

Title: i-Controller 2.0 Firmware Loading Using USB

This work instruction describes how to configure a micro-USB thumb drive and use it to update the firmware in the i-Controller 2.0 unit controller.

NOTE: The i-Controller 2.0 will require a micro-USB male to USB-A female adapter or a micro-USB drive.

Format the USB

Before loading program file to the micro-USB, verify the drive has been formatted to the FAT32 file system and drive is not larger than 32 GB. If the file system is not correct, format the drive now, prior to loading firmware file.

Configure the USB Thumb Drive

1. Connect a blank USB thumb drive to the PC where the i-Controller configuration files are located.
2. Navigate to the USB thumb drive.
3. Within the USB thumb drive, create a folder named "UPGRADE". See Figure 1.

NOTE: **ONLY** the i-Controller files and folders are on the thumb drive. Additional folders or files will corrupt the firmware update.



Figure 1. USB Folder Structure

Copy Application files to USB Drive

1. Locate the i-Controller configuration files.
2. Copy, then paste the "Autorun.ap1" file to the "UPGRADE" folder. See figure 1.
3. Copy, then paste the "CONFIG_1.txt" file to the root of the USB drive. See figure 2.
4. After the configuration files have been copied to the thumb drive, safely remove the USB drive from the PC.



Figure 2. USB Folder Structure

Transfer Firmware Files to i-Controller

1. Locate the i-Controller 2.0.
2. Verify the i-Controller 2.0 has power applied and is 'ON'.
3. Use adapter, if required, and insert the USB thumb drive into the i-Controller 2.0 as seen in figure 3.

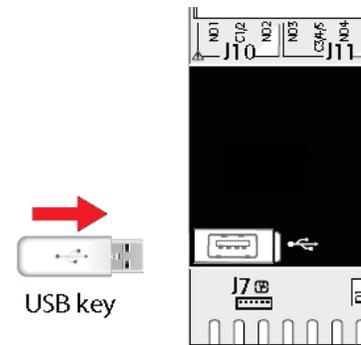


Figure 3. Insert USB into Port

4. When the USB thumb drive is inserted into the i-Controller 2.0, the upload screen will display as seen in figure 4.

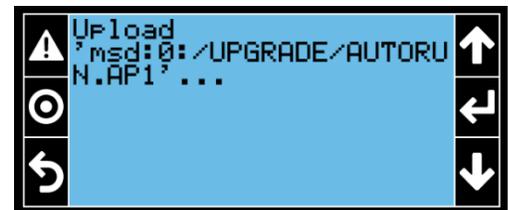


Figure 4. i-Controller Upload screen

Do not remove the USB thumb drive once this process starts.

5. The display will scroll through several loading screens.

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- When the firmware update is complete, the display returns to the 'Overview' screen (see figure 5).

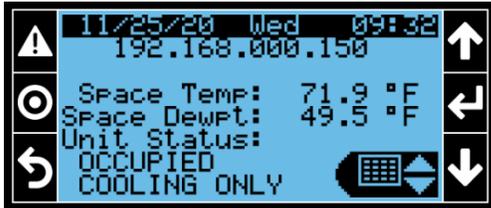


Figure 5. Overview screen

NOTES:

- During the firmware update, the controller will automatically reboot.
- The firmware update may take up to **10-minutes** to complete.
- Do not remove power or the USB thumb drive during the firmware update process.

Importing the *CONFIG_1.TXT* file

Use the display to perform the following steps:

- If the "Standby" screen is displayed (see figure 6.), press the program button to go to the "Overview" screen. See figure 7.



Figure 6. Flö i-Controller Standby Screen



Figure 7. Overview Screen

- From the "Overview" screen, press the program button, , three times to go to the "Settings Menu" as seen in figure 8.
- In the "Settings Menu" press the "UP" arrow to go to the "Import/Export" selection and press "Enter" button . See figure 8.



Figure 8. Display Settings Menu

- Press the "Enter" button to move the flashing cursor to the "Import/Export:" selection. Use the "UP" arrow to set selection to "IMPORT" and press "Enter" to select change and move cursor to the next field.
- Use the "UP" arrow to set "Memory type:" field to "USB" and press "Enter" to select change and move cursor to the next field.
- Use the "UP" arrow to set the "File name:" field to "CONFIG_01" and press "Enter" to select change and move cursor to the next field.
- The cursor is in the "Confirm" field now. Verify all settings. See figure 9.



Figure 9. Unit Configuration Settings

- Once settings are verified, use the "UP" arrow to set the "Confirm:" field to "Yes" and press "Enter" to begin import. "Operation done" will be displayed once the import has completed. See figure 10.

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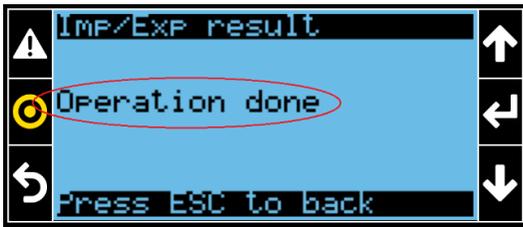


Figure 10. Import complete Screen

9. Remove the USB from the USB Port. See figure 3.

Importing of the CONFIG_1.txt file is complete.

Verify Successful Firmware Update

After updating the i-Controller firmware, verify the firmware update was successful by verifying the firmware revision using the display.

1. Use the i-Controller display to navigate to the 'Information' screen
2. From the 'Overview' screen, use the quick menu options to select the 'Information Menu'  and press 'Enter' .
3. Verify the correct software version number is displayed next to SW ver. on the Information screen. See figure 11.



i-Controller
Firmware
Revision

Figure 11. Information Screen