FleX-Net™ FX-4000 Firmware Upgrade and Downgrade Procedure

This document describes how to upgrade the firmware on FleX-Net™ FX-4000 or FleX-Net™ FX-2000N panels to FleX-Net™ FX-4000 version 2.0.3.

It also describes how to downgrade the firmware on a single component from FleX-Net™ FX-4000 version 2.0.3 to either FleX-Net™ FX-4000 version 1 or FleX-Net™ FX-2000N.

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1 Upgrade from FleX-Net™ FX-4000 version 1.12 or 1.15 to FleX-Net™ FX-4000 version 2.0.3

1.1 You need

- MGC-4000 Configurator software version 2.0.3
- Windows 10 or newer computer with a USB port
- MGC-CONFIG-KIT4 Fire Panel Configuration Kit (this kit includes the cables required to connect the computer to the Fire Alarm Control Panel)
- Registered CodeMeter key
- A copy of the version 2.0.3 firmware

1.2 Export the Job

1. Insert your CodeMeter key into the laptop.
2. If the job file is **not on your laptop**, connect to the FleX-Net™ FX-4000 panel with the MGC-4000 Configurator version 1.12 or 1.15 and get the job.
3. Click **Job** > **Export Job** and save the job with a descriptive name (for example **SiteName_Backup_Date**).

1.3 Update MGC-4000 Configurator to version 2.0.3

1. Install the **new MGC-4000 Configurator version 2.0.3**.

1.4 Import the Job into MGC-4000 Configurator version 2.0.3

1. In the MGC-4000 Configurator version 2.0.3, click **Job** > **Import Job** and import the job that you exported in section 1.2.
2. Review the job, and make adjustments as required.
3. Click **Tools**, then click **Build Job** and verify that the job is built without any errors.

   Note: If there is no **Tools** menu, click **File**, then **User Preferences**, then select **Show Tools Menu**.

1.5 Set the Panel to Factory Default

1. Press the MENU button to activate the menu mode. 

2. Use the UP and DOWN buttons to scroll the cursor to **Configuration**. 
3. Press ENTER. 
4. Use the UP and DOWN buttons to scroll the cursor to **Factory**.
5. Press ENTER. 

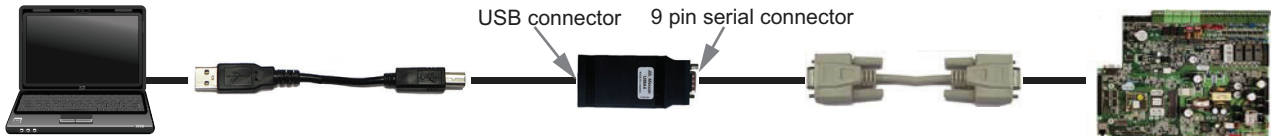
   The system displays the following message:

   Are you sure you want to change the system configuration ?Y
6. Press ENTER. 
7. the system is restored to factory defaults and all the jobs are made inactive.

1.6 Connect with MGC-4000 Configurator version 2.0.3 and Delete the Jobs

This step removes all the job files, reducing the risk of conflicts during the upgrade.

1. Connect your laptop to the panel with the UIMA4 interface, a USB A to B cable, and a serial cable as shown below. See LT-6230 (available on **http://mircom.com**) for more information.



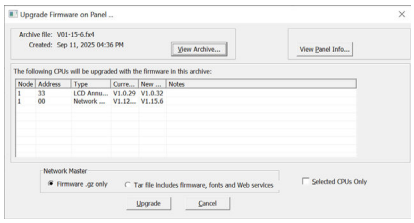
Computer | USB A to B male cable | UIMA4 interface | Serial cable | P9 on main board

Note: Make sure that switch 7 of SW2 is OFF and switch 8 of SW2 is OFF on the main board.

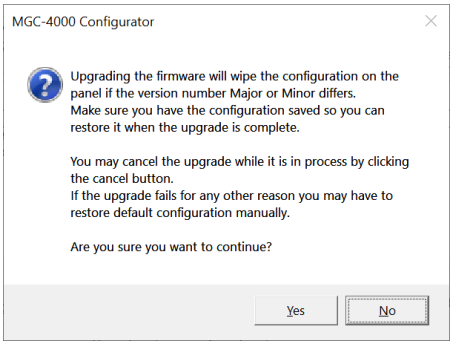
2. Start the **new MGC-4000 Configurator** and make sure that the correct serial port is selected in the User Preferences window.
3. Click **Panel** > **Connect**.
4. Cick **Panel** > **Manage Jobs**.
5. In the **Manage Jobs** window, delete **all job files**.
6. Click **Panel** > **Delete Backup** to delete the backup job, if one exists.

1.7 Upgrade the Firmware to version 2.0.3

1. Click **Panel** > **Upgrade Firmware**.
2. Select the version 2.0.3 firmware file. It has the extension **.f4k**, for example: **FX4000-V02-0-3.f4k**.
3. In the **Upgrade Firmware on Panel** window, click **Upgrade**.



4. A warning appears saying that you should have the configuration backed up. Click **Yes**. (You backed up the job in section 1.2.



5. The MGC-4000 Configurator will upgrade the firmware on **all the CPUs on the site**.

1.8 Set the Panel to Factory Default

1. Press the MENU button to activate the menu mode. 
2. Use the UP and DOWN buttons to scroll the cursor to **Configuration**. 
3. Press ENTER. 
4. Use the UP and DOWN buttons to scroll the cursor to **Factory**.
5. Press ENTER. 

   The system displays the following message:
   Are you sure you want to change the system configuration ?Y
6. Press ENTER. 
7. the system is restored to factory defaults and all the jobs are made inactive.

1.9 Perform a Network Restart

1. On the panel's main display, press the MENU button. 
2. Scroll down to **Network Restart**, and press ENTER. 
3. Enter the passcode, then press ENTER. 
4. The system asks if you want to reboot the whole network. Press ENTER to confirm. 
5. The system restarts.

1.10 Confirm that all CPUs were upgraded successfully

1. In the MGC-4000 Configurator version 2.0.3, reconnect to the panel, then click **Panel** > **Panel Information**.
2. In the Panel Information window, check that the main CPU on each node is running firmware **version 2.0.3**.

1.11 Send the Job

1. Connect to the panel.
2. Send the job to the panel.

1.12 Test and Verify

1. Perform a brief functional test:
   - Place a device into alarm, supervisory, and trouble conditions.
   - Confirm proper system response.
2. Document the results and update site records.

2 Upgrade from FleX-Net™ FX-2000N version 12.2.41 or version 14.0.953 to FleX-Net™ FX-4000 version 2.0.3

2.1 Before you begin

- Make sure you have a record of the job. After you upgrade, you might need to recreate the job.
- There must be free space for the quad loop adder module ALCN-4792MISO. The analog loop field wiring must be connected to the ALCN-4792MISO, not Loop 2 on the main board.
- If you plan to use MIX-4000 devices, you must also install an ALCN-960MISO quad loop adder module.
  See the FleX-Net™ FX-4000 manual LT-894MP for instructions on wiring ALCN-4792MISO and ALCN-960MISO.
- Mircom recommends making a new battery calculation after the upgrade is complete.

2.2 You need

- MGC-4000 Upgrade Wizard version 2.0.3 - installed with MGC-4000 Configurator version 2.0.3
- Windows 10 or newer computer with a USB port
- MGC-CONFIG-KIT4 Fire Panel Configuration Kit (this kit includes the cables required to connect the computer to the Fire Alarm Control Panel)
- Registered CodeMeter key
- A copy of the version 2.0.3 firmware

2.3 Get the Job and Make Changes

1. Insert your CodeMeter key into the laptop.
2. If the job file is **not on your laptop**, connect to the FleX-Net™ panel with the **MGC Configurator version 12.2.40 or version 14.0.9** and get the job.
3. Make the following changes to the job in order to make it compatible with FleX-Net™ FX-4000.
   - Delete all Lamp Test switches and add them back after you import the job into the MGC-4000 Configurator version 2.0.3.
   - The FleX-Net™ FX-4000 Configurator will not import loop 2. Move all devices, zones and correlations from loop 2 to a loop adder.
   - Remove all split amplifiers.
4. Click **Tools**, then click **Build Job** and verify that the job is built without any errors.

   Note: If there is no **Tools** menu, click **File**, then **User Preferences**, then select **Show Tools Menu**.

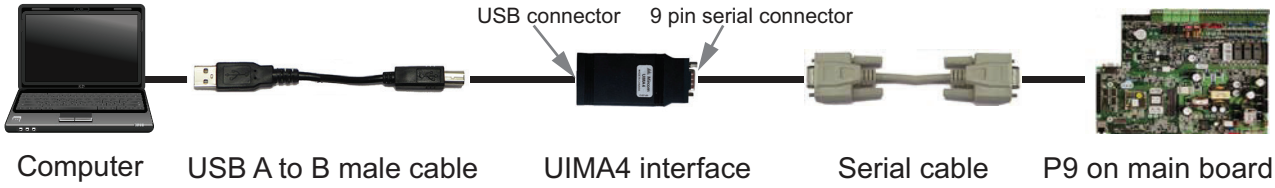
2.4 Export the Job

1. Click **Job** > **Export Job** and save the job with a descriptive name (for example **SiteName_Backup_Date**).

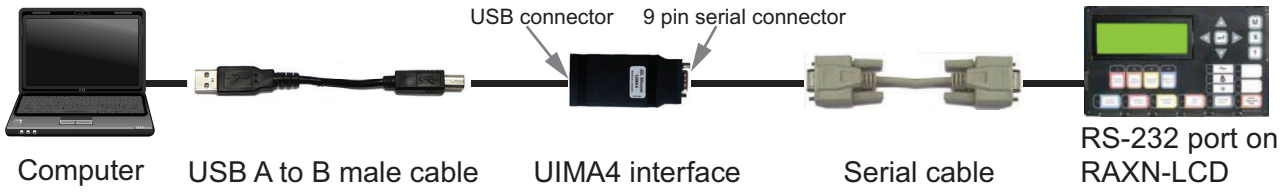
2.5 Use the MGC-4000 Upgrade Wizard

1. Connect the computer to the CPU as shown in the pictures below.

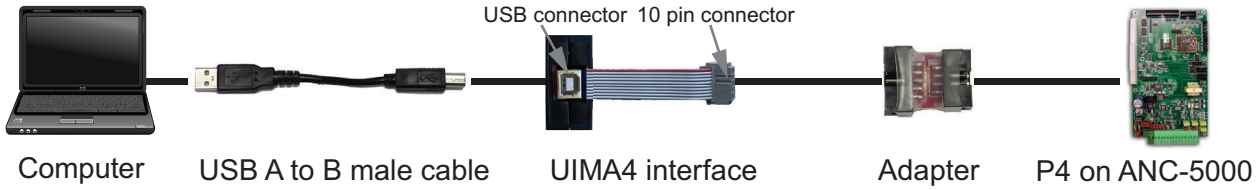
Main CPU on FleX-Net™ FX-2000N Series Panels:



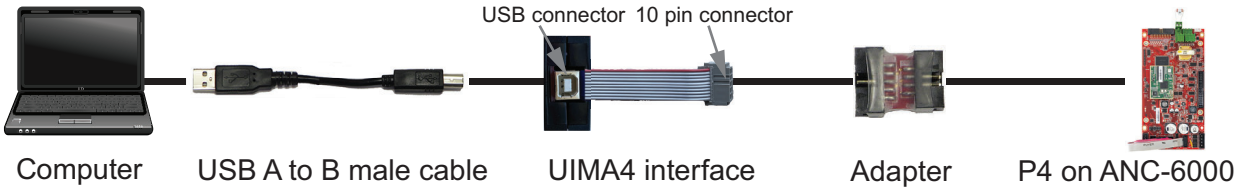
RAXN-LCD Remote Annunciator:



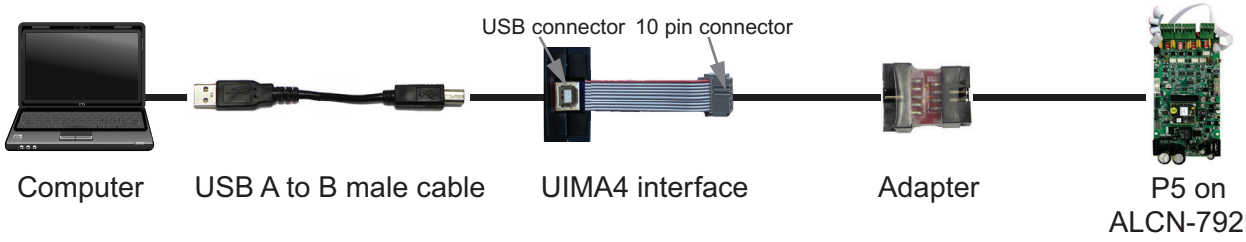
ANC-5000 Audio Controller:



ANC-6000 Audio Controller:



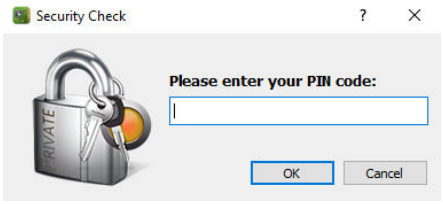
ALCN-792M Loop Controller:



ALCN-792MISO Loop Controller:

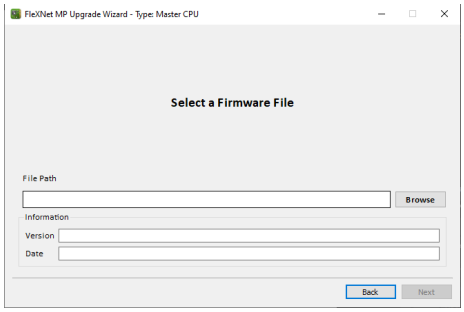
Computer USB A to B male cable P7 on ALCN-792MISO

2. Install the MGC-4000 Upgrade Wizard.
3. Insert your FleX-Net™ CodeMeter key into the computer.
4. Start the MGC-4000 Upgrade Wizard.
   The MGC-4000 Upgrade Wizard prompts you for your PIN.
5. Type your four digit PIN.

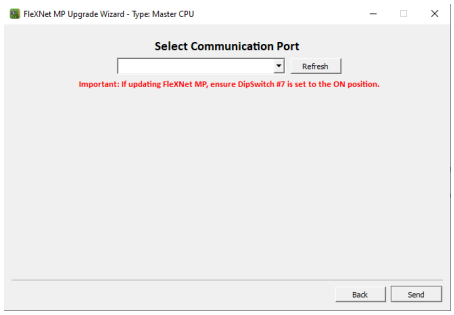


6. Click the kind of CPU that your laptop is connected to.

7. Click **Browse** and select the version 2.0.3 firmware file. It has the extension **.f4k**, for example: **FX4000-V02-0-3-BN-4.f4k**.



8. Click **Next**.
9. Select the communication port that your computer is using to connect to the CPU.

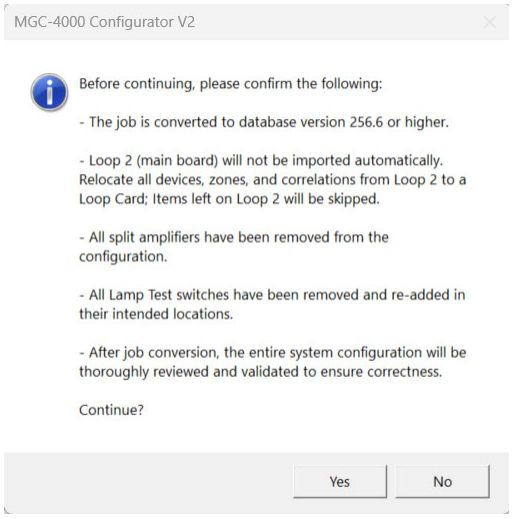


10. Click **Send**.
11. Wait while the firmware is upgraded.
12. When the upgrade is complete, click **Close**.
13. Repeat steps 1 to 12 for every CPU in the system.

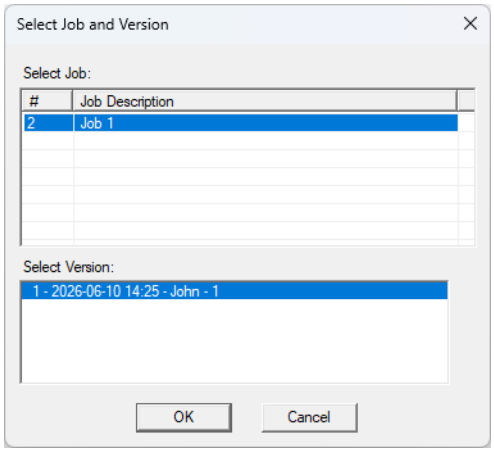
2.6 Import and Send the Job

1. In the MGC-4000 Configurator version 2.0.3, click **Job** > **Import V12/V14 Job** and import the job that you exported in section 2.4.

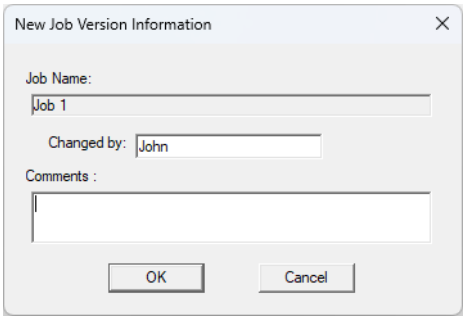
   A warning message appears, describing the changes that you should have already made in the job (section 2.3).



2. Click **Yes** in the warning message.
3. Select the FleX-Net™ FX-2000N job file you want to import, then click **OK**.
4. Select the job version to import, then click **OK**.



5. Enter a comment for this job version, then click **OK**.



A list of validation warnings appears.

6. Click **Save List** to save the list of warnings, then click **Yes**.

Attention: **When converting a job from FleX-Net™ FX-2000N to FleX-Net™ FX-4000, the Configurator skips all devices, zones and correlations on loop 2.**

After importing the job, review and validate it to make sure it is correct.

7. Review the list of warnings and the job, and make adjustments as required.
8. Click **Tools**, then click **Build Job** and verify that the job is built without any errors.

   Note: If there is no **Tools** menu, click **File**, then **User Preferences**, then select **Show Tools Menu**.
9. Connect to the panel.
10. Send the job to the panel.

3 Downgrade a Component using the MGC-4000 Upgrade Wizard

The MGC-4000 Upgrade Wizard lets you downgrade the firmware on a single CPU in a FleX-Net™ FX-2000N or FleX-Net™ FX-4000 system, so that it can communicate with the rest of the system. You can downgrade from FleX-Net™ FX-4000 version 2.0.3 to an earlier version of FleX-Net™ FX-4000, or to FleX-Net™ FX-2000N version 12 or 14.

The following CPUs can be downgraded:

- Main FleX-Net™ FX-4000 circuit board
- ANC-4000
- RAXN-4000LCD, RAXN-4000LCDG
- ALCN-4792MISO

The MGC-4000 Upgrade Wizard can downgrade a component from version 2.0.3 to these versions:

- 1.15.7
- 1.15.602
- 1.12.657
- 1.12.12
- 14.0.953
- 12.2.41

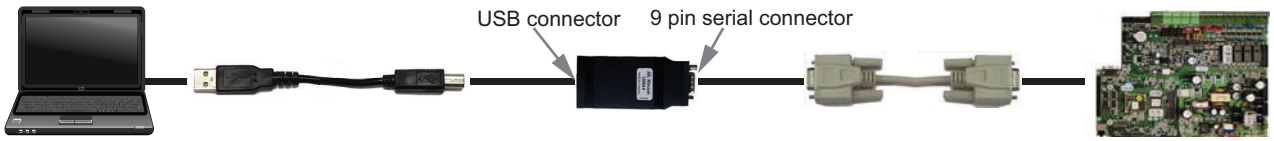
3.1 You need

- MGC-4000 Upgrade Wizard version 2.0.3 - installed with MGC-4000 Configurator version 2.0.3
- Windows 10 or newer computer with a USB port
- MGC-CONFIG-KIT4 Fire Panel Configuration Kit (this kit includes the cables required to connect the computer to the Fire Alarm Control Panel)
- Registered CodeMeter key
- A copy of the firmware that you want to load onto the CPU

Attention: This process erases all the information on the affected CPU. Get the jobs from the panel and back up your configurations before continuing.

1. Connect the computer to the CPU as shown in the pictures below.

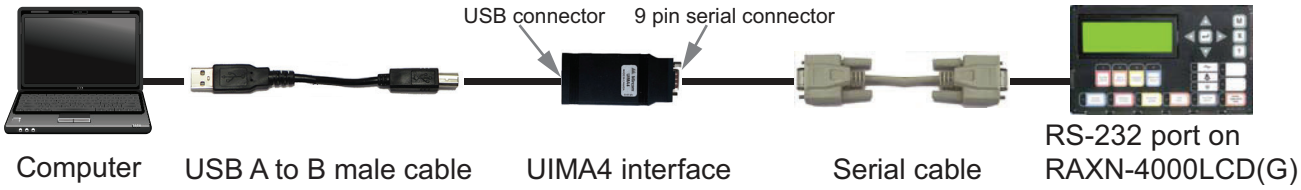
   Main CPU on FleX-Net™ FX-4000 Series Panels:



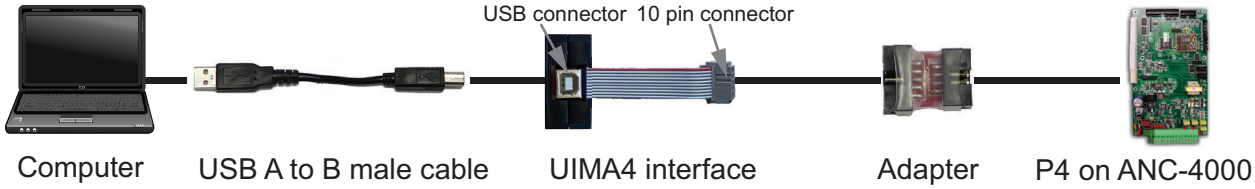
Computer | USB A to B male cable | UIMA4 interface | Serial cable | P9 on main board

Note: On FleX-Net™ FX-4000 boards, turn switch 7 of SW2 ON and switch 8 of SW2 OFF in order to use the MGC-4000 Upgrade Wizard. After the firmware upgrade is complete, turn both switch 7 and switch 8 OFF.

RAXN-4000LCD(G) Remote Annunciator:

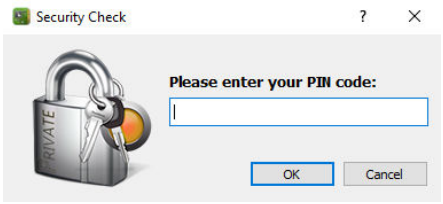


ANC-4000 Audio Controller:



ALCN-4792MISO Loop Controller:

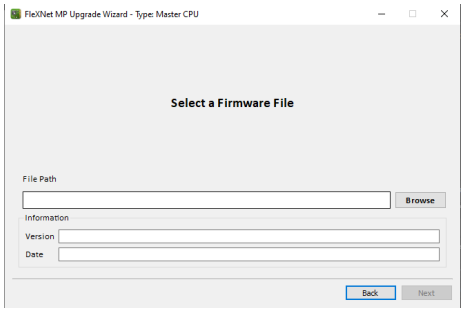
2. Install the MGC-4000 Upgrade Wizard.
3. Insert your CodeMeter key into the computer.
4. Start the MGC-4000 Upgrade Wizard.
   The MGC-4000 Upgrade Wizard prompts you for your PIN.
5. Type your four digit PIN.



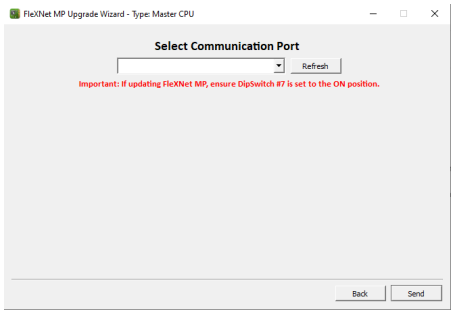
Note: **To downgrade the firmware, you must use the same ESD number as the organization that configured the panel, unless it is a new blank panel.**

6. Click the kind of CPU that your laptop is connected to.

7. Click **Browse** and choose the firmware file. The file name can have one of three extensions.
   The extension **.gz**: a firmware file for one CPU.
   The extension **.fx2**: a file containing the firmware for all FleX-Net™ CPUs.
   The extension **.fx4**: a file containing the firmware for all FleX-Net™ FX-4000 CPUs.



8. Click **Next**.
9. Select the communication port that your computer is using to connect to the CPU.



10. Click **Send**.
11. Wait while the firmware is upgraded.
12. When the upgrade is complete, click **Close**.
13. Repeat steps 1 to 12 for every CPU in the system.