3 October 2023

CCFC Outdoor Observation and Surveillance Field Camera Recovery and Update Manual

Background

In certain versions of the CCFC, a flash chip can return corrupted data. This condition affected cameras with operating systems (OS) prior to v2.9 and serial number range 2333 to 2694. There are two main symptoms that indicate a problem with the CCFC:

- Symptom 1: Unable to communicate with the camera through any of the interfaces (direct connect, Ethernet, Wi-Fi). This comprises approximately 80% of all instances of failure.
- Symptom 2: Able to access the camera only through Ethernet and produces the FailSafe webpage. The 2.8 firmware does not load.

What Has Been Done

A new CCFC OS has been developed, v2.9, and is available at www.campbellsci.com/ccfc. Please refer to the *Downloads* section. This new OS addresses the issue by updating the bootloader, which corrects the corrupted data. Depending on the CCFC status, the end user can update to OS v2.9. In cases where the CCFC is nonfunctional, factory repair is necessary.

Determining CCFC Status

Depending on the state of the CCFC in question, the OS may be updated in the field by customers with functional units. If the unit is dead, the unit must be returned to Campbell Scientific for service. There are three possible states for a CCFC:

1. Normal Mode: The unit may be functioning normally; in which case, a simple two-step OS update will prevent the problem from ever occurring.
2. Failsafe Mode: The unit may be operating in failsafe mode; in which case, it may be possible to perform the two-step OS update.
3. Nonfunctional: The unit may be completely nonfunctional; in which case, the unit must be returned to Campbell Scientific under a return merchandise authorization (RMA) for repair.

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Two-Step OS Update

Normal Mode Process

1. Load the web page for the CCFC (www.campbellsci.com/ccfc) and use the menu on the left side to navigate to **Settings > Advanced > Update**.
2. On that page, click on the **Upload File** button, select the **CCFC_FW_2_9_alpha.tar.gz** file, and press the **Update** button.
3. The update process will take about two minutes to complete. Once it's done, the web page should reload, and the *Application Firmware* version should read *Version 2.9alpha*.
4. Repeat the update process with the *CCFC_FW_2_9.tar.gz* file. When completed, the *Application Firmware* version should read *Version 2.9*.

Failsafe Mode Process

In this situation, the main CCFC OS is corrupted, but the failsafe OS is still functional. In failsafe mode, the CCFC boots up and the external LED flashes on for one second and off for three seconds.

When in this mode, the CCFC will always have a fixed IP address of **192.168.1.90**, which may or may not be accessible to the end user via Wi-Fi or Ethernet, depending on their network configuration.

To determine your computer's IP address:

1. Right click on the network connection in the system tray in the lower right corner of your screen.
2. Open your network and internet settings.
3. Click on **Properties** for your network connection.
4. There will be a setting called **IPv4 address**. If this address starts with **192.168.xx.xx**, then the CCFC should be accessible when plugged into the same network.
5. Otherwise, a direct connection between the computer and CCFC will be required.

Directly connecting to the CCFC:

1. Use an Ethernet cable to connect directly between the computer and CCFC.
2. Right-click on the network connection in the system tray in the lower right corner of your screen.
3. Open your network and internet settings.
4. Click on **Properties** for your network connection.
5. Click on **Edit** under the *IP assignment* section.
6. Change the setting from **Automatic** to **Manual**.
7. Click the **IPv4** switch to set it **On**.
8. Enter **192.168.1.100** in the *IP address* box.
9. Enter **255.255.0.0** in the *Gateway* box.
10. Click **Save** to commit the changes.

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To update the CCFC OS in failsafe mode:

1. Access the CCFC failsafe webpage using a Firefox web browser at http://192.168.1.90.
2. Rename the *CCFC_FW_2_9_alpha.tar.gz* file to **CC5MPX_FW_2_9alpha.tar.gz**.
3. Load the **CC5MPX_FW_2_9alpha.tar.gz** file in the *Fail Safe* web page.
4. Click the **Update** button to start the process.
5. Once complete, the CCFC will automatically reboot and start up as normal.
6. The browser will need to manually be reloaded after about three minutes to load the new web page.
7. After this step, follow the *Normal Mode Process* instructions above with the *CCFC_FW_2_9.tar.gz* file.
   Note: This means the IP address has changed back to the 169.254.99.99 and you'll have to send the file from the IP page instead of the 192.168.1.90.
8. **Important**! Be sure to undo the IP address changes on your computer if directly connecting to the CCFC.

We appreciate your business. Please contact the Campbell Scientific Technical Support Team at (435) 227-9100 if you have any questions or difficulties.

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