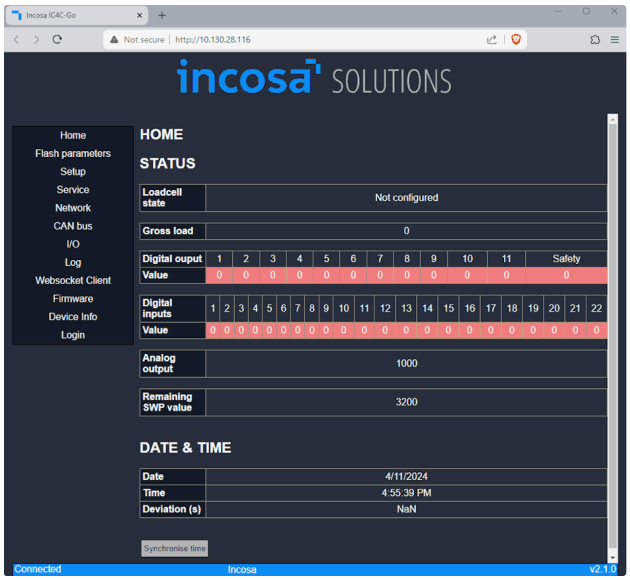
Public 24.2 - v2.1.0

Summary

New Product Features

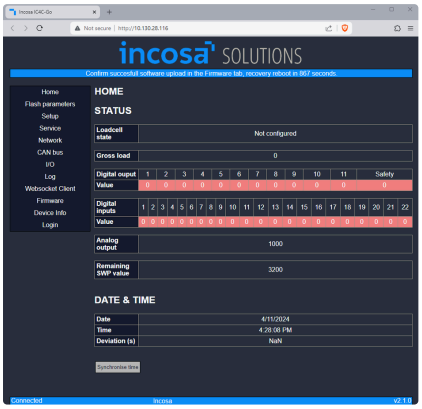
Improved Firmware Upload Process



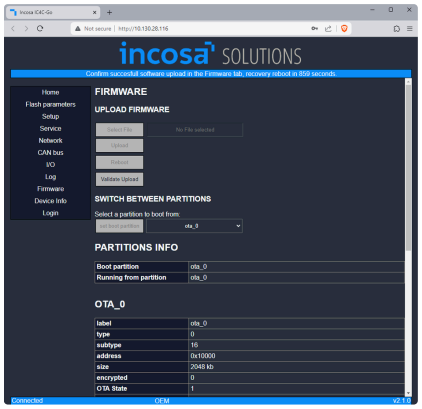
User verification for Successful Firmware Upload

When uploading a new firmware to the I•C4C GO there is a small that file gets corrupted when transmitting it from your device.
To be able to recover from a corrupted firmware upload the device has two memory slots that are foreseen for firmware.
One slot contains the firmware that is being executed, the other slot contains the firmware that has been upload by the user.
After a successful firmware upload, the memory slot from which the device has to load the firmware at the next boot will be changed.
In previous releases the software was performing a self-check to validate the new firmware.
In some cases this self-check wasn't extensive enough, and unable to detect corrupted software.
This caused some devices to be unrecoverable without a programming cable.
Starting from this release the self-check has been removed and user input is required to validate the new firmware.
After uploading new firmware and rebooting the device the user has 15 minutes to connect to the web-interface and validate the software.

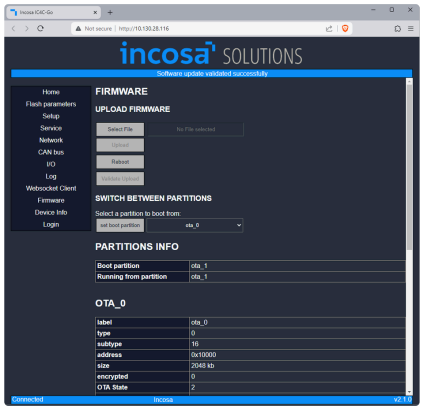
The operator has to be able to connect over Wi-Fi to the web-interface, this confirms that the software is functioning correctly.
This validation process avoid devices that cannot be updated via the web-interface in the field.
When the software is not validated within 15 minutes, the device will configure itself to boot from the memory slot which contains the last valid software.



“Confirm software upload“ notification

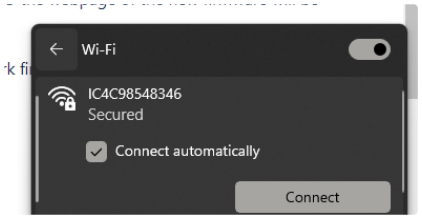


only the “Validate Upload“ button is active when software is in invalid state.



“Software validated“ Notification

More processing time for background processes
Uploading large firmware files takes time and processing power of the I•C4C GO. While uploading time has to be reserved for other processes running in parallel.
When important processes are not able to finish in time an automatic reboot of the device is triggered. This not desired while in the middle of the firmware upgrade process.
The processing time that was foreseen for all background processes has been increased to prevent the I•C4C Go from crashing during an upload.
Automatic Reboot with Page refresh
After a successful firmware upload the device needs to be rebooted to load the new firmware.
A firmware upload might contain a newer version of the website.
When the page is not refreshed the old website from the previous firmware that is stored in the user of the browser might connect to the new firmware.
This could be confusing for the operator and cause unwanted behavior.
To avoid this situation an automatic page refresh was added to the “Reboot” button.
While the I•C4C GO reboots and the user is waiting for the 30 second time to automatically refresh the page the I•C4C GO has time to reboot.
If the device which is being used for the firmware upload is configured to automatically connect to the Wi-Fi signal of the I•C4C GO the webpage of the new firmware will be shown when the page is refreshed.
In case the automatically connect features has not been enabled for the Wi-Fi network the user will need to connect to the network first.



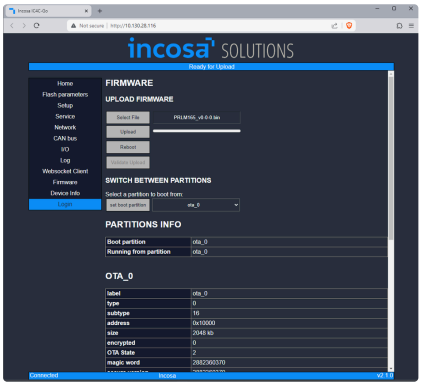
“Connect Automatically” checkbox in windows

Feedback with Notifications & Alerts

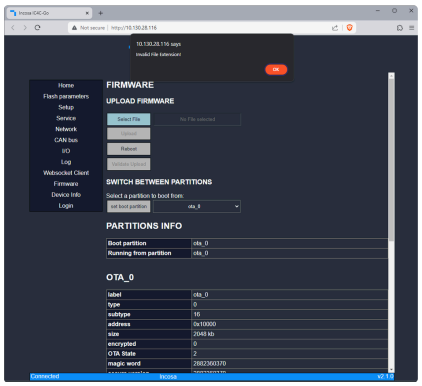
The process which was in place in the previous software versions of the I•C4C GO had limited feedback.

Starting from this version the user wil be informed by notification in the website when everything goes as planned.

If something unexpected happens a pop-up window, also know as alert will show the error which occurred.



“Ready for Upload” Notification



“Invalid File Extension!“ Alert

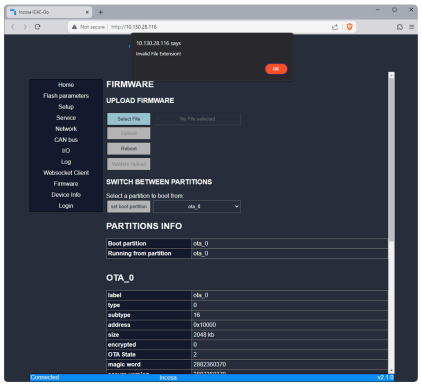
“Ready for Reboot“ Notification

File extension checking on client side

When uploading a new firmware by using a pc, the system file explorer only show files with a ‘.bin’ extension.

This limits the amount of files that are shown, and lowers the risk of uploading an incorrect file.

When a file has been selected the web-interface checks the extension a second time.



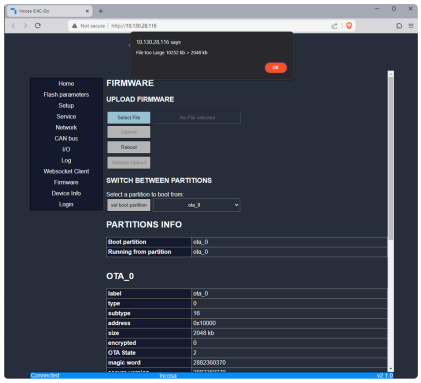
“Invalid File Extension!“ Alert

File size checking on client & server side

Since release 2.0.0 we support devices with an increased flash size of 16MB, that have a large memory partition that support I•C4C Go firmware up to 2048Kb.

To avoid uploading a binary with a size that is too large for the device we perform a check on client and server side.

When the size is too large an alert will be shown, and uploading will not be possible.



“File too Large“ Alert