



EASY **FLUX**[®] Web

EasyFlux[®] Web Self-Hosted
EasyFlux[®] Web CSI-Hosted



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1. Introduction

EasyFlux® Web is a web-based multiuser software system used for monitoring internet-connected Campbell Scientific eddy-covariance stations.

EasyFlux Web functions with a Campbell Scientific CR6 running either the EasyFlux-CR6OP program for open-path eddy-covariance systems or the EasyFlux-CR6CP program for closed-path eddy-covariance systems, or a CR3000 running the EasyFlux-DL program for open-path eddy-covariance systems. When a station is added, EasyFlux Web automatically pulls station information available from the program running in the datalogger (ecosystem, latitude, and longitude).

After adding your stations, you can graphically monitor data including QA/QC values, download data, compare data between stations, and set up alerts to notify you by email of data values outside of user-entered thresholds.

An administrator can set up user accounts and control the rights of each user.

2. Installation & Updates

Installation

There are two installation options for EasyFlux® Web.

1. **EasyFlux Web CSI-Hosted:** Campbell Scientific can install the software for you in an Azure-based environment and provide a link to access the software.
2. **EasyFlux Web Self-Hosted:** You can install the software directly on your server. When installing the software on your server, the installation process will also install SQL Server Express. EasyFlux Web is then accessed by typing the IP address of the server into a web browser. If EasyFlux Web is installed on your local machine, you can access it by typing **localhost** into a web browser or by clicking **Launch Browser** from the EasyFlux Web Server Administration Utility.

Updates

EasyFlux Web CSI-Hosted comes with automatic updates as part of your annual subscription cost.

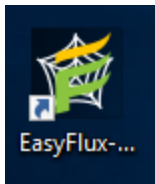
Your purchase of EasyFlux Web Self-Hosted allows you to receive updates for one year free of charge. From the CSI EasyFlux Web Server Administration Utility^a, press **Check for Updates** and follow the prompts to update your software. After one year, you are required to purchase yearly maintenance agreements to continue receiving updates. After purchasing a maintenance agreement, open the CSI EasyFlux Web Server Administration Utility, and select **Manage License | Register Add-On** to input your maintenance license key. You can then press **Check for Updates** to see if there is an update available.

Add Station Licenses

If additional station licenses are purchased for EasyFlux Web CSI-Hosted, Campbell Scientific will add the licenses for you.

If additional station licenses are purchased for EasyFlux Web Self-Hosted, you must add them by using the CSI EasyFlux Web Server Administration Utility^a. After opening the utility, select **Manage License | Register Add-On** to input the license key. Copy and paste the key from your customer page on the Campbell Scientific website.

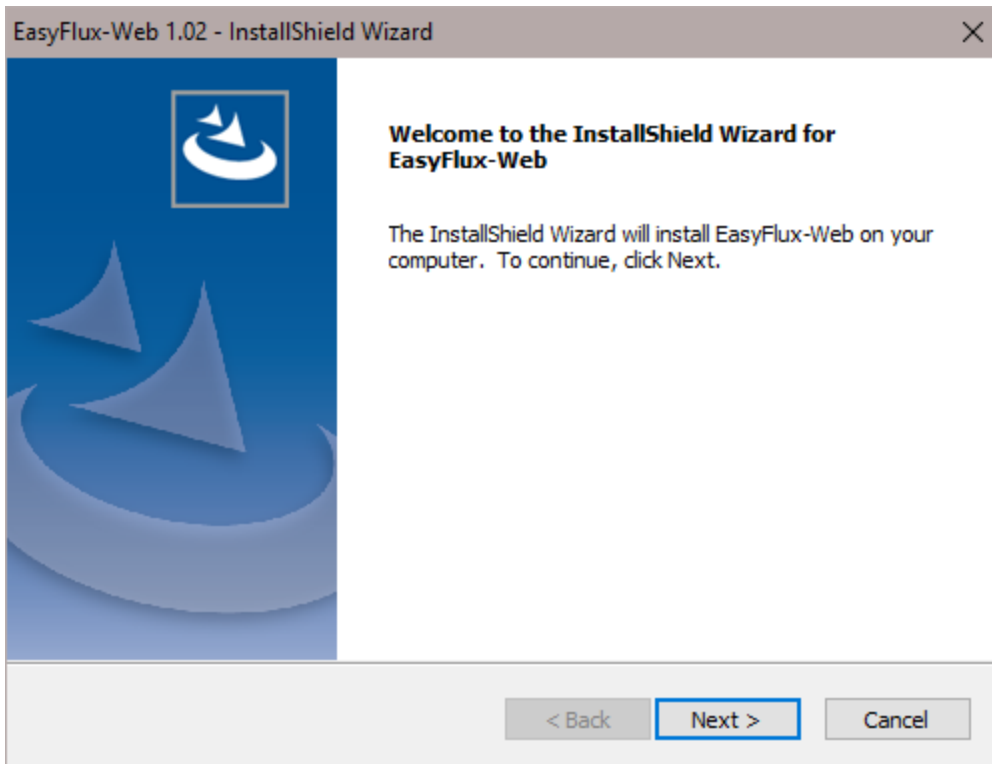
^aCSI EasyFlux Web Server Administration Utility is a separate application. Use the desktop icon to open the application.



2.1 Installation Instructions (Self-Hosted Only)

Performing a self-installation on your own machine is very simple. Run your executable file and follow the prompts, using the default settings shown.

Following is a step-by-step guide to help you through the installation process. Follow each step making sure that what you see is similar to that shown in the following screenshots. At each screen, click **Next** to resume.



At the following step, input a **User Name** and **Company** name. Any name you would like will work. Input the installation key provided to you in the **CD Key** field (note: this is not the same as your station license key).

EasyFlux-Web 1.02 - InstallShield Wizard

User Information

Enter your registration information.

The CD Key can be found on the EasyFlux-Web CD case.

User Name: Required

Company: Required

CD Key: · · Required

InstallShield

< Back Next > Cancel

SQL Server 2016 Setup

License Terms

To install SQL Server 2016, you must accept the Microsoft Software License Terms.

License Terms

- Global Rules
- Product Updates
- Install Setup Files
- Install Rules
- Feature Selection
- Feature Rules
- Feature Configuration Rules
- Installation Progress
- Complete

MICROSOFT SOFTWARE LICENSE TERMS

MICROSOFT SQL SERVER 2016 EXPRESS

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft

- updates,
- supplements,
- Internet-based services, and
- support services.

I accept the license terms.

SQL Server 2016 transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about SQL Server 2016 data processing and privacy controls, please see the [Privacy Statement](#).

Copy Print

< Back Next > Cancel

SQL Server 2016 Setup

Install Rules

Setup rules identify potential problems that might occur while running Setup. Failures must be corrected before Setup can continue.

License Terms
Global Rules
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Installation Progress
Complete

Operation completed. Passed: 4. Failed 0. Warning 1. Skipped 0.

Hide details << Re-run

[View detailed report](#)

Rule	Status
Fusion Active Template Library (ATL)	Passed
Consistency validation for SQL Server registry keys	Passed
Computer domain controller	Passed
Microsoft .NET Application Security	Passed
Windows Firewall	Warning

< Back Next > Cancel

SQL Server 2016 Setup

Feature Selection

Select the Express features to install.

License Terms

Global Rules

Product Updates

Install Setup Files

Install Rules

Feature Selection

Feature Rules

Instance Configuration

Server Configuration

Database Engine Configuration

Feature Configuration Rules

Installation Progress

Complete

Features:

Instance Features

Database Engine Services

SQL Server Replication

Shared Features

SQL Client Connectivity SDK

Redistributable Features

Instance root directory:

Shared feature directory:

Shared feature directory (x86):

Feature description:

The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL Server instances can operate side-by-side on

Prerequisites for selected features:

Already installed:

- Windows PowerShell 3.0 or higher
- Microsoft Visual Studio 2010 Redistributable

Disk Space Requirements

Drive C: 1058 MB required, 805945 MB available

SQL Server 2016 Setup

Instance Configuration

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

- License Terms
- Global Rules
- Product Updates
- Install Setup Files
- Install Rules
- Feature Selection
- Feature Rules
- Instance Configuration**
- Server Configuration
- Database Engine Configuration
- Feature Configuration Rules
- Installation Progress
- Complete

Default instance

Named instance:

Instance ID:

SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL13.EFWeb

Installed instances:

Instance Name	Instance ID	Features	Edition	Version
---------------	-------------	----------	---------	---------

< Back Next > Cancel

SQL Server 2016 Setup

Server Configuration

Specify the service accounts and collation configuration.

- License Terms
- Global Rules
- Product Updates
- Install Setup Files
- Install Rules
- Feature Selection
- Feature Rules
- Instance Configuration
- Server Configuration**
- Database Engine Configuration
- Feature Configuration Rules
- Installation Progress
- Complete

Service Accounts Collation

Microsoft recommends that you use a separate account for each SQL Server service.

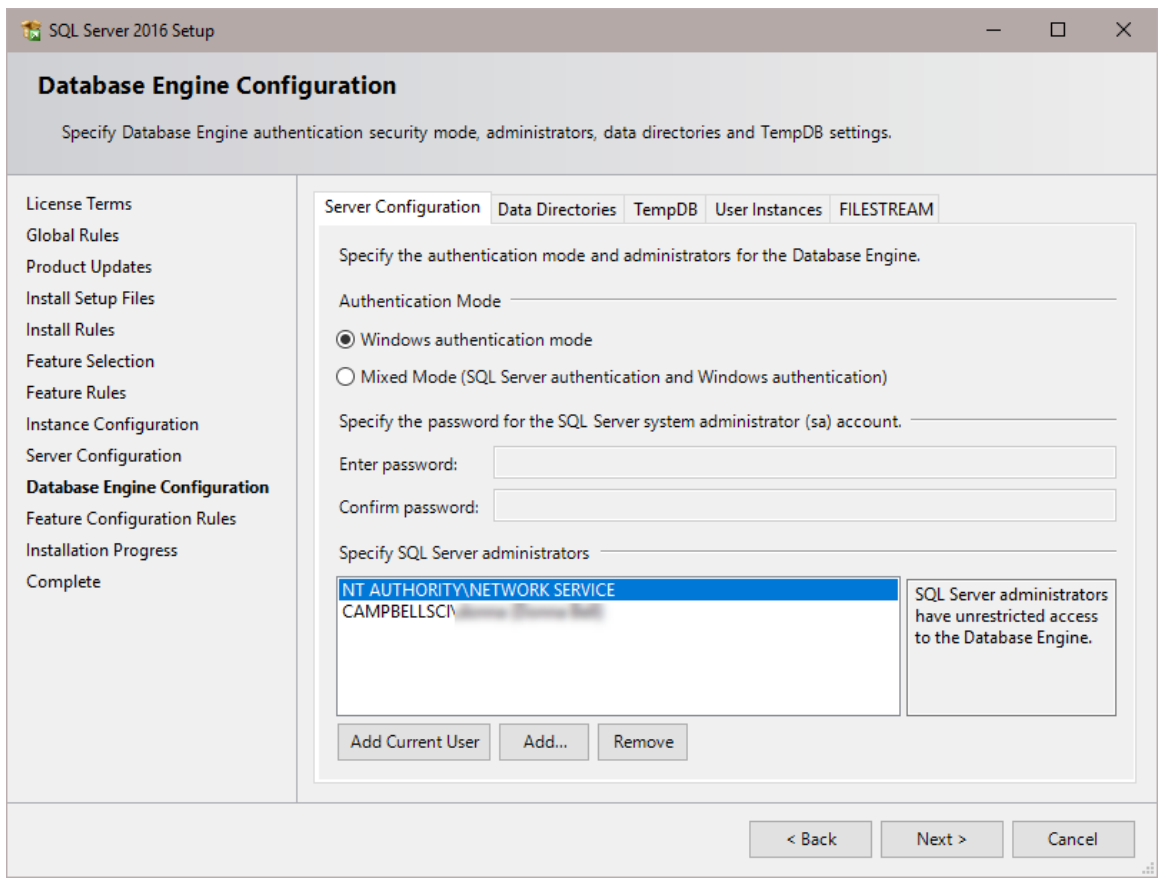
Service	Account Name	Password	Startup Type
SQL Server Database Engine	NT AUTHORITY\NETW...		Automatic
SQL Server Browser	NT AUTHORITY\LOCAL ...		Disabled

Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service

This privilege enables instant file initialization by avoiding zeroing of data pages. This may lead to information disclosure by allowing deleted content to be accessed.

[Click here for details](#)

< Back Next > Cancel



SQL Server 2016 Setup

Complete

Your SQL Server 2016 installation completed successfully with product updates.

- License Terms
- Global Rules
- Product Updates
- Install Setup Files
- Install Rules
- Feature Selection
- Feature Rules
- Instance Configuration
- Server Configuration
- Database Engine Configuration
- Feature Configuration Rules
- Installation Progress
- Complete**

Information about the Setup operation or possible next steps:

Feature	Status
✓ Database Engine Services	Succeeded
✓ SQL Server Replication	Succeeded
✓ SQL Browser	Succeeded
✓ SQL Writer	Succeeded
✓ Setup Support Files	Succeeded


Details:

Product Update:
Product Update has successfully applied KB 3182545 <<http://support.microsoft.com/?id=3182545>>. These updates have set the patch level of the Setup operation to 13.1.4001.0.

Summary log file has been saved to the following location:
C:\Program Files\Microsoft SQL Server\130\Setup Bootstrap\Log\20191021_104227\Summary_donna-bell-17_20191021_104227.txt

Close

EasyFlux-Web 1.02 - InstallShield Wizard



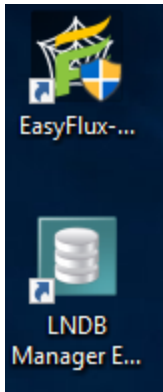
InstallShield Wizard Complete

Setup has finished installing EasyFlux-Web on your computer.

Yes, add an EasyFlux-Web shortcut to the desktop.

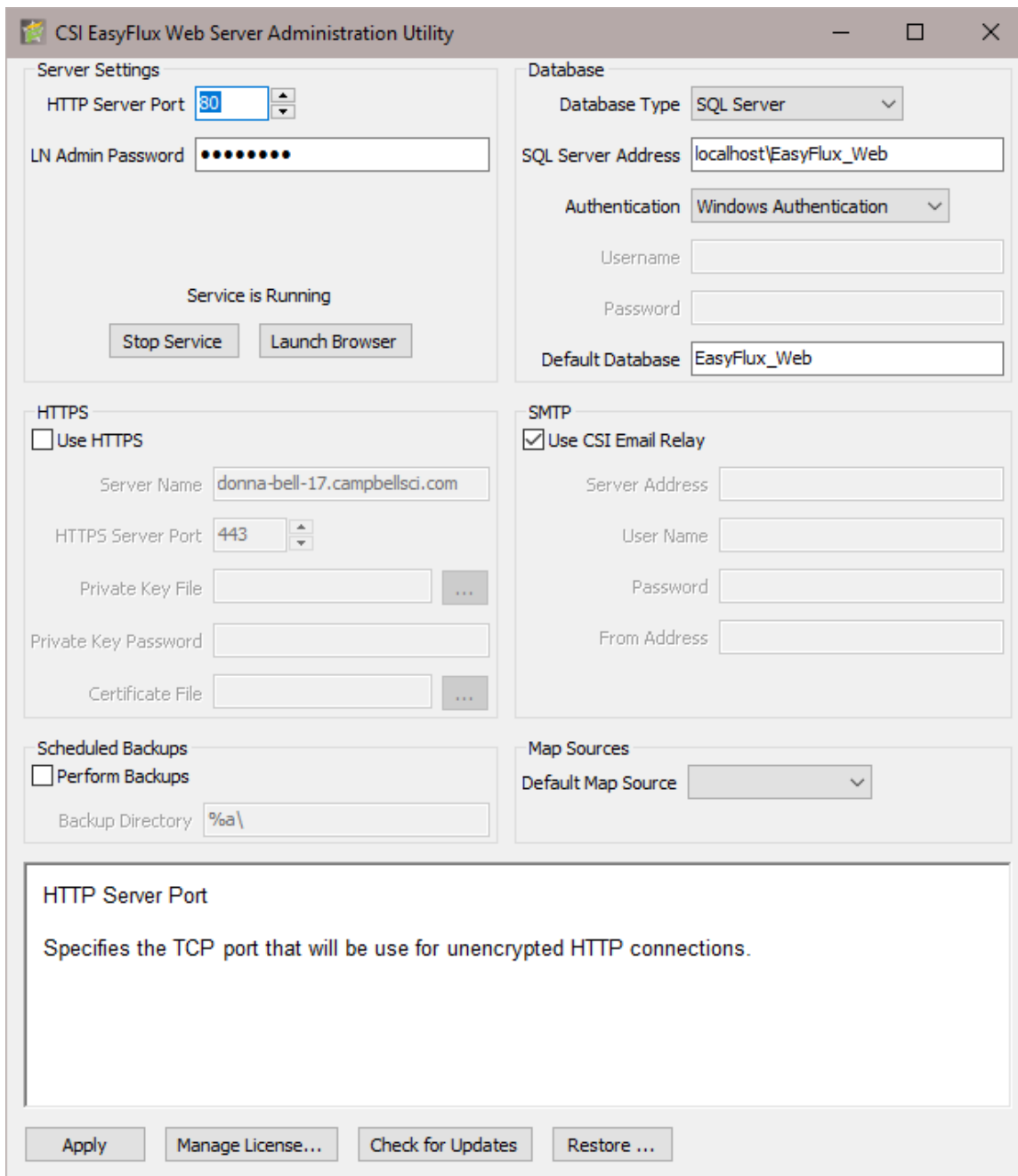
< Back Finish Cancel

Once you click **Finish**, you will notice two desktop icons have been created on your machine that look like the following image :

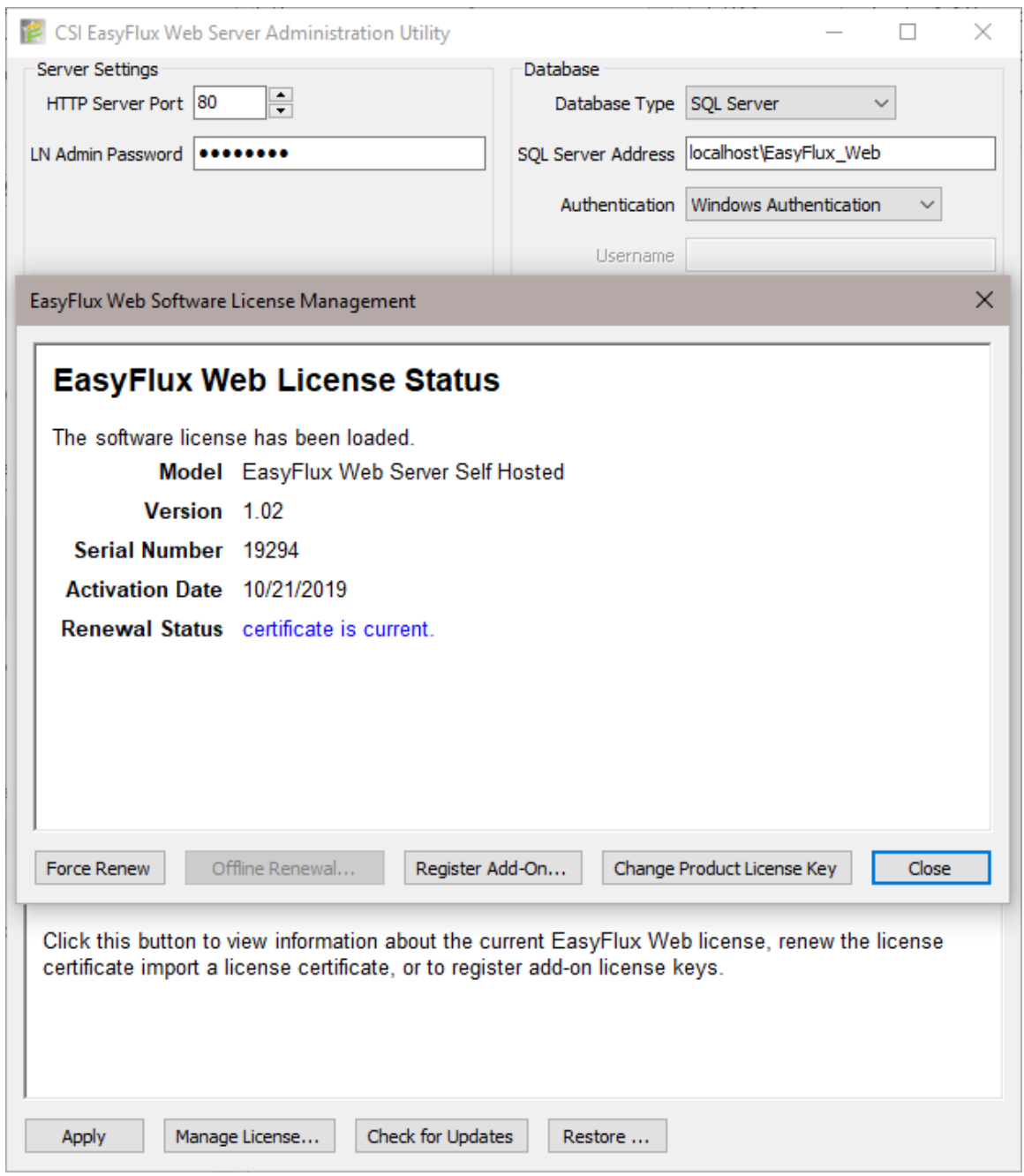


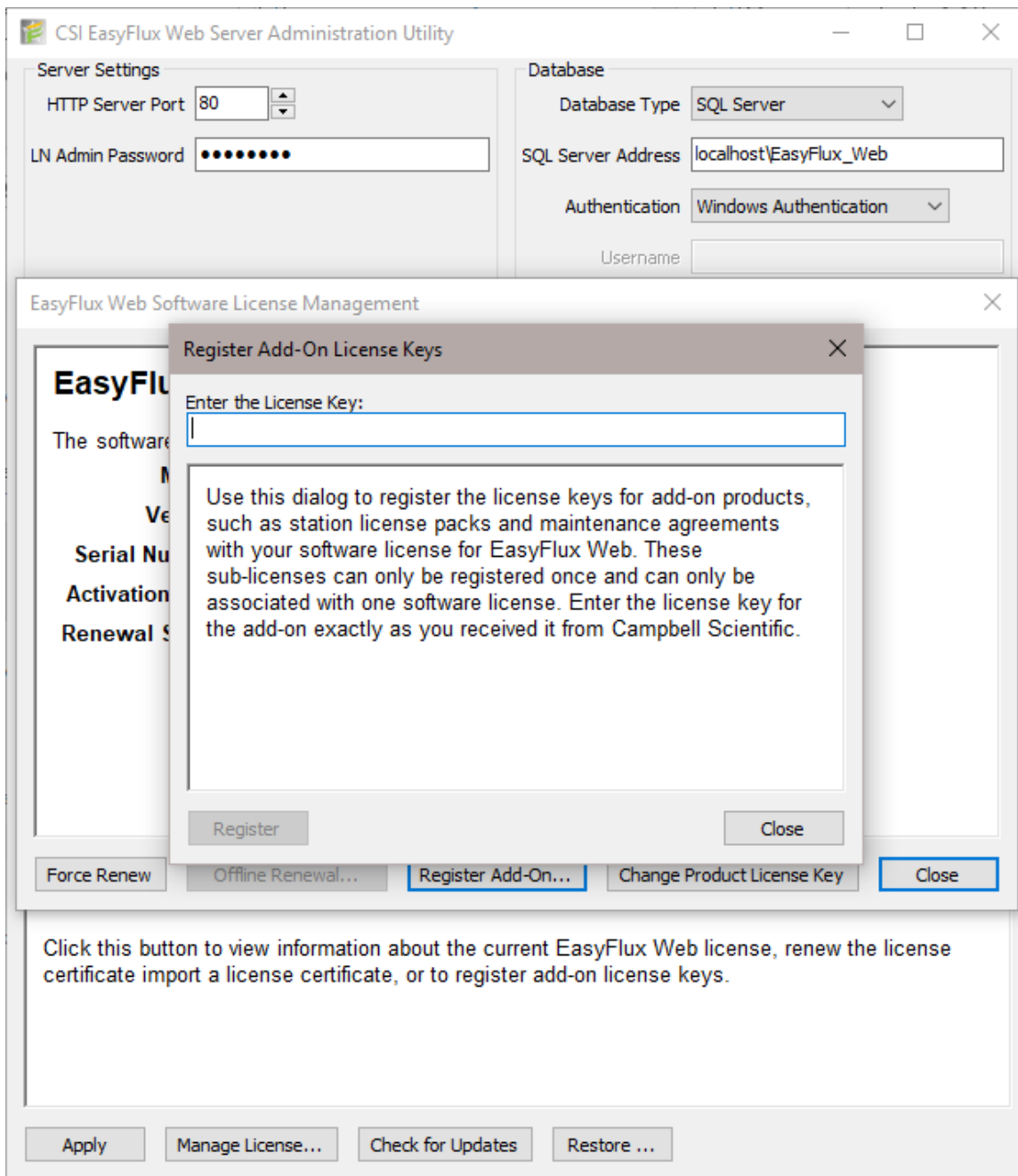
The top icon is the EasyFlux™ Web Server Administration Utility. This is the utility you will use to activate your station license keys (note: this is not the same as your installation key you input during installation), adjust your server settings, start and stop the service, select a database, perform scheduled backups, and check for updates. Select any option and refer to the help box at the bottom of the screen for more information. The bottom icon is the LNDB (Loggernet Database) Manager that shouldn't require any attention. Please do not adjust any settings within the LNDB Manager without contacting a Campbell Scientific employee.

Before trying to access your EasyFlux Web account in a web browser, open the EasyFlux Web Server Administration Utility (shown in the following image). None of the defaults on this page should require editing. The possible exception is the **Port Number**, and then only if the default Port Number is taken by another web server installation.



To add your station license key click **Manage License...** and then click **Register Add-On....** The next prompt will allow you to input your station license key. Once this is completed, you can open your web browser and type in the IP address of your computer or simply type "localhost" into your browser. This should pull up the main EasyFlux Web page. If a different web page is pulled up (not EasyFlux Web), you may have a conflicting port number. This will require you changing your port number, as mentioned above, to one that is not being used. If you are still having trouble accessing the web page, contact a Campbell Scientific employee.





2.2 Set Language

The EasyFlux® Web user interface text can be displayed in different languages. The **Set Language** button (highlighted in the following image) on the navigation bar allows you to select from a list of installed languages. If your preferred language is not listed, please contact Campbell Scientific. After receiving a language pack from Campbell Scientific, press **Upload Language Pack** to upload the language file.



2.3 Header and Footer Customization (Self-Hosted only)

The user can create their own header and footer for EasyFlux® Web by creating text files with a text editor. These files must be saved to the EasyFlux Web working directory. (By default, the working directory is C:\Campbellsci\EasyFlux-Web.)

The files must be named:

- PageHeader.snippet
- PageFooter.snippet

HTML code can be added to these files to display logos, hyperlinks, images, or perform other html customization as needed.

Contact Campbell Scientific for example files as well as general help on how to customize the interface to your preference.

3. Supported Web Browsers

EasyFlux Web has been tested with the following web browsers:

- Chrome
- Firefox
- Safari

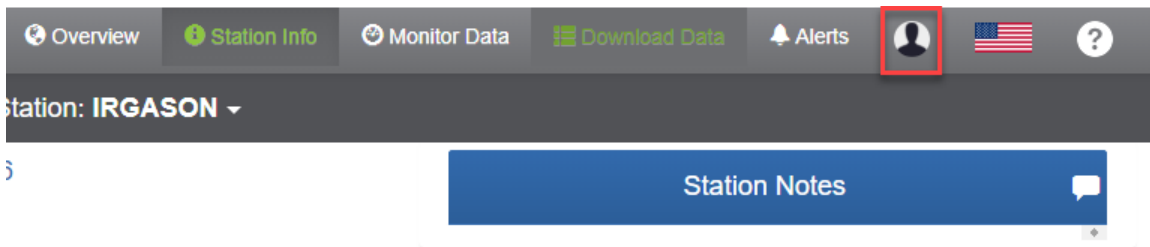
Current versions of these web browsers should be used.

4. Working with EasyFlux® Web

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4.1 Manage Users

To add user accounts, click on the **User Info** button in the top right corner.



[North, Logan, Cache County,](#)

In the resulting window, click **Manage Users**, and then **Add User**. Fill in the requested information. Note that the email address you provide will be used to send the alerts that a user is subscribed to.

The **Is Administrator** checkbox gives a user the ability to add, edit, and delete users, stations, and alerts, as well as edit metadata. If the **Is Administrator** checkbox is not checked, by default, the user is able to view data, download data, and subscribe to alerts for any station they are associated with. A user can be associated with a station and their permissions can be changed from the Manage Station Users dialog box (see [Manage Station Users](#) (p. 20) for more information).

An email will be sent to the new user, when an account is created. The email will contain a link that the new user will follow where they will be instructed to create a password.

If you forget your password, go to the Login screen and select **Forgot Password**.

By default, there is a Public user that is able to view and download data for each station that it is associated with.

NOTE:

You must be an administrator in order to manage users. If an administrative account has not been set up, a **Create User** box will be displayed when EasyFlux® Web is opened to allow you to create an administrator.

You can also click **Station Permissions** to select any other enabled, non-admin user and to set the rights for the selected user on all visible stations.

4.2 Add Station

A station can be added by clicking **Add Station** from the **Map** or **Stations** view to display the **New Station** dialog box. If the datalogger has already been added to LoggerNet, you can select it from the **Manage LoggerNet Dataloggers** drop-down list. If the datalogger has not been added to LoggerNet, select **Add LoggerNet Datalogger** from the list. The **Add LoggerNet Datalogger** dialog box will be displayed (see [Add LoggerNet Datalogger](#) (p. 19) for more information). After

adding the LoggerNet datalogger, you will be returned to the **Add Station** dialog box with the newly added LoggerNet datalogger selected.

On the left side of the screen, you can load an image or a video and provide a **Description** for the station.

If available in the datalogger program, the **Ecosystem**, **Latitude**, **Longitude**, and **Elevation** fields will be automatically filled in. (Note that the program is only checked for these fields when the station is first added to EasyFlux® Web. They can be modified by the user at any time in EasyFlux Web.)

The default name of the EasyFlux Web station will be the same as its LoggerNet name. You can give it a unique name in the **Name** field.

Select the **Type** of station: Select the Type of station. There are two types by default: **EasyFlux DL CR6** or **EasyFlux DL CR3000**. These types of stations are associated with dataloggers that have an EasyFlux DL program running on them. Alerts, Data Monitors, and Metadata are all populated based off of the information within the EasyFlux DL program. If this site's datalogger has a different program then a new **Type** of site will need to be manually created. To create a new **Type** of station see **Manage Station Type** below.

If not filled in automatically, specify the **Ecosystem**, the **Latitude** and **Longitude** in decimal, and the **Elevation** of the station in meters, .

You can optionally enter an **Abbreviation**, **Institution**, and **Location**. (Clicking the icon next to **Location** will fill in the information based on your current location. This will also override the **Latitude** and **Longitude** obtained from the datalogger program.)

Press **Save** to save the information and exit the dialog box.

To delete a station or modify its settings, go to the **Station Info**, click on the station of interest on the station dropdown, navigate to the **Manage Station** dropdown. Select **Delete Station** to delete the station. Select **Edit Properties** to open the **Edit Station** dialog box which will allow you to modify the settings of the station. From the **Edit Station** dialog box, you can use the **Enabled/Disabled** toggle to choose whether a station is enabled. A disabled station will show up with a black slash on the map. When a station is disabled, data will not be collected and alerts will not be sent.

4.2.1 Manage Station Type

From the **Edit Station** dialogue box click on **Manage Station Types**. From here you can select either **New Type from this Station** or **Edit Station Types**. If you select **New Type from this Station** a prompt will appear that will allow you to name this station type. The station type will be created based upon the configuration (Alerts, Data Monitors, and Metadata) of the site selected. Once the type template has been created, it can be used to specify the configuration of new stations

and to change the configuration of existing stations to match. If you select **Edit Station Types** it displays all the different station types that have been created and allows the user to rename the stations types, apply that station type to other stations, set a default station type, or delete the station type.

4.3 Add LoggerNet Datalogger

Before adding a station to EasyFlux® Web, it must be added to LoggerNet. The **Add LoggerNet Datalogger** dialog box can be opened by selecting **Add LoggerNet Datalogger** from the **Manage LoggerNet Dataloggers** drop-down list on the **New Station** dialog box.

The **Add LoggerNet Datalogger** dialog box has the following fields:

- **Datalogger Name:** Specify the name that will be used in the LoggerNet Network Map.
- **Link Type:** Specify whether the link will be an Outbound PakBus/TCP (that is, EasyFlux Web will initiate contact to retrieve data) or Inbound PakBus/TCP (that is, the station will initiate the contact).

NOTE:

For EasyFlux Web CSI-Hosted, the firewall is opened to allow incoming connections on ports 6700-6799. This allows for 100 incoming station connections. Furthermore, dataloggers can share a port, if each datalogger sharing the port has a unique PakBus address. This also allows for the LoggerNet default port of 6789 and the datalogger default port of 6785.

- **Datalogger Address:** Enter the IP address or domain name to be used to contact the datalogger.
- **Datalogger Port:** Enter the PakBus/TCP port of the datalogger. Default is 6785.
- **PakBus Address:** Enter the PakBus address of the datalogger. Each datalogger in a PakBus network must have a unique address. Valid addresses are 1 through 4094. However, PakBus addresses of greater than 3999 are typically reserved for PakBus routing devices and ports.
- **Neighbor Address:** The PakBus address of the neighbor you will go through to connect to your datalogger. A value of 0 means you will connect directly to your datalogger.
- **LN PakBus Address:** The PakBus address of the LoggerNet server. (The default LoggerNet server address for EasyFlux® Web is 4088.)
- **Security Code:** If security has been set up in the datalogger, enter the security code needed for access.
- **TCP Password:** If a PakBus/TCP password has been set up to control IP access to the datalogger, enter that password here.
- **PakBus Encryption Key:** If a PakBus Encryption Key has been set up to encrypt communication to and from this datalogger, enter the key here.

NOTE:

Since EasyFlux Web Self-Hosted runs on the LoggerNet server, the LoggerNet toolbar cannot be opened while EasyFlux Web Self-Hosted is running. However, you can open individual LoggerNet applications (such as the Status Monitor or Connect Screen) to view your EasyFlux Web stations. If you need to access the LoggerNet toolbar, use the EasyFlux Web Server Administration Utility to temporarily stop the service or go to computer's task manager to stop the "EasyFlux-Web" service.

4.4 Manage Station Users

To manage users for a station, go to the **Station Info** tab. Click **Manage Station | Manager Users** at the top left of the window or **Manage Users** from the User Info dialog box.

All of the current users for the station will be shown along with their permissions. You can edit the permissions by selecting or clearing the check boxes. A user can be deleted by pressing the red . A new user can be added by pressing **Add User**. Note that a user must be added to EasyFlux® Web before he can be added to a station. See [Manage Users](#) (p. 16) for more information.

NOTE:

An administrator always has full permissions. The Public user can only monitor and download data. These permissions cannot be modified.

4.5 Manage Metadata

The station metadata controls what is shown in the **Station Info** box (see [Station Info](#) (p. 21) for more information).


To manage the metadata for a station, go to the **Station Info** tab, select the station from the dropdown, click **Manage Station | Manage Metadata** at the top left of the window. (The **Manage Station** drop-down list can also be used to **Restore Default Metadata** for this station or **Copy to Other Stations** the metadata set up for this station.)

When editing metadata, a group is a collection of displays. In the **Station Info** screen, each group will show up in a blue box with the **Group Name** at the top of the box.

To add a new group, press **Add Group**. A group will be added. Assign a name to the group in the **Group Name** field. One display will be added to the group by default. Press **Add Display** to add more displays. For each display, set the:

- **Display Name:** The name shown for the display.
- **Width:** The width allows you to control the amount of space needed to display the value. You can choose to use 1/4, 1/3, 1/2, or the full width of the screen. For example, if you want to 3 displays to be shown per line, select **1/3 Width**.
- **Value Type:** Specify whether the display value will be manually entered by a user or retrieved from the datalogger.
- **Manual Value:** Set the default value for a manually entered field. (**Manual** displays only.)
- **Logger Table/Field:** Select the datalogger table and field to be displayed. (**From Datalogger** displays only.)


To make changes to a group, click the group name to show the displays in the group. Click a display name to open the display for editing. Use the arrows to move a display up or down within the group. (The displays will be shown in the order they are listed.) Press the red x to delete the display.

Use the arrows next to group names to move the groups up or down. (The groups will be shown in the order they are listed.) Press the red  to delete the group.

4.6 Station Info

Information about a station can be displayed by pressing the **Station Info** tab at the top of the screen and selecting your station from the **Station** drop-down list.

In the **Station Info** window click **Manage Station | Edit Properties** to edit the station information (ecosystem, location, latitude, longitude, elevation, and so forth). The **Edit Station** dialog box will appear allowing you to modify the information. From this window, you can also **Disable/Enable** a station. When a station is disabled, all user interface for that station is disabled.

The **Station Notes** field can be used to add notes about the station. Press  to add a new note. Notes are displayed in the **Station Info** window with the most recent note at the top.


The rest of the **Station Info** window contains the station metadata. A station is set up with default metadata; it can be modified by pressing **Manage Station | Manage Metadata** (p. 20). The **Manage Station** drop-down list can also be used to **Restore Default Metadata** for this station or **Copy to Other Stations** the metadata set up for this station.

Select **Manage Station | Manage Station Users** (p. 20) to control what users are associated with a station and their permissions.

Select **Manage Station | Import Data Files** to import old data files from the station into EasyFlux® Web. Once those data files are imported, they can be viewed within the **Monitor Data** tab by creating another monitor and adding the old data.

A station can be deleted by selecting **Manage Station | Delete Station** This will delete the currently selected station.

4.7 Monitor Data

Data for a station can be monitored by clicking  under **Actions** from the **Stations** view or by clicking on **Monitor Data** at the top of the main screen and selecting the station from the **Station** drop-down list.

Monitors display data values, by default. To instead display the [QA/QC](#) (p. 23) (for values that it is available for), select the **QA/QC** checkbox.

For an image monitor, use the arrows to scroll through available images. Use the camera button at the top of the monitor to save a snapshot of the displayed image.

Default monitors are set up when a station is added to EasyFlux® Web. To modify the station monitors, press **Manage Monitors | Edit Station Monitors** at the top left of the monitor window. The **Manage Monitors** drop-down list can also be used to **Restore Default Monitors** for this station or **Copy to Other Stations** the monitors set up for this station.

When editing station monitors, click a monitor name to open the monitor for editing.

Use the arrows to move a monitor up or down within the display. (The monitors will be shown in the order they are listed.) Press the red x to delete the monitor.

To add a new monitor, press **Add Monitor**. For each monitor, set the:

- **Title:** The name shown for the monitor.
- **Type:** Specify whether the monitor will be a **Graph**, **Wind Rose**, **Image**, or **Live Video**.
- **Interval:** Specify the interval to be displayed on the monitor.
- **Table:** Select the datalogger table to be displayed.
- **Field:** Select the field from the datalogger table to be displayed. (**Graph** monitors only.)
- **Autoscale:** Select this box to have the graph autoscale. If the box is not selected, a **Max** and **Min** box will appear allowing you to set the scale for the graph. (**Graph** monitors only.)
- **Wind Speed/Direction:** Select the fields from the datalogger table which contain the wind speed and wind direction. (**Wind Rose** monitors only.)
- **Image Source:** (**Image** monitors only.)
 - **Datalogger Collected:** Images stored on a datalogger.
 - **Datalogger Image Pattern:** Specify the datalogger device type (cpu, crd, usb, or usr) and image type. For example, cpu:* .jpg.
 - **Local Watch Directory:** Images being sent to a local directory via FTP.
 - **Image watch directory:** Copy and paste the desired directory on the local machine. The directory must be within the EasyFlux® Web working directory (by default, the working directory is C:\Campbellsci\EasyFlux-Web).

- **Image Watch Pattern:** Specify the image type.
- **Refresh Rate:** Specify how often to check for a new image.
- **Image URL:** Images collected directly from a camera URL.
 - **Image URL:** Specify the URL directly to the camera (that is, not through the user interface).
 - **Refresh Rate:** Specify how often to check for a new image.
- **Camera Address:** Enter the IP address of the camera without a port number. (**Live Video** monitors only.)
- **Camera Type:** Specify whether you are using a Campbell Scientific **CCFC** or a **Generic** camera.

NOTE:

The CCFC supports only **one** live video feed client at any given time. This means that if the camera web app is active, the feed from EasyFlux® Web will be unable to connect.

- **Video Resolution:** Select the resolution for the live video. (**Live Video CCFC** monitors only.)
- **User Name:** Enter the user name for the camera. (**Live Video** monitors only.)
- **Password:** Enter the password for the camera. (**Live Video** monitors only.)
- **Custom Path:** Many cameras make different exposures, resolutions, and other options available by altering the path portion of the URL. For example, `rtsp://ip_address/custom_path`. Consult the documentation for your camera to see the options that may be specified with a custom path. (**Live Video Generic** monitors only.)


4.7.1 QA/QC

"The presented scheme was classified by micrometeorological experiences so that classes 1-3 can be used for fundamental research, such as the development of parameterizations. Classes 4-6 are available for general use such as for continuously running systems of the FLUXNET program. Classes 7 and 8 are only for orientation. Sometimes it is better to use such data instead of a gap-filling procedure, but then these data should not differ significantly from the data located before and after these data in the time series. Data of class 9 should be excluded under all circumstances."^a

^aFoken, Thomas, Ray Leuning, Steven R. Oncley, Matthias Mauder, and Marc Aubinet. 2012.

"Corrections and Data Quality Control." In *Eddy Covariance: A Practical Guide to Measurement and Data Analysis*, edited by Marc Aubinet, Timo Vesala, and Dario Papale, 85-131. Netherlands: Springer.

4.8 Download Data

Data from a station can be downloaded by clicking  under **Actions** from the **Stations** view or by clicking **Download Data** at the top of the main screen and selecting the station from the **Station** drop-down list.

Select the Table to Collect: Use the drop-down list to select which datalogger table data is to be collected from.

Data File Format: Use the drop-down list to select the format of the downloaded data.

- **TOA5** - Data is stored in a comma separated format. Header information for each of the columns is included, along with field names and units of measure if they are available.
- **TOB1 (binary)** - Data is stored in a binary format. Though this format saves disk storage space, it must be converted before it is usable in other programs.
- **XML** - Data is stored in XML format with Campbell Scientific defined elements and attributes. For additional information, refer to the LoggerNet manual.

Collection Mode: Use the drop-down list to select the collection mode.


- **All Data** - Retrieves all records from the selected table.
- **Most Recent Interval** - Retrieves the most recent interval from the selected tables by backing up the interval specified in the **Backfill Interval** field and retrieving all data forward.
- **Most Recent # of Records** - Retrieves a specific number of records from the selected tables by backing up the number of records entered in the **Number of Records to Collect** field and retrieving all data forward.
- **Date Range** - Allows you to specify a time frame for data collection. When this option is selected, the **Start Date** and **End Date** fields will be enabled.

After selecting what data to download, click **Download Now**. You will be asked what to do with the *.dat file. You can **Open** the file in View Pro, **Save** the file, or **Cancel** the download. If you choose to save the file, by default, the data is stored in your Downloads directory and given a name of *StationName_TableName.dat*. You can change the location and/or filename by using the arrow next to **Save** and choosing **Save as**.

4.9 Alerts

Alerts can be used to notify by email everyone that is associated with a station and subscribed to the alert, when an alert condition exists.

To subscribe to alerts, go to the **Alerts** tab and select the **Subscribed** checkbox for each alert you wish to subscribe to, or use the drop-down list next to **Subscribed** to **Subscribe to All** alerts for a station. Subscriptions must be set up for each station.

Alerts for a station can be viewed by clicking  under **Actions** from the **Stations** view or by clicking on **Alerts** at the top of the main screen and selecting the station from the **Station** drop-down list.

When a station is added, default alerts are set up. More alerts can be added by selecting [Add Alert \(p. 25\)](#) from the **Manage Alerts** drop-down list in the top left corner of a station's **Alerts** screen. The **Manage Alerts** drop-down list can also be used to **Restore Default Alerts** for this station or **Copy to Other Stations** the alerts set up for this station.

4.10 Add Alert

Type: Specify what will trigger the alert. An alert can be triggered if no data is received from a table for a certain interval or by the value of a field.

Title: Type a title that will be used in the list of alerts and in the email when an alert is triggered.

Table: Select the table that will trigger the alert.

Field: Select the field within the selected table that will trigger the alert. (**Field Value** alerts only.)

Severity: Specify whether the alert is **Critical** or **Warning**. When monitoring alerts, warning is indicated with yellow, critical with red.

No Data Interval: Specify the interval of time without data that will trigger an alert. (**No Data** for **Table** alerts only.)

Trigger: Specify what field value will trigger the alert. Select =, >, >=, <, <=, or <> (not equal to) from the first drop-down list. Enter the value to compare the field to in the box. Use the drop-down list to add another line. Select **AND** or **OR** depending on whether only one or both conditions must be met to trigger an alert. (**Field Value** alerts only.)

Message: Enter the message to be shown when the alert is triggered.

4.11 Map

The **Map** view shows the stations located according to their latitude and longitude.

The icon for the station indicates the highest level of alert for the station:



No Alerts



Warning Alert

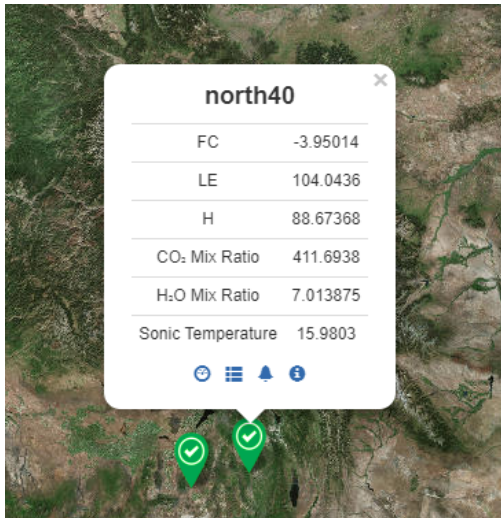


Critical Alert

 Unknown State for Alert

 Station Disabled

Click a station icon to bring up a station quick view showing the most recent data from the station. Icons on the bottom of the station quick view take you to [Monitor Data](#) (p. 22), [Download Data](#) (p. 24), [Alerts](#) (p. 24), and [Station Info](#) (p. 21).



4.12 Comparison

The **Comparison** view allows you to view a comparison graph of the fields you select. The fields can come from any tables in any of the dataloggers in your network. Multiple dataloggers can be viewed within one comparison.

To set up a comparison, go to the **Comparison** view and click the gear icon in the top right corner. This brings up the Manage Comparison Configurations dialog box. Press **Add Configuration**. The **Comparison Graph Configuration** dialog box will open. For the comparison, set the:

- **Title:** The name show for the configuration.
- **Interval:** The interval of data to be shown on comparison graph.

One trace is shown by default. Click **Add Trace** to add more traces to the graph. Click a trace name to open the trace for editing. Use the arrows to move a trace up or down. (The traces will be shown in the legend in the order they are listed.) Press the red x to delete the trace.

For each trace, set the:

- **Station:** Select the datalogger with the field to display.
- **Table:** Select the datalogger table with the field to be displayed.
- **Field:** Select the field from the datalogger table to be displayed.
- **Trace Title:** Specify the name to be used for the field on the comparison graph. This defaults to *stationname.tablename.fieldname*.
- **Axis:** Select whether this field will be associated with the scale on the left or right axis.

After adding all of the desired traces to the comparison configuration, press **Done**.

Press **Add Configuration** to add another comparison configuration or **Close** to close the **Manage Comparison Configurations** dialog box.

Once configurations are set up, you view them from the **Comparison** view. If you have multiple comparison configurations, use the **Load Config** drop-down list box to select which to view in the comparison view.

5. License Agreements

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5.1 EasyFlux® Web CSI-Hosted License Agreement



License Agreement for EasyFlux® Web CSI-Hosted Data Service

NOTICE OF AGREEMENT:

This License Agreement for EasyFlux Web Hosted Data Service (the "Agreement") is a legal agreement between End User (as defined below) and Campbell Scientific. ("CSI") for the license and use of the EasyFlux Web Hosted Data Service. The EasyFlux Web Hosted Data Service ("Data Service" as defined below) is licensed, not sold, to End Users of CSI pursuant to the terms and conditions of this Agreement. By using the Data Service, End User agrees to the terms and

conditions contained herein, and acknowledges that this Agreement is a legal agreement between End User and CSI only, and no other third parties. If End User does not agree to the terms of this Agreement, End User may not use the Data Service. End User agrees and acknowledges that any use of the Data Service acknowledges that End User has read this Agreement, understands this Agreement, and agrees to be bound by the terms and conditions of this Agreement.

DEFINITIONS:

“CSI” means Campbell Scientific, Inc. a Utah company with headquarters in Logan, Utah.

“Data Service” means EasyFlux Web Hosted Data Service, which is a cloud-based software tool hosted by CSI for monitoring Campbell Scientific eddy-covariance systems.

“End User” means the entity that will use the Data Service.

LICENSE FOR USE:

1. Use Rights: It is hereby understood and agreed that CSI is the owner of all rights, title, and interests in and to the Data Service, regardless of the media or form, including all copyrights, trademarks, patents, and trade secrets, and all Modifications (as defined below) thereto. End User acknowledges and agrees that through use of the Data Service, End User does not acquire any ownership rights in or to the Data Service. CSI grants to End User a license to use the Data Service only as expressly permitted in and subject to the terms and conditions of this Agreement, as CSI may change from time to time. This license is limited, non-exclusive, non-perpetual, revocable, and, unless specifically allowed in writing by CSI, non-transferable, and End User understands, acknowledges, and agrees that CSI may revoke, modify, terminate, or otherwise alter this License and/or the Data Service, as determined by CSI in CSI’s sole and absolute discretion. CSI reserves all rights not expressly granted in this Agreement. The terms of this Agreement shall apply to any upgrades, modifications, enhancements, customizations, supplements, updates, revisions, replacements, or derivative works to the Data Service (collectively, “Modifications”). End User may not (i) reproduce, display, download, modify, create derivative works of, or distribute the Data Service, in whole or in part, or make any Modifications to the Data Service; (ii) attempt to reverse engineer, decompile, disassemble, or access the source code for the Data Service, or any component thereof; (iii) permit any other party to access the Data Service; or (iv) access the Data Service via any means other than over the Internet using authorized login credentials as implemented within the Data Service.

2. Technical Limitations: End User must comply with documented technical limitations of the Data Service that only allow use in certain ways. End User may not work around them. Minimum system requirements or other factors may affect End User's ability to use the Data Service, and CSI makes no warranties regarding End User’s ability to use the Data Service or compatibility with End User’s device(s).

3. Data Transfer Notices: CSI provides Internet-based services with the Data Service, and requires transmitting data over the Internet.
4. Consent for Data Transfer: The Data Service requires transmitting data over the Internet. By using the Data Service, End User consents to the transmission of data and End User information. CSI does not use the information to identify or contact End User.
5. Computer Information: The Data Service uses Internet protocols, which send to the appropriate systems computer information, such as End User's Internet protocol address to make the Internet-based services available to End User (the "Computer Information").
6. Use of Information: CSI may use the Computer Information, error reports, malware reports and URL filtering reports to improve its software and services. CSI may also share it with others, such as hardware and software vendors. They may use the information to improve how its products run with CSI software and the Data Service.
7. Misuse of Internet-based Services: The End User may not use the Data Service in any way that could harm them or impair anyone else's use of them. The End User may not use the services to try to gain unauthorized access to any service, data, account or network by any means.
8. No High-Risk Use: The Data Service is not guaranteed to be error free or to operate uninterrupted. The End User does not have the right to use the Data Service in any application or situation where the Data Service's failure could lead to death or serious bodily injury of any person, or to severe physical or environmental damage ("High-Risk Use"). Examples of High-Risk Use include, but are not limited to: aircraft or other modes of human mass transportation, nuclear or chemical facilities, life support systems, implantable medical equipment, motor vehicles, or weaponry systems. High-Risk Use does not include utilization of the Data Service for administrative purposes, to store configuration data, engineering and/or configuration tools, or other non-control applications, the failure of which would not result in death, personal injury, or severe physical or environmental damage. These non-controlling applications may communicate with the applications that perform the control, but must not be directly or indirectly responsible for the control function. End User agrees to indemnify, defend, and hold CSI harmless from any third-party claim arising out of the use of the Data Service in connection with any High-Risk Use.
9. Scope of Use: End User may not:
 - Use the Data Service in a way that is prohibited by any law, regulation or governmental order or decree in any relevant jurisdiction, or that violates others' legal rights;
 - Use the Data Service in a way that could harm it or impair anyone else's use of it;
 - Falsify any protocol or email header information (e.g., "spoofing");
 - Use the Data Service to send "spam" (i.e., unsolicited bulk or commercial messages), to distribute malware, or otherwise make available any offering designed to violate these terms (e.g., denial of service attacks, etc.); or

- Remove, modify, or tamper with any regulatory or legal notice or link that is incorporated into the Data Service.

ADDITIONAL TERMS

1. License Terms Updates: CSI may update the terms and conditions of this Agreement from time to time, as determined in CSI's sole discretion. Changes to these Agreement license terms that CSI either notifies End User of, introduces with updates or supplements, or is required by law to make, or that do not materially affect the use of the Data Service, will, in each such situation, apply immediately.

2. Data Service Suspension and Termination of Agreement: CCSI may suspend Data Service in whole or in part, and terminate this Agreement, in any of the following circumstances:

- If CSI believes that End User's use of the Data Service represents a direct or indirect threat to CSI's network function or integrity or anyone else's use of the Data Service;
- If reasonably necessary to prevent unauthorized access to End User data;
- To the extent necessary to comply with legal requirements;
- If End User does not abide by the terms of this Agreement; or
- If CSI determines, in its sole and absolute discretion, to terminate or suspend the Data Service, or to revoke End User's license granted under the Agreement, for any reason or for no reason at all.

3. Suspension promise: Any suspension of the Data Service pursuant to this section shall apply to the minimum necessary portion of the Data Service and will only be in effect for as long as reasonably necessary to address the issues giving rise to the suspension.

4. Notice of suspension: CSI will provide notice before suspending the Data Service, except where CSI reasonably believes an immediate suspension is required.

5. Right to terminate: If End User does not fully address the reasons for the suspension within 30 days after suspension of the Data Service, CSI may terminate End User access.

6. Use of Other Web Sites and Services: End User may need to use certain CSI web sites or services to access and use the Data Service. If so, the terms of use associated with those web sites or services, as applicable, apply to End User's use of them.

7. Third Party Content and Services: CSI is not responsible for any third-party content End User accesses directly or indirectly via the Data Service. End User is responsible for its dealings with any third party (including advertisers) related to the Data Service (including the delivery of and payment for goods and services).

8. End User Equipment: It is End User's responsibility to ensure that any equipment programmed to access the Data Service account is in working order and that any communication mechanism or device is in full working order and contactable by the Data Service.

MAINTENANCE AND SUPPORT:

CSI or its affiliated companies may, from time to time, at CSI's sole discretion, provide End User with support services related to the Data Service ("Support Services"). CSI reserves the right to alter, suspend, and terminate the Support Services at any time and for any reason. Use of the Support Services is governed by this Agreement and other CSI policies and guidelines as may be determined by CSI. No other third party, has any obligation to furnish maintenance and support services with respect to the Licensed Application.

Requests for Data Service maintenance, support, or other inquiries should be addressed to CSI or a Campbell Scientific company covering the End User's region, as noted in CAMPBELL SCIENTIFIC COMPANIES below.

DISCLAIMER OF WARRANTIES:

END USER EXPRESSLY ACKNOWLEDGES THAT THE USE OF THE DATA SERVICE IS AT END USER'S SOLE RISK AND THAT THE ENTIRE RISK AS TO QUALITY, PERFORMANCE, ACCURACY, AND EFFORT IS WITH THE END USER. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE DATA SERVICE IS PROVIDED "AS IS," WITH ALL FAULTS AND WITHOUT REPRESENTATION OR WARRANTY OF ANY KIND, AND CSI DISCLAIMS ALL WARRANTIES, ANY IMPLIED REPRESENTATIONS, WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED OR STATUTORY, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, TITLE OR NON-INFRINGEMENT OF THIRD PARTY RIGHTS. THESE DISCLAIMERS WILL APPLY UNLESS APPLICABLE LAW DOES NOT PERMIT THEM. CSI DOES NOT WARRANT THAT THE OPERATION OF THE DATA SERVICE WILL BE UNINTERRUPTED OR ERROR-FREE, OR THAT DEFECTS IN THE DATA SERVICE WILL BE CORRECTED, AND IS NOT RESPONSIBLE OR LIABLE FOR THE SAME. WITHOUT LIMITING THE GENERAL NATURE OF THE ABOVE DISCLAIMERS OF WARRANTIES, CSI MAKES NO REPRESENTATION OR WARRANTY WHATSOEVER THAT THE DATA SERVICE WILL BE AVAILABLE FOR USE, WILL MEET END USER'S REQUIREMENT FOR USE, OR THAT THE DATA SERVICE OR DOCUMENTATION OR GUIDELINES ASSOCIATED THEREWITH ARE ERROR FREE, OR THAT THE OPERATION OF THE DATA SERVICE WILL BE UNINTERRUPTED. END USER SHALL BE SOLELY LIABLE FOR TELECOMMUNICATION ACCESS COSTS AND OTHER SIMILAR COSTS, AND SHALL INDEMNIFY CSI FROM AND BE SOLELY LIABLE FOR CLAIMS BY ANY THIRD PARTY.

LIMITATION OF LIABILITIES:

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, WHATEVER THE LEGAL BASIS FOR THE CLAIM OR DAMAGES, IN NO EVENT SHALL CSI, OR ANY OF ITS AFFILIATES OR SUPPLIERS, BE LIABLE FOR PERSONAL INJURY, OR FOR ANY INDIRECT, CONSEQUENTIAL, SPECIAL OR INCIDENTAL DAMAGES, DAMAGES FOR LOST PROFITS OR REVENUES, BUSINESS INTERRUPTION, OR LOSS OF BUSINESS INFORMATION ARISING IN CONNECTION WITH THIS AGREEMENT OR THE USE OF OR INABILITY TO USE THE DATA SERVICE OR THE PROVISION OF

OR FAILURE TO PROVIDE SUPPORT SERVICES, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR IF SUCH POSSIBILITY WAS REASONABLY FORESEEABLE. THIS NON-LIABILITY FOR DAMAGES APPLIES WHETHER IN AN ACTION OR CLAIM BASED ON CONTRACT, TORT, OR ANY OTHER SUCH THEORY. CSI'S AGGREGATE MAXIMUM LIABILITY ARISING FROM OR RELATING TO THIS AGREEMENT, THE DATA SERVICES, OR THE DOCUMENTATION OR INFORMATION ASSOCIATED THEREWITH SHALL NOT EXCEED, AND END USER ACKNOWLEDGES AND AGREES IS LIMITED TO, THE GREATER OF (I) \$10.00 AND (II) THE INITIAL FEE, IF ANY, PAID BY END USER FOR CREATING AN ACCOUNT, ACCESSING, AND USING THE DATA SERVICE.

INDEMNIFICATION:

End User hereby agrees to indemnify, defend, and hold harmless CSI and its directors, officers, employees, representatives, and agents from and against, any and all claims, losses, damages, and expenses, including attorney fees, arising from a third party claim to the extent that such third party claim is based on End User's use of any content or materials, use of the Data Service, a breach of this Agreement or any CSI agreements, or End User's negligence or other act or omission in connection with use of the Data Service.

LEGAL COMPLIANCE:

1. By accepting this Agreement, End User represents and warrants that it (i) is not located in a country that is subject to a U.S. Government embargo, or that has been designated by the U.S. Government as a "terrorist supporting" country; and (ii) is not listed on any U.S. Government list of prohibited or restricted parties; and (iii) that End User will comply with all application international and national laws that apply to the Data Service, including any export laws, rules, and regulations, and end user and destination restrictions issued by the U.S. and other governments.

2. Electronic Notices: CSI may provide End User with information about the Data Service in electronic form. It may be via email to the address End User provides when End User signs up for the Data Service, or through a web site that CSI identifies.

TERMINATION:

CSI may modify or terminate the Data Service in any country where there is any current or future government requirement or obligation that subjects CSI to any regulation or requirement not generally applicable to businesses operating there, presents a hardship for CSI to continue operating the Data Service without modification, and/or causes CSI to believe these terms or the Data Service may be in conflict with any such requirement or obligation. For example, CSI may modify or terminate the Data Service in connection with a government requirement that causes CSI to be regulated as a telecommunications provider. CSI may also modify or terminate the Data

Service and this Agreement in accordance with any other terms of this Agreement, including, but not limited to, the "Data Service Suspension and Termination of Agreement" terms above.

MISCELLANEOUS:

End User may not assign any of its rights or obligations hereunder, whether by operation of law or otherwise, without the prior written consent of CSI. Notwithstanding the foregoing, CSI may assign this Agreement in its entirety, without the consent of End User. Subject to the foregoing, this Agreement shall bind and inure to the benefit of the parties, their respective successors and permitted assigns. Any attempted assignment in breach of this provision shall be void. The parties hereto are independent contractors and nothing in this Agreement will create any partnership, joint venture, agency, or employment relationship between the parties. There are no third party beneficiaries to this Agreement. The parties agree that any legal action arising under or relating to this Agreement or the Data Service must be maintained in the state and federal courts located in the State of Utah, and that any legal action brought in the state courts must be brought in Cache County, Utah. The laws of the State of Utah govern this Agreement, excluding laws concerning conflict of laws. In any action related to this Agreement or the Data Service, the prevailing party shall be entitled to an award of reasonable attorney fees and reasonable costs against the non-prevailing party. This Agreement, and any other agreements referenced herein, contains the entire agreement and understanding of the parties concerning the subject matter of this Agreement. The waiver by CSI of any breach or default under this Agreement does not constitute the waiver of any subsequent breach or default. If any provision of this Agreement is held to be illegal or unenforceable, it shall be deemed amended to conform to applicable laws or regulations, or, if it cannot be so amended without materially altering the intention of the parties, it shall be stricken and the remainder of this Agreement shall continue in full force and effect. This Agreement may be amended at any time by CSI, in CSI's sole and absolute discretion. The most current Agreement applies to End User unless otherwise designated by CSI.

BY ACCEPTING THIS AGREEMENT, YOU ARE AGREEING ON BEHALF OF YOURSELF OR THE END USER THAT YOU ARE AN AUTHORIZED USER UNDER THE TERMS OF THIS AGREEMENT, AND THAT YOU HAVE THE AUTHORITY TO BIND SUCH ENTITY TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT HAVE THE AUTHORITY TO BIND THE END USER, THEN YOU SHALL NOT ACCEPT THIS AGREEMENT AND SHALL NOT USE THE DATA SERVICE. YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT BY SELECTING THE "ACCEPT" OPTION AND/OR USING THE DATA SERVICE. YOU MUST AGREE TO ALL OF THE TERMS OF THIS AGREEMENT BEFORE GAINING ACCESS TO AND USE OF THE DATA SERVICE. IF YOU DO NOT AGREE TO ALL OF THE TERMS OF THIS AGREEMENT, YOU MUST NOT USE THE DATA SERVICE.

CAMPBELL SCIENTIFIC COMPANIES:

Australia

Location: Garbutt, QLD Australia
Email: info@campbellsci.com.au
Website: www.campbellsci.com.au

Brazil

Location: São Paulo, SP Brazil
Email: vendas@campbellsci.com.br
Website: www.campbellsci.com.br

Canada

Location: Edmonton, AB Canada
Email: dataloggers@campbellsci.ca
Website: www.campbellsci.ca

China

Location: Beijing, P. R. China
Email: info@campbellsci.com.cn
Website: www.campbellsci.com.cn

Costa Rica

Location: San Pedro, Costa Rica
Email: info@campbellsci.cc
Website: www.campbellsci.cc

France

Location: Vincennes, France
Email: info@campbellsci.fr
Website: www.campbellsci.fr

Germany

Location: Bremen, Germany
Email: info@campbellsci.de
Website: www.campbellsci.de

India

Location: New Delhi, DL India
Email: info@campbellsci.in
Website: www.campbellsci.in

South Africa

Location: Stellenbosch, South Africa

Email: sales@campbellsci.co.za

Website: www.campbellsci.co.za

Spain

Location: Barcelona, Spain

Email: info@campbellsci.es

Website: www.campbellsci.es

Thailand

Location: Bangkok, Thailand

Email: info@campbellsci.asia

Website: www.campbellsci.asia

UK

Location: Shepshed, Loughborough, UK

Email: sales@campbellsci.co.uk

Website: www.campbellsci.co.uk

USA

Location: Logan, UT USA

Email: info@campbellsci.com

Website: www.campbellsci.com

5.2 EasyFlux® Web Self-Hosted License Agreement



License Agreement for EasyFlux® Web Self-Hosted Software

NOTICE OF AGREEMENT:

This License Agreement for EasyFlux® Web Self-Hosted Software (the "Agreement") is a legal agreement between End User (as defined below) and Campbell Scientific, Inc. ("CSI") for the license and use of the EasyFlux Web Self-Hosted Software. The EasyFlux Web Self-Hosted sold to End Users of CSI pursuant to the terms and conditions of this Agreement. By using this Software (as defined below), End User agrees to the terms and conditions contained herein, and acknowledges that this Agreement is a legal agreement between End User and CSI only, and no

other third parties. If End User does not agree to the terms of this Agreement, End User may not use the Software. End User agrees and acknowledges that any use of the Software confirms that End User has read this Agreement, understands this Agreement, and agrees to be bound by the terms and conditions of this Agreement.

DEFINITIONS:

“CSI” means Campbell Scientific, Inc. a Utah company with headquarters in Logan, Utah.

“Software” means EasyFlux® Web Self-Hosted Software, which is a user-installed software tool hosted by the End User on their own data server for monitoring eddy-covariance systems.

“End User” means the person or entity that will use the Software.

LICENSE FOR USE: Campbell Scientific grants you a non-exclusive license to use this software in accordance with the following:

1. The purchase of this software allows you to install and use a single instance of the software on one physical computer or one virtual network machine only.
2. If this copy of the software is an upgrade from a previous version, you must possess a valid license for the earlier version of software. You may continue to use the earlier copy of software only if the upgrade copy and earlier version are installed and used on the same computer. The earlier version of software may not be installed and used on a separate computer or transferred to another party.
3. This software package is licensed as a single product. Its component parts may not be separated for use on more than one computer.
4. Use Rights: It is hereby understood and agreed that CSI is the owner of all intellectual property related to the Software, regardless of the media or form, including all copyrights, trademarks, patents, and trade secrets, and all Modifications (as defined below) thereto. CSI grants to End User a license to use the Software only as expressly permitted in and subject to the terms and conditions of this Agreement, as CSI may change such terms and conditions from time to time. This license is limited, non-exclusive, non-perpetual, revocable, and, unless specifically allowed in writing by CSI, non-transferable, and End User understands, acknowledges, and agrees that CSI may revoke, modify, terminate, or otherwise alter this License and/or Software, as determined by CSI in CSI's sole and absolute discretion. CSI reserves all rights not expressly granted in this Agreement. The terms of this Agreement shall apply to any upgrades, modifications, enhancements, customizations, supplements, updates, revisions, replacements, or derivative works to the Software (collectively, “Modifications”). End User may not (i) reproduce, download, modify, create derivative works of, or distribute the Software, in whole or in part, or make any Modifications to the Software; (ii) attempt to reverse engineer, decompile, disassemble, or access the source code for the Software, or any component thereof; (iii) or permit any other party to access the Software

5. Technical Limitations: End User must comply with documented technical limitations of the Software that only allow use in certain ways. End User may not work around them. Minimum system requirements or other factors may affect End User's ability to use the Software, and CSI makes no warranties regarding End User's ability to use the Software or compatibility with End User's device(s).

6. No High-Risk Use: The Software is not guaranteed to be error free or to operate uninterrupted. The End User does not have the right to use the Software in any application or situation where the Software's failure could lead to death or serious bodily injury of any person, or to severe physical or environmental damage ("High-Risk Use"). Examples of High-Risk Use include, but are not limited to: aircraft or other modes of human mass transportation, nuclear or chemical facilities, life support systems, implantable medical equipment, motor vehicles, or weaponry systems. High-Risk Use does not include utilization of the Software for administrative purposes, to store configuration data, engineering and/or configuration tools, or other non-control applications, the failure of which would not result in death, personal injury, or severe physical or environmental damage. These non-controlling applications may communicate with the applications that perform the control, but must not be directly or indirectly responsible for the control function. End User agrees to indemnify, defend, and hold CSI harmless from any third-party claim arising out of the use of the Software in connection with any High-Risk Use.

7. Scope of Use: End User may not:

- Use the Software in a way that is prohibited by any law, regulation or governmental order or decree in any relevant jurisdiction, or that violates others' legal rights;
- Use the Software in a way that could harm it or impair anyone else's use of it;
- Falsify any protocol or email header information (e.g., "spoofing");
- Use the Software to send "spam" (i.e., unsolicited bulk or commercial messages), to distribute malware, or otherwise make available any offering designed to violate these terms (e.g., denial of service attacks, etc.); or
- Remove, modify, or tamper with any regulatory or legal notice or link that is incorporated into the Software.

ADDITIONAL TERMS

1. License Terms Updates: CSI may update the terms and conditions of this Agreement from time to time, as determined in CSI's sole discretion. Changes to these Agreement license terms that CSI either notifies End User of, introduces with updates or supplements, or is required by law to make, or that do not materially affect the use of the Software, will, in each such situation, apply immediately.

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third party (including advertisers) related to the Software (including the delivery of and payment for goods and services).

3. End User Equipment: It is End User's responsibility to ensure that any equipment programmed to access or be accessed by the Software is in working order and that any communication mechanism or device is in full working order and contactable by the Software.

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CAMPBELL SCIENTIFIC Worldwide Offices:

Australia

Location: Garbutt, QLD Australia
Email: info@campbellsci.com.au
Website: www.campbellsci.com.au

Brazil

Location: São Paulo, SP Brazil
Email: vendas@campbellsci.com.br
Website: www.campbellsci.com.br

Canada

Location: Edmonton, AB Canada
Email: dataloggers@campbellsci.ca
Website: www.campbellsci.ca

China

Location: Beijing, P. R. China
Email: info@campbellsci.com.cn
Website: www.campbellsci.com.cn

Costa Rica

Location: San Pedro, Costa Rica
Email: info@campbellsci.cc
Website: www.campbellsci.cc

France

Location: Vincennes, France
Email: info@campbellsci.fr
Website: www.campbellsci.fr

Germany

Location: Bremen, Germany
Email: info@campbellsci.de
Website: www.campbellsci.de

India

Location: New Delhi, DL India
Email: info@campbellsci.in
Website: www.campbellsci.in

South Africa

Location: Stellenbosch, South Africa
Email: sales@campbellsci.co.za
Website: www.campbellsci.co.za

Spain

Location: Barcelona, Spain

Email: info@campbellsci.es

Website: www.campbellsci.es

Thailand

Location: Bangkok, Thailand

Email: info@campbellsci.asia

Website: www.campbellsci.asia

UK

Location: Shepshed, Loughborough, UK

Email: sales@campbellsci.co.uk

Website: www.campbellsci.co.uk

USA

Location: Logan, UT USA

Email: info@campbellsci.com

Website: www.campbellsci.com

5. Version

To view your version of EasyFlux® Web:

- **CSI-Hosted:** Type *easyfluxweb.com/version* into a web browser.
- **Self-Hosted:** Type *localhost/version* into a web browser.

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Campbell Scientific Regional Offices

Australia

Location: Garbutt, QLD Australia
Phone: 61.7.4401.7700
Email: info@campbellsci.com.au
Website: www.campbellsci.com.au

Brazil

Location: São Paulo, SP Brazil
Phone: 11.3732.3399
Email: vendas@campbellsci.com.br
Website: www.campbellsci.com.br

Canada

Location: Edmonton, AB Canada
Phone: 780.454.2505
Email: dataloggers@campbellsci.ca
Website: www.campbellsci.ca

China

Location: Beijing, P. R. China
Phone: 86.10.6561.0080
Email: info@campbellsci.com.cn
Website: www.campbellsci.com.cn

Costa Rica

Location: San Pedro, Costa Rica
Phone: 506.2280.1564
Email: info@campbellsci.com
Website: www.campbellsci.com

France

Location: Vincennes, France
Phone: 0033.0.1.56.45.15.20
Email: info@campbellsci.fr
Website: www.campbellsci.fr

Germany

Location: Bremen, Germany
Phone: 49.0.421.460974.0
Email: info@campbellsci.de
Website: www.campbellsci.de

India

Location: New Delhi, DL India
Phone: 91.11.46500481.482
Email: info@campbellsci.in
Website: www.campbellsci.in

South Africa

Location: Stellenbosch, South Africa
Phone: 27.21.8809960
Email: sales@campbellsci.co.za
Website: www.campbellsci.co.za

Spain

Location: Barcelona, Spain
Phone: 34.93.2323938
Email: info@campbellsci.es
Website: www.campbellsci.es

Thailand

Location: Bangkok, Thailand
Phone: 66.2.719.3399
Email: info@campbellsci.asia
Website: www.campbellsci.asia

UK

Location: Shepshed, Loughborough, UK
Phone: 44.0.1509.601141
Email: sales@campbellsci.co.uk
Website: www.campbellsci.co.uk

USA

Location: Logan, UT USA
Phone: 435.227.9120
Email: info@campbellsci.com
Website: www.campbellsci.com