



Control TechNotes

Updating Flash Memory

**2703A/AP/APD CPU
2716/2716D Communications Module
5100 Series Controller
using CTC Monitor**

Technical Note No. 31, April, 2002

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Getting Started

This technical note describes how to update the firmware on 2703 Series CPUs, 2716/2716D Communications Modules, and 5100 Series controllers with **CTC Monitor v2.7** (or later). Different versions of CTC Monitor are required for each product:

- **2703 Series CPUs** — Version 2.7.1 or later
- **2716/2716D Communications Modules** — Version 2.7.1 or later
- **5100 Series controllers** — Version 2.7.2 or later



Notes

1. You can download firmware updates from the **Software Downloads** section of the **Support** area on CTC's web site at www.ctc-control.com.
 2. For more information on the 2716/2716D modules, refer to the appropriate installation guide. These guides are available in the Support area of CTC's web site at www.ctc-control.com.
 3. For more information on the 5100 controller, refer to *Model 5100 Installation Guide*. This guides is available in the Support area of CTC's web site at www.ctc-control.com.
 4. For more information on the 2703 Series CPUs, refer to the 2703AP Quick Reference Guide.
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General Guidelines

Make a note of the following before upgrading firmware:

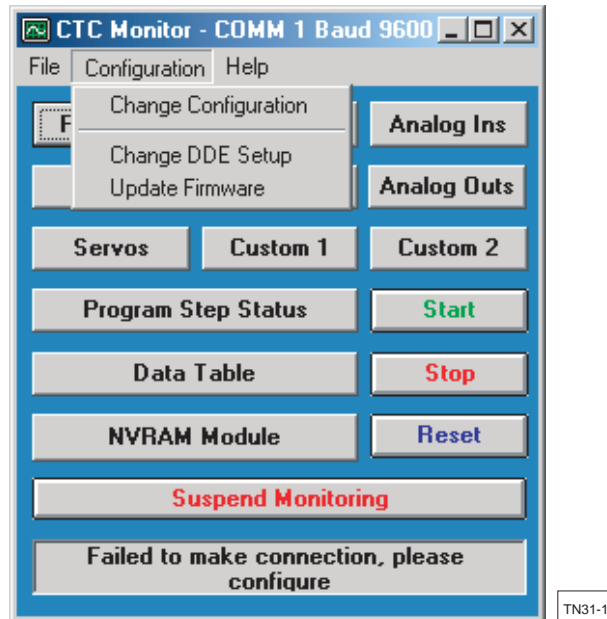
- A firmware upgrade begins by issuing a *Stop and Reset* command to the controller. Make sure that any equipment connected to the controller is prepared for a reset before attempting an upgrade.
- For **2703 CPU** downloads, connect the PC directly to the 2703 CPU's serial port or to communications port 0 (using the Model 2886 duplex adapter).
- For **2716/2716D** downloads, connect the PC directly to the module's COMM1 port.
- For **5100** downloads, connect the PC directly to the module's COMM1 port.
- **Connections to the wrong serial port** – Connecting to the wrong serial port on the controller is normally detected by **CTC Monitor** and results in a download error. In rare cases, **CTC Monitor** may not be able to verify the module connected to the PC.

- **Downloads to the wrong module** – Downloading a file to the wrong module may damage it. For example, if you attempt to download a 2703 firmware upgrade to the 2716 module, your module may need repair. Contact CTC Technical Support if this occurs.
- Firmware upgrades do not generally affect the controller's Quickstep program but it is sometimes necessary to reload the program after an upgrade. Before attempting an upgrade, make a backup copy of your Quickstep program. You can retrieve a program from the controller by uploading it with the **CTC Load Utility**.

How to Update Firmware

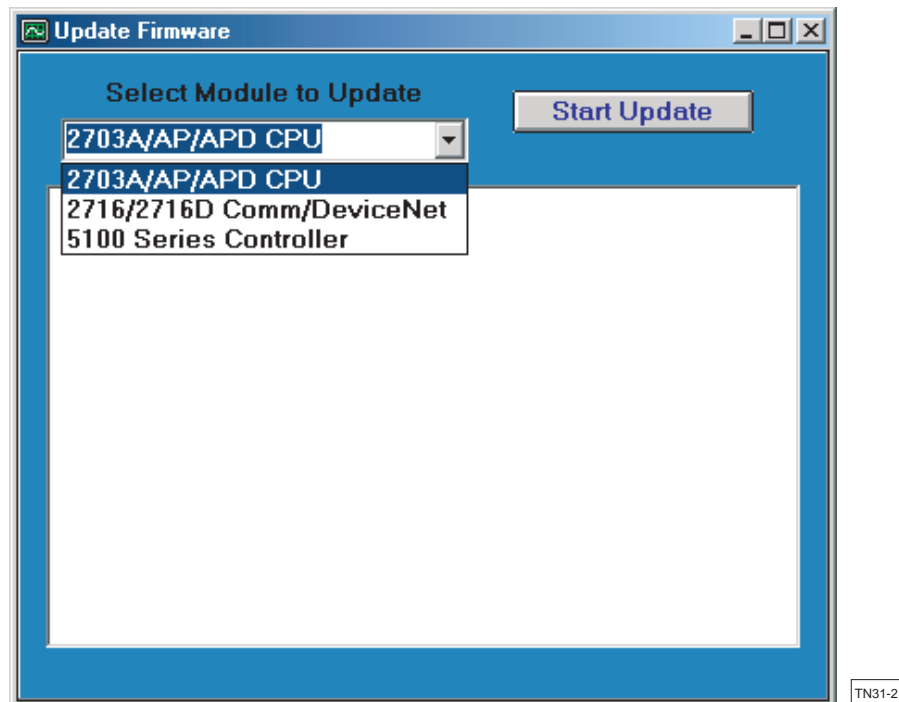
This procedure describes how to update your firmware with **CTC Monitor**:

1. Launch **CTC Monitor**. Select **Update Firmware** from the **Configuration** menu.



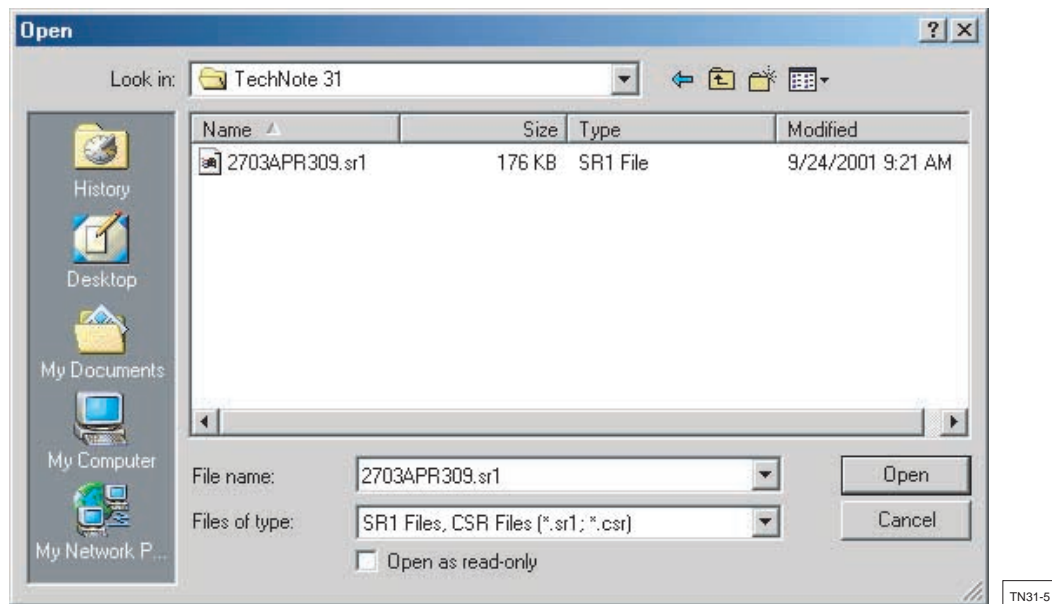
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2. The **Update Firmware** dialog box appears as shown below. Select a product from the drop-down menu.

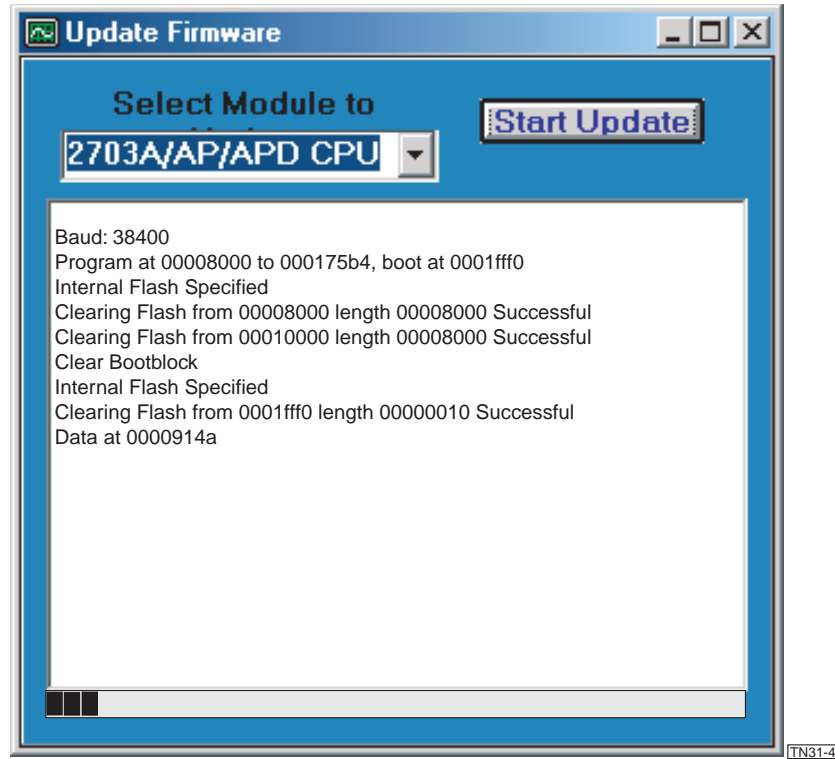


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3. Press **Start Update**; an **Open** dialog box displays. Locate and select a firmware update file such as *2703APR309.sr1*. A firmware update file contains the module number (2703AP), the firmware revision number (R309), and a file extension of .sr1 or .csr.



4. Once you select the update file, **CTC Monitor** displays a dialog box with several warnings (refer to *General Guidelines* for more information). Press **OK** to start the download.
5. The program returns to the **Update Firmware** screen. Press **Start Update** to complete the update process. The program displays the progress of the update as shown on the top of the next page.



6. The download is finished when the word **COMPLETE** appears at the top of the text list. If there is no error message, the controller resets and starts executing the original Quickstep program. You can verify this by looking at the **Program Step Status** window in CTC Monitor.

If an error such as **Corrupt Program Data** appears in this window, then reload your Quickstep program into the controller.

Verify the firmware revision number by checking the value in Register 13003.

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