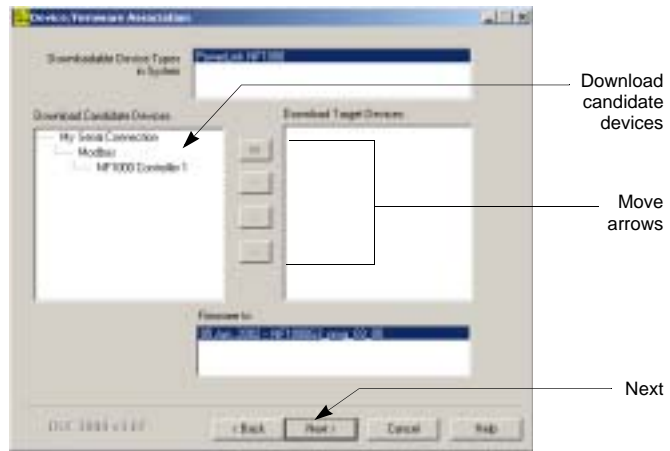
1. Click **Add** in the Devices Defined box to display the Add Device dialog.
2. **Name** the controller (Device Name) in the system, select the **controller type**, and select the **connection name**.
3. Click **OK** to display the Serial Device Route dialog.
4. In the Rt 3 box, type the **serial network address** of the controller and click **OK**.

**NOTE:** Controllers are shipped from the factory with a serial network address of 1. Use this value unless your serial network address has been changed.



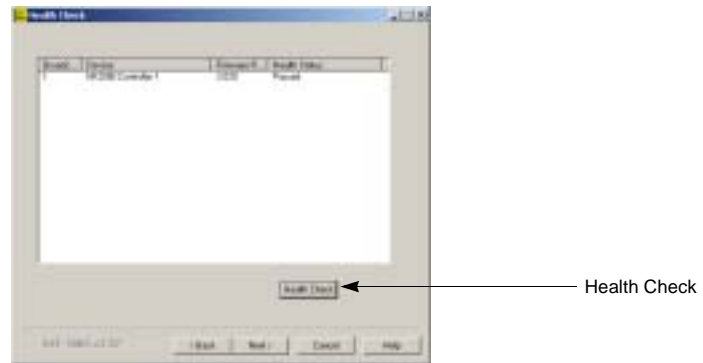
### Selecting Devices for Upgrade

1. Click **Next** to display the Device/Firmware Association dialog.
2. In the Download Candidate Devices box, click the devices to which firmware will be upgraded.
3. Click the arrow to move the device(s) into the **Download Target Devices** box.



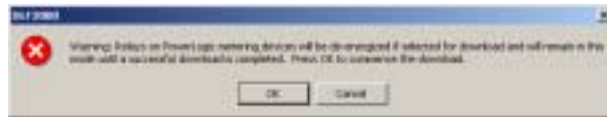
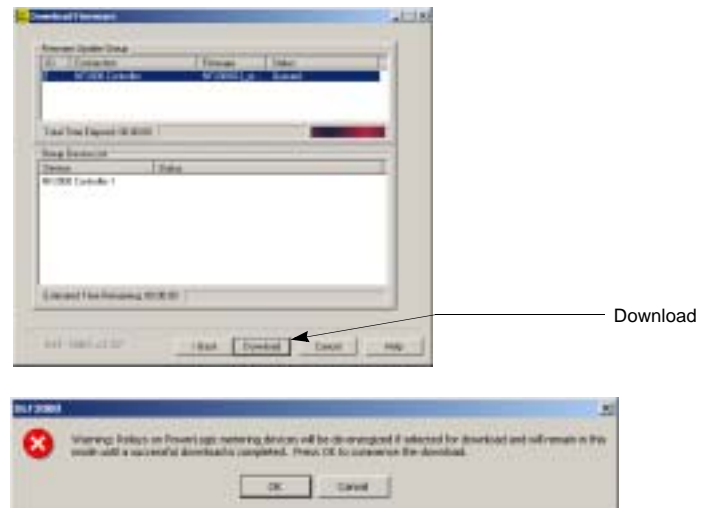
## Selecting the Firmware File for Download

1. In the Firmware to box, highlight the firmware file that will be upgraded.
2. Click **Next** to display the Health Check dialog.
3. Click **Health Check** to check the connection and ensure that the device type matches the configuration. Wait until it displays "Passed."



## Initiating the Serial Download

1. Click **Next** to display the Download Firmware dialog.
2. Click **Download**.
3. The download warning message displays. You can ignore this warning message as it does not affect devices in a POWERLINK system.
4. Click **OK** and wait for the upgrade to begin. The upgrade starts and displays the status on the Download Firmware dialog. Wait until "Successful Download" is displayed in the Group Device List box.
5. Click **Finished**, then **Yes** to quit DLF3000.



## Download via Ethernet (DLF3000)

Follow the steps in this section to upgrade the firmware to a controllers connected via Ethernet either directly, through a gateway, or by FTP.

### Before You Begin

Make sure that you have obtained the latest firmware files (\*.fw when using DLF and \*.bin when using FTP) for your controller system and have saved them on your hard drive.

### Selecting the Firmware File

1. Launch **DLF3000**. From the Windows task bar, click **Start > Programs > DLF3000** and select **DLF3000**.
2. Click **Add/Update** to browse to the location where you have saved the firmware files.
3. Select the firmware.
4. Click **NEXT** to display Select System dialog.



### Configuring the Ethernet System

1. Click **New** to create a system. Enter the name of your system.
2. Click **Next** to display Setup Connections and Devices dialog.
3. Click **Add** in the Communications Connection Defined box to display the Add Communications Connection dialog.
4. Create a **name** for the connection to the system and select **Modbus/TCP Driver**.
5. Click **Continue** to display the Communications Connections — Modbus/TCP dialog.
6. Enter the IP address of the controller (or gateway) and click **OK**.



### Adding Devices to the Ethernet System

1. Click **Add** in the Devices Defined box to display the Add Device dialog.
2. **Name** the controller in the system, select the **controller type**, and select the **connection name** that you just created.
3. Click **OK** to display the Modbus/TCP Device Route dialog.
4. Click **OK** if you are using the NF2000G3 and NF3000G3 controller to connect to Ethernet, you do not need to enter the device address, because it is the only device at that IP address.

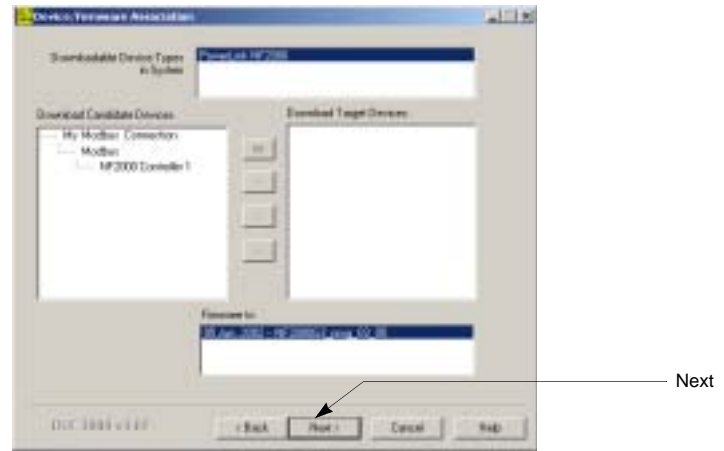
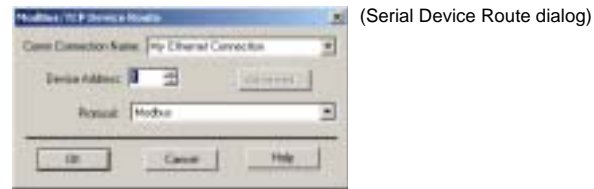
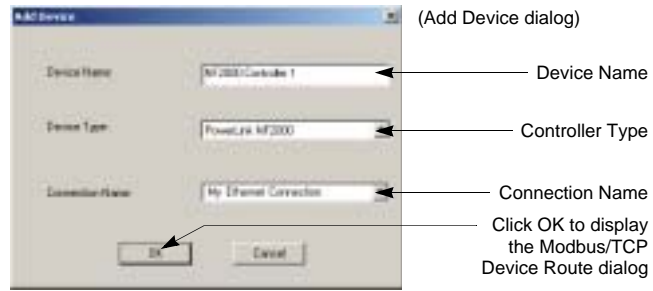
If you are using a controller connected through a gateway, select the **connection name** and enter the **serial network address of the controller**, then click **OK**.

**NOTE:** If you are adding more than one controller, use the Setup Connections and Devices dialog to add the devices before continuing.

5. Click **Next** to display the Device/Firmware Association dialog.
6. In the Download Candidate Devices box, click the device(s) to which firmware will be downloaded.

**NOTE:** If you have more than one controller, first select the appropriate downloadable device types, then the appropriate firmware version ("Firmware to"), last move the download candidate devices.

7. Click the arrow to move the device(s) into the **Download Target Devices** box.



### Selecting the Firmware File for Download

1. In the Firmware to box, highlight the firmware file that will be downloaded
2. Click **Next** to display the Health Check dialog.
3. Click **Health Check** to check the connection and ensure that the device type matches the configuration. Wait until it displays "Passed."



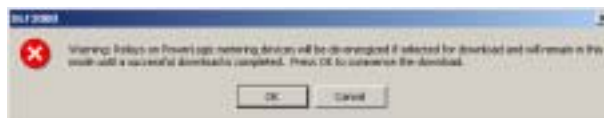
Health Check

### Initiating the Ethernet Download

1. Click **Next** to display the Download Firmware dialog.
2. Click **Download**.  
The download warning message displays. You can ignore this warning message as it does not affect devices in a POWERLINK system.
3. Click **OK** and wait for the upgrade to begin.  
The upgrade starts and displays the status on the Download Firmware dialog. Wait until "Successful Download" is displayed in the Group Device List box.
4. Click **Finished**, then **Yes** to quit DLF3000.



Download



### Download via Ethernet (FTP)

For **2000 and 3000 controllers only**, follow the steps in this section to connect to the controller and use FTP to download the firmware. FTP download requires that the controller have firmware program version 5.0 or greater. Earlier versions do not support FTP download.

**NOTE:** The controller must be connected via ethernet with an IP address assigned to the controller.

1. Launch **Internet Explorer**.
2. Type address "**FTP://XXX.XXX.XXX.XXX**" (Enter your controller's IP address)
3. Log into the controller (**first-time log in only**: default username = "admin", password = "admin")

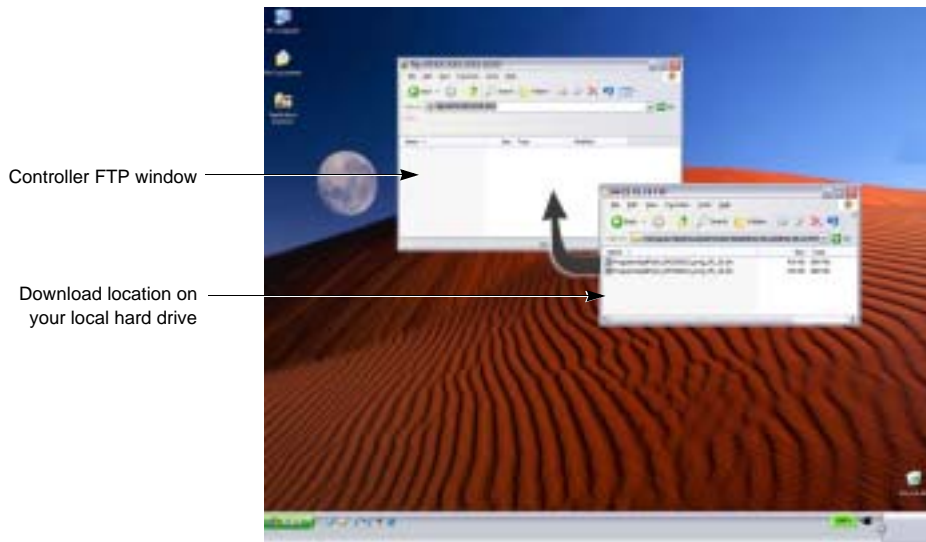
**NOTE:** Use the "admin" username and password for your initial log-in only. Afterward, you will need to establish a new username and password.



Type "admin"

4. Drag the appropriate file (\*.bin) for your controller into the FTP window (Internet Explorer).

**NOTE:** Wait for file download progress bar to show transfer is complete. Wait approximately one additional minute before proceeding to ensure transfer is complete.



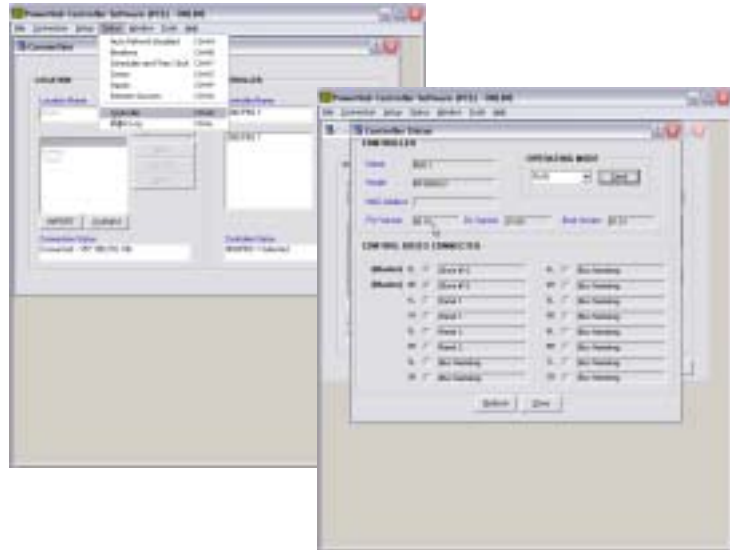
Controller FTP window

Download location on your local hard drive

- Verify that the firmware download was successful. You can use PCS system 5, the controller panel (2000/3000 level controllers), or the controller web page (3000 level controllers only)

**Using PCS system 5 to verify firmware:**

- Launch PCS and connect to the controller.
- Click on the Status drop down menu.
- Scroll to "Controller".
- Verify the firmware program version in the Controller Status screen.



**Using the controller panel to verify firmware:**

From Main screen select the following

- Menu
- Status
- System
- Controller
- Verify the firmware program version in the Controller Status screen.

