

CattronLink™ Software

User Manual

9M02-9061-A002-EN



CONNECT. CONTROL. PROTECT.

Revision History

VERSION	DATE	NOTES
1.0	21-01-21	New release as standalone and upgrade method per ECO-20-0310
2.0	June 23 rd 2023	Added Remtron Legacy Code Setting ECO-23-0311
3.0	Sept 2023	Added requirement to load frequency tables ECO-23-0385

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What is CattronLink™ Software.

CattronLink™ software is a suite of Apps that enable the latest generation of Cattron remote control products to be accessed over a Bluetooth® link for the purposes of.

- Firmware Upgrades
- Loading or changing of configuration parameters
- Examining device status including switch and relay totalizers
- Examining the datalogging stores.

NB: Not all features of CattronLink™ are available for all systems, Cattron-S series for example has fixed configurations and limited need for frequency or address management.



2 CattronLink™

1.1 Compatibility

Cattron Link™ requires a Windows 10 or newer PC equipped with a Bluetooth link.

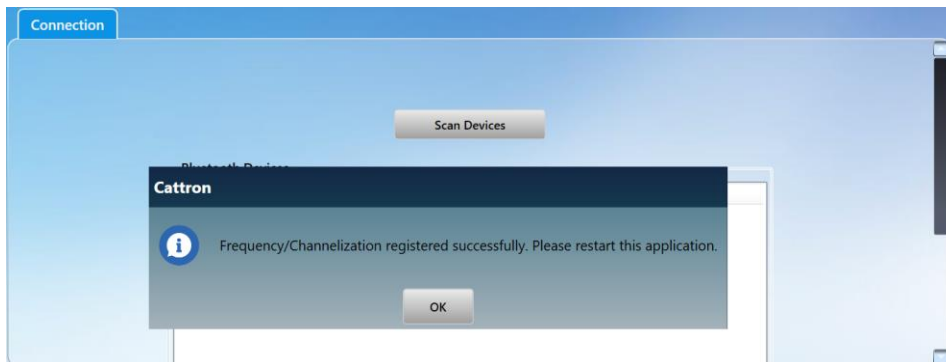
1.2 Installation

The latest version of CattronLink™ can be downloaded from the Support and Resources section of the Cattron website, please check for updates as new feature support is added regularly.

1.2.1 Load Frequency Tables

After installation it is necessary to load frequency tables, please ensure your PC has internet access as these are loaded from an AWS server. This task is only required after initial installation.

Launch CattronLink then go to Help and select Load Frequency Table, if successful, the following message will be displayed.



Then close CattronLink and re-launch.

1.2.2 License Key Registration

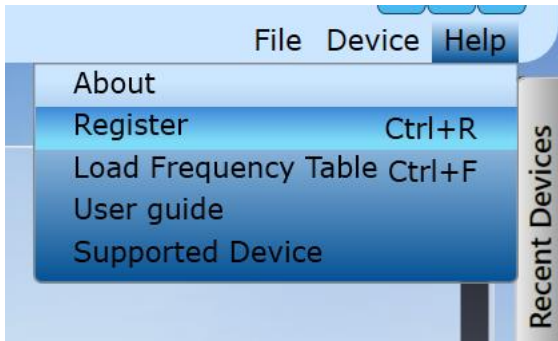
For all common functionality such as setting of Frequency, Address, OCU Timeout, Battery Type, E-Stop switch test at startup etc. a License is not required.

Other Features are only available with qualified training and feature availability is based on a license key system that the tool automatically accesses when it is started.

Extended feature license registration requires that the PC to be used is registered on the Cattron licensing server, in order to do this the MAC address of the PC to be used needs to be sent to licensing1@cattron.com

The MAC address of your PC can be found by clicking on the HELP menu and then on Register





This will open up a window as shown below that shows your MAC address, clicking on the box (for the interface to be used) shown in the orange highlight box below will copy your MAC address to your clipboard, you can paste this into the email for your request to licensing1@cattron.com



Once Cattron have entered your details into the licensing server you will be able to click on the lower left Register button (NB: this changes to Re-Register as shown above if already registered and changes are being requested) and the system will configure your required functionality with the CattronLink™ tool.

Notes:

1. licenses have an expiry date, if your systems stops working, check that your license expiry date is still valid.
2. If you wish to use CattronLink when disconnected from the internet, you will need to request a license file (name.lic) that can be loaded with the 'load license' button shown above.



1.2.3 Connecting CattronLink to an OCU or an MCU

The MCU is available for the establishment of a Bluetooth link only when it is in Passive mode (not linked to an OCU).

The OCU is available for the establishment of a Bluetooth link only for the first 60 seconds after being woken from a sleep state and in Passive mode (not transmitting, so from OFF press Start only once).

The OCU or MCU can be found by scanning for OCUs and MCUs, see the CattronLink™ section below.

1.3 CattronLink™ Functionality

Cattron Link functionality is implemented as a series of Plugins, not all Plugins are available for all users without specific training or authorization.

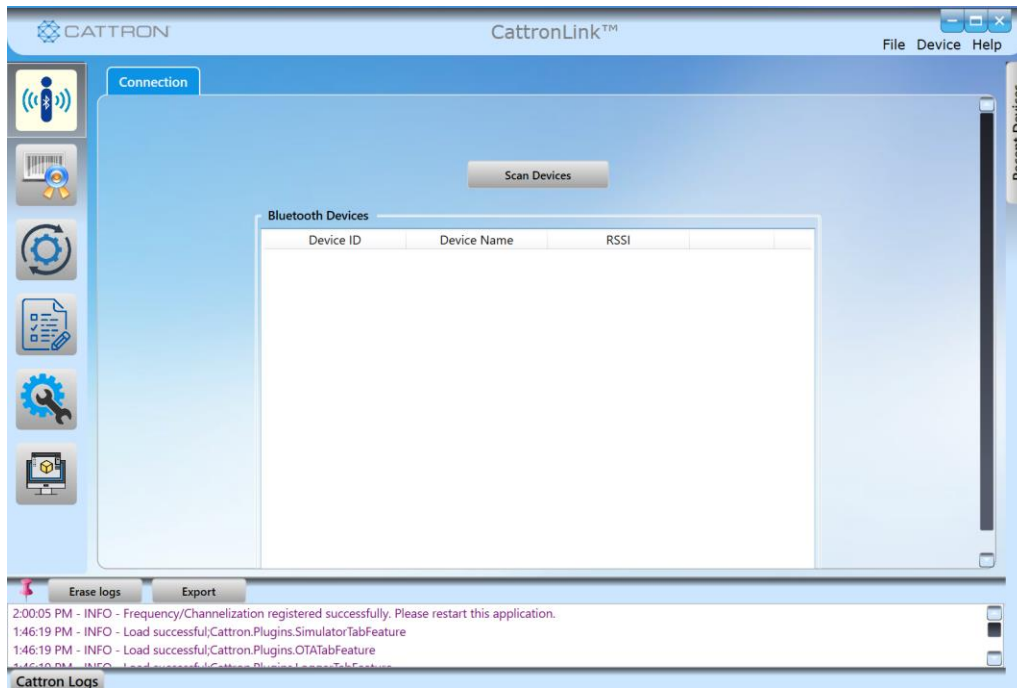
An extensive help screen is available that can be accessed from the Help Menu

The Graphic User Interface (GUI) for CattronLink™ is divided into 5 main zones:

- **Top menu** at the top right
- **Recently connected devices** on the right
- **Progress Log panel** at the bottom
- **Workspace** at the center that has tabs for each functionality
- **Plugin group buttons** on the left



Figure 1 Main elements of the UI



1.3.1 Top Menu

The top horizontal menu consists of 3 menu items:

1.3.1.1 File

This menu item has a submenu item 'Exit' to exit the Cattron application.

1.3.1.2 Device

This menu item has a submenu item 'New Device' used to connect to a new device.

1.3.1.3 Help

This menu has 4 sub menus

- **About:**

Clicking on this sub menu item will open a dialog box displaying the details about the application such as its product name, version, copyright etc.

- **Register:**

Clicking on this sub menu item will open a dialog box displaying the registration details discussed in the previous section.

- **User Guide:**

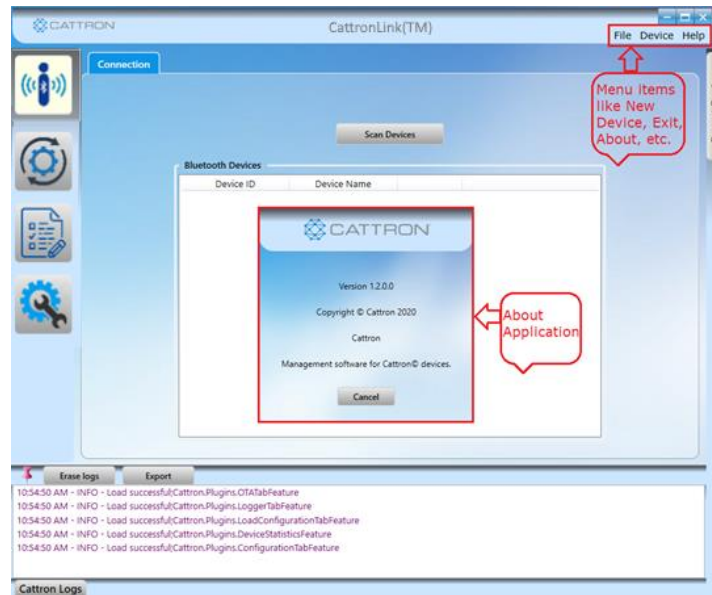
Clicking on this sub menu item will open the user guide.

- **Supported Device:**

Clicking on this sub menu item will open new window to display list of supported devices by this application.



Figure 2 Top Menu



1.3.2 Recent Devices

List of recently connected devices are shown in the panel on the right. It consists of an icon for each of the recently connected device and its Name or Serial Number.

When the icon for an OCU or MCU is double clicked the application tries to connect to the device and after successfully connecting to it, will ask for a PIN to complete the connection, **the default key is 219547** but this can be changed in the configuration file.

The MCU must be offline before a connection can be established.

If a connection could not be established, then the dialog box for connecting to the device is still shown. This is the same as that opened from the 'Device' menu, also pay attention to the logs window at the bottom of the page, if a connection is not established, retry a few times.



Each icon for a recently connected devices has item in the context menu, (right click), to remove the device from the recently connected list.

Figure 3 Recent Devices



1.3.3 Progress Log

Every action performed by this application is logged and shown in the lower panel.

Figure 4 Progress Log



1.3.4 Central Workspace

This is the main area where all the installed plugins displayed, each plugin is shown as a separate tab on the workspace.



1.3.5 Plugin Groups

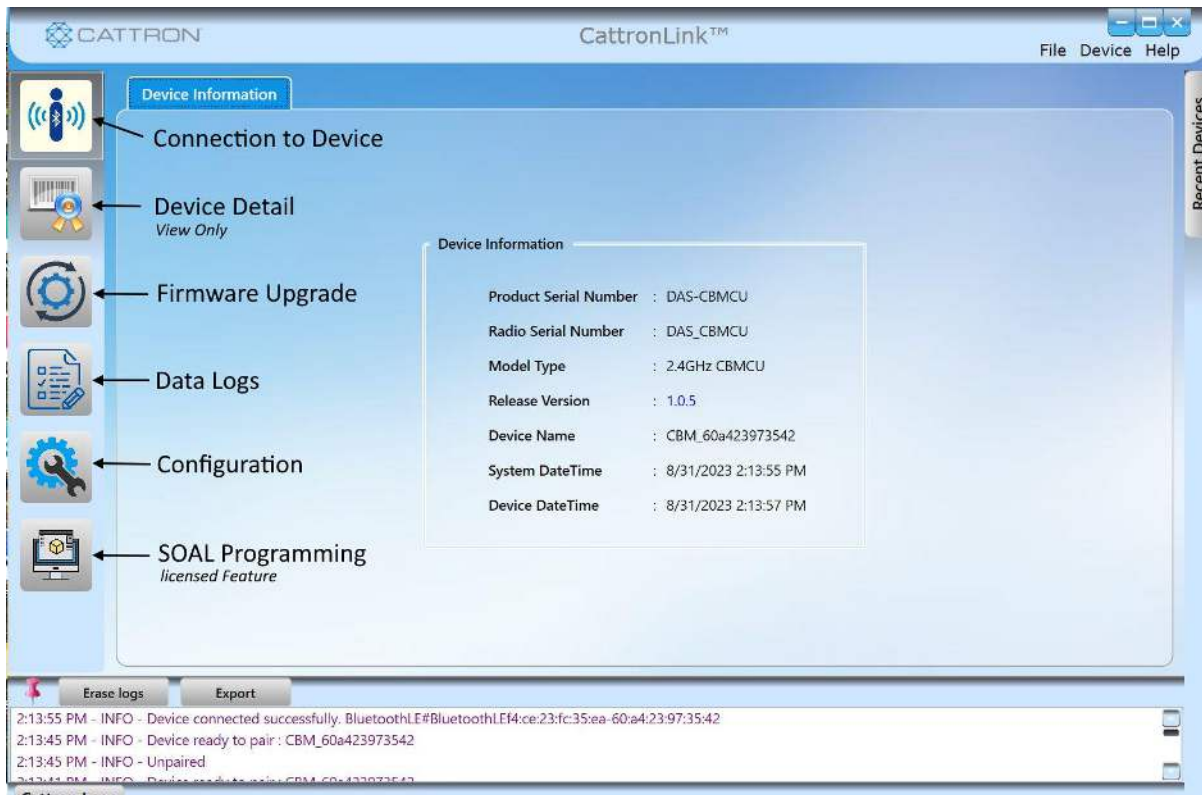
All the features in the application are implemented as plugins.

Plugins contain one or more functions with similar functionality.

Each plugin is represented by a button on the left panel of the application screen.

When the button is clicked all of the features of that plugin are loaded as tabs in the workspace.

Figure 5 Plugins and Workspace



1.3.6 Connection to Device



Click this button and then click Device/New Device from the upper right menu, then Scan Device to show a list of currently available devices,

Highlight the item wanted and click on Connect, then enter the Bluetooth password, default is 219547, but this may be changed in configuration.

NB: If the password is changed and forgotten, the only way to recover the device will be to return it to Cattron for repair.

Figure 6 Connection sequence



After a connection is established the device information will be displayed. Hovering over the Release Version will display the current Bootloaders and Firmware for the three microcontrollers.

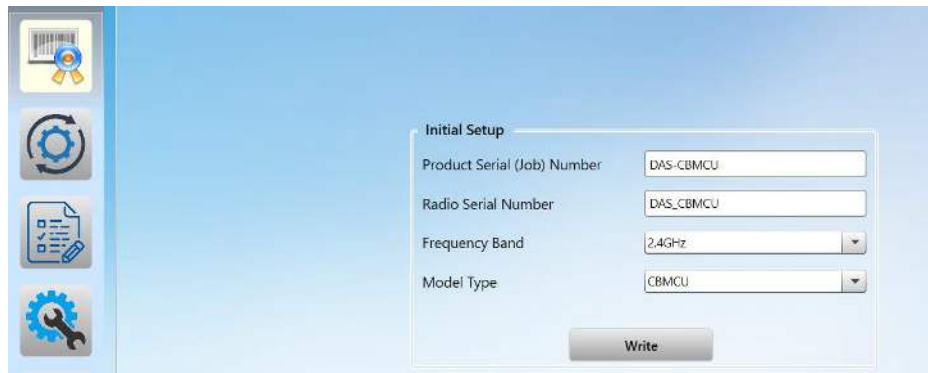
Figure 7 Device Information



1.3.7 Device Detail



This plugin is used to display the Job Number and the product type and frequency, it is set at the time of manufacture and is not user adjustable.



1.3.8 Firmware Upgrade



This plugin is used to update the firmware.

Remember that Firmware is the central operating system that comprised the core safety and enables the Features such as RFID, and that Configuration are the parameters used by the Firmware to customize the features with specific switch mapping, frequency, address etc.

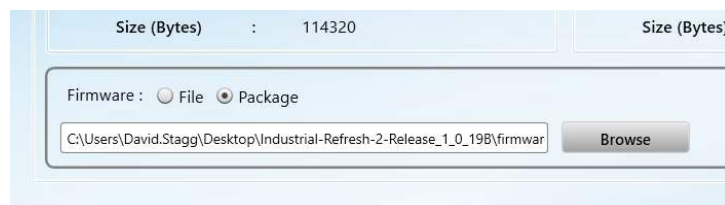
In a Category 3 safety architecture there are two microcontrollers, the Master and the Slave, both need to be programmed. Additionally, the Radio module has a microcontroller that also needs to be programmed. Master and Slave always need to be upgraded together.

There are two ways to upgrade firmware, by **File** and by **Package**. **Package is the recommended method.**

NB: prior to Radio rev 21 the File method must be used.

1.3.8.1 Upgrade by Package

Select **Package** in the lower left corner



When connected to the device, the current firmware will be displayed in the **Existing Characteristics** area.

If desired you can select any 'Device Type' (Master, Slave, Radio) option to see what the current version is.

- Browse for the OCU or MCU firmware Package, the file format is (*.zip). The firmware file names will be identified by an associated document provided.

Once the correct upgrade file is located and reflected in the right hand **To be Upgraded Characteristics** area,

- **OPTIONALLY AND ADVISEDLY FOR AN MCU** if there are more than one MCU close together the following is recommended to ensure the intended MCU is upgraded, select YES for the Button Press Req.



Then in the MCU Press and hold button 1 before and during the next step.

- Click the **Upgrade** button and the upgrade will commence showing the following popup

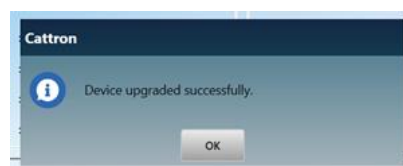
(changing automatically as each of Master/Slave/Radio is being processed)



When complete a Rebooting popup will appear



- After Reboot the following popup will appear, click on it without too much delay or the device may not re-connect and a device reconnection may be required.

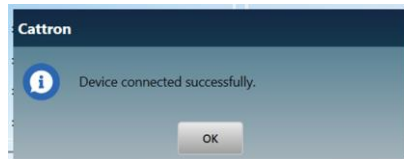


A short while after clicking the above confirmation, the following popup will appear.



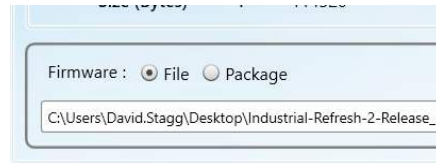
The Upgrade of Master, Slave and Radio is now complete, it may be necessary to power the MCU off and on again.

- If you wish to review other items on the device click on the OK and after a short while the following popup will appear, click on it.



1.3.8.2 Upgrade by Individual File

Select **File** in the lower left corner

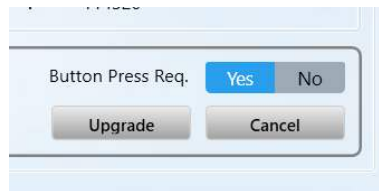


When connected to the device, the current firmware will be displayed in the **Existing Characteristics** area.

- Select any 'Device Type' (Master, Slave, Radio) option and browse for the correct firmware file (*.hex) on the PC. The firmware file names will be identified by an associated document provided.

Once the correct upgrade file is located and reflected in the right hand **To be Upgraded Characteristics** area,

- **OPTIONALLY AND ADVISEDLY FOR AN MCU** if there are more than one MCU close together the following is recommended to ensure the intended MCU is upgraded, select YES for the Button Press Req.



Then in the MCU Press and hold button 1 before and during the next step.

- Click the **Upgrade** button and the upgrade will commence showing the following popup (for Master/Slave/Radio as appropriate)

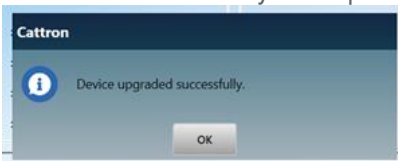


When complete a Rebooting popup will appear

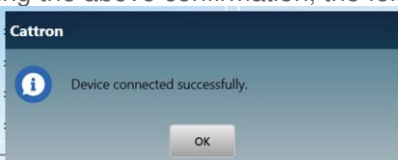




- After Reboot the following popup will appear, click on it without too much delay or the device may not re-connect and a device reconnection may be required.



- A short while after clicking the above confirmation, the following popup will appear, click on it.



- Complete the above sequence for each of the Master, Slave and Radio, when complete it may be necessary to power the MCU off and ON again.



1.3.9 Configuration Changes



This plugin is used to change or update the configuration (Operating characteristics; Frequency, Address, Switch or Relay functions etc.) for the OCU or MCU.

1.3.9.1 General Configuration Changes

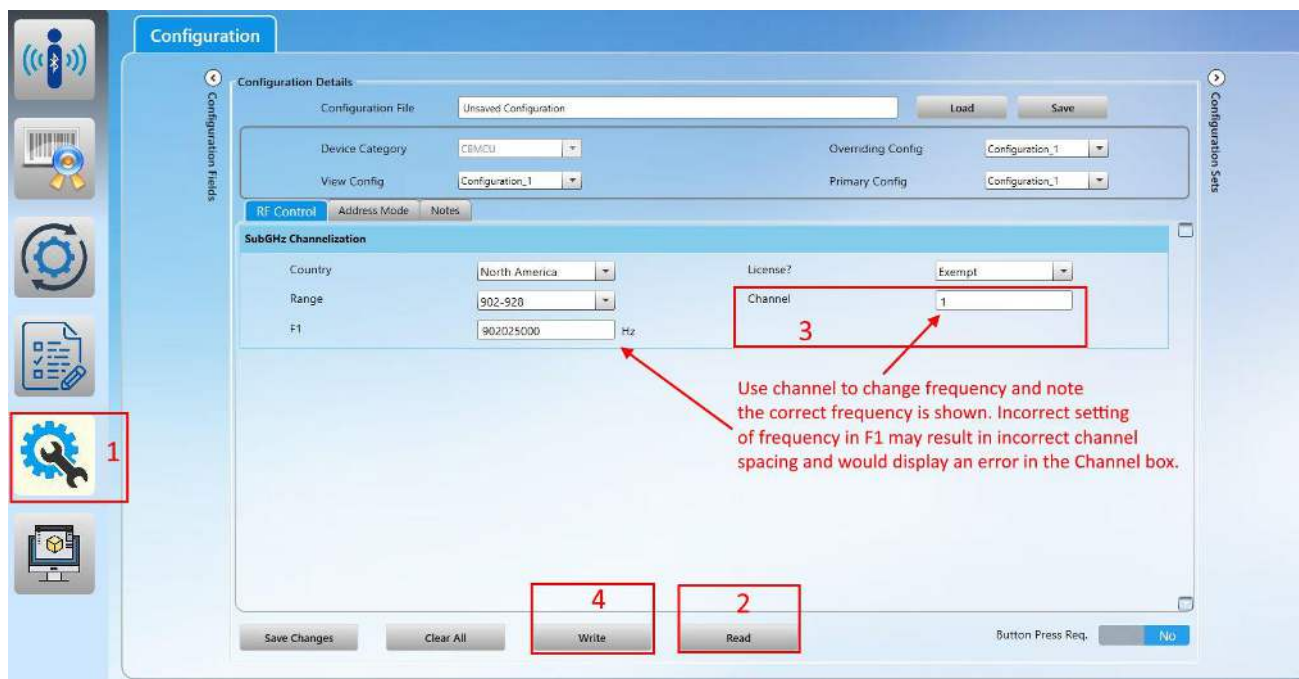
On clicking this plugin button, the application will open the screen below where it is possible to set different configuration values for 'Writing' into the OCU or MCU.

Configuration parameters are divided into categories like 'RF Control', 'Firmware' and 'Address Mode'.

Some configuration parameters are pre-defined to ensure compliance and stability and not available for customer use. Other parameters are only available after appropriate training. Configuration files may not be saved without specific 'user rights'.

1.3.9.2 General Changes

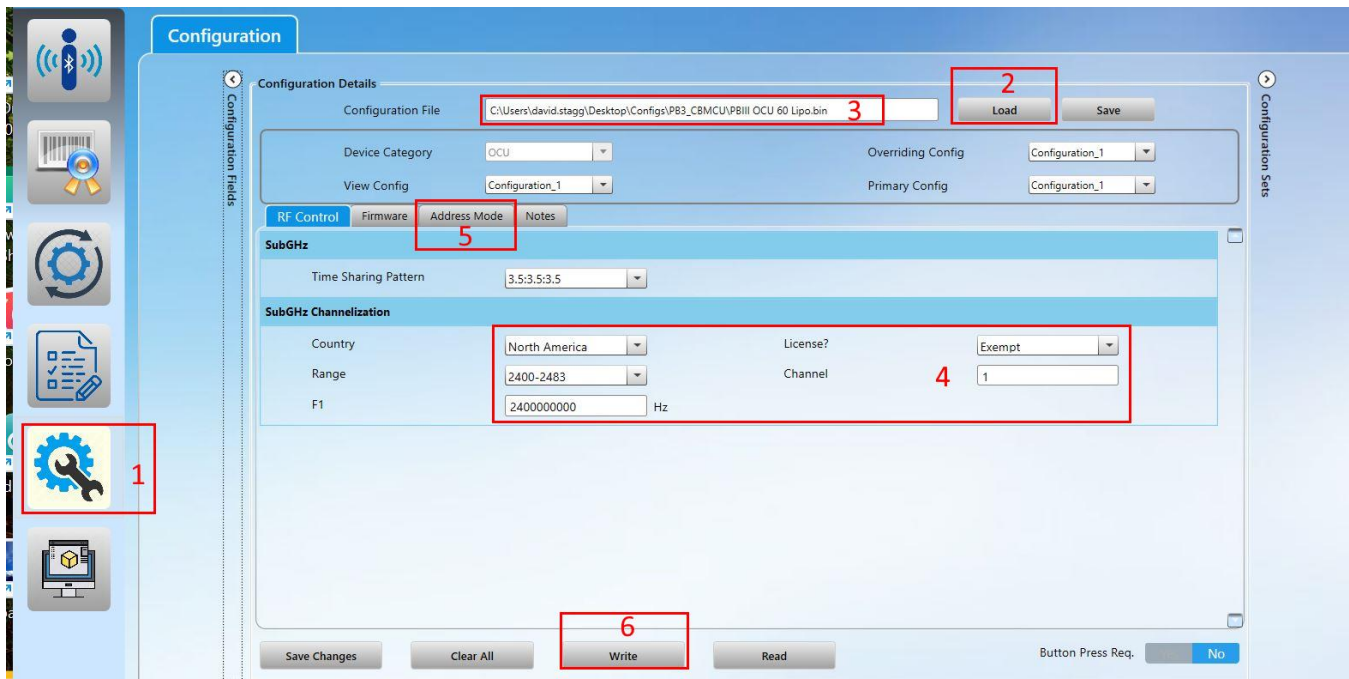
Most changes will be minor and when connected to the device will simply require the Configuration Icon to be selected and then READ the current configuration, Make the desired changes, then simply WRITE back to the device.



1.3.9.3 Loading a New Configuration

Sometimes it may be desirable to load a completely different configuration to provide different functionality, this will require a Configuration file provided by Cattron. The required steps after connecting to the device are shown below.

1. Connect
2. Select Load Config
3. Select the location of the Configuration and when the popup shows, select NO to Overwrite.
4. Select the correct Frequency parameters to match the system.
5. Set the correct Address (Only use an address assigned by Cattron, Addresses are never duplicated)
6. Click on Write, the new configuration will be written to the device after you accept responsibility for changes made.



The screenshot shows the 'Configuration' window in the CattronLink software. The interface includes a sidebar with icons for various functions, a main configuration area, and a 'Configuration Sets' panel on the right. The main area is divided into sections: 'Configuration Details', 'RF Control', 'Firmware', 'Address Mode', and 'Notes'. The 'Address Mode' section is currently selected, showing fields for 'SubGHz' and 'SubGHz Channelization'. Red boxes and numbers highlight the steps for loading a new configuration:

- 1**: Points to the 'Configuration' icon in the sidebar.
- 2**: Points to the 'Load' button in the 'Configuration Details' section.
- 3**: Points to the 'Configuration File' text box, which contains the path 'C:\Users\david.stagg\Desktop\Configs\PB3_CBMCU\PBIII OCU 60 Lipo.bin'.
- 4**: Points to the 'Channel' dropdown menu in the 'SubGHz Channelization' section, which is set to '1'.
- 5**: Points to the 'Address Mode' tab in the 'RF Control' section.
- 6**: Points to the 'Write' button at the bottom of the configuration window.

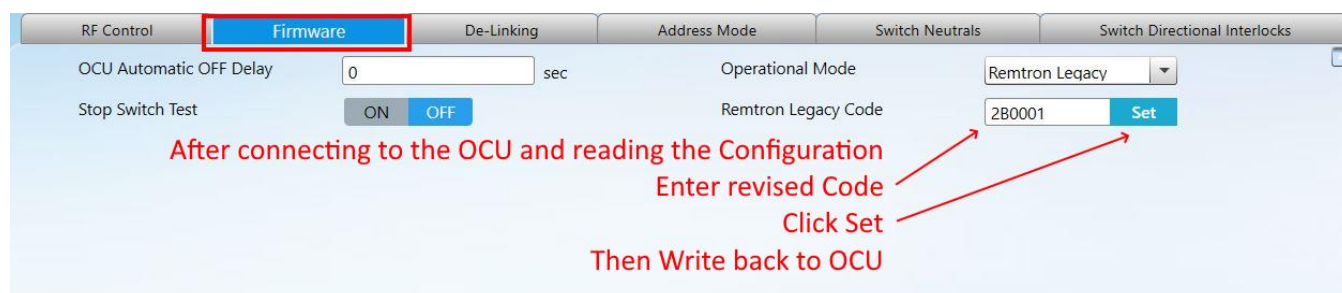


6.1.1.1 Remtron Legacy Code Setting

When a controller is set to Remtron Legacy mode, the setting of Frequency and address is best carried out by

1. Reading the current configuration,
2. Entering the revised Code as shown below
3. Clicking on Set,
4. Writing the revised code back to the OCU.

Remember that the first two characters are the Frequency and the last four characters are the system address.



RF Control **Firmware** De-Linking Address Mode Switch Neutrals Switch Directional Interlocks

OCU Automatic OFF Delay sec

Operational Mode

Stop Switch Test

Remtron Legacy Code

After connecting to the OCU and reading the Configuration
Enter revised Code
Click Set
Then Write back to OCU



6.1.2 Data Logs

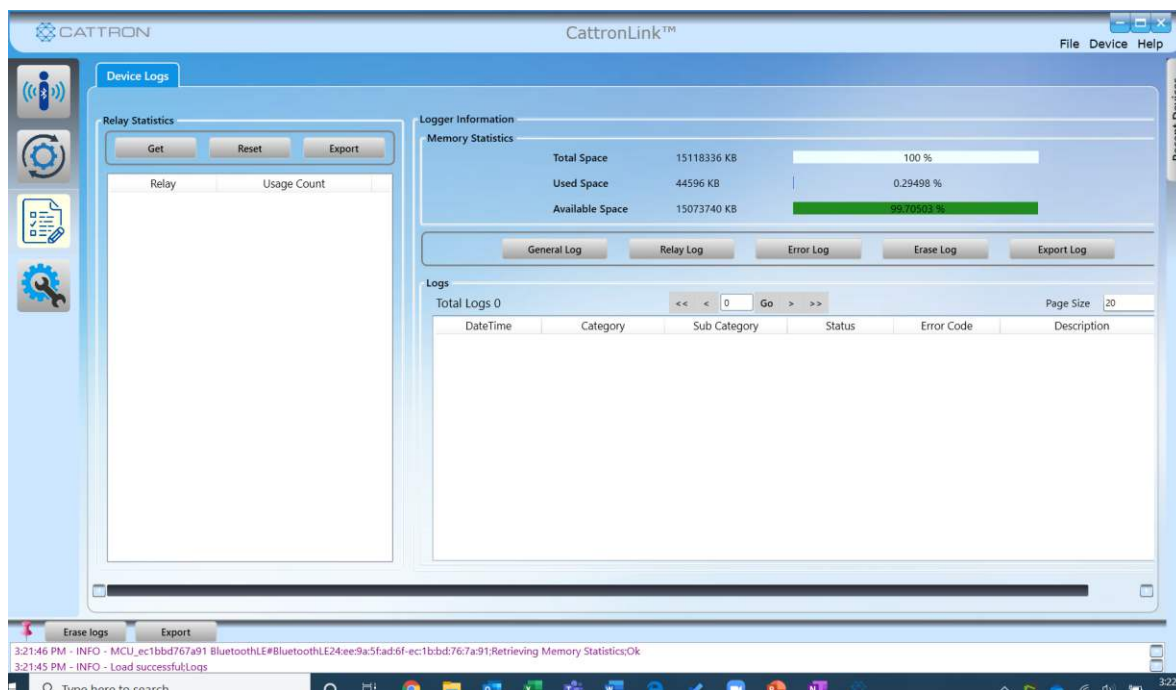


The Data Log Application allows the various OCU and MCU data logs to be examined and erased, the available data log access is controlled by a license key.

NB: Data log availability is controlled by a license key and some features may be restricted or subject to a user fee.

Data logs from the MCU are recorded against a real time clock, data logs from the OCU are recorded against time elapsed since OCU was turned on.

Figure 8 Data Log Page



6.1.2.1 Totalizers

The left pane enables the Switch or Relay Totalizers to be retrieved. They can only be reset by Cattron.

6.1.2.2 General Log

This Log shows a record of the general activity such as power up, power down, E-Stop pressed, internal test completed.

6.1.2.3 Error Log

This Log will contain the results of any internal errors such as switch errors, or self-test failures.

6.1.2.4 Erase Log

This button enables the various logs to be erased, access is restricted to Cattron service personnel.

6.1.2.5 Export Log

This button allows the log currently being displayed, to be saved as a CSV file to the chosen location.



Due to continuous product improvement, the information provided in this document is subject to change without notice.