QUICK START

DevComFF.Win uses Device Descriptions (DDs) to access data stored in the memory of the smart field device. These DDs are developed by the manufacturer for their products and, in turn, distributed by the FieldComm Group (FCG) worldwide. The latest DDs are included as part of the DevComFF installation. Visit the FCG website (www.fieldcommgroup.org) or the ProComSol website (www.procomsol.com) for update information.

The following steps will allow you to install and quickly begin using DevComFF.Win:

Step 1: Install the DevComFF.Win application

Insert the DevComFF.Win installation USB drive into a USB port on your computer. Launch the Windows File Manager application. Double click on the DevComFF_Setup.exe file. This will begin the installation program.

Step 2: Activate DevComFF.Win

Launch DevComFF.Win by selecting the DevComFF icon on your desktop. You can also start the application by going to your computer's Start Menu and selecting **Start → Programs → ProComSol → DevComFF → DevComFF** to launch the program.

You will now be asked to Activate DevComFF. If you have Activation Codes (located in the USB drive shipment or distribution email), select the Activation method of your choice (Manual or Online). Select the Evaluate option if you do not have Activation Codes. You can use DevComFF.Win for 10 days before you need to activate it.

If you are Activating DevComFF.Win by the online method, select online activation. You will be asked to enter the Activation Codes on the next screen. Once entered, DevComFF.Win will connect to the Internet to verify the Activation Codes. If you do not have an internet connection, you can activate it by email or phone using the Manual Activation method. Activation details are fully explained later in this manual.

Activation only needs to occur once.

Step 3: Connect the mobiLink communication interface

Connecting to a Foundation Fieldbus device requires special interface hardware to be attached to your computer. DevComFF only works with the MOBI-FF and MOBI-CMPLT modems available from ProComSol, Ltd and other sources. The modem should be connected and configured.

Step 4: Connect to the Foundation Fieldbus (FF) network

Connect the mobiLink to the FF network at the power hub or other dedicated FF access point for communicators.

Step 5: Live List

Click the New Device icon to start populating the Live List. The Live List shows all the FF devices connected to the segment powered by the Power Hub. Click on the device you wish to configure or view.

Step 6: Browse the Device

Operating DevComFF.Win is similar to working with Windows® Explorer. DevComFF.Win communicates to the field device, establishes a connection and learns its identity. Once DevComFF.Win knows its identity, DevComFF.Win locates the device's DD and loads it. From this point forward operation of DevComFF.Win is determined by the DD provided by the product's manufacturer. If a DD for the device is not present, an error message is given showing the details of the file it is looking for.

The device Blocks can be accessed by clicking the Blocks sub-menu on the top menu bar. Once a Block is selected, DevComFF will open the Browser window. The organization of the data in this explorer-style window is dictated by the device DD. The left hand tree-pane of this window shows the logical groups of field device data. These are called "Menus". The right hand data-pane shows the data, any sub-groups and any Methods found on a given menu.

You can browse through the field device data by expanding (click "+" symbol) or collapsing (click the "-" symbol) the menus in the tree-pane. You can also double-click the folder symbol when seen on the data-pane.

Step 7: Modify the Device's Configuration

The Browser window allows access to all of the data exactly as described by the product's manufacturer's DD. When you find elements of the field device's configuration you want to change, simply double-click and edit the data. Once you have changed the configuration to suit your needs, press the Send icon  to commit the data and transfer it to the field device.

Step 8: Performing Maintenance and Testing the Field Device

Many devices perform Methods or Standard Operating Procedures (SOPs) that may need to be performed to ensure the device is in peak condition. These Methods may include trimming the transducer values or performing some diagnostic test on the field device. Methods appear in the data-pane just like data does. Double-click on the Method and it will start running in a separate window. The Method will guide you through the process ensuring the procedure is completely and consistently performed. When the Method is complete the window will disappear.

Step 9: Exit

When you are through working on the field device simply exit DevComFF.Win. Once the program exits, you can then disconnect the mobiLink from the segment.

Table of Contents

1 INTRODUCTION

The Smart Device Communicator (DevComFF.Win) allows access to and management of a Foundation Fieldbus (FF) compatible field device's configuration and calibration. This manual provides the information about the Hardware setup, Communication with Smart devices, and functions of DevComFF.Win.

DevComFF.Win is unique in that it uses the DD of the connected device to determine what information to display, what variables are available for edit, and what procedures to follow for calibration, setup, and maintenance.

1.1 Acronyms and Definitions

Acronym	**Definition**
FF	Foundation Fieldbus
COTS	Commercial-off-the-Shelf
DD	Device Description File. This contains the device information.
DDL	Device Description Language
FCG	FieldComm Group
DevComFF.Win	Smart Device Communicator Software

1.2 Conventions Used in This Manual

Following formatting conventions are used in this guide:

Convention	Description
Words in **bold** type	Field names including buttons in the display, or important phrases.
→ Arrow	Windows pull down menus and their options are separated by→. For example, click **Device** → **New Device** to connect to a new device.
`Courier font`	Information that you type, parts of the code quoted for explanations or as examples.
UPPERCASE	Acronyms
UPPERCASE within angle brackets	Command keys For example, press <ENTER>.

1.3 Document Organization

DevComFF.Win user manual is organized into the following sections:

Section 1	Describes the scope and objective of DevComFF.Win user manual along with the organization of the remaining part of the manual.
Section 2	Provides an overview of the DevComFF.Win application and its architecture.
Section 3	Provides the information pertaining to hardware and software requirements for the DevComFF.Win application.
Section 4	Provides the steps to install, activate, and uninstall the DevComFF.Win application.
Section 5	Provides the steps to start the DevComFF.Win application and connecting to field devices.
Section 6	This section explains different aspects of the DevComFF.Win application and its functionalities.

1.4 Getting Help

If you need help or encounter problems when using DevComFF.Win or this guide, please contact ProComSol, Ltd. See Appendix B for contact information. Please provide the following information.

Create a text description of the problem. If possible, provide the text in event sequence, which will enable the duplication of the problem. Provide information about the system. This information must include:

- DevComFF.Win version and License ID
- Computer Windows version
- Device information: make, model, and device revision
- Point of contact: complete mailing address, telephone number, and e-mail address,

2 OVERVIEW OF DEVCOMFF.WIN

Field devices such as flow, pressure, level, temperature transmitters, and valve positioners provide the physical connection to the process. These devices allow the control system to monitor and manipulate process conditions. Foundation Fieldbus (FF) devices maintain a real-time database of process, configuration, identification, and diagnostic information. This information can be accessed using the FF Communications Protocol.

FF devices are capable of providing functions and features far beyond the basic task of providing a process input or accepting a control output to manipulate process conditions. FF device manufactures create a DD (Device Description) describing all of these functions and features specific to that device. The DD also provides information essential to the successful configuration and calibration of the device.

DevComFF.Win uses these DD's to access the data stored in a device, providing full configuration and setup support for all registered FF DD's.

DevComFF.Win accesses and presents field device data based solely on its DD. DevComFF.Win is intended to monitor and configure a single device at a time and:

- Provides user interface to configure the FF field device,
- Provides a means to configure and view all the parameters related to FF field device, and
- Provides an option to view the detailed status and diagnostic capability of the FF device.

DevComFF.Win allows viewing and modifying of field device parameters based on the DD. Using the device's DD, DevComFF.Win performs various tests to verify the proper operation of the FF device. DevComFF.Win runs as a standalone software package and must have a mobiLink attached to the system to interrogate the FF devices

System Requirements

The following minimum system requirements are recommended for operation of DevComFF.Win.

PC	Processor Speed: Pentium, 600 MHz Memory: 256 MB Hard Disk Space: 500 MB Monitor: 256-color VGA
FF Modem	mobiLink modem. ProComSol provides MOBI-FF and MOBI-CMPLT which will work with DevComFF.Win. MOBI-PWR-FF and MOBI-PWR-CMPLT will also work.
Communication Port	USB or Bluetooth
Operating System	Windows 7 Note that Windows 10 is preferred.

3 DEVCOMFF.WIN INSTALLATION

3.1 Prerequisites

You need to be familiar with the basic functions of the following when installing the DevComFF.Win tool:

- Microsoft Windows
- FF communication interface
- FF field device

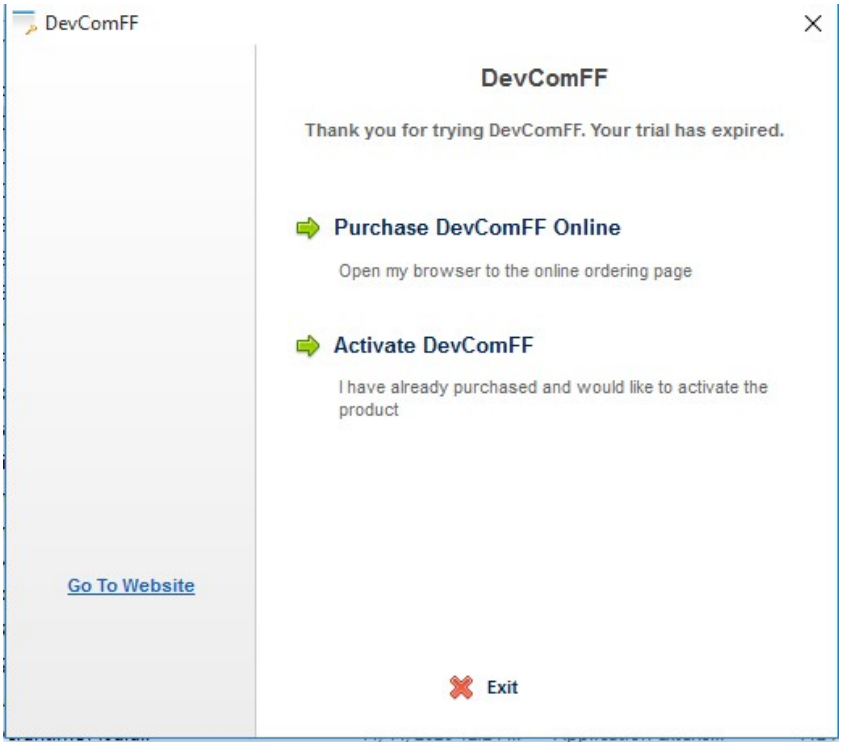
3.2 Installing the DevComFF.Win Application

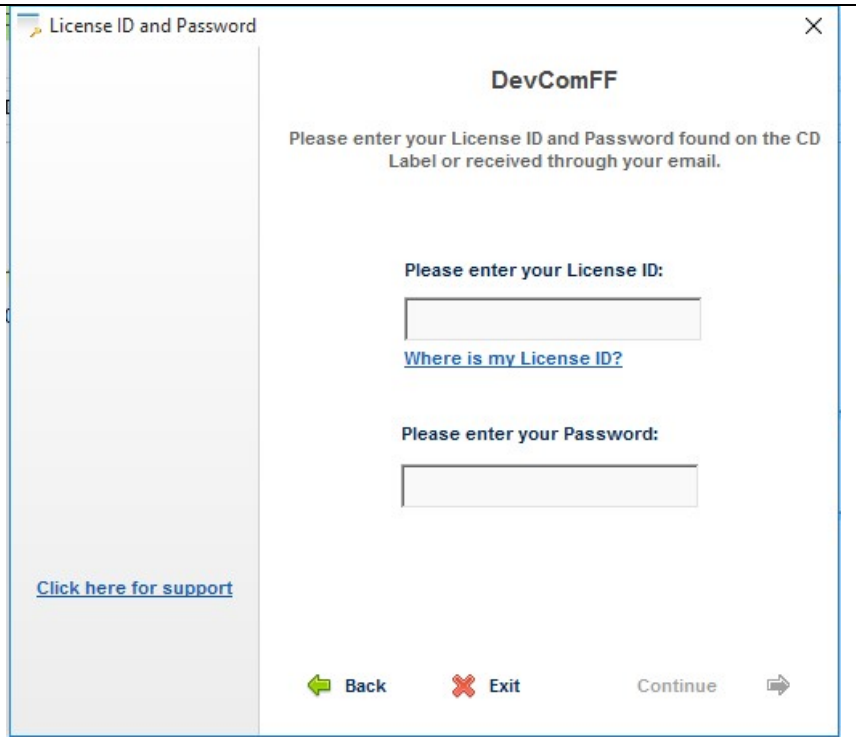
To install the DevComFF.Win application in a standalone system, perform the following steps:

Step	Action
1	Insert the DevComFF.Win USB drive into a USB port on your PC.
2	Click **Start** and choose **Run**. From the Run window, click **Browse**.
3	In the **Look In** box, browse to the USB drive.
4	Double-click the drive to access the USB content.
5	Look for the **DevComFFSetup.exe** file and double-click the same. This process will take you through a sequence of installation wizard steps.
6	Follow the instructions on the upcoming screens to complete the Installation.

3.3 Activating DevComFF.Win

DevComFF.Win must be activated before use. If the program is not activated, it will not run after 10 days. The following procedure will activate the software.

Step	Action
1	Start the DevComFF.Win Application. The following Activation window is displayed:  If you want to evaluate DevComFF.Win before purchasing, select the "Evaluate DevComFF.Win" option. You will have 10 days of unlimited program use before you will need to purchase a license. Select "Purchase DevComFF.Win Online" to go to the ProComSol, Ltd website to purchase a license.
2	If "Activate DevComFF.Win" is selected, the following window appears:
3	If the "Activate DevComFF.Win Online" option is selected, the following window appears.



Enter the information from the Activation post card or email. Select "Continue" to process the information.

If the codes were successfully entered, the program will continue as normal. You will not need to perform the activation process again.

4 If the "Activate Manually" option is selected ou will then need to contact ProComSol, Ltd to obtain the Activation Codes. You must supply the User Codes to ProComSol, Ltd support personnel. You can register manually in any of the following ways:

1. Call ProComSol, Ltd at 216.221.1550. Have the program License ID and User Codes ready.

2. Or, send an email to support@procomsol.com containing your company name, License ID, and User Codes.

The above information will be processed at ProComSol, Ltd and an appropriate response will contain the required Activation Code information that the user will need to enter.

If successful, the program continues as normal. You will not need to perform the activation process again.

5 We have tried to make the Activation process as easy as possible. Contact ProComSol, Ltd if you have any difficulties.

3.4 Connecting to the FF Network

The DevComFF.Win application communicates with FF Field Devices through a FF compatible communication interface, the mobiLink. Using this communication interface you will transmit real-time FF data between DevComFF.Win and the selected FF field device.

Insert the USB connector on the mobiLink into your computer's USB port. Using the clips on the wires from the mobiLink, connect to the FF Power Hub or other dedicated FF communicator connection point.

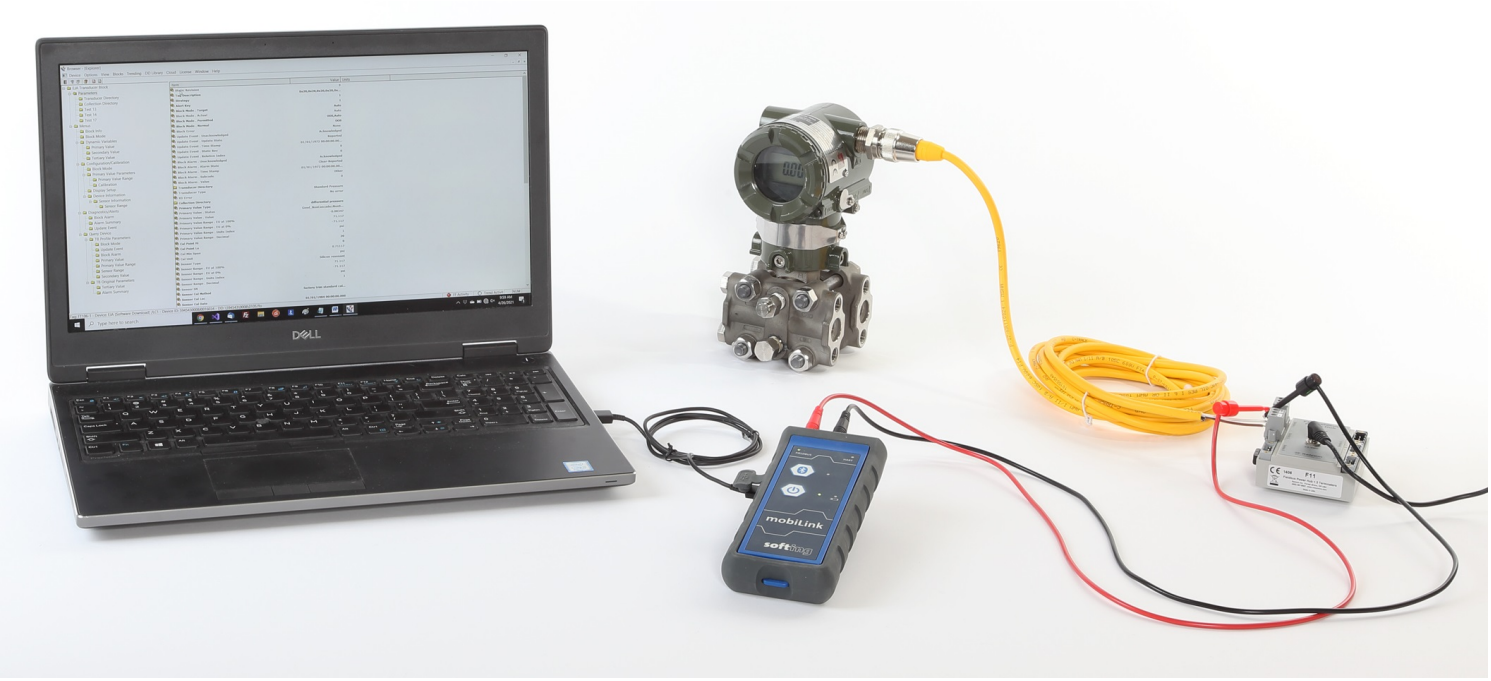


Figure 1 Typical DevComFF.Win Hardware Setup

3.5 Uninstalling the DevComFF.Win Application

To uninstall the DevComFF.Win application, perform the following steps:

Step	Action
1	Click **Start → Programs → ProComSol → DevComFF → Uninstall DevComFF**
2	Or, Click **Start → Settings → Apps**
3	Click the DevComFF.Win program that you want to uninstall.
4	Click **Uninstall**.
5	Click **OK** to confirm the removal of the selected application.

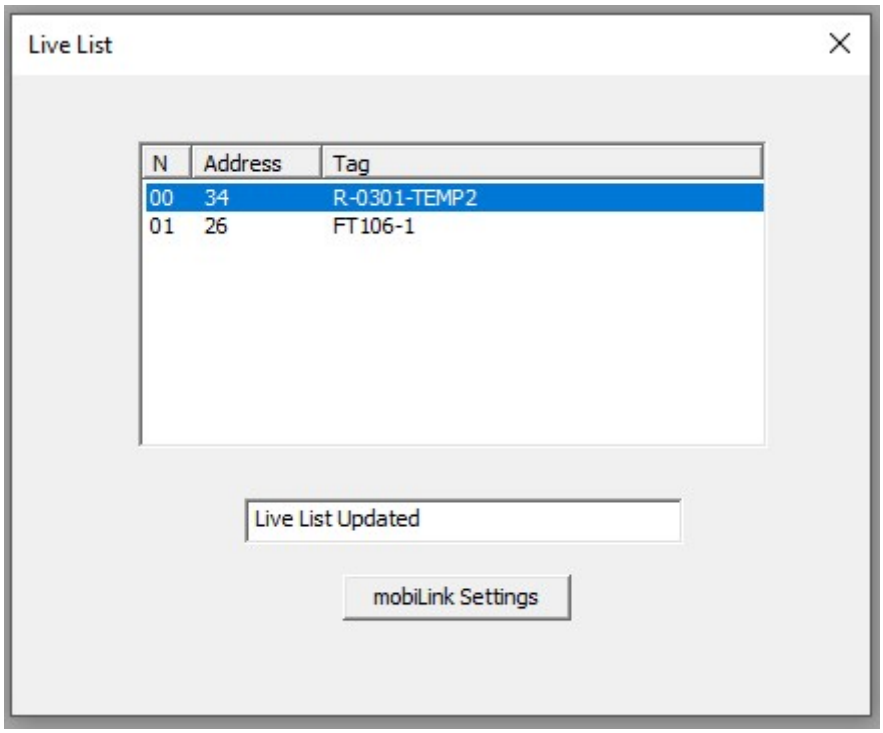
4 USING DEVCOMFF.WIN

4.1 Starting DevComFF.Win

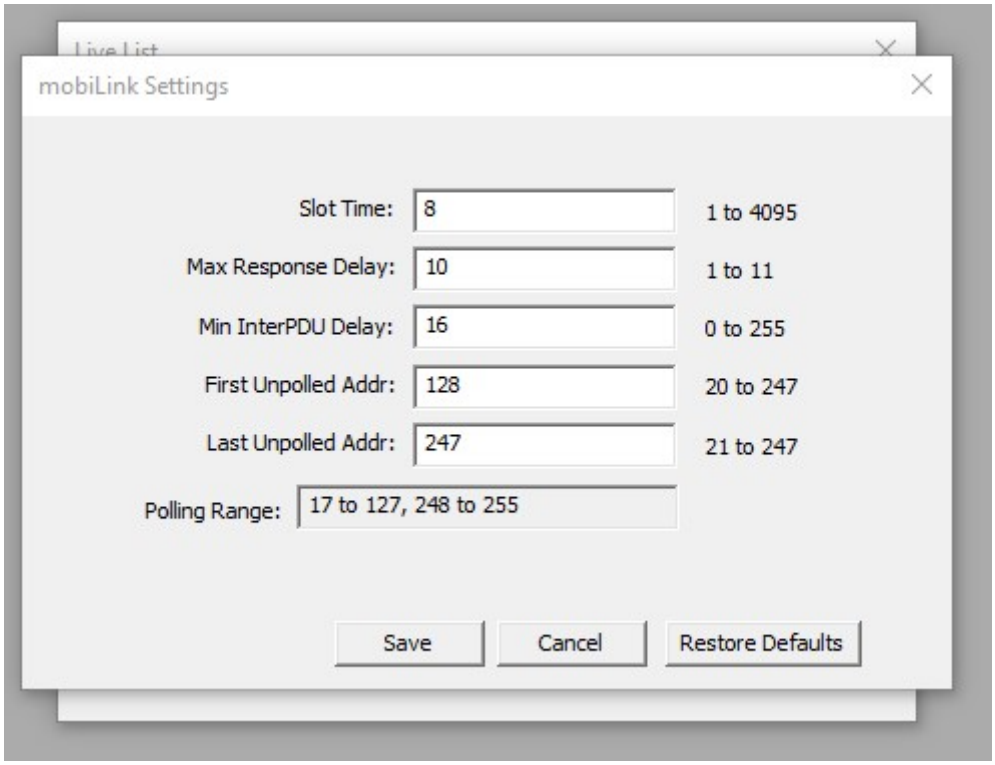
Connect the mobiLink to the USB port on your PC and connect the FF leads to the FF power hub or dedicated FF communicator connection point. With the physical connection established, launch DevComFF.Win by clicking the DevComFF icon on your desktop. You can also start the application by going to your computer's Start Menu and selecting **Start → ProComSol → DevComFF.**

4.1.1 Live List

When first launching DevComFF.Win, the software determines what devices are connected to the FF Segment. It polls address 0-247 and shows the results on the Live List. Below is an example:

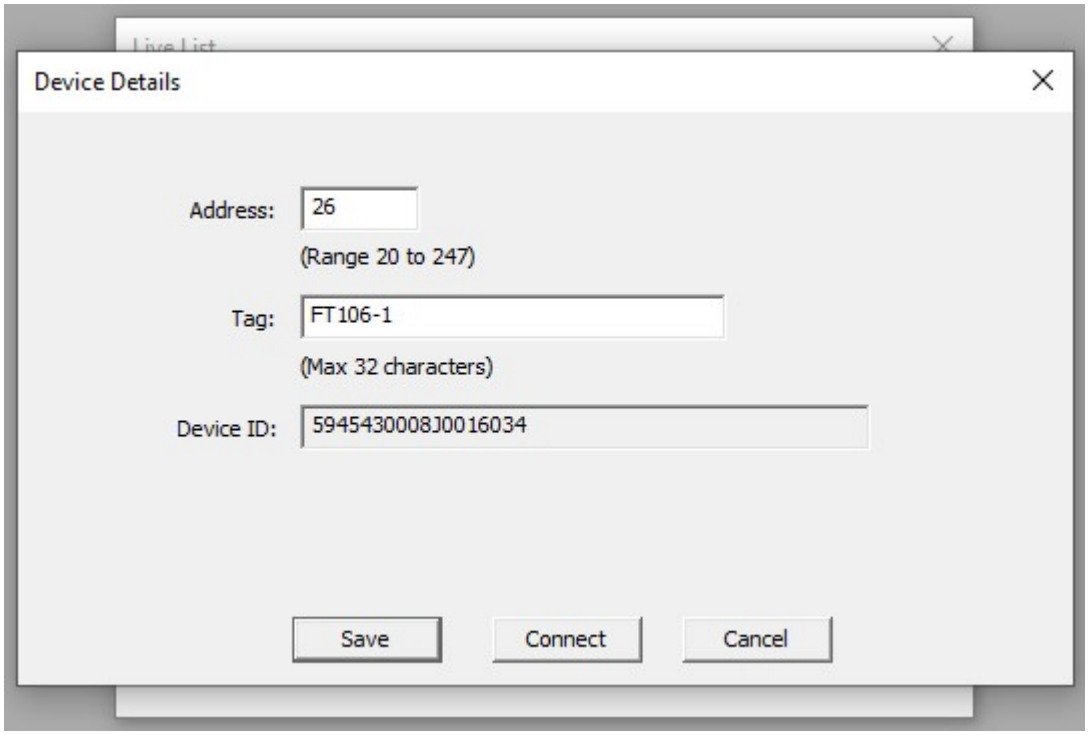


You may need to make changes to the mobiLink settings in order to connect to your FF network. Click mobiLink Settings to bring up the mobiLink Settings Dialog Box.



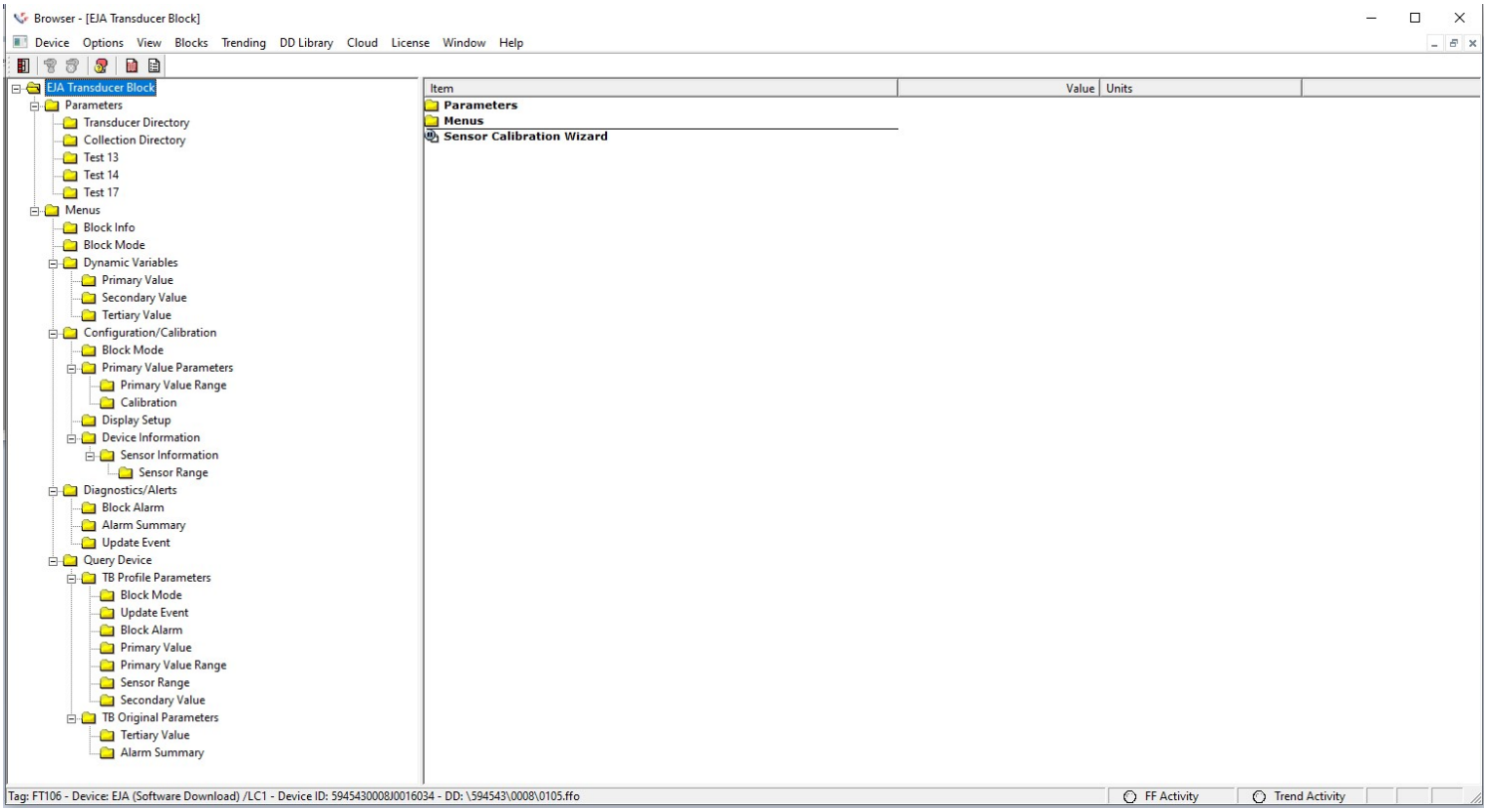
4.1.2 FF Device Connect

Once the Live List is displayed, simply click on the device you want to configure. You will then be prompted to change the Tag or Address or to connect to the device. Below is an example:



Click the Connect button to connect to the FF device. The Browser window will now open with the Block List highlighted. Here is an example:

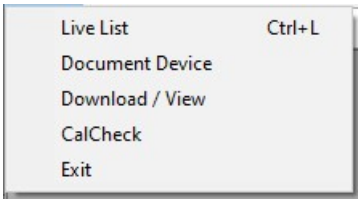
Select the desired block to view. You then navigate through the menus as needed. Below is an example:

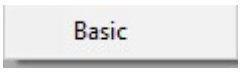
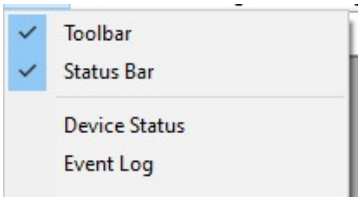
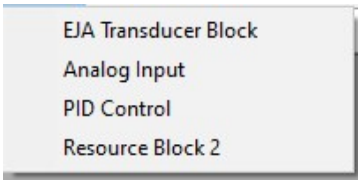
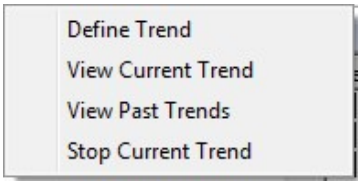


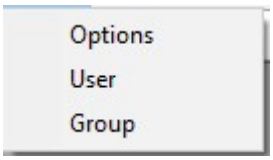
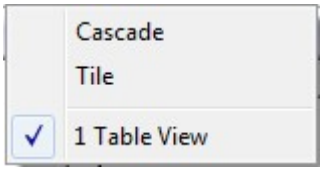
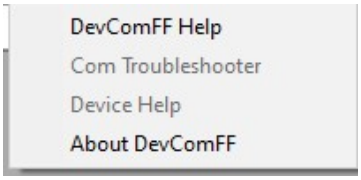
4.2 Getting Familiarized with DevComFF.Win Explorer

4.2.1 Using the Menus

DevComFF.Win Explorer provides visual representation and structure of the application window.

Menu	Explanation
	The **Device** Menu offers the following sub-menu options: **Live List -** Brings up the Live List dialog box that shows the devices that are connected to the segment that the mobiLink is connected to. **Document Device** – Brings up the Document Device dialog box used to save the device configuration to disk. **Download / View** – Brings up the Download dialog box which provides Configuration File features. **CalCheck** - Brings up the CalCheck dialog box for performing a check of the device performance. **Exit** - Exit DevComFF.Win.

	The **Options** Menu brings up the Options menu for setting DevComFF.Win behaviors.
	The **View** Menu offers the following sub-menu options: **Toolbar -** Hide or show the Tool Bar. **Status Bar -** Hide or show the Status Bar. **Device Status** – View device status for each Block. **Event Log** – View log of events
	The **Blocks** Menu is determined by the device connected to. The image shown is an example. Click on the desired Block to configure or view.
	The **Trending** menu offers the following sub-menu options: **Define Trend** – Brings up the Define Trend dialog box where a trend is started. **View Current Trend –** Brings up a real-time graph of values currently being trended. **View Past Trends –** Brings up the View Trend dialog which contains past trend files. Selected trend files can then be graphed. **Stop Current Trend** – Stops the current log in process.
	The **DD Library** menu offers the following sub-menu options: **Add DD** – Brings up the dialog that adds a DD to the library. Also used to give labels to non-standard library DDs. **Available DDs** – Brings up a browser of all the DDs installed in the library. **Check For Updates** – Shows current DD Library version and checks for DD library update

	The **Cloud** menu offers the following sub-menu options: **Options** - Brings up the dialog box that sets the Cloud Options **User** - Brings up the dialog box that sets the User Options including Log in **Group** - Brings up the dialog box that sets the Group behaviors including joining a group.
	The **License** window offers the following sub-menu options: **Details** – Shows License ID and Password information. **Check-In (return)** – Returns license to our server and closes program
	The **Window** menu offers the following sub-menu options: **Cascade** – Organizes open windows in a cascade arrangement. **Tile** – Organizes open windows as tiles **1 Table View** – List of the open windows. Click to select the window to view
	The **Help** menu offers the following sub-menu options: **DevComFF Help** – Brings up Help information for the DevComFF.Win application. **Com Troubleshooter** – Brings up the DevComFF.Win Com Troubleshooter. (not available yet) **Device Help** – Brings up help information for the connected device (if available). **About DevComFF** – Shows copyright information, support information, and application Version Number.

4.2.2 Using the Toolbar

When you start the application, by default, the toolbar buttons appears on the main window. If it fails to display, click **View → Toolbar** option from the menu bar to bring up the toolbar.

Following are the buttons available in the DevComFF.Win application toolbar to perform the necessary tasks:

Button	Description	Corresponding Menu Option
	Load the Live List	**Device → Live List**
	Send parameter changes to the device (Commit)	
	Cancel parameter changes (Cancel)	
	View Block device status	**View → Device Status**
	View Event log	**View → Event log**

4.2.3 Icons

DevComFF.Win application uses different icons to represent different elements of the application. Following table lists the icons and their meanings:

Icon	Meaning
	Indicates a menu or submenu in the navigation tree
	Indicates a currently selected menu or submenu in the navigation tree
	Online menu icon. The actual DD menu comes under this.
	Indicates a “Variable” item
	Indicates a “Method” (Standard Operating Procedure) item
	Indicates an “Edit Display” item
	Indicates an “Image” item
	Indicates a “Graph” item

5 FUNCTIONS AND BASIC OPERATIONS

5.1 Overview

DevComFF.Win allows the user to monitor and configure a single device at a time in the field. Each device is associated with the DD when the device information is present. A DD may contain any of the following parameters/elements:

Variable

A variable is defined as the data contained in the device (e.g. Device Firmware Version). There are two types of variables:

Editable Variable – It allows the operator to modify the value and download it to the device.

Non-Editable Variable – It is a read-only data from the device.

Edit Display

This option is used to view a group of parameters. You can also modify a single parameter from this group, based on which other parameters of the device get altered.

For example, if the Engineering Unit of the device is modified, the corresponding Low Limits and High Limits change as per the Engineering Unit set.

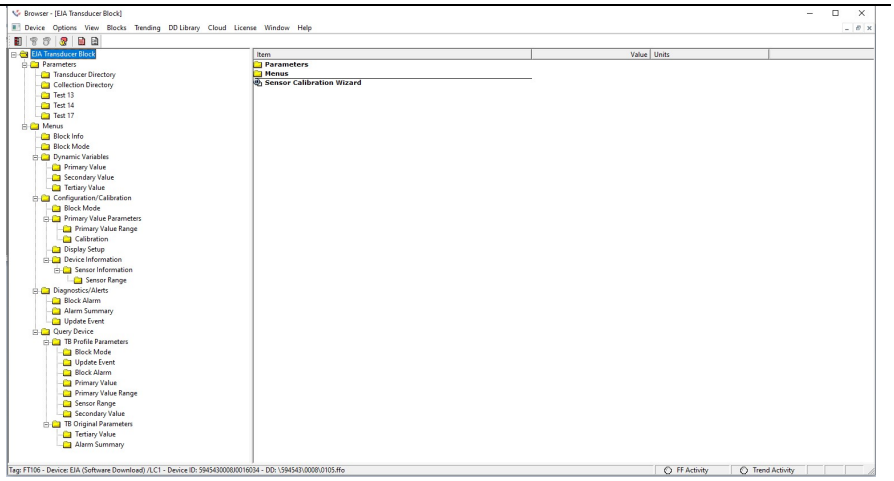
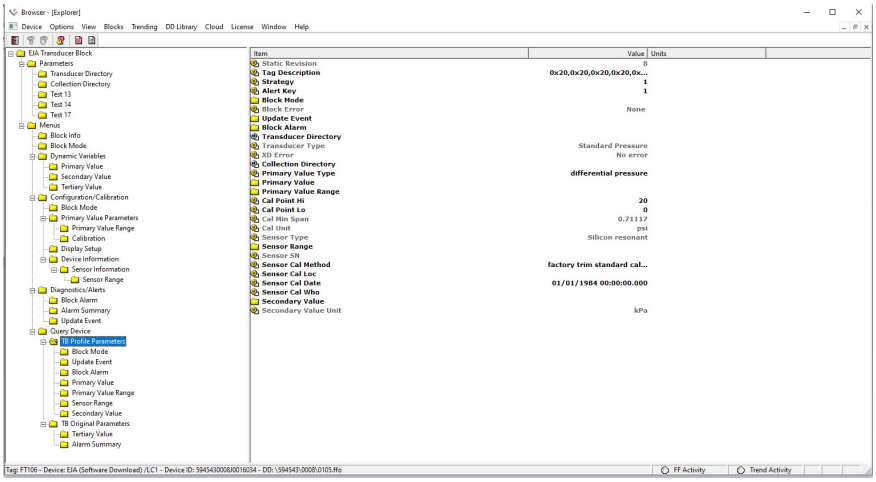
Method / Standard Operating Procedure (SOP)

This option helps to perform various tests on the device for instance, Self Test. A Method or SOP is a series of steps that are executed in a sequence results in the completion of some device related tasks. When a method gets invoked, it gives various warning messages and options to the user, by which the user can thoroughly test the device. If a test is aborted by operator command at any stage of the sequence, the method invokes additional steps to bring the device back to its original state before the test.

5.2 Viewing Device Parameters

To view the configuration of the device that is connected to DevComFF.Win, perform the following steps:

Step	Action
1	Ensure that the application is running and communications have been established:

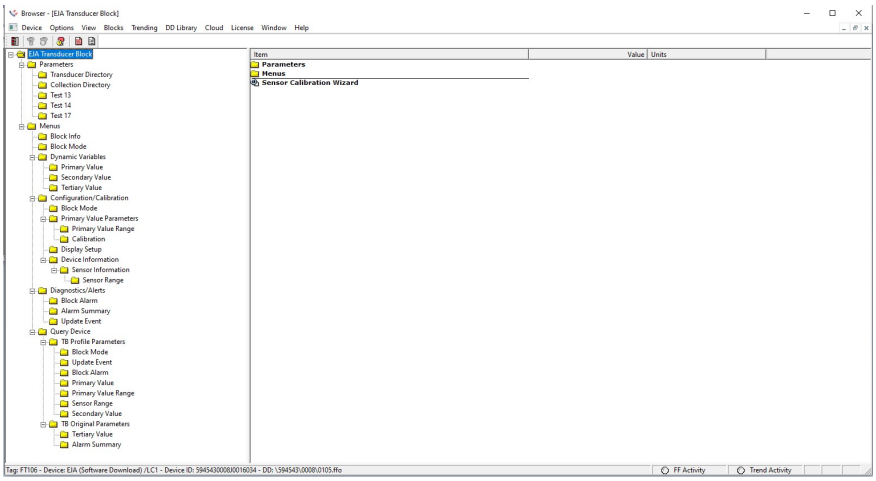
Step	Action
	 The left pane of the window shows the menu structure and the right pane of the window displays corresponding parameters of the menu selected. The menus are displayed depending on the type of device that is being connected. These menus are displayed based on the DD file of the particular device. Note that the menus in this document are typical and will differ based on what FF device you are connected to. The menus are determined by the Device DD.
2	Expand the menu by clicking the "+" sign and double-click to view the device parameters. Below is an example of an expanded menu: 
3	Select the menu and view the associated parameters to view the device information.

5.3 Configuring Device Parameters

5.3.1 Overview

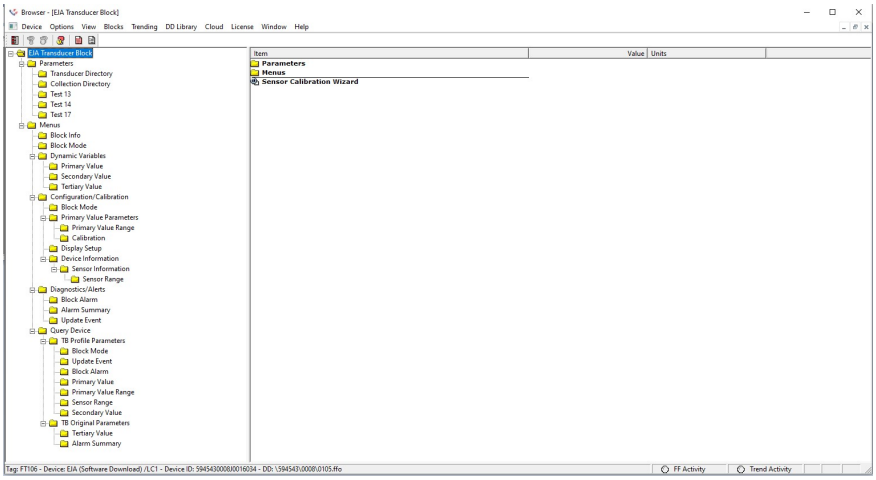
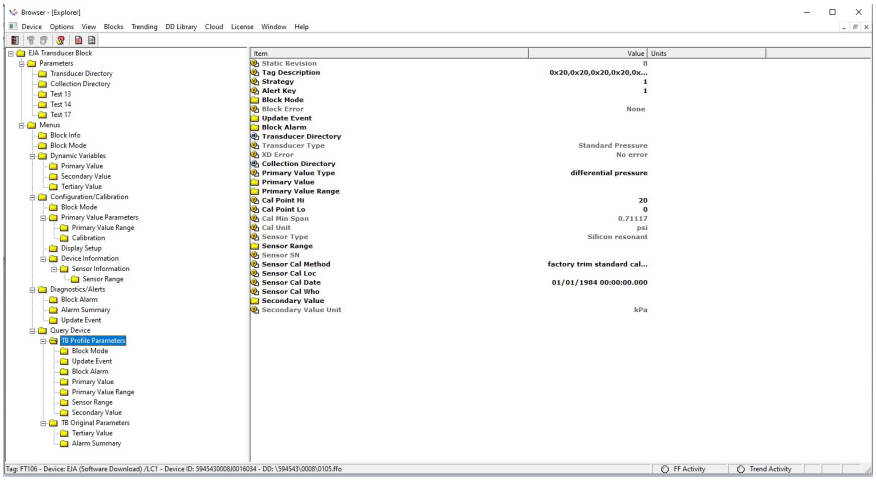
DevComFF.Win allows you to view and configure the field device parameters based on the device description. However, the device vendor defines most of the parameters at the factory. These parameters become read only for the users and the user cannot modify the values. The related variables are grouped under various menus of different levels as defined in the DD file. Expand or collapse the tree view using the "+" or "-"sign to access the device configuration parameters.

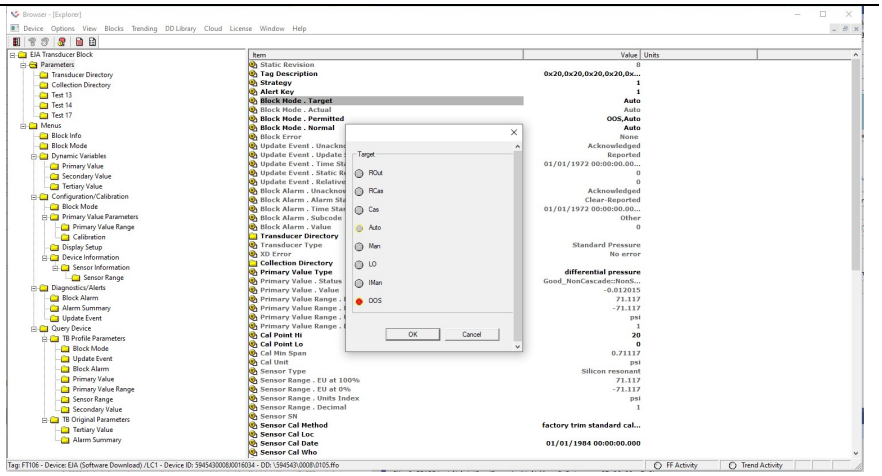
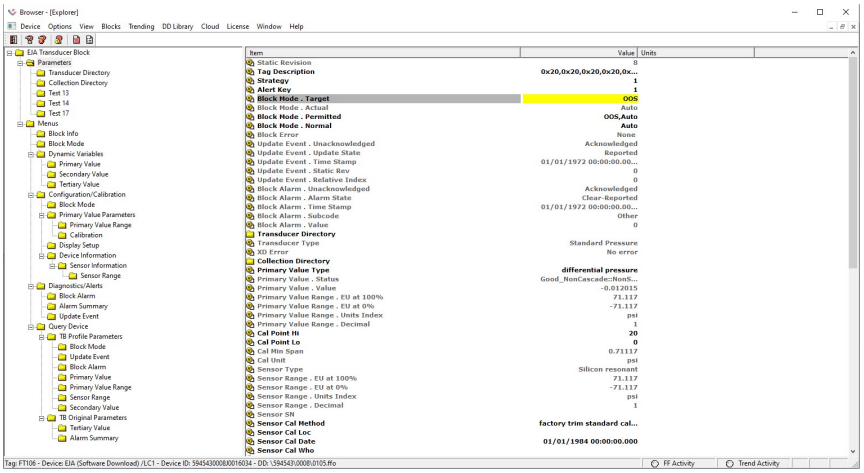
Following table describes the details about the device configuration:

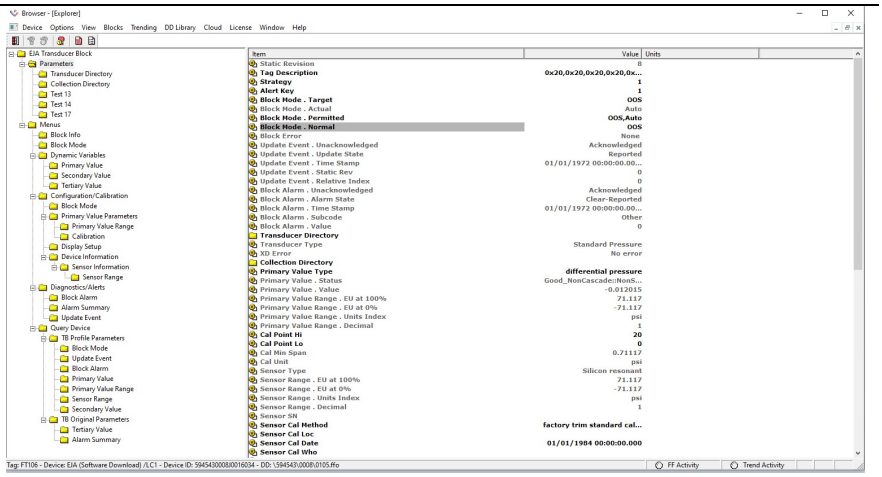
Step	Action
1	Ensure that the application is running and communications have been established:  The left pane of the window shows the menu structure and the right pane of the window displays corresponding parameters of the menu selected.
2	Expand the menu by clicking the "+" sign and double-click to view the device parameters.
3	There are three types of variables: dynamic, read/write and read only. The parameters that are grayed out indicate that these are dynamic variables (variables that get updated online by the device) or read only variables. Following points describe how the device parameters represents their status when connected to DevComFF.Win: **Bold Font: Modifiable Values** Normal Font: Menu Item Gray Font: Dynamic or Read Only Variables
4	Select the parameter and configure the values, as required.
5	The subsequent topics explain how to configure device parameters.

5.3.2 Variable

To edit the parameter variables of the connected device, perform the following steps:

Step	Action
1	Ensure that the application is running and communications have been established:
	
	Expand the menu by clicking the "+" sign and double-click to view the device parameters.
2	Select the menu where the editable parameter is present as shown below:
	
3	Double-click the variable to edit it. The following dialog box appears on the screen:

Step	Action
	
4	Make the changes to the parameter value, as required.
5	Click **Set** to accept the changed value. The change gets reflected as shown:
	
6	Click on the **Send** icon to commit the changes to the device.
7	When the value is no longer yellow, the variable has been changed in the device.

Step	Action
	 The Send and Cancel Icon will now be grey as well. This indicates that there are no new changes to be sent to the device.

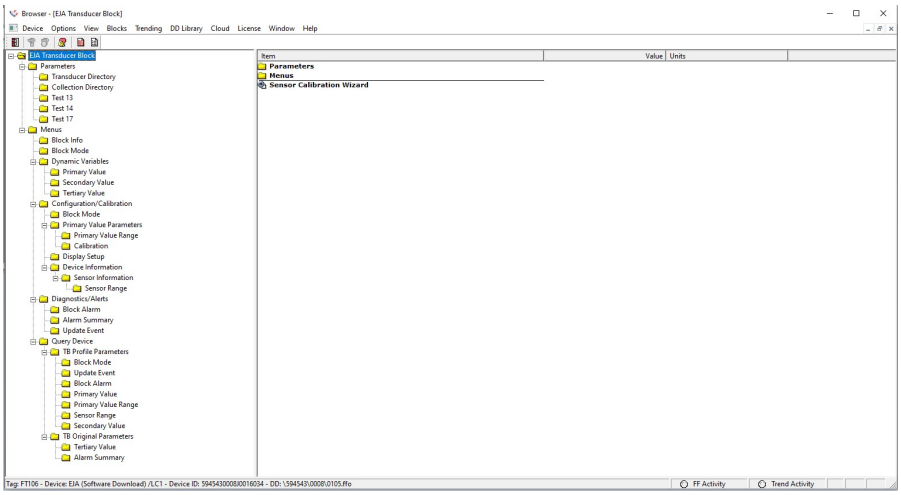
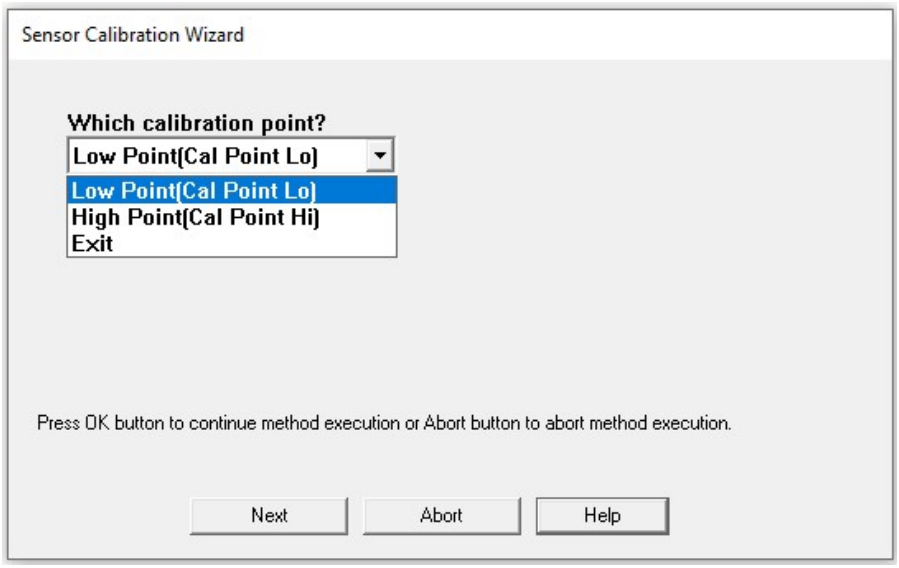
5.3.3 Executing Methods or Standard Operating Procedures

Methods are defined in the DD file for the device that DevComFF.Win is connected to. You can select the Method and execute it for calibrating the device, trouble shooting, etc. Method execution leads you through a number of steps, like in a wizard.

A Few examples of methods include:

- Calibration of the device
- Run the advanced diagnostic test procedure
- Execute tests to gather information on device operation.

To execute a Method, perform the following steps:

Step	Action
1	Ensure that the application is running and communications have been established:  Expand the menu by clicking the "+" sign and double-click to view the device parameters.
2	Select the menu where the method is present and double-click to execute it.
3	Below is an example of a Method dialog box: 
4	Click **Next** to move to the next dialog in the Method sequence.
5	Or, click **Abort** to cancel the Method execution.
6	Click **Help** to get specific help for that step of the Method. This Help information is provided by the device DD.

5.4 Calibrating FF Field Devices

Calibration of field devices are achieved by executing the Methods or Standard Operating Procedures that are specific to device. Methods are defined based on the test parameters specific to the device, providing information for the calibration of that device.

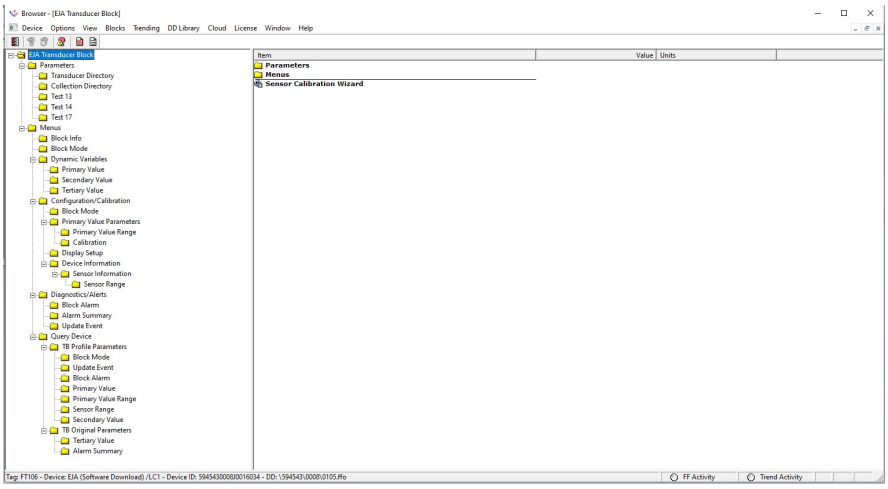
See the previous section for Method execution.

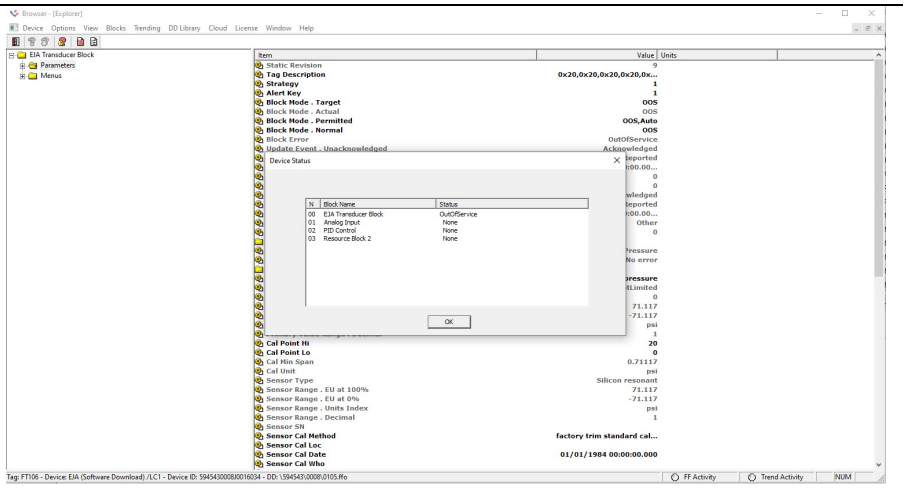
5.5 Viewing the Device Status

DevComFF.Win provides the user with the ability to monitor the device specific status of the device Blocks.

When there is error communicating with the device, it is recognized and indicated to the user. The user can view more details of such errors, using the **View → Device Status** from the main window.

To view the device Block status, perform the following steps:

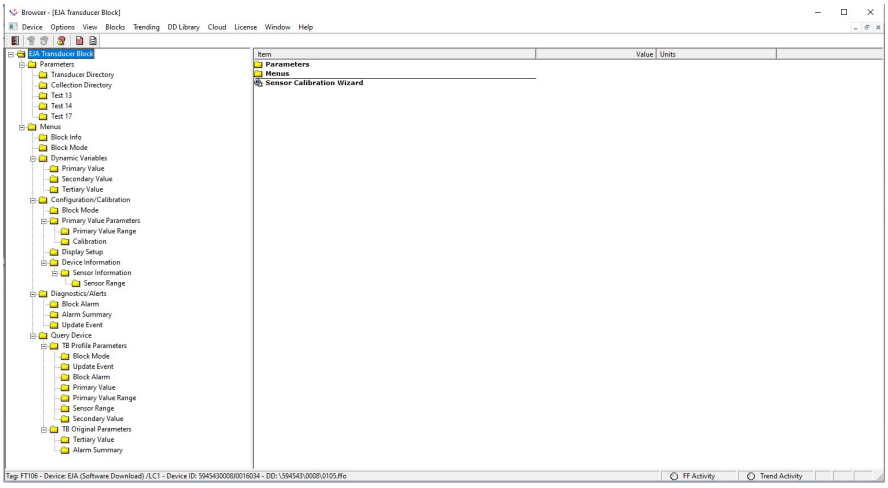
Step	Action
1	Ensure that the application is running and communications have been established:
2	 Expand the menu by clicking the "+" sign and double-click to view the device parameters.
3	Select **View → Device Status** from the main window or choose the status icon from the toolbar. Following window is displayed:

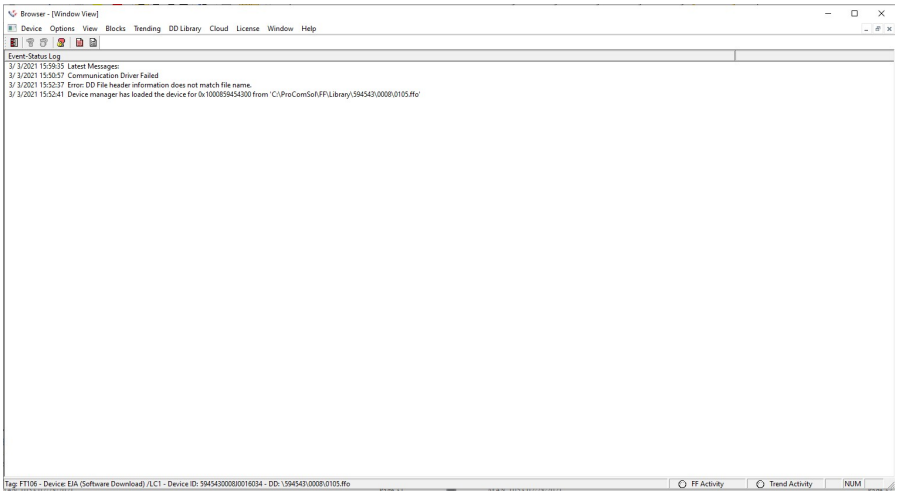
Step	Action
	
4	
5	Click OK to close the Status window.

5.6 Viewing the Event Log

DevComFF.Win allows the user to view the error conditions of the device and the communication network.

To view the Event-Status Log, perform the following steps:

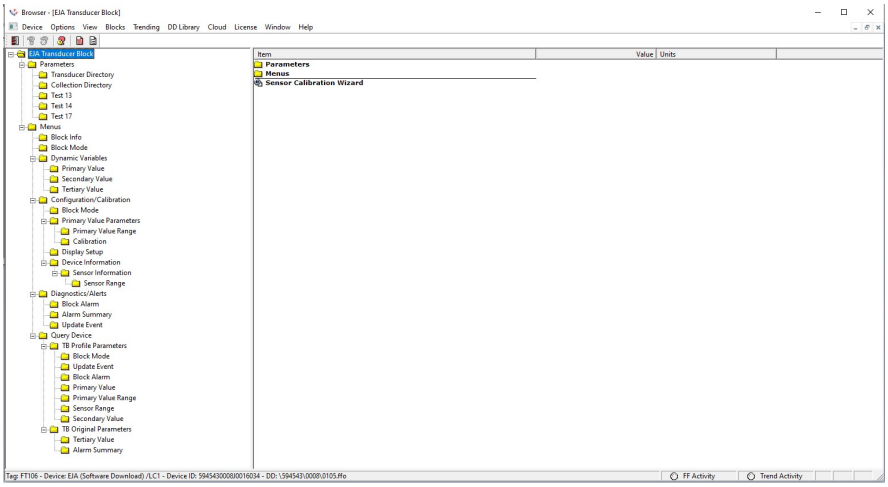
Step	Action
1	Ensure that the application is running and communications have been established:
	 Expand the menu by clicking the "+" sign and double-click to view the device parameters.
2	Select **View → Event Log** from the main window or choose the

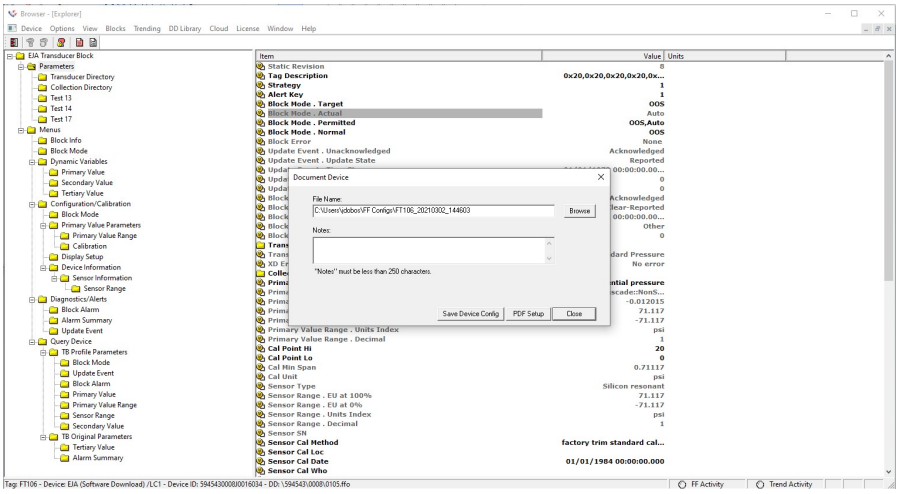
Step	Action
	Event log icon  from the toolbar. An additional Event Log window is displayed:
	
3	To close, go to **View → Event** menu option or click on the  icon to go back to the original window.

5.7 Saving Device Configuration to Disk (Document Device)

FF Device configurations can be saved to disk as a PDF and comma delimited text file to document the device. Data from the text file can be imported into configuration management software packages. A PDF version of the configuration is also created.

To save device configurations to disk, perform the following steps:

Step	Action
1	Ensure that the application is running and communications have been established:
	

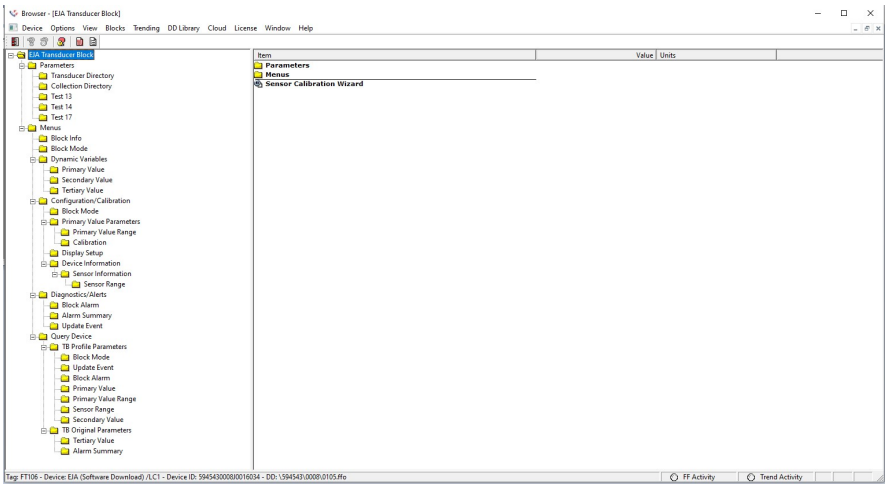
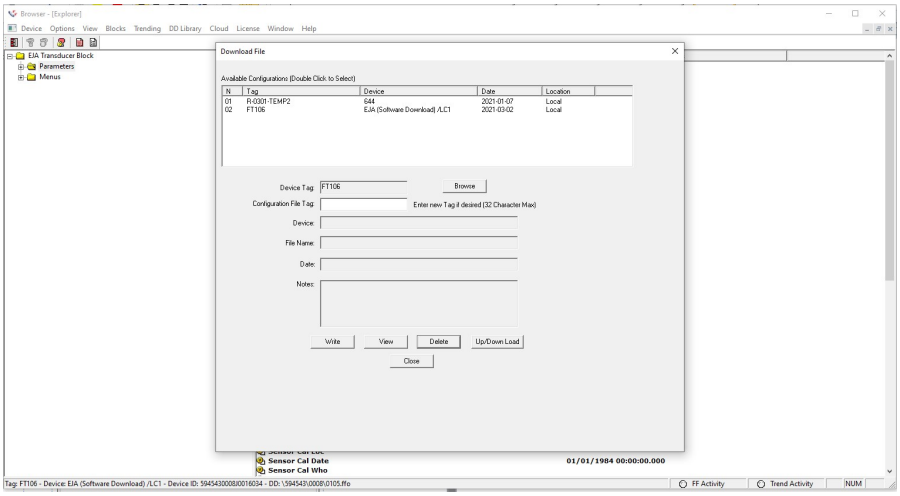
Step	Action
2	Select **Device → Document Device** from the main window. The Document Device Dialog Box is displayed: 
3	The default directory is based on Windows User Accounts. The default file name is Tag_Date_Time. The directory and filename can be changed by the user. Use the "Browse" button to change directories and/or filenames also.
4	Enter a Note in the Notes: field if desired. Maximum of 250 characters.
5	Press the "Save Device Config" button to save device configuration.

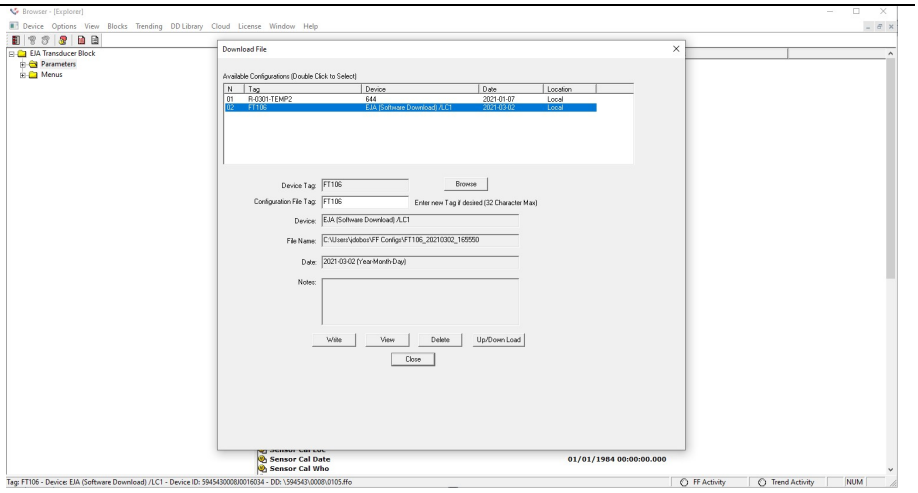
5.8 Download Configuration to Device

Saved configuration files can be downloaded back to devices. This is useful for "Cloning" a device, either for replacement or plant setup.

To save device configurations to disk, perform the following steps:

Step	Action
1	Ensure that the application is running and communications have been established:

Step	Action
	
2	Select **Device → Download** from the main window. The Download Dialog Box is displayed: 
3	The available configurations are displayed. You can sort on each column by clicking it. To get details about a configuration, select the desired configuration and double click it. The details will be displayed below:

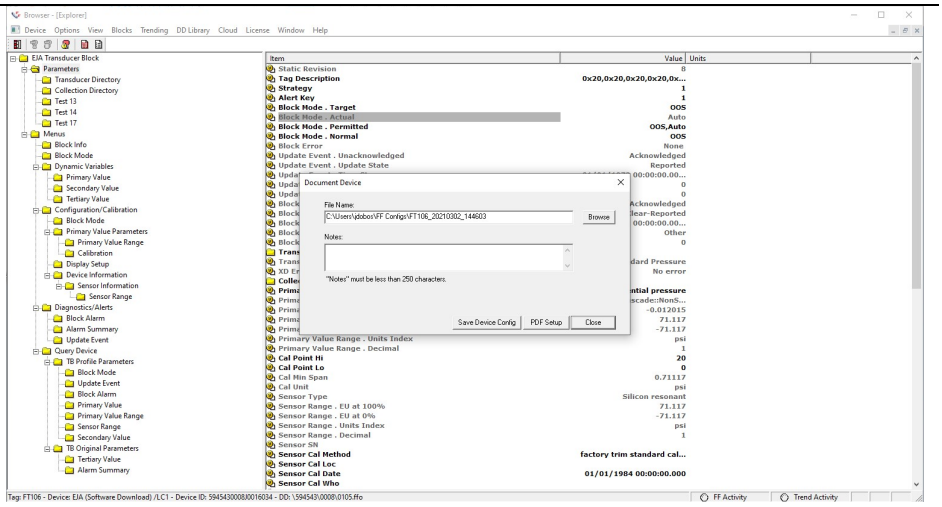
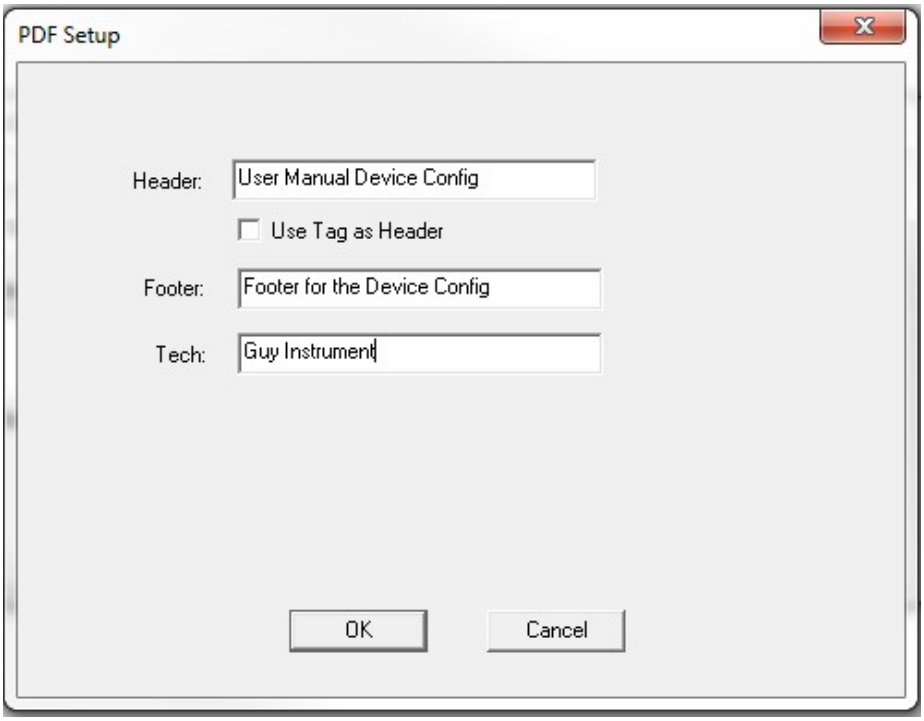
Step	Action
	
4	You can change the desired Tag by editing the Configuration File Tag box.
5	Press the “Write” button to write device configuration to the connected device. The device must be the same type as the configuration file. If they are different, the write operation will be aborted.
6	You can view the PDF file for the configuration file by double clicking on the desired configuration and pressing “View”.
7	You can delete configurations by double clicking on the desired configuration and pressing “Delete”.

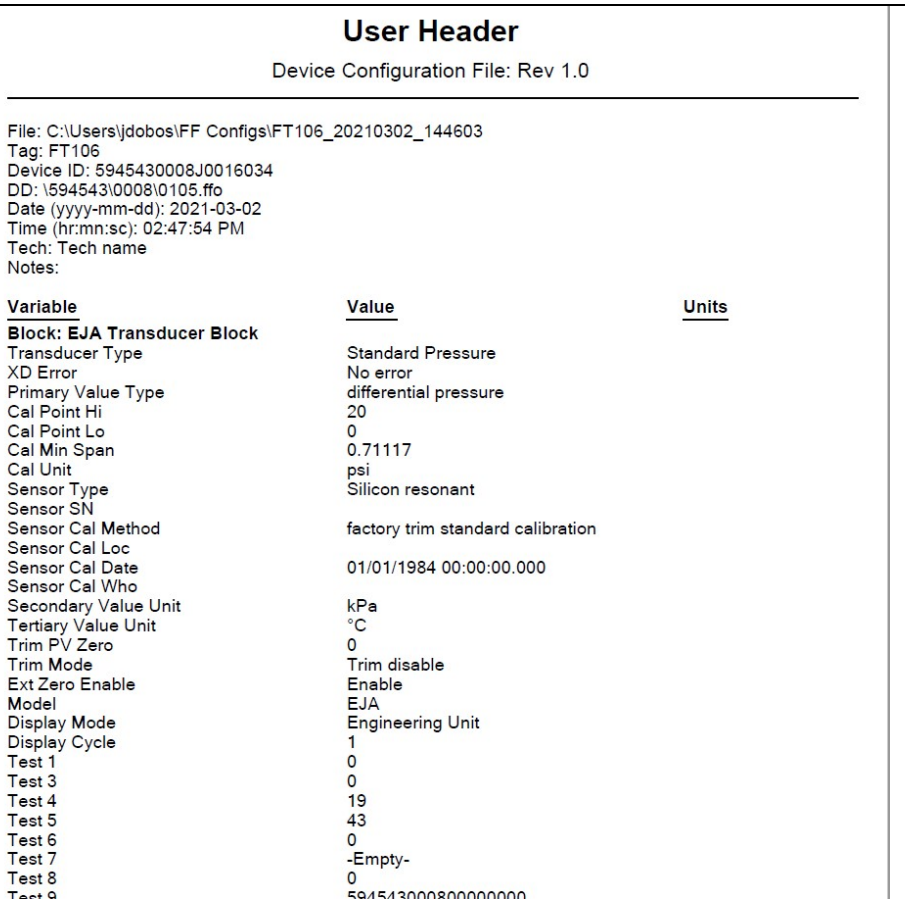
5.9 Customizing PDF File Output

FF Device configurations can also be saved to disk as PDF Files to document the device. The header, footer, and technician name can be entered to customize the PDF file to make it into a configuration report.

To customize the PDF output, perform the following steps:

Step	Action
1	Press the “PDF Setup” button on Document Device Dialog Box:

Step	Action
	
2	The PDF Setup Dialog box is displayed: 
3	Enter data as needed and press OK. The data is saved for future configuration saves.
4	Below is a sample PDF file.

Step	Action
	

User Header

Device Configuration File: Rev 1.0

File: C:\Users\jdobos\FF Configs\FT106_20210302_144603
Tag: FT106
Device ID: 5945430008J0016034
DD: \594543\0008\0105.ffo
Date (yyyy-mm-dd): 2021-03-02
Time (hr:mn:sc): 02:47:54 PM
Tech: Tech name
Notes:

Variable	Value	Units
Block: EJA Transducer Block		
Transducer Type	Standard Pressure	
XD Error	No error	
Primary Value Type	differential pressure	
Cal Point Hi	20	
Cal Point Lo	0	
Cal Min Span	0.71117	
Cal Unit	psi	
Sensor Type	Silicon resonant	
Sensor SN		
Sensor Cal Method	factory trim standard calibration	
Sensor Cal Loc		
Sensor Cal Date	01/01/1984 00:00:00.000	
Sensor Cal Who		
Secondary Value Unit	kPa	
Tertiary Value Unit	°C	
Trim PV Zero	0	
Trim Mode	Trim disable	
Ext Zero Enable	Enable	
Model	EJA	
Display Mode	Engineering Unit	
Display Cycle	1	
Test 1	0	
Test 3	0	
Test 4	19	
Test 5	43	
Test 6	0	
Test 7	-Empty-	
Test 8	0	
Test 9	5945430008000000000	

5.10 License File Transfers

The license file can be transferred easily to other computers. The process is a “Check-In/Check-Out” process. When a license is on the computer, it is considered “Checked-Out”. When the license is on the license server, it is considered “Checked-In”. When the license is “Checked-in”, it can be “Checked-Out” by other users. This enables the license to be shared by many users.

5.10.1 Check-In

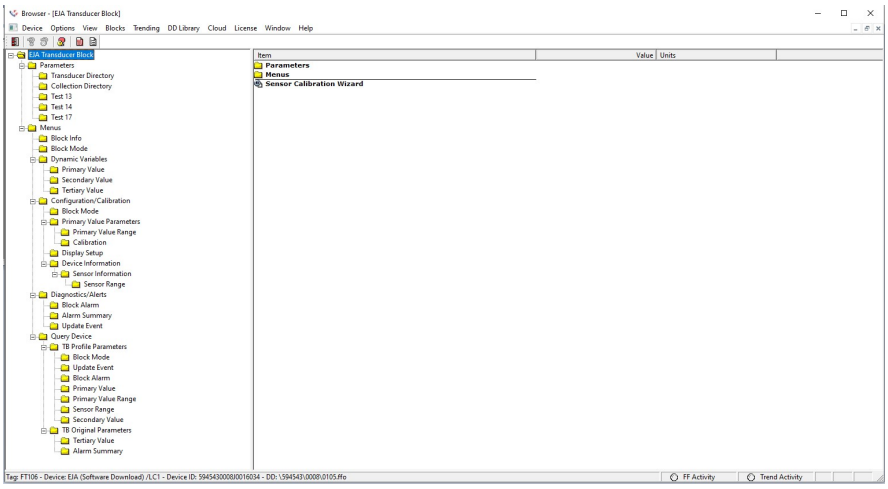
To Check-In the license from the current computer to the License Server, perform the following steps:

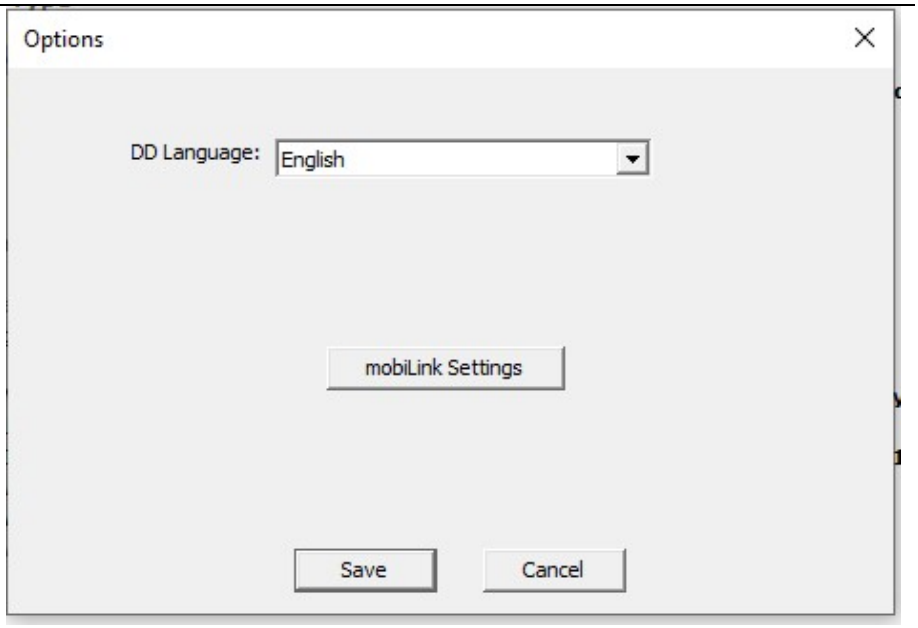
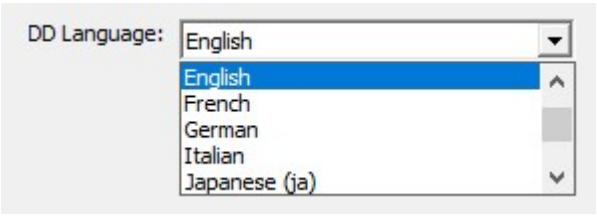
Step	Action
1	Verify your PC is connected to the Internet.
2	Select “Check-In” from the “License” Menu. If the current computer is not licensed, an error message will appear. If licensed, the program will contact the License Server via the internet. It will check-in the license using the License ID and Password used in Activation. The current computer will then become un-activated.

5.11 Options Menu

6.12.4.2 Language

Certain DD's can be used in different languages. English is the default setting but some support other languages. Note that main program frame will always be English. Only the DD based items – menus, variables, etc. will change language. And will only change if the DD supports that language. In order to change the Language setting, perform the following steps:

Step	Action
1	Ensure that the application is running.
	
2	Select **Options → Basic** from the main window. The Options Dialog Box is displayed

Step	Action
	
3	Click the "DD Language" drop down to select a different language. 
4	Select a language to translate the DD into. Click Save to save the changed settings.
5	Restart DevComFF.Win for the changes to take place. If the language is supported the DD will be translated. If not, the DD with default to English.

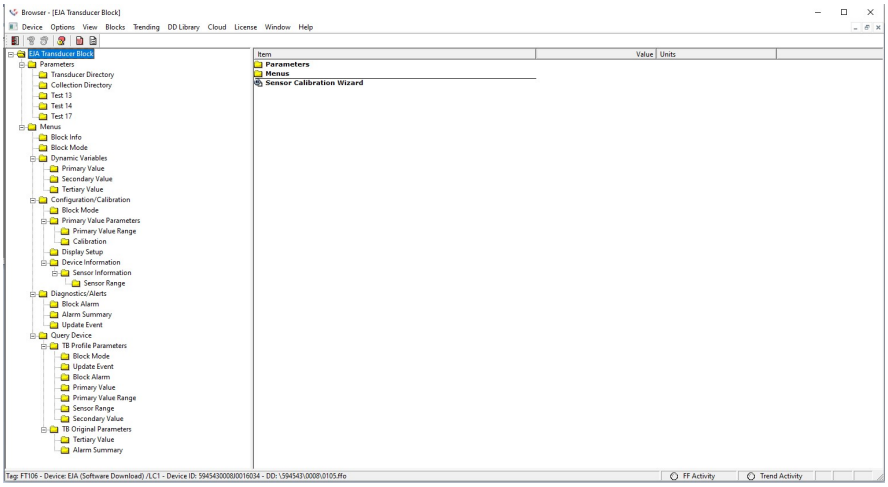
5.12 Trending

5.12.1 Define Trend

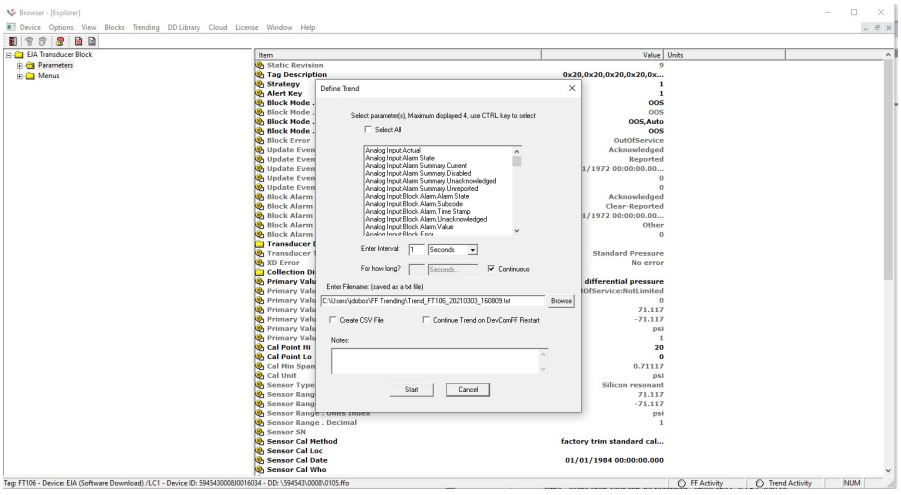
The **Trending** menu is used to track dynamic device parameters over a specified period of time. Once a parameter is tracked, it can be graphed and compared against other parameters tracked on the same time period. Before a parameter can be graphed, a trend must first be created. To create a trend, perform the following steps:

Step	Action

Step	Action
1	Ensure that the application is running and is connected to a device.



2	Select **Trending → Define Trend** from the main window. The **Define Trend** Dialog Box is displayed:



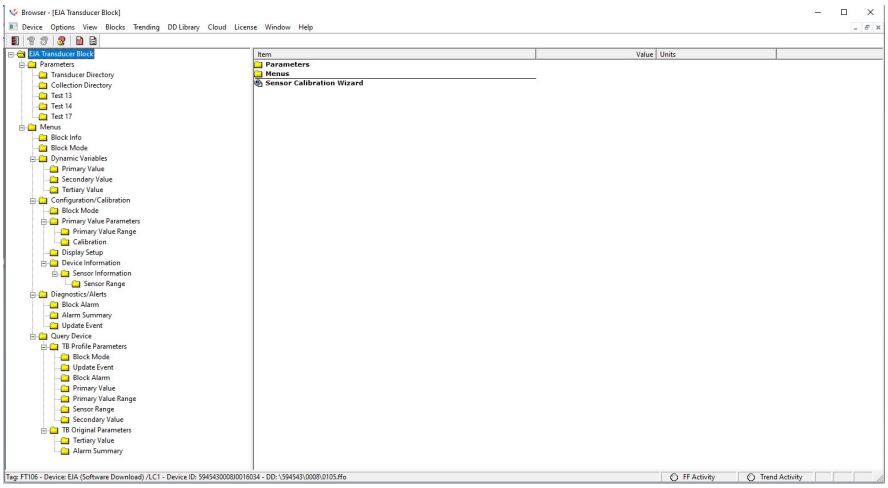
3	Select the information for the log file: **Select Parameters –** Select up to four parameters to display at a time. More than four can be recorded. Press the CNTRL key to select multiple parameters. **Select All** – All parameters are recorded, but only four are displayed. **Enter Interval -** Input a number and select an interval from the drop down box, i.e. Seconds, Minutes, Hours, and Days. **For How Long?** – Input duration for how long to log the parameter(s). This part will be grayed out if the "Continuous" check box is selected. Unselect it for a finite duration. **Filename –** The default directory is based on Windows User Accounts however a log file can be saved anywhere. **Create CSV File** – When selected a .csv file is also created for use in

Step	Action
	3rd party software. **Continue Trend on DevComFF.Win Restart** – When selected, the define trend is automatically restarted whenever DevComFF.Win is launched. **Notes –** The section can only be 250 characters long.
4	Click the "Start" button to start the Trend.
5	The Trend will then be started. At the lower right hand corner of DevComFF.Win the "Trend Activity" light will come on. This indicates that a Trend is in process. You cannot start another Trend until this one is finished or the user stops the trend manually. 

5.12.2 View Current Trend

When a trend is created DevComFF.Win creates a window that shows the graph of the current trend. To view this trend, perform the following steps:

Step	Action
1	Ensure that the application is running and is connected to a device.



2	Ensure that a trend is in progress. The "Trend Activity" light at the bottom of the screen is on if a trend is in progress. If not then the light will be off. 

Step	Action
3	Select **Trending → View Current Trend** from the main window.
4	The **DevComFF.Win Trend** dialog opens up.

The user can manipulate the graph as desired. "Tracking" is the term used to describe how the graph control follows the data, changing the axis in real time so that all of the data is shown. Below are the specific parts of the graph:

Tool Bar: There are multiple things that the user can do with the graph.

Resume All Tracking: The "Resume All" button -  - is grayed out while tracking. If either axis is changed or the "Pause" button is pressed, this will be come green -  - Pressing "Resume All Tracking" will resume the tracking on the graph.

Pause All Tracking: The "Pause" button -  - pauses the graph in its current state. Data is still added, however the current X-axis and Y-axis spans no longer change. Pressing the "Resume" button will continue tracking.

Scroll Axis: This is the default way to scroll both the X and Y-axis. The "Scroll Axis" button -  - allows the user to scroll in both directions on the graph.

Zoom Axis: The "Zoom Axis" button -  - allows the user to shrink or enlarge the scale of either axis. By moving up or down, left or right, the span of each axis is changed.

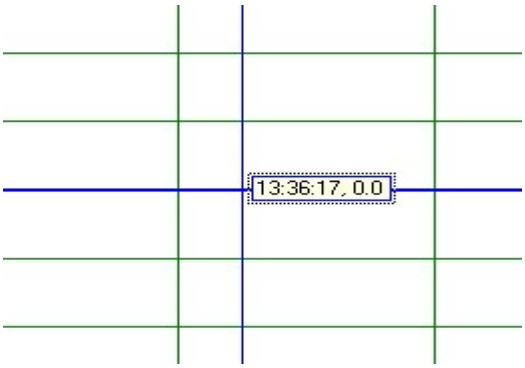
Zoom Out All Axis: The "Zoom Out All Axis" button -  - zooms out both the X-axis and Y-axis at the same time giving the user a broader look at the graph.

Step	Action

Zoom In All Axis: The "Zoom In All Axis" button -  - zooms in both the X-axis and Y-axis at the same time giving the user view over a smaller time period.

Zoom Box: The "Zoom Box" button -  - changes the cursor allowing the user to select a specific area of the graph to zoom in on for a more detailed look.

Cursor: The "Cursor" button -  - adds a cursor to the screen that gives the coordinates of the graph at a certain time. Clicking and moving the cursor can give the coordinates of any point on the graph. See below for an example of using the "Cursor" tool:



Properties: The "Properties" button -  - brings up the "Properties" dialog box which gives the user the ability to customize the graph as desired. Below is an example of one of the "Properties" tabs:

Copy To Clipboard: The "Copy To Clipboard" button -  - copies the graph to the clipboard to allow the graph to be pasted into documents like a report.

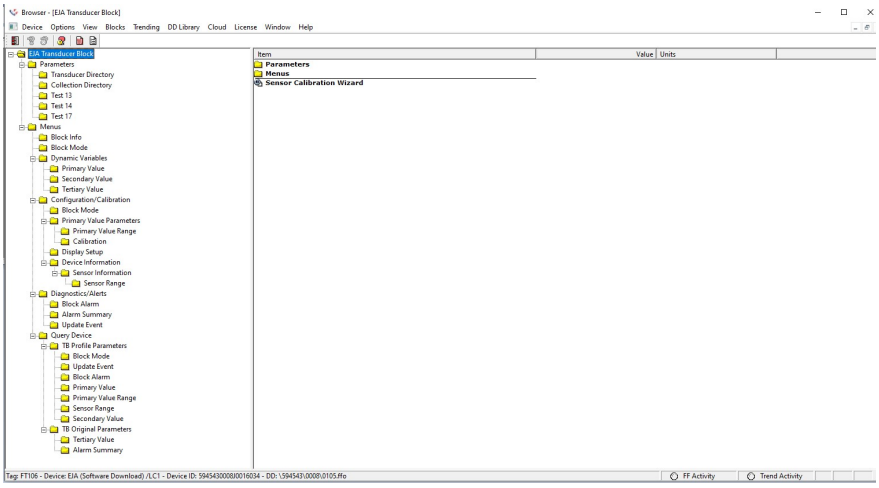
Save: The "Save" button -  - saves the graph as a "*.bmp".

Print: The "Print" button -  - prints the graph.

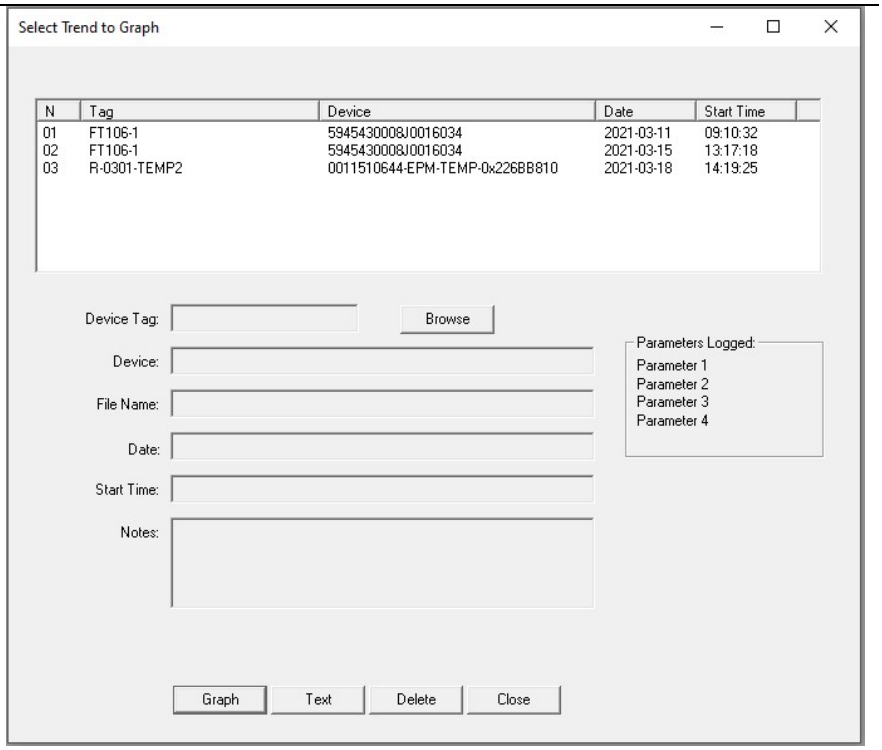
Step	Action
	Preview: The "Preview" button -  - gives a print preview of the graph. **Title:** The title gives the name of the parameter being trended, the units that the parameter is being measured in, and the date(s) of the graph. (Parameter) (Units) - (Date) Pressure inH2O - (2011/03/14) **Axis:** The Y-axis is the units of the parameter. The X-axis is the time in HH:MM:SS format. **Redraw:** This section is disabled for **View Current Trend**.

5.12.3 View Past Trends

DevComFF.Win keeps a list of trends that have been done in the past. These trends are saved so that they can be viewed at a later date. To select a trend to be viewed perform the following steps:

Step	Action
1	Ensure that the application is running, you do not have to be connected to a device to use **View Past Trends**.
	
2	Select **Trending → View Past Trends** from the main window.
3	The **Select Trend To Graph** dialog will open.

Step	Action



This dialog box is very similar to the "Download/View" dialog box.

Graph: Opens the trend as a graph

Text: Opens the trend as a text file.

Delete: Deletes the trend from the database.

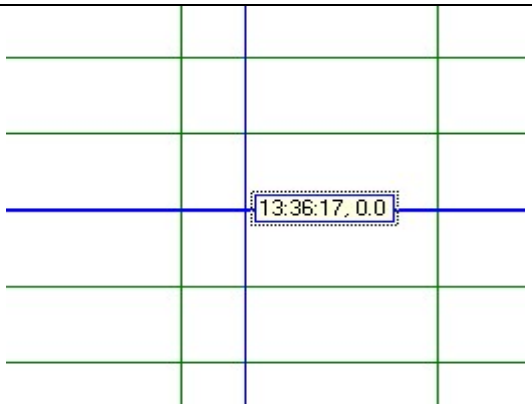
Close: Closes the dialog box.

4 The **DevComFF.Win Trend** dialog opens up when "Graph" is selected.

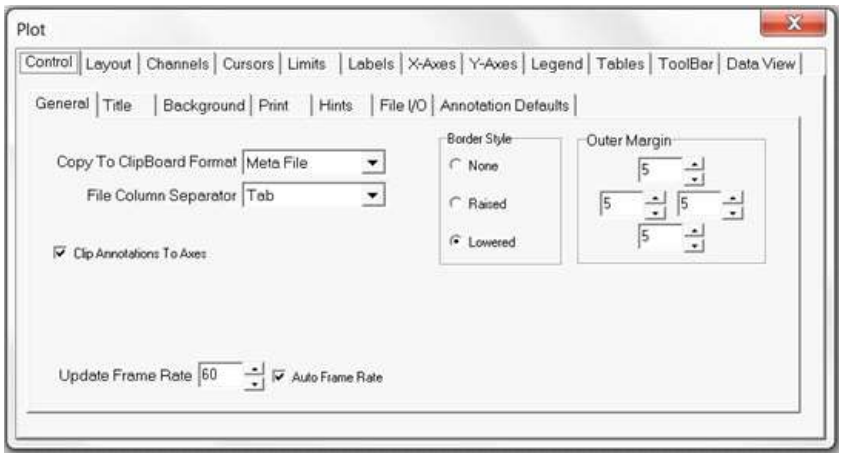
The user can manipulate the graph as desired. "Tracking" is the term used to describe how the graph control follows the data,

Step	Action
	changing the axis in real time so that all of the data is shown. Below are the specific parts of the graph: **Tool Bar:** There are multiple things that the user can do with the graph.  Resume All Tracking: The "Resume All" button - - is grayed out while tracking. If either axis is changed or the "Pause" button is pressed, this will be come green - - Pressing "Resume All Tracking" will resume the tracking on the graph. Pause All Tracking: The "Pause" button - - pauses the graph in its current state. Data is still added, however the current X-axis and Y-axis spans no longer change. Pressing the "Resume" button will continue tracking. Scroll Axis: This is the default way to scroll both the X and Y-axis. The "Scroll Axis" button - - allows the user to scroll in both directions on the graph. Zoom Axis: The "Zoom Axis" button - - allows the user to shrink or enlarge the scale of either axis. By moving up or down, left or right, the span of each axis is changed. Zoom Out All Axis: The "Zoom Out All Axis" button - - zooms out both the X-axis and Y-axis at the same time giving the user a broader look at the graph. Zoom In All Axis: The "Zoom In All Axis" button - - zooms in both the X-axis and Y-axis at the same time giving the user view over a smaller time period. Zoom Box: The "Zoom Box" button - - changes the cursor allowing the user to select a specific area of the graph to zoom in on for a more detailed look. Cursor: The "Cursor" button - - adds a cursor to the screen that gives the coordinates of the graph at a certain time. Clicking and moving the cursor can give the coordinates of any point on the graph. See below for an example of using the "Cursor" tool:

Step	Action



Properties: The "Properties" button -  - brings up the "Properties" dialog box which gives the user the ability to customize the graph as desired. Below is an example of one of the "Properties" tabs:



Copy To Clipboard: The "Copy To Clipboard" button -  - copies the graph to the clipboard to allow the graph to be pasted into documents like a report.

Save: The "Save" button -  - saves the graph as a "*.bmp".

Print: The "Print" button -  - prints the graph.

Preview: The "Preview" button -  - gives a print preview of the graph.

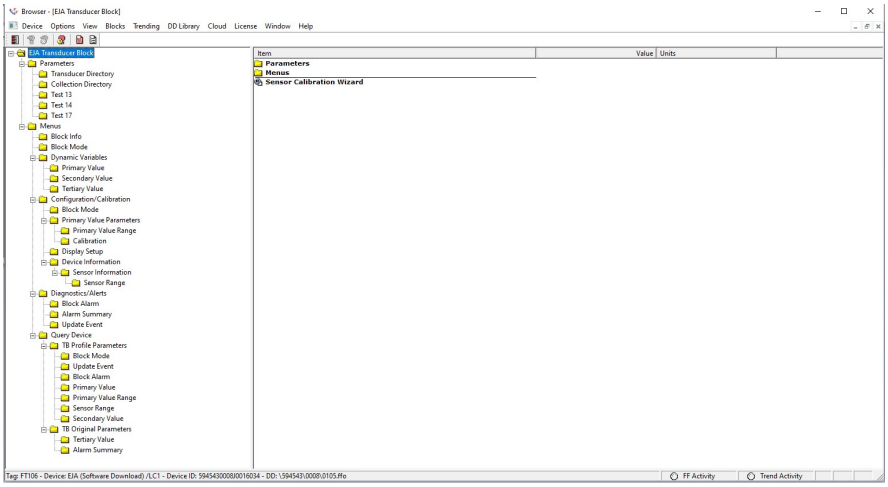
Title: The title gives the name of the parameter being trended, the units that the parameter is being measured in, and the date(s) of the graph.

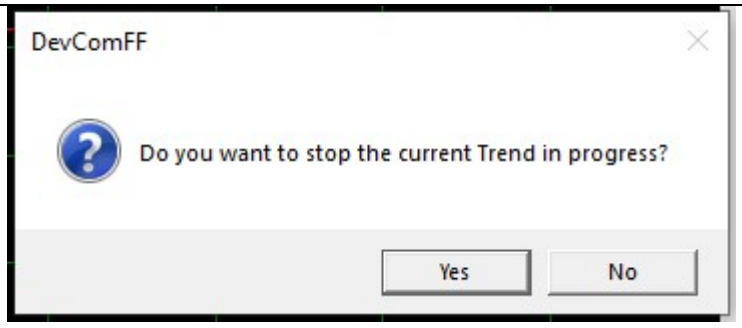
(Parameter) (Units) - (Date)

Axis: The Y-axis is the units of the parameter. The X-axis is the time in HH:MM:SS format.

Step	Action
	Redraw: Up to four parameters can be trended at the same time. By clicking the check box for a parameter u can show one or four at the same time for easy comparison over a period of time.  Click "Redraw" and the parameters checked will be shown.

5.12.4 Stop Current Trend

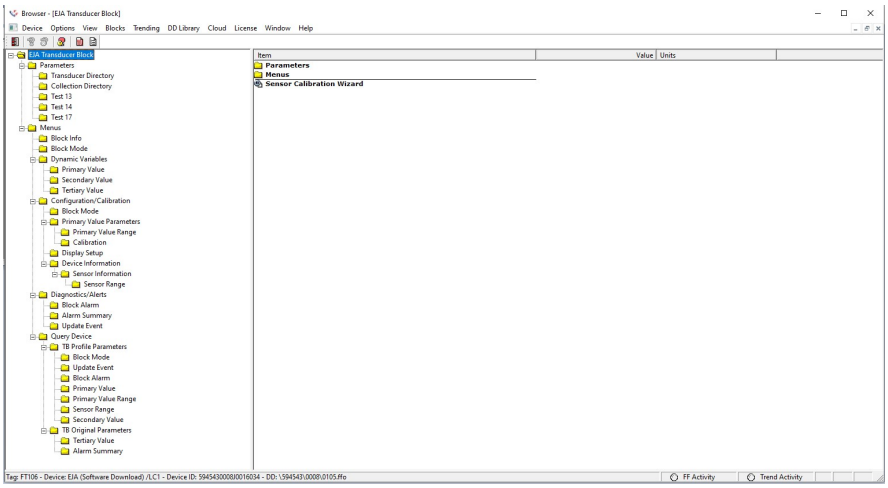
Step	Action
1	Ensure that the application is running and is connected to a device. 
2	Ensure that a trend is in progress. The "Trend Activity" light at the bottom of the screen is on if a trend is in progress. If not then the light will be off. 
3	Select **Trending → Stop Current Trend** from the main window.
4	You will be asked if you want to stop the current trend. Click "Yes". This will stop the current trend.

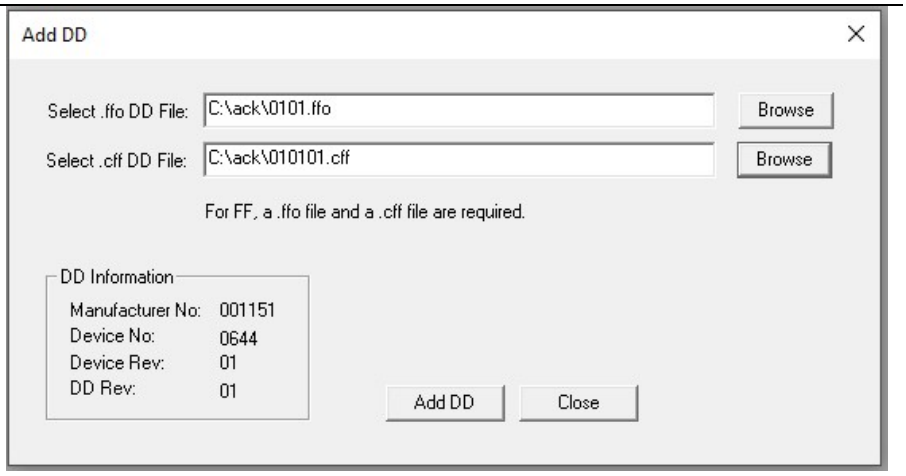
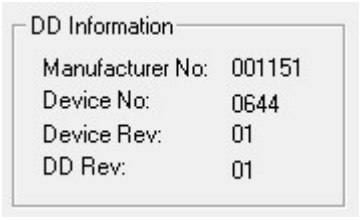
Step	Action
	
5	The "Trend Activity" light will now be off. 

5.13 DD Functions

5.13.1 Adding a DD

DevComFF.Win allows the user to add a DD to the library when necessary. Each DD must be in its appropriate destination for DevComFF.Win to find the DD. The format is: "C:\ProComSol\FF\Library\xxxxxx\yyyy\" where "xxxxxx" represents the manufacturer ID and "yyyy" represents the device type ID. The user does not need to add the directory structure, DevComFF.Win does that automatically. To add a DD perform the following steps:

Step	Action
1	Ensure that the application is running, you do not have to be connected to a device to use **Add DD**.
	
2	Select **DD Library → Add DD** from the main window.
3	The **Add DD** dialog will open.

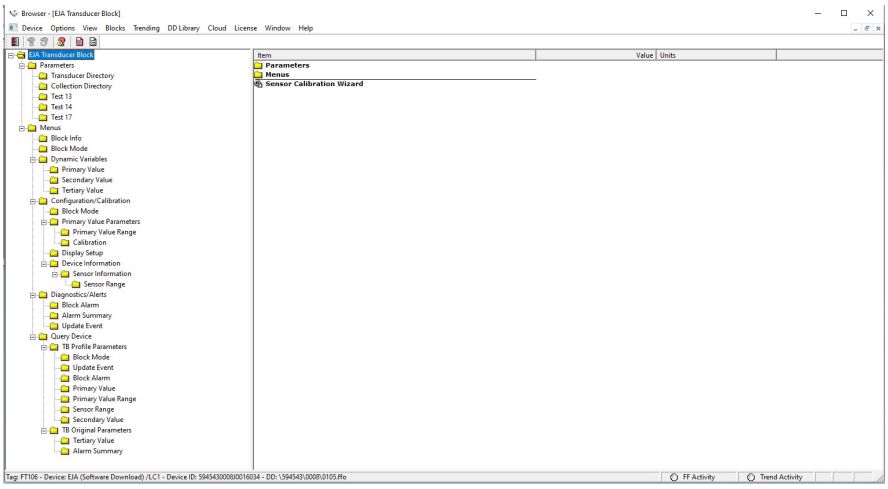
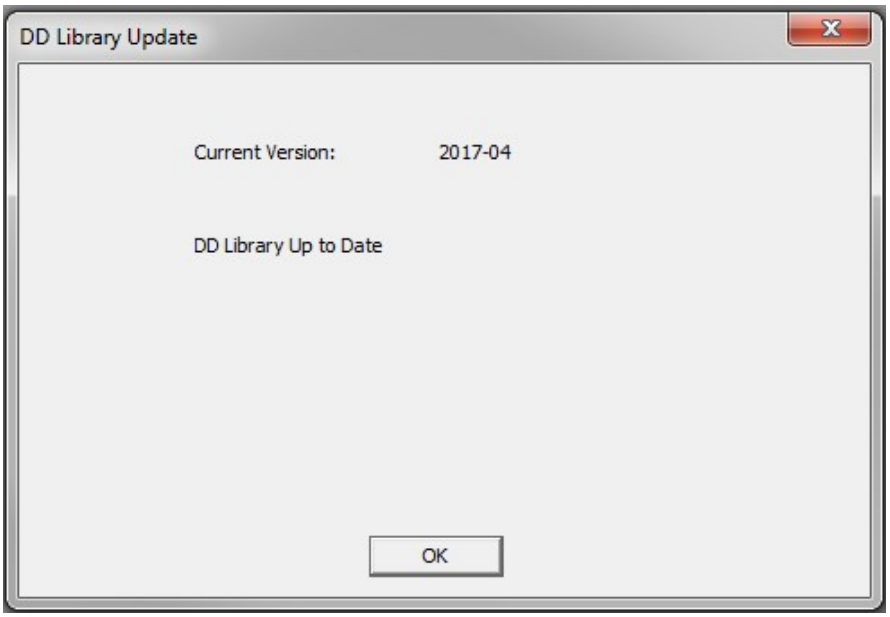
Step	Action
	
4	Click “Browse” and go to the location of the DD that is to be added.
5	The “DD Information” section will be populated. Confirm that it is the correct DD. Below is an example of 0000c2/0021/0201.fm6: 
6	If the DD Information data is correct, click Add DD to add the files to the DD Library.

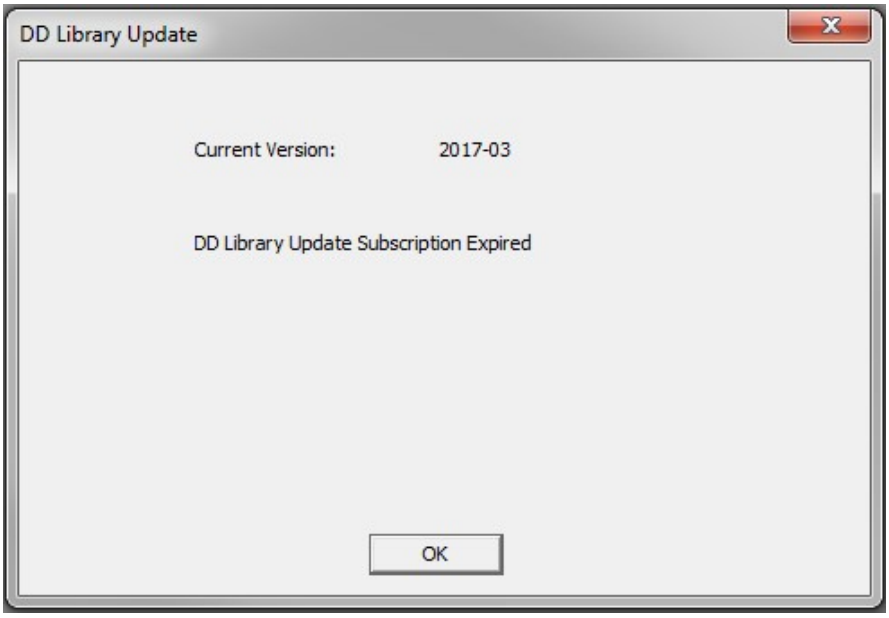
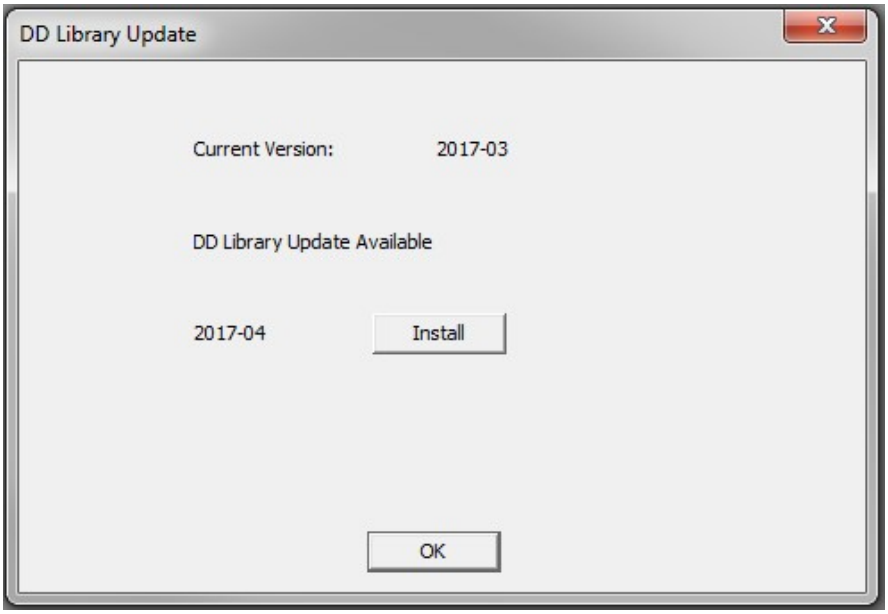
5.13.2 DD Library Updates

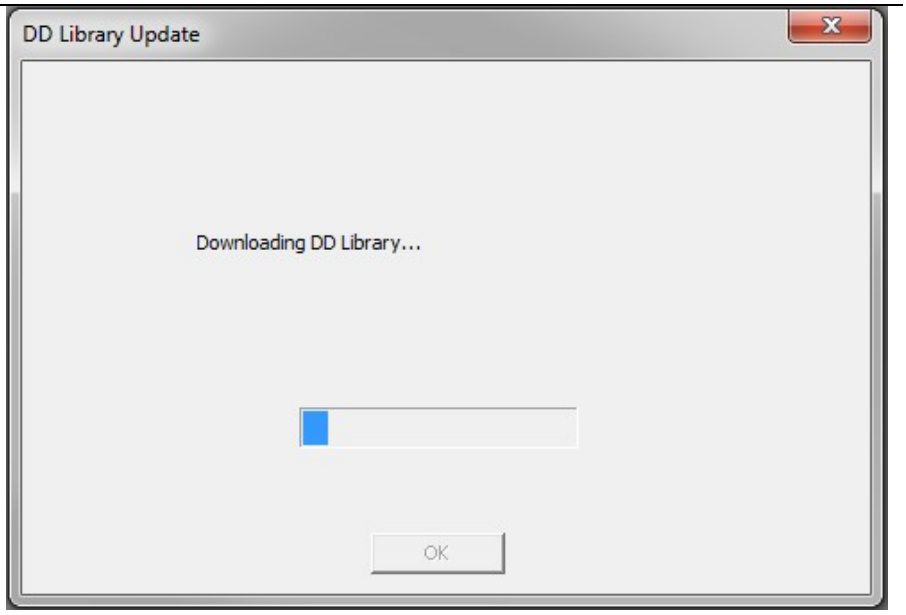
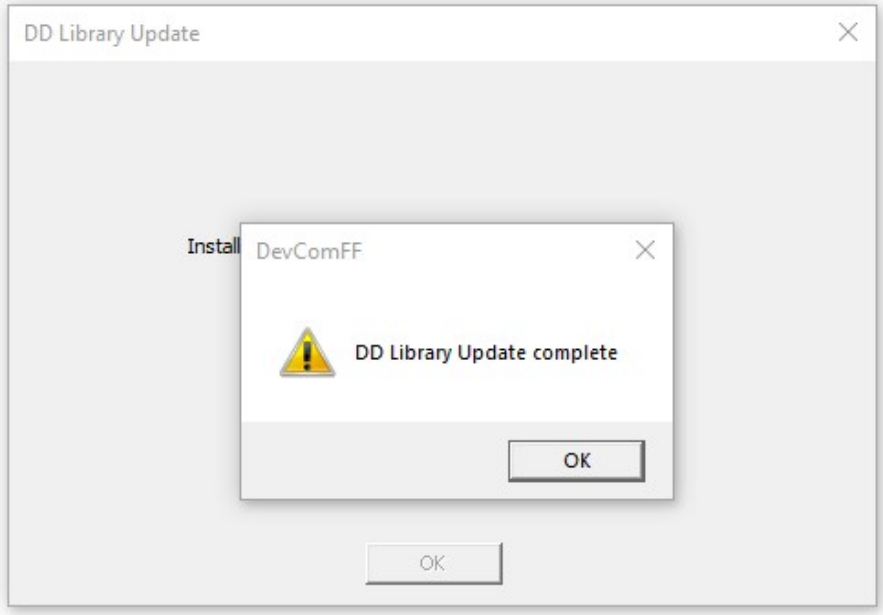
The DD Library is updated generally every quarter. Users are notified by email when this occurs. You can also check for updates by clicking **DD Library→Check for Updates**. DevComFF.Win will then contact the ProComSol DD Library Server and determine if a new DD Library is available. Note that you must have a valid Update Subscription.

To check for DD Library updates perform the following steps:

Step	Action
1	Ensure that the application is running, you do not have to be connected to a device to use **Check for Updates**. However you do need internet access.

Step	Action
	
2	Select **DD Library → Check for Updates** from the main window.
3	The **DD Library Update** dialog box will open. What is displayed is based on the Current DD Library Version, Available DD Library Version, and status of the Update Subscription for this license.  DD Library is current, no update required.

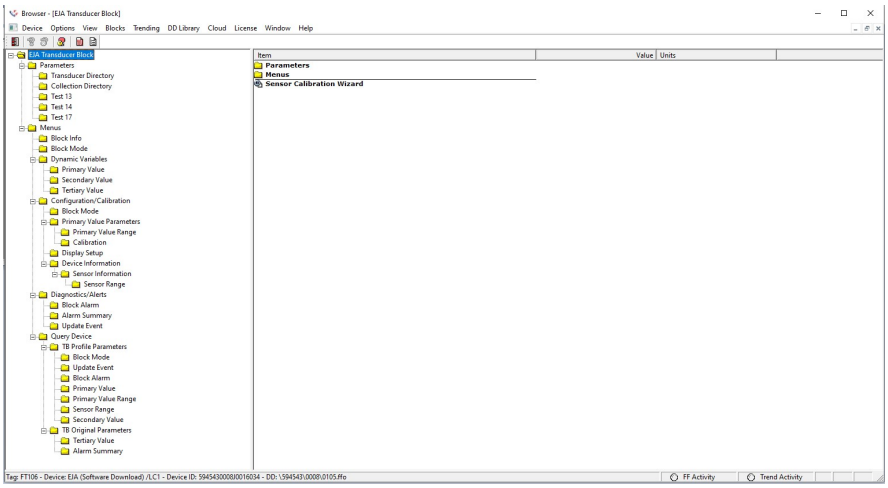
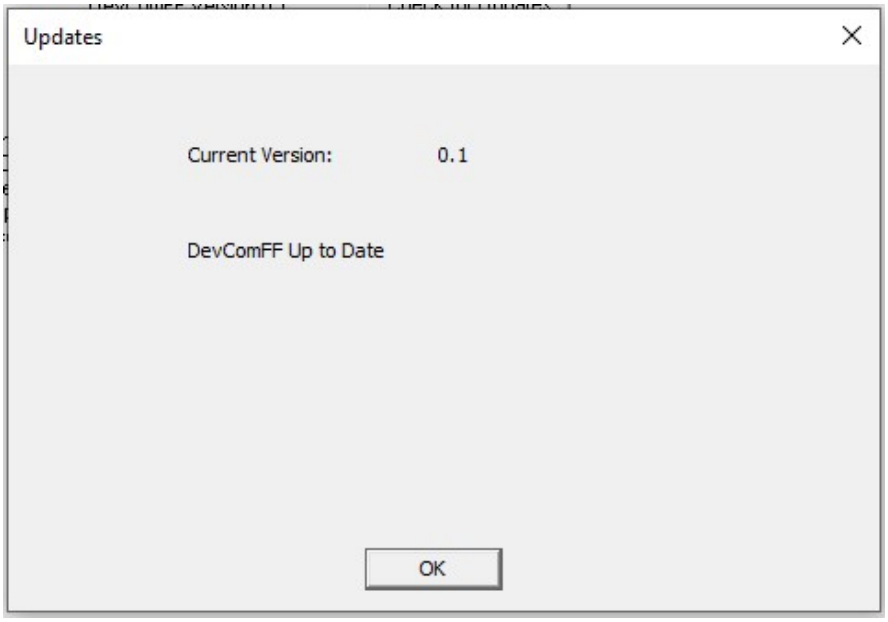
Step	Action
	 Update Subscription expired for this license. Contact ProComSol to renew your subscription.
4	 DD Library Update is available. Press “Install” to download the new library.
5	While the DD Library download and installation is occurring, a bar shows progress:

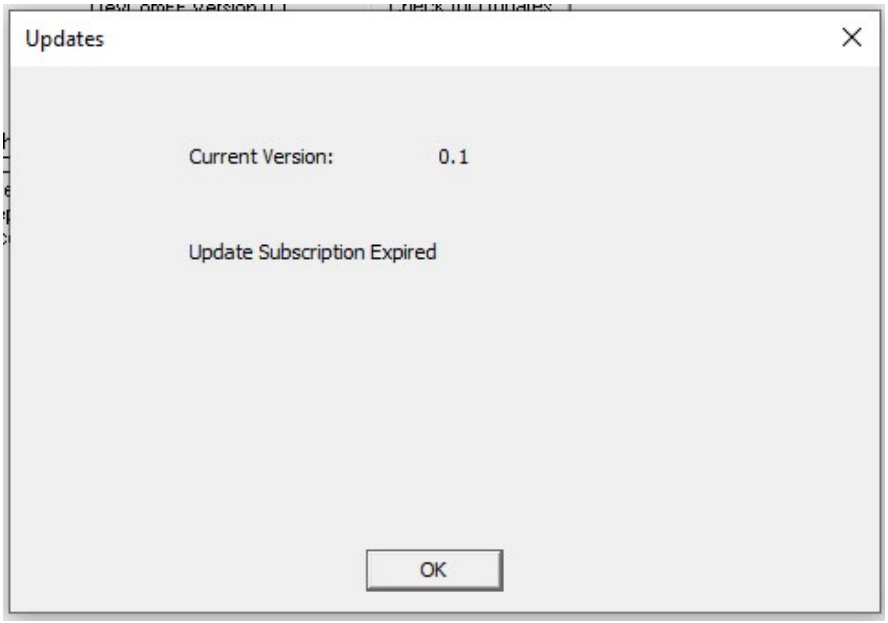
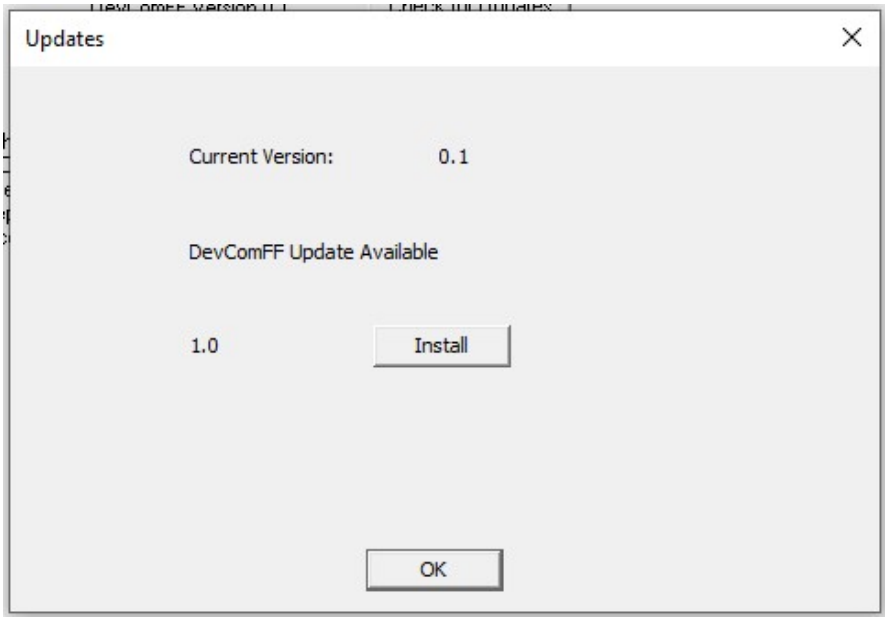
Step	Action
	
6	The user is notified when the download and installation is complete: 

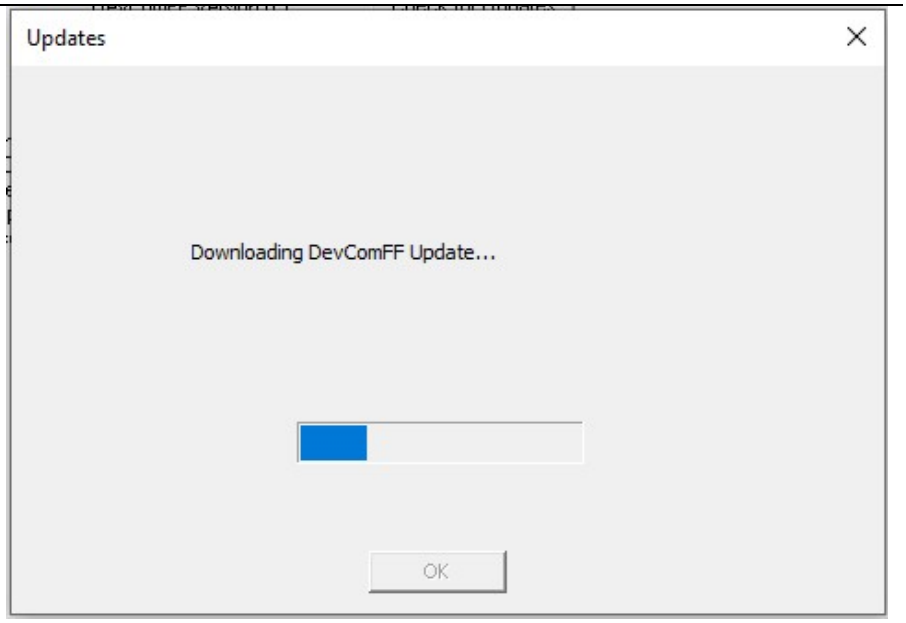
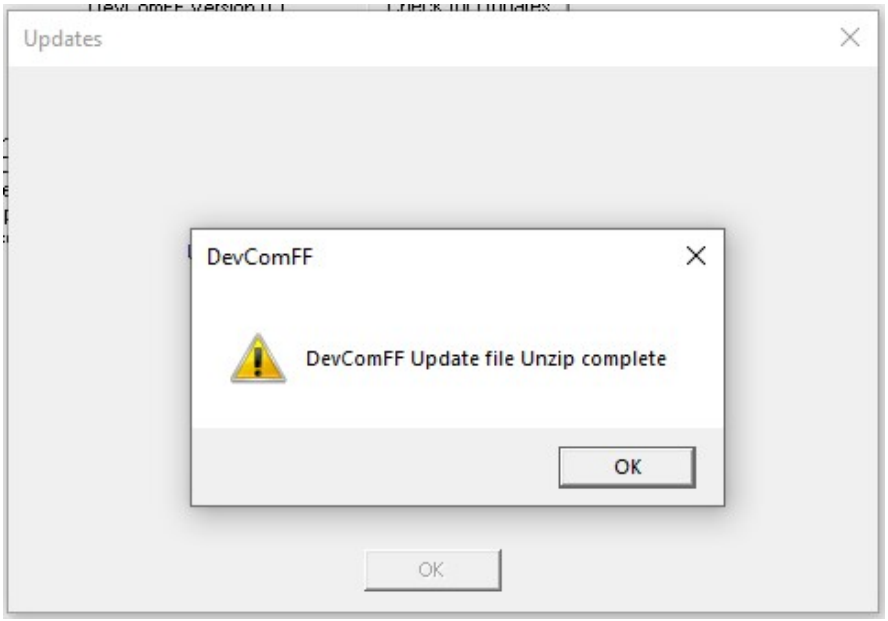
5.14 Program Updates

The DevComFF.Win program is updated periodically to add new features or to fix reported issues. Users are notified by email when this occurs. You can also check for updates by clicking **Help → About DevComFF → Check for Updates**. DevComFF.Win will then contact the ProComSol Update Server and determine if a new program update is available. Note that you must have a valid Update Subscription.

To check for program updates perform the following steps:

Step	Action
1	Ensure that the application is running, you do not have to be connected to a device to use **Check for Updates**. However you do need internet access.
	
2	Select **Help→About DevCom FF → Check for Updates** from the main window.
3	The **Update** dialog box will open. What is displayed is based on the Current Program Version, Available Program Version, and status of the Update Subscription for this license.
	
	Program is current, no update required.

Step	Action
	 Update Subscription expired for this license. Contact ProComSol to renew your subscription.
4	 Program Update is available. Press “Install” to download the new library.
5	While the Program download and installation is occurring, a bar shows progress:

Step	Action
	
6	The user is notified when the download and installation is complete: 

5.15 Cloud Functions

5.15.1 Enabling Cloud Functions

Cloud functions are not yet available. Stay tuned!

Appendix A

Troubleshooting Guide

Problem:
No FF devices in Live List

Hardware Check:

Verify the following:
FF device is connected to power conditioner and is powered.
mobiLink is connected to power conditioner and is powered.

Problem:
Activation by Internet blocked by Firewall

Try the following:
1. Allow one time access to internet via your computer's Firewall settings.
2. Disable Firewall.
3. Use manual activation method.

Problem:
Active Windows not shown in Windows drop down list

Try the following:
1. Select **Window→Cascade** or **Window→Tile**.
2. All Windows will now be shown

Appendix B

Contact Information

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