

20-750-UFB-1 Universal Feedback Encoder Option Module Firmware Version 1.015

Catalog Number 20-750-UFB-1

These release notes correspond to major version 1, minor version 15 of firmware for the 20-750-UFB-1 Universal Feedback Encoder option module.

The following information is included in this document:

| Topic | Page |
|-------------------------------|------|
| Determining Firmware Revision | 1 |
| Firmware Upgrades | 3 |
| Enhancements | 7 |
| Corrected Anomalies | 7 |
| Known Anomalies | 8 |
| Restrictions | 8 |
| Compatible Revisions | 8 |

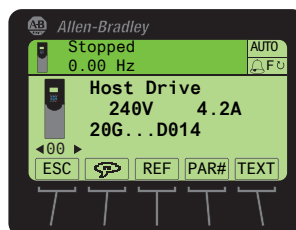
Determining Firmware Revision



This section describes procedures to determine the firmware revision of the 20-750-UFB-1 Universal Feedback Encoder Option Module.

Using the Drive LCD HIM (20-HIM-A6/-C6S)

1. Access the Status screen, which is displayed on HIM power up (or press the ESC *soft key* until this screen appears).

Figure 1 Status Screen



2. Use the  or  key to scroll to the drive Port in which the Option Module is installed (for example, Port 4, 5 or 6).







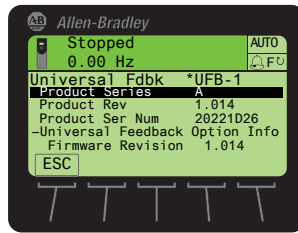
3. Press the  key to display the Option Module's last-viewed folder.
4. Use the  or  key to scroll to the DIAGNOSTIC folder.
5. Use the  or  key to select **Device Version**.
6. Press the  (Enter) key to display the Option Module information screen, which includes the firmware version (see [Figure 2](#)).

Figure 2 Option Module Information Screen

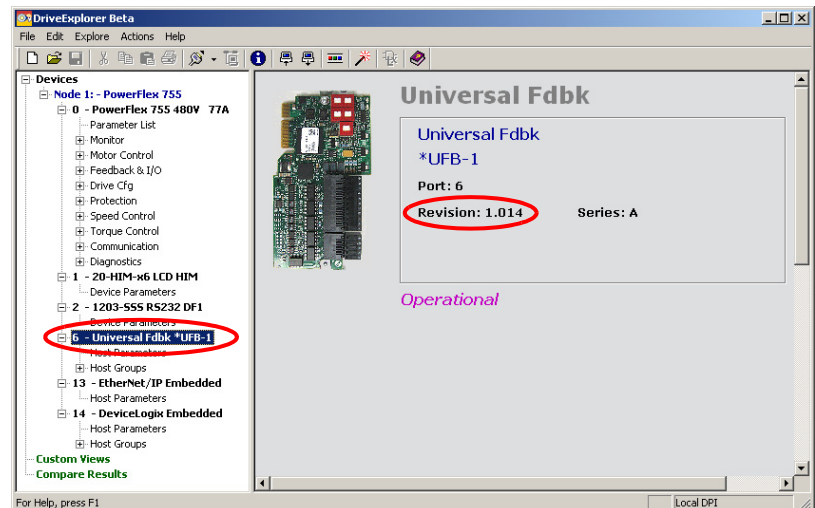


Using DriveExplorer Lite/Full

IMPORTANT You need DriveExplorer version 6.01 or later to interface with the PowerFlex 755 drive. To obtain the latest version, visit the Rockwell Automation Product Compatibility & Download Center (PCDC) site located at <http://www.rockwellautomation.com/global/support/pcdc.page>.

1. Launch DriveExplorer and go online with the drive in which the Option Module is installed. To connect to the drive, use a 1203-USB or 1203-SSS converter, or an EtherNet/IP network connection.
2. In the DriveExplorer treeview, select “Universal Fdbk *UFB-1” (see [Figure 3](#)) to display the module's properties, including its firmware revision, in the right pane of the DriveExplorer window.

Figure 3 Information Icon in DriveExplorer Window



Using DriveExecutive

IMPORTANT You need DriveExecutive version 5.01 or later to interface with the PowerFlex 755 drive. To obtain the latest version, visit the Rockwell Automation PCDC site located at <http://www.rockwellautomation.com/global/support/pcdc.page>.


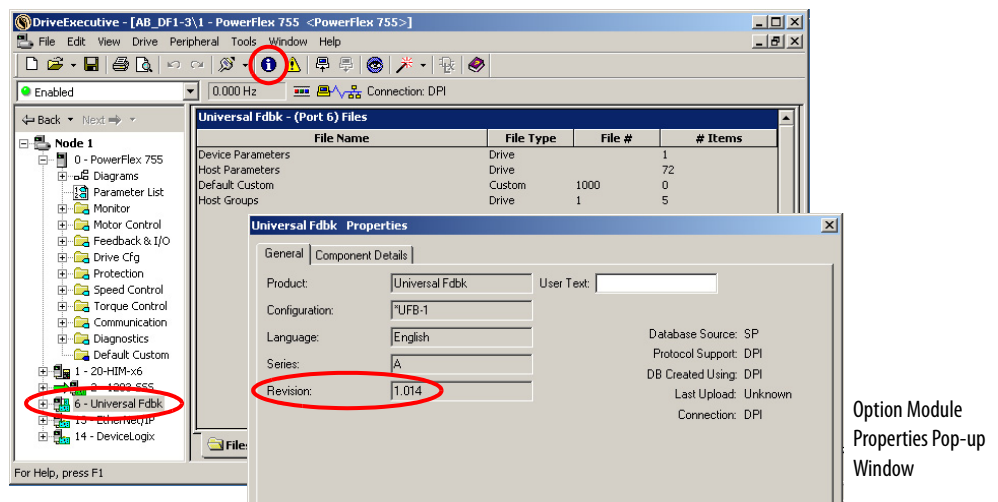
1. Launch DriveExecutive and go online with the drive in which the Option Module is installed. To connect to the drive, use a 1203-USB or 1203-SSS converter, or a network connection.
2. In the DriveExecutive treeview, select “Universal Fdbk” (see [Figure 4](#)) and click the information icon  to display the module’s Properties pop-up window. The module firmware revision is shown in the Revision field.

Figure 4 Information Icon in DriveExecutive Window



Option Module
Properties Pop-up
Window

Firmware Upgrades

This section describes how to upgrade the Option Module firmware. Flash kits for PowerFlex 750-Series Option Modules are available on the Rockwell Automation PCDC site located at <http://www.rockwellautomation.com/global/support/pcdc.page>. Flashing can be performed using a 1203-USB or 1203-SSS converter, or a network connection to the drive. For information about using a converter to connect to the drive, see the 1203-USB User Manual, publication DRIVES-UM001 or the 1203-SSS User Manual, publication 20COMM-UM001. These publications can be viewed or downloaded from the Literature Library web site at <http://literature.rockwellautomation.com>.



ATTENTION: Risk of injury or equipment damage exists. When performing a flash update, verify that the drive has stopped safely before starting a flash update.


Once a flash update starts, do not remove power from the drive until after the download is completed. If power is removed during a flash update, it is possible that the Option Module can be permanently damaged. An Option Module damaged in this way cannot be repaired.

IMPORTANT Flashing the firmware may restore some or all of the Option Module parameters to their default values. Before flashing, you can save your configuration using DriveExplorer or the HIM CopyCat feature.


Installing the Flash Kit

1. Go to the Rockwell Automation PCDC site at <http://www.rockwellautomation.com/global/support/pcdc.page> and install the flash kit for the 20-750-UFB-1 Option Module. (This also automatically installs the ControlFLASH software and saves the firmware files for use with HyperTerminal on your computer.)
2. You are now ready to use DriveExplorer, DriveExecutive, ControlFLASH or HyperTerminal to update the Option Module. Refer to the respective method and follow the instructions.

Using DriveExplorer Lite/Full to Flash Update

1. With the Flash Kit installed (see [Installing the Flash Kit](#) above), launch DriveExplorer and go online with the drive in which the Option Module is installed. To connect to the drive, use a 1203-USB or 1203-SSS converter, or an EtherNet/IP network connection.
2. In the DriveExplorer treeview, select “Universal Fdbk *UFB-1” (see [Figure 3](#)) and click the information icon  to display the module’s Properties dialog box.
3. In the 20-750-UFB-1 Properties dialog box, click the Details tab.
4. To start the flash update, click the **Flash Update...** button. Then select “1.015.01” from the list of available updates and click **Next >**. Follow the remaining screen prompts until the flash update is complete and the new firmware revision is displayed.

Using DriveExecutive to Flash Update

1. With the Flash Kit installed (see [Installing the Flash Kit on page 4](#)), launch DriveExecutive and go online with the drive in which the Option Module is installed. To connect to the drive, use a 1203-USB or 1203-SSS converter, or a network connection.
2. In the DriveExecutive treeview, select “Universal Fdbk” (see [Figure 4](#)) and click the information icon  to display the module’s Properties dialog box.
3. In the 20-750-UFB-1 Properties dialog box, click the Component Details tab.

4. To start the flash update, click the **Flash Update** button. Then select “20-750-UFB-1” from the list of available devices and click **Next** >.
5. Select “1.015.01” from the list of available updates and click **Next** >. Follow the remaining screen prompts until the flash update is complete and the new firmware revision is displayed.

Using ControlFLASH to Flash Update

1. With the Flash Kit installed (see [Installing the Flash Kit on page 4](#)), launch ControlFLASH by selecting **Start** > **(All) Programs** > **Flash Programming Tools** > **ControlFLASH**.
2. In the ControlFLASH Welcome screen, click **Next** >.
3. Do one of the following. When flashing the Option Module through a:
 - 1203-USB or 1203-SSS converter, choose “20-750-UFB-1 via DPI Comm” from the list, and then click **Next** >.
 - PowerFlex 750-Series network adapter or the embedded EtherNet/IP port on a PowerFlex 755 drive, choose “20-750-UFB-1 via 20-750 Series Comm” from the list, and then click **Next** >.
4. Expand the treeview for the communication path being used, and select the drive icon that represents the drive with the Option Module being updated. Then click **OK**.
5. With the Multiple Assemblies Found window displayed, select “Port X - Universal Fdbk” from the list and click **OK**.
6. With the Firmware Revision window displayed, select “1.015.01” from the list of available updates and click **Next** >. Follow the remaining screen prompts until the flash update is complete and the new firmware revision is displayed.

Using HyperTerminal to Flash Update

1. With the Flash Kit installed (see [Installing the Flash Kit on page 4](#)), launch HyperTerminal and go online with the drive in which the Option Module is installed. To connect to the drive, use a 1203-USB or 1203-SSS converter. (You cannot flash update with HyperTerminal using a network connection to the drive.)
2. Press the **Enter** key until the main menu ([Figure 5](#)) appears.

Figure 5 Main Menu

```

Main Menu - Enter Number for Selection
1> Display Setup Parameters
2> Display Event Queue
3> Flash Upgrade
  
```

- In the main menu, press **3** to flash upgrade. Then press the number key that corresponds to the “Universal Fdbk” module in the list, and press **Y** (for Yes) to update the flash code. The terminal program starts displaying the letter “C,” signaling the XMODEM protocol that the download may proceed.

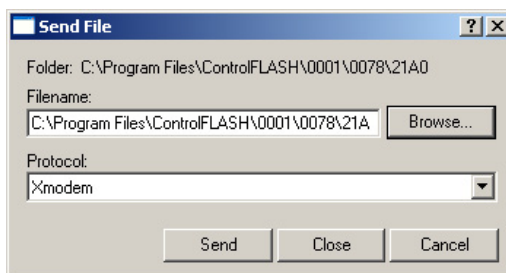
IMPORTANT You have one minute to complete steps 4 through 7 or HyperTerminal will return to step 2, where you must repeat steps 2 and 3.

TIP To cancel the flash update at any time, press **CTRL-X**.

- Select **Transfer > Send File** to display the Send File screen ([Figure 6](#)).
- Click **Browse** and navigate to the flash file located in:

C:\Program Files\ControlFLASH\0001\0078\21A0

Figure 6 Send File Screen



- In the Select File to Send window list, click on the “20-750-UFB-1_01_015_01_App.dpi” file. Then click **Open**. This file name now appears in the Filename box in the Send File screen.
- In the Protocol box, select “Xmodem.”
- Click **Send**. A dialog box appears and reports the update progress. **This process takes at least an hour for HyperTerminal to complete.** When it is complete, the message “DPI Peripheral Flash Program Updated” appears. Press any key to continue.

IMPORTANT Keep the drive powered until after the flash is completed.

Enhancements

There are no enhancements provided in this revision of firmware.

Corrected Anomalies

This section describes the anomaly corrected in this revision of firmware.

Pepperl+Fuchs Linear Position Encoder

The anomaly concerned the interaction with a Pepperl+Fuchs linear position encoder and the 20-750-UFB-1 Universal Feedback Encoder Option Module. The Pepperl+Fuchs linear position encoder communicates to the 20-750-UFB-1 Option Module using the Standard Serial Interface (SSI). The reading head on the linear position encoder reads the code rail and sends the position to the 20-750-UFB-1. When the code rail is not in the Pepperl+Fuchs reading head, the reading head sends an out-of-rail alarm to the 20-750-UFB-1 Option Module.

When the anomaly occurred, the 20-750-UFB-1 Option Module would stop communicating with the Pepperl+Fuchs linear position encoder. The 20-750-UFB-1 would not re-establish communication when the code rail entered the reading head, and the drive did not receive position feedback data.

Three things could trigger the anomaly:

- The drive was powered up when the code rail was not in the reading head.
- There was a command to initialize the 20-750-UFB-1 Option Module when the code rail was not in the reading head.
- Change to the value of a parameter in the 20-750-UFB-1 Option Module that can only be modified when the drive is stopped when the code rail was not in the reading head. (This causes a command to initialize the 20-750-UFB-1 Option Module.)

This would occur regardless of the settings for parameters 9 [FB0 Loss Cfg] and 39 [FB1 Loss Cfg]. Even if the drive was configured to ignore the feedback loss or alarm in response to the feedback loss, the 20-750-UFB-1 Option Module would stop communicating to the linear position encoder.

Known Anomalies

This section describes the known anomalies that are present in this revision.

Functionality with SSI Full Digital Feedback Encoders

When the UFB is used with a Synchronous Serial Interface (SSI) full digital feedback encoder, disconnecting the SSI encoder may result in the system running at an unexpected speed. To determine if this anomaly affects you and for additional information, please refer to Knowledgebase Document Number 745654.

Restrictions

You must use drive Main Control Board (MCB) firmware 3.002 or later if your application requires the drive to fault when the code rail is not in the reading head.

If you use this new 20-750-UFB-1 Option Module firmware 1.015 with older MCB firmware, the drive will not fault when the code rail is not present.

Compatible Revisions

To use this revision of firmware, update your drive software tools.

| Drive Software Tools | Firmware Version |
|----------------------------|-------------------------|
| DriveExplorer Lite/Full | 6.01 (or later) |
| DriveExecutive | 5.01 (or later) |
| PowerFlex 750-Series Drive | All versions compatible |
| 20-HIM-A6 or 20-HIM-C6S | All versions compatible |
| RSLinx Classic | 2.43 (or later) |

Notes:

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At <http://www.rockwellautomation.com/support/>, 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://www.rockwellautomation.com/support/>.

Installation Assistance

If you experience a problem within the first 24 hours of installation, review the information that is contained in this manual. You can contact Customer Support for initial help in getting your product up and running.

| | |
|---------------------------------|--|
| United States or Canada | 1.440.646.3434 |
| Outside United States or Canada | Use the Worldwide Locator at http://www.rockwellautomation.com/support/americas/phone_en.html , or contact your local Rockwell Automation representative. |

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

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

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