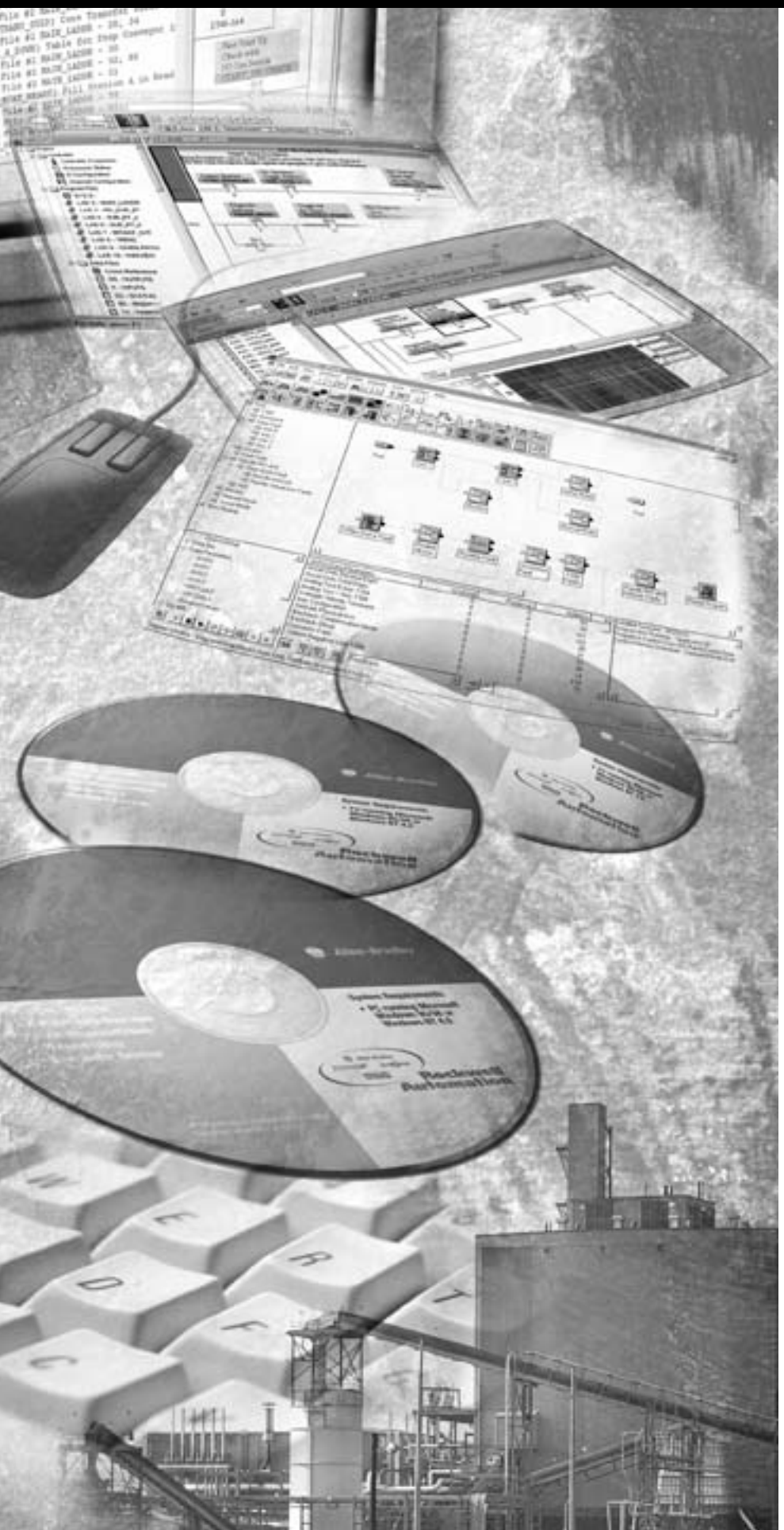

Allen-Bradley

ControlFLASH Firmware Upgrade Kit

Catalog Number
ControlFLASH 6.0

Quick Start

Rockwell Automation

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://literature.rockwellautomation.com) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

WARNING	Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.
ATTENTION	Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence
SHOCK HAZARD	Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.
BURN HAZARD	Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.

CompactFLASH, Logix5000, Allen-Bradley, TechConnect, Rockwell Automation, PowerFlex 700S, FlexLogix, DriveLogix, SoftLogix, Kinetix, RSLinx Classic, Data Highway Plus, CompactLogix, ControlLogix, and RSLogix 5000 are trademarks of Rockwell Automation, Inc.

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Preface
Purpose of This Manual. 5
Who Should Use This Manual. 5

Chapter 1

ControlFLASH Firmware Upgrade Kit Quick Start
Introduction 7
What is ControlFLASH Software? 7
What is the ControlFLASH Firmware Upgrade Kit?. 7
What are the System Requirements? 7
RSLinx Classic Lite Software. 8
Before You Begin to Use the ControlFLASH Firmware Upgrade Kit . 8

Chapter 2

Installing the ControlFLASH Firmware Upgrade Kit
Introduction 9
Install the ControlFLASH Firmware Upgrade Kit. 9
Uninstall the ControlFLASH Firmware Upgrade Kit 12

Chapter 3

Using the ControlFLASH Software to Upgrade Firmware
Introduction 13
Prepare the Networks for Upgrades 13
Prepare the Device for Upgrades 14
Use the ControlFLASH Software to Upgrade Firmware. 14
Modifying Download Restrictions 21
Accessing the ControlFLASH Software Online Help 22

Appendix A

ControlFLASH Software Error Messages
Introduction 23

Purpose of This Manual

This manual describes how you can use the ControlFLASH software to upgrade the firmware for process control hardware.

Who Should Use This Manual

You should use this manual if you need to maintain firmware revisions on process control hardware. The following is a list of hardware that the ControlFLASH software supports:

- ControlLogix controllers, communication, digital, analog, and motion modules
- CompactLogix controller, communication, digital, analog, and motion modules
- FlexLogix controllers and communication modules
- PowerFlex 700S with DriveLogix controllers and communication modules
- SoftLogix5800 controllers - Kinetix 6000, Kinetix 2000, Kinetix 7000 and 8720MC servo drives, communication, and motion modules

You should also:

- have a basic understanding of networking concepts.
- have a basic familiarity of RSLinx Classic software.

Notes:

ControlFLASH Firmware Upgrade Kit Quick Start

Introduction

This chapter helps you to get started with using the ControlFLASH Firmware Upgrade Kit with your application.

This chapter:

- describes the ControlFLASH software programming tool and the parts of the kit.
- describes system requirements.
- tells you what to do before you begin.
- tells you where to go for more information.

What is ControlFLASH Software?

The ControlFLASH software is an application that lets you quickly upgrade hardware firmware.

What is the ControlFLASH Firmware Upgrade Kit?

The ControlFLASH Firmware Upgrade Kit includes the:

- firmware upgrade and drivers to be downloaded.
- ControlFLASH programming tool, along with its support drivers and online help.
- Quick Start.

The ControlFLASH software supports a wide variety of products and protocols. For information on the specific products and protocols the tool can support, go online at: http://support.rockwellautomation.com/firmware.asp or contact your local distributor or Rockwell Automation representative.

What are the System Requirements?

To use the ControlFLASH Firmware Upgrade Kit, your system must be at this minimum configuration:

- Personal computer with at least a 486 processor
- Windows 2000, NT, or XP operating systems
- RSLinx Classic Lite software

RSLinx Classic Lite Software

You need to have RSLinx Classic Lite software installed before you install the ControlFLASH software. RSLinx Classic Lite software is a communication package that you can use with a wide variety of Rockwell Automation software, applications, and hardware.

The ControlFLASH software uses RSLinx Classic Lite software to communicate over Data Highway Plus, DF1, DH485, ControlNet, DeviceNet, and Ethernet networks. To install and use RSLinx Classic Lite, refer to the documentation (printed or online) that came with your RSLinx Classic Lite package. If RSLinx Classic Lite is already installed on your computer, you may not need to install it now.

Before You Begin to Use the ControlFLASH Firmware Upgrade Kit

Before you can start using the ControlFLASH Firmware Upgrade Kit, you will need to:

- verify that you have RSLinx Classic Lite software installed.
- configure RSLinx Classic Lite software.
- install and configure your communication interface card.
- verify your communication interface card operates correctly.

Installing the ControlFLASH Firmware Upgrade Kit

Introduction

This chapter explains how to install the ControlFLASH Firmware Upgrade Kit. You can obtain the software by either downloading it from: the My Support site at http://support.rockwellautomation.com/firmware.asp or accessing it through a release CD. The CD and the downloaded kit contains these files:

- Firmware to upgrade your devices
- ControlFLASH executable file
- ControlFLASH drivers
- ControlFLASH online help

Install the ControlFLASH Firmware Upgrade Kit

Follow these steps to install the ControlFLASH Firmware Upgrade Kit.

You either have the software on a release CD or you have downloaded the software.

Follow these steps to install the software.

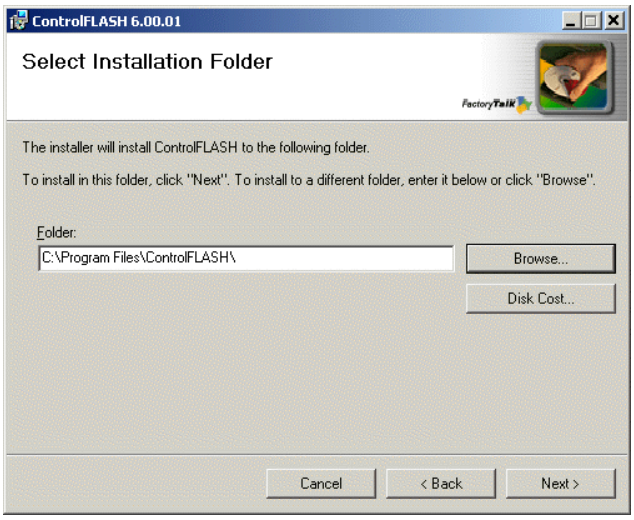
1. Locate the firmware kit install .msi file for the kit.

   The location and name of the file depends on where you saved the file and what you named it when you saved it.

2. Double-click the icon or select Start -> Run -> Browse -> <location of the firmware .msi file.

3. Click Next.

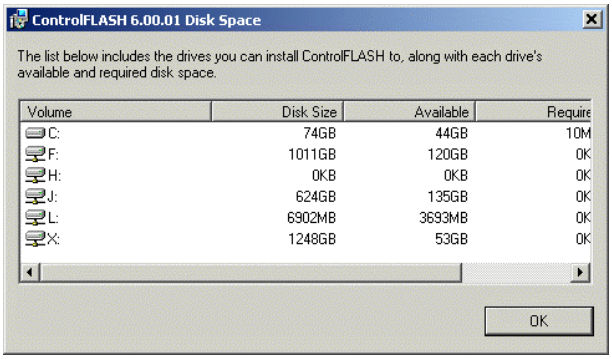
4. Read and agree to the license and click Next.



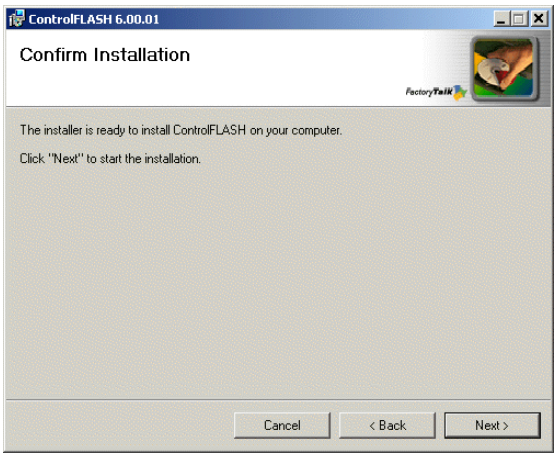
5. Use Browse to select the location of the installation.

   The default location is C:\Program Files\ControlFLASH\.

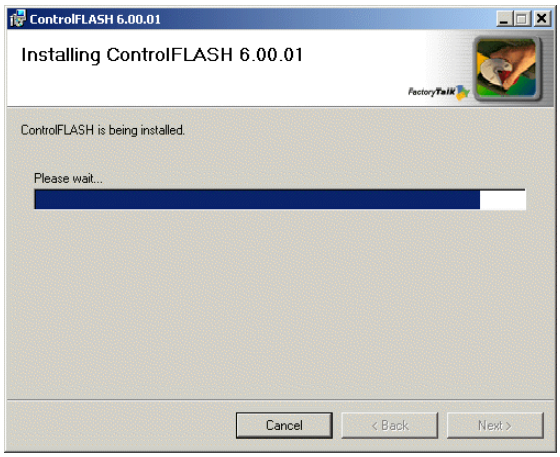
6. If needed, you can click Disk Cost to view your drives available and the required disk space and click OK.



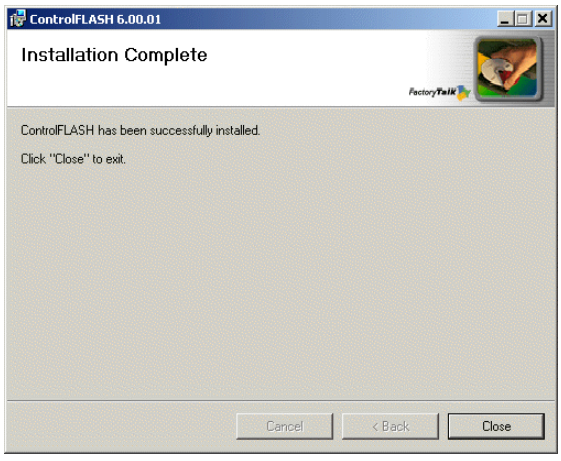
7. Confirm installation and click Next



ControlFLASH software installs.



Installation completes.



8. Click Close to finish installation.

Uninstall the ControlFLASH Firmware Upgrade Kit

When you are finished with the upgrade, you may want to uninstall the ControlFLASH Firmware Upgrade Kit to save your hard disk space.

If you do not uninstall it, each new ControlFLASH firmware upgrade installs the most current version of the tool on top of the earlier version.

IMPORTANT Do not uninstall the ControlFLASH Firmware Upgrade Kit until you have completed the firmware upgrade.

To uninstall the ControlFLASH software, follow these steps.

1. Go to the ControlPanel and open Add or Remove Programs.
2. Select ControlFLASH Firmware Upgrade Kit.
3. Click Remove.

   Wait until the remove process is complete before closing the Add or Remove Programs dialog.
4. Verify that the ControlFLASH software listing was removed from the programs list.

Using the ControlFLASH Software to Upgrade Firmware

Introduction

This chapter tells you how to upgrade firmware by using the ControlFLASH software.

This chapter:

- tells you what to do before you begin.
- describes how to run the ControlFLASH software.
- describes online help.

IMPORTANT The illustrations of the ControlFLASH software dialogs shown in this manual are samples. Because your system configuration is unique, the dialogs you see when running the tool may be different from the ones you see here.

Before you begin, make sure that you have:

- prepared your network for updating.
- prepared your device for updating.

If you need help, refer to the back cover of this publication for support information.

Prepare the Networks for Upgrades

Follow this procedure to prepare the network for updating.

ATTENTION You cannot perform this upgrade while running a process. Before performing the upgrade, choose an appropriate time to remove your device from service.

1. Choose an appropriate time after all processes can be stopped to remove the device from service.

2. Shut down the production line only if the device does not support removal/insertion under power (RIUP).

   To find out if your device supports RIUP, check with the documentation that comes with your hardware. For Rockwell Automation products you can visit: http://literature.rockwellautomation.com to obtain the latest documentation or contact your local distributor or Rockwell Automation representative.

3. Verify that all network devices are properly connected.

Prepare the Device for Upgrades

Follow this procedure to prepare the device for updating.

ATTENTION

Be sure to back up any data or programs that you have downloaded to a device. When you upgrade the firmware, all data will be overwritten.

1. Back up any current programs or data on the devices that you are updating.
2. Turn the key switch on your processor (if used) to Program mode.
3. Turn on power to the processor.

Use the ControlFLASH Software to Upgrade Firmware

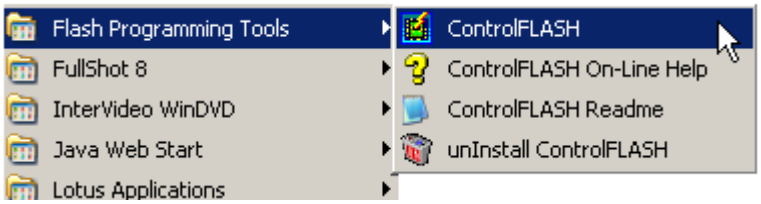
Follow these steps to use the ControlFLASH software to upgrade the firmware on your devices.

1. Run the ControlFLASH software from your personal computer by using one of the following methods:

   - double-click the ControlFLASH icon on your desktop.

     ControlFLASH

   - Select Start > Programs > Flash Programming Tools > ControlFLASH.



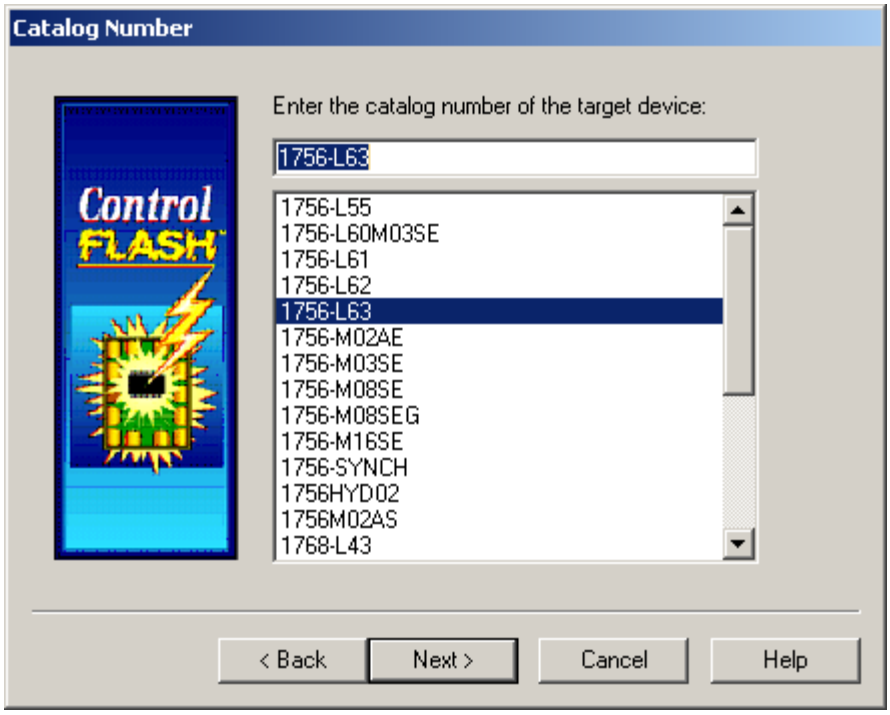
The Welcome dialog displays.

This dialog tells you to be prepared with the following information:

- Catalog number of the target device
- Network configuration information (optional)
- Network path to the target device
- Firmware revision for this upgrade

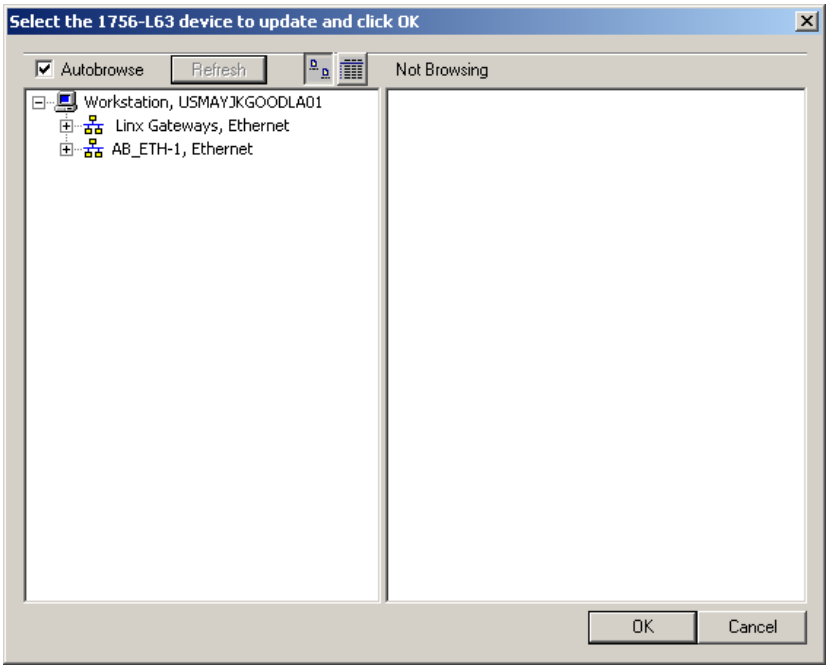
2. Click Next once you have gathered your information.

You see the Catalog Number dialog.

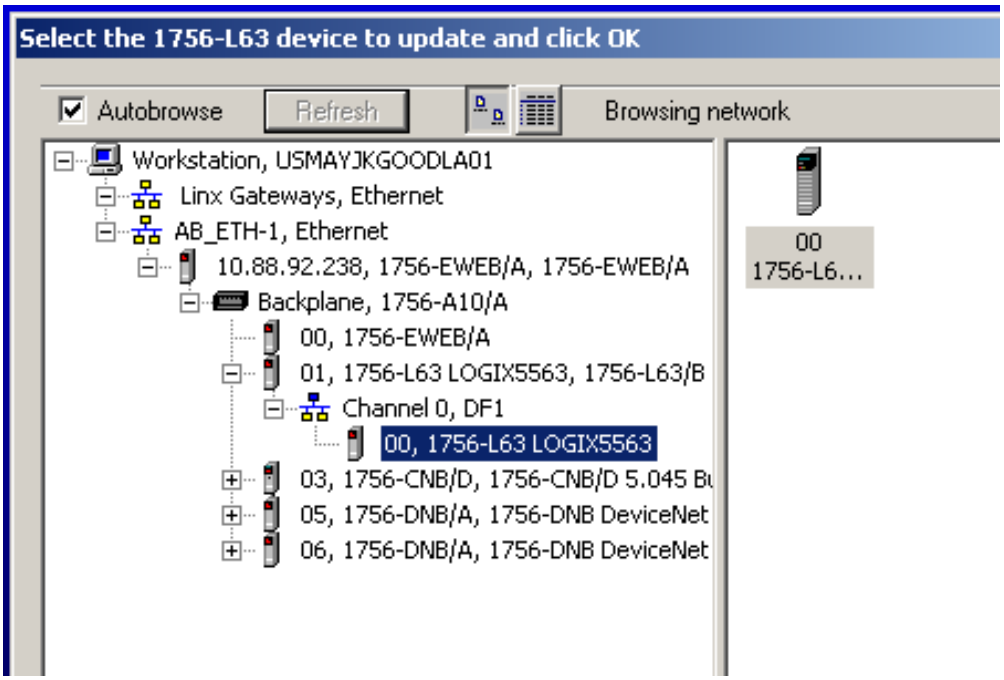


3. Select the catalog number of the device you are updating and click Next.

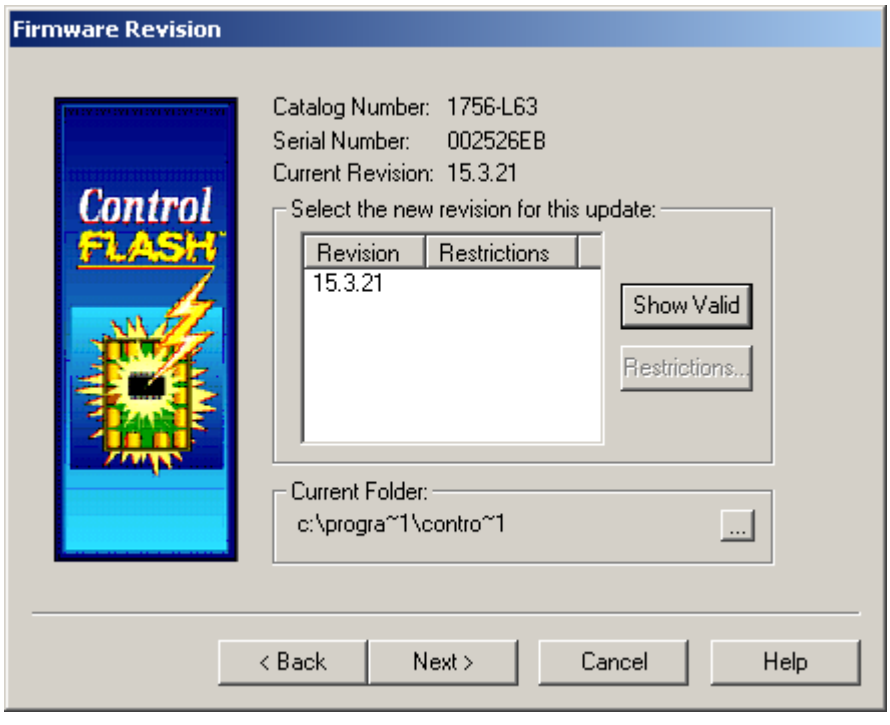
The ControlFLASH software accesses RSWho browser.



4. Identify the device you want to upgrade.

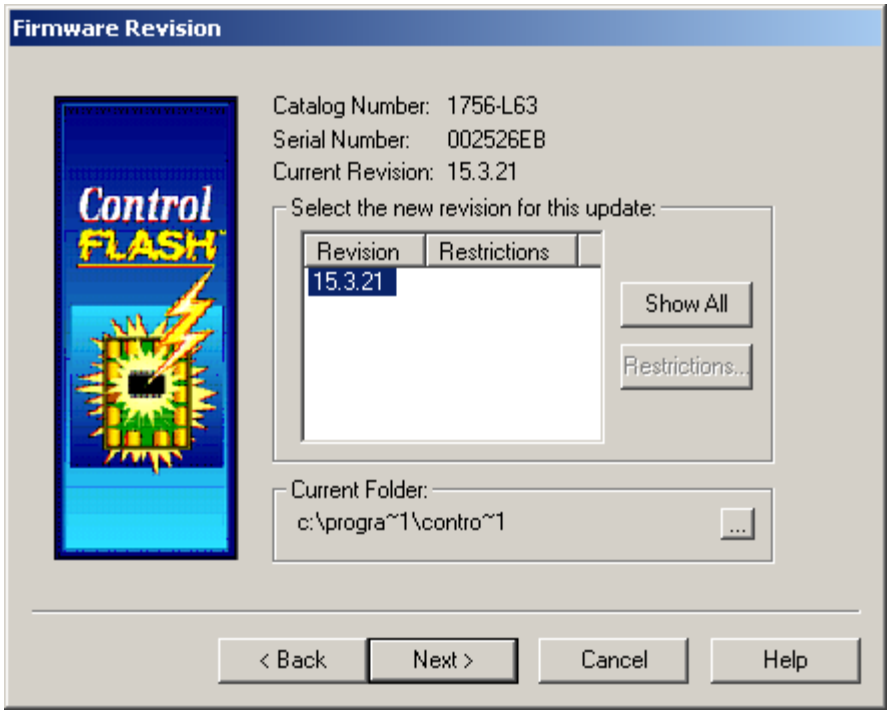


5. Double-click the device to select it.



6. Click Next.

7. Click Show All if you want to see all revisions available.

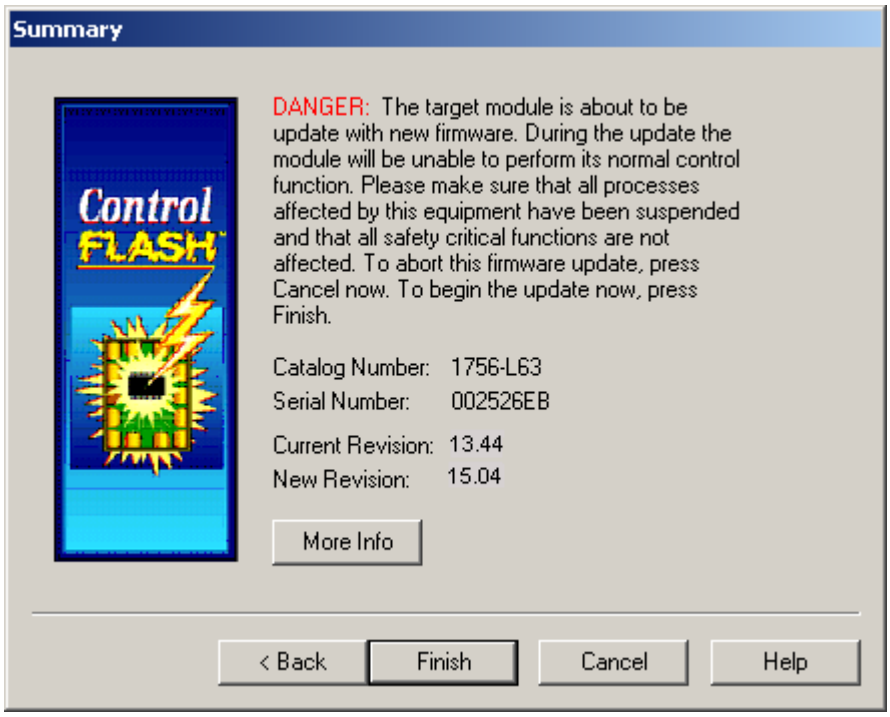


8. Select the correct revision for this upgrade and click Next.

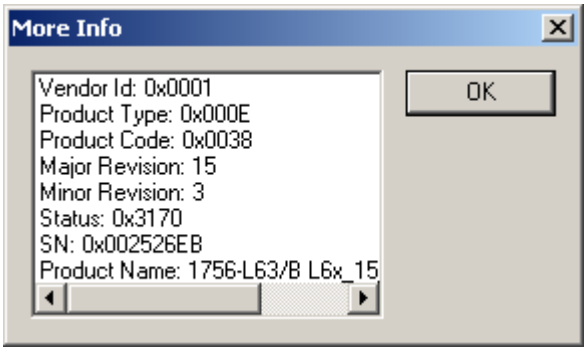
ATTENTION

Be sure that this upgrade is the correct one to make for your device. If it is not, unpredictable system operation could result. Contact your technical support specialist for more information.

The Firmware Revision dialog displays.

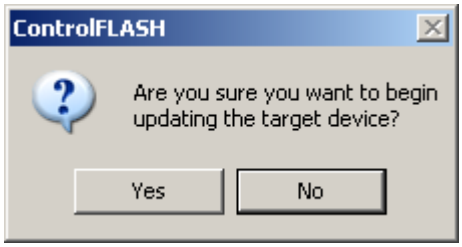


9. Click More Info if you want to know more about the revision you selected.



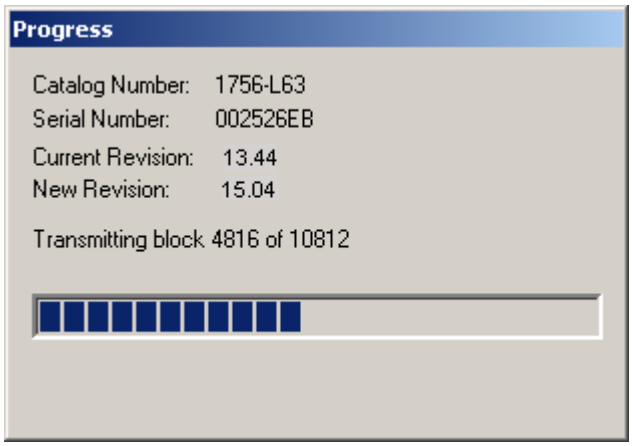
10. Click Finish when you are ready to upgrade the device.

The dialog displays.



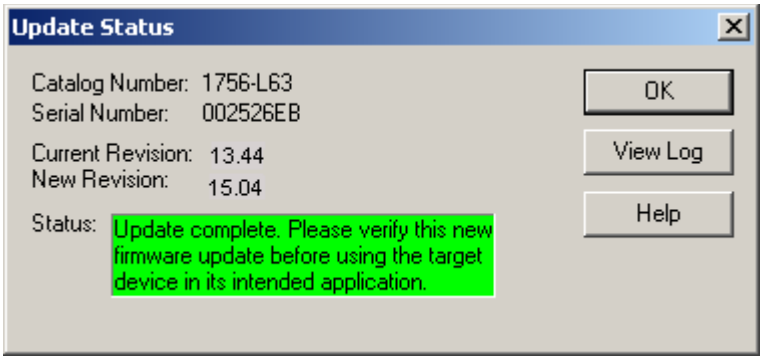
11. Click Yes if you are sure you want to upgrade the target device.

The upgrade is in progress.



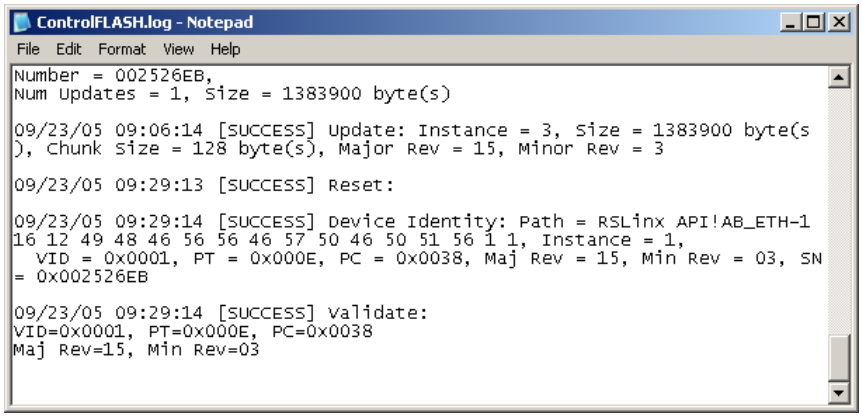
IMPORTANT Do not interrupt the upgrade. For example, do not unplug the module, remove power, or disconnect communication cable.

After the upgrade, the dialog displays.



12. Click OK.

13. Click View Log for a history of programming events in Notepad.



14. Click OK.

TIP If the upgrade does not complete successfully, check Appendix A of this manual for more information about errors.

The upgrade is now complete.

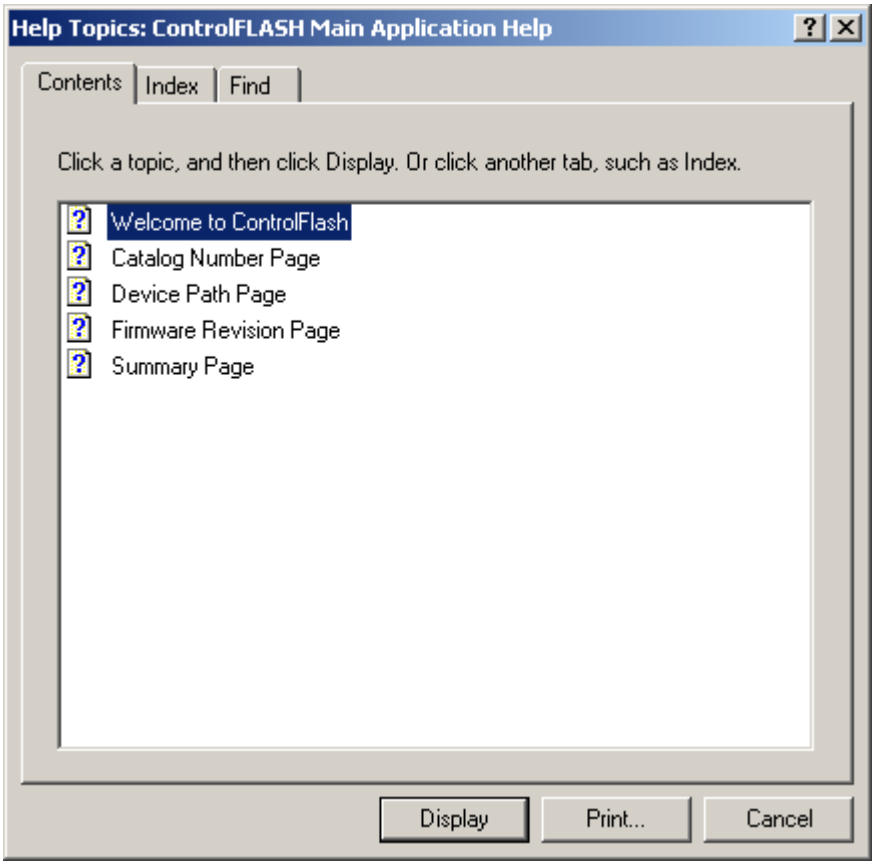
IMPORTANT Test the operation of the device you upgraded before using it in its intended application.

Modifying Download Restrictions

If download restrictions prevent you from completing the upgrade, you may need to modify restrictions. Contact your technical support representative to get instructions and obtain the required reset code.

Accessing the ControlFLASH Software Online Help

There is additional information in the online help for this application. Access help from the button that appears on each ControlFLASH software dialog.



For additional information about error messages, press F1 while the ControlFLASH software displays the error message.

ControlFLASH Software Error Messages

Introduction

This appendix describes common error messages you may see when running the ControlFLASH software.

Error Message	Description
Log Viewer Error The event log viewer (Notepad.exe) could not be found	Verify that the Notepad application has been installed on your system.
Catalog Registry Error	The catalog registry database could not be read. Check with your technical support representative to verify that the correct database has been loaded.
Load Driver Error	The ControlFLASH software could not find an essential support file for the selected catalog number. Check with your technical support representative to verify that the correct drivers have been loaded.
Invalid Catalog Number	The catalog number of the target device you selected does not match the catalog number selected in the Catalog Number dialog. You selected either an incorrect target device or catalog number. Select a device that matches the catalog number or a different catalog number
Catalog Directory Error	The catalog directory database could not be read. Check with a technical support representative to verify that the correct catalog database has been loaded.
Invalid Revision	The upgrade revision selected is not compatible with the selected target device. The selected firmware revision is either: • older than the firmware currently on the target device. • incompatible with the revision level of the target device. **ATTENTION:** Do not continue with the upgrade until you have verified that the upgrade is compatible with the selected device. Unpredictable system operation could result.
Instance Validation Error	The target device did not report enough information to be properly identified. Check with a technical support representative for help in resolving this problem.
Script File Error	The script file associated with the selected upgrade is corrupt. Check with a technical support representative to obtain a new script file.

Error Message	Description
Data File Error	The data file used in programming could not be read. Check with a technical support representative to obtain a new data file.
Out of Memory Error	Your system is low on or out of RAM memory. The ControlFLASH software could not allocate enough memory for data. Free up RAM space by: • shutting down other applications currently running. • increasing the size of your virtual memory. • purchasing additional RAM, if necessary.
Out of Memory Error Log File Error	The log file could not be accessed because of a file error. Either the log file: • could not be opened. • could not be written to because of an error. • could not be written to because the disk is full. **ATTENTION:** Check with your application engineer or supervisor before deleting any files. Verify that you are not deleting any files necessary for system operation. If the disk is full, you can free up disk space by: • deleting files from your c:\windows\temp directory. • uninstalling any unnecessary applications. • shutting down and restarting your computer.
Authenticate Error	The download restrictions placed on the selected revision could not be validated. Files containing validation information are either corrupted or have been deleted. Check with a technical support representative for help in restoring your restriction files.
Restriction System Error	The download restriction system could not read the master key disk. Check with a technical support representative for help in resolving this problem.
RSLinx Load Error	An error occurred while the ControlFLASH software tried to install the network protocol driver (DTL32.DLL). Verify that RSLinx Classic software is properly installed and configured.
Communication Error	An error occurred while the ControlFLASH software tried to communicate with the target device. Verify that: • all cable connections are secure. • the target device has power. • RSLinx Classic software is properly configured.
Mode Error	The target device is in a mode in which it cannot be programmed. Place the device into the appropriate mode.

How Are We Doing?

Your comments on our technical publications will help us serve you better in the future.
Thank you for taking the time to provide us feedback.
You can complete this form and mail (or fax) it back to us or email us at
RADocumentComments@ra.rockwell.com

Pub. Title/Type ControlFLASH Firmware Upgrade Kit

Cat. No. ControlFLASH 6.0 Pub. No. 1756-QS105A-EN-E Pub. Date January 2007 Part No. 957988-48

Complete the sections below. Where applicable, rank the feature (1=needs improvement, 2=satisfactory, and 3=outstanding).

Overall Usefulness	1	2	3	How can we make this publication more useful for you?
Completeness (all necessary information is provided)	1	2	3	Can we add more information to help you? procedure/step illustration feature example guideline other explanation definition
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Other Comments				You can add additional comments on the back of this form.

Your Name _____

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Would you like us to contact you regarding your comments?

___No, there is no need to contact me

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___Yes, please email me at _____

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Return this form to: Rockwell Automation Technical Communications, 1 Allen-Bradley Dr., Mayfield Hts., OH 44124-9705

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Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://support.rockwellautomation.com, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://support.rockwellautomation.com.

Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running.

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell tests all of its products to verify that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning, it may need to be returned.

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

www.rockwellautomation.com

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