FBxConnect™ Configuration Software

FBxConnect™ is a Microsoft® Windows®-based program that enables you to easily configure, monitor, service and calibrate Emerson's FB1100, FB1200, FB2100, and FB2200 Flow Computers. Designed for ease of use, FBxConnect provides at-a-glance monitoring, quick access to commonly performed tasks, and configuration wizards to quickly get your equipment up and running.

Features

- **Ease of Use:** incorporates an intuitive graphical user interface
- **Faster Configuration, Commissioning, and Startup Times:** configuration wizards walk you through the steps needed to configure your device
- **Reduced Maintenance Expenditures:** troubleshoot remotely by monitoring status and diagnostic information
- **Increased User Safety:** reduced work time in the hazardous area using Mobile SCADA™
- **Multi-level and Role-based Security:** only those who need to can change your metering or control, the audit trail ensures that you know what changes were made when and by whom

User Interface

The graphical user interface (GUI) allows you to easily navigate device options using a ribbon-style menu. The GUI shows a visual representations of critical information, current device status, and communication statistics. You can easily view and modify the current configuration of I/O points, alarms, and history. A full-featured help system is included to assist you along the way.

Configuration

In today's world, we all face the same challenge to do more with fewer resources. The FBxConnect tool helps you achieve this. By reducing the time to configure each device, reducing dependence on expert resources as well as reducing time to perform tasks in the field.

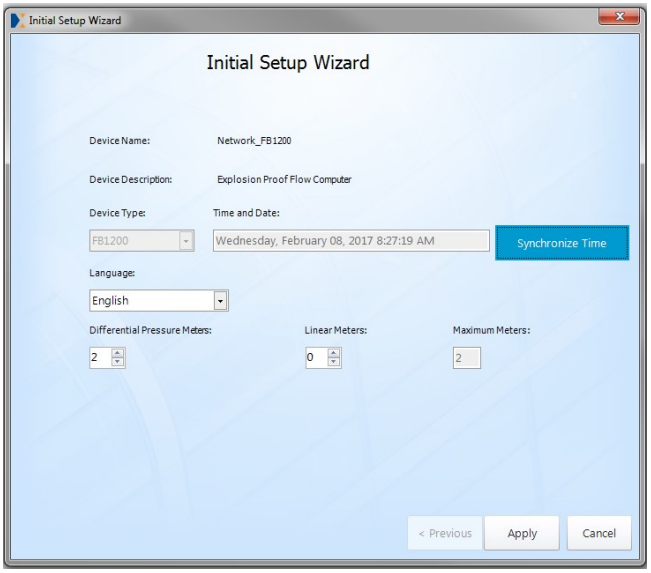
The FBxConnect tool provides a guided configuration process that takes you through a step-by-step process to configure your flow computer. This wizard-driven approach simplifies configuration and ensures that you only need to enter required data once.

Configurations can either be edited online when connected to a device or they can be generated and edited "offline" from the comfort of the office for upload to devices at a later time.

Whether it's you or your newest technician, you can be confident that it is done the right way.

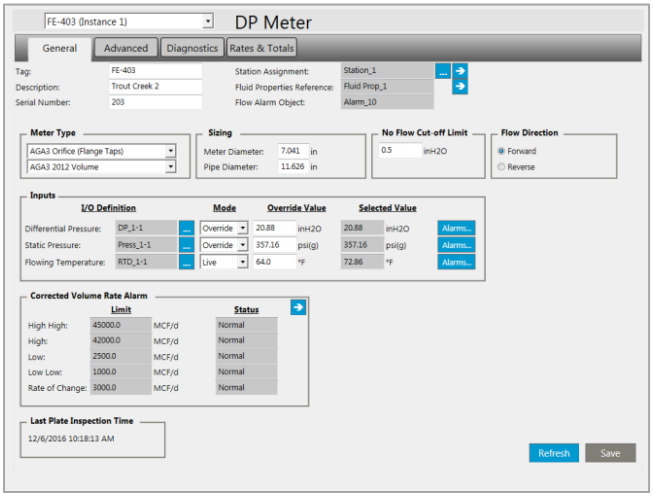
Monitor Screen

Initial Setup Wizard – The initial setup wizard walks you through the steps of setting up and configuring your device. You're presented with only the configuration options you need for your device and meter type. This greatly reduces the amount of time spent configuring your device.



Initial Setup Wizard

Online and Offline – FBxConnect allows you to securely log on to a flow computer. Provided you have the required user role privileges you can view, back-up, or edit the device's configuration "on line." You can also work on configurations "off line" from the comfort of your office. This is particularly useful for generating new configurations either from scratch or by using an existing configuration from a similar application and making the required changes for the new site. This enables you to customize and test the configuration before leaving the office and minimize the time spent on site.



DP Meter

Connectivity

Users can easily connect to a device through a secure wired or wireless connection using the flow computer's serial ports, Ethernet ports, or the optional Mobile SCADA™ connectivity via Wi-Fi.

Mobile SCADA enables you to connect your laptop or tablet to the flow computer through a secure wireless connection. Once connected, you can use FBxConnect tool to view process values, edit configuration parameters, update set-points, and collect logs stored in the flow computer — all while never stepping foot in the hazardous area.

Security

The integrity of your devices and fiscal data is paramount in the modern world.

The new Emerson flow computers and FBxConnect tool have been designed with security in mind to allow you to establish a secure infrastructure.

FBxConnect provides multi-level role based security allowing different users the required accessibility to perform their tasks. User authentication is more robust with stronger and longer encrypted passwords (up to 16 characters: upper, lower case, numbers, and special characters) and the ability to apply a minimum password length.

There is also a security lock-out option, preventing multiple unsuccessful login attempts for a pre-configured time.

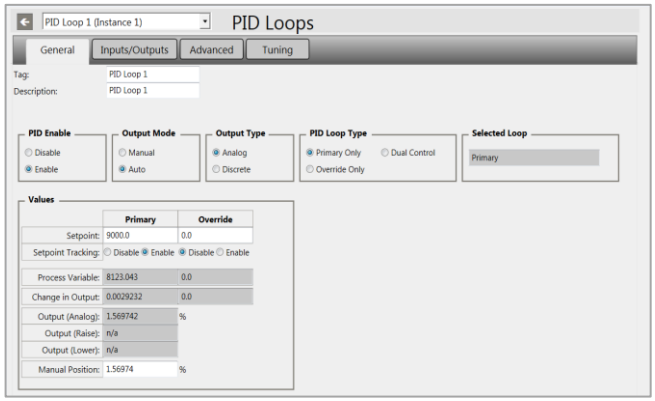
An added security feature is that flow computer firmware is authenticated by Emerson and will not load without the required signature.

FBxConnect works with the flow computers to provide a robust audit trail to ensure that you know what changes were made when and by whom.

Control

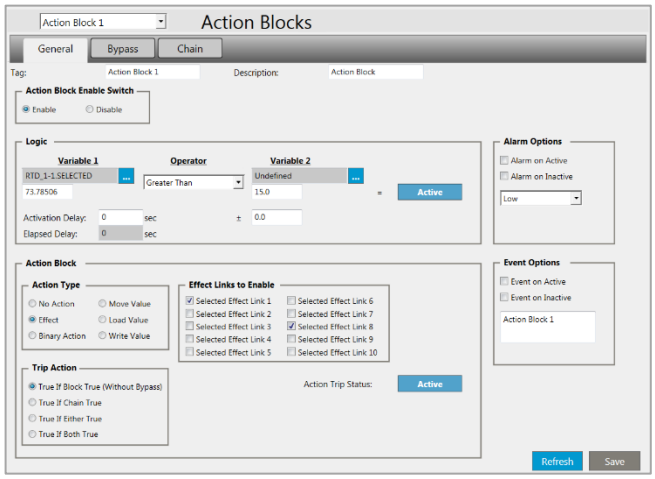
If your device supports control functionality, you can use FBxConnect to quickly configure those functions. FBxConnect makes it easy to customize control functionality with Proportional, Integral, and Derivative (PID) control loops, action blocks, effects, and math blocks.

PID Control – Typically, a proportional, integral, and derivative (PID) control loop maintains a process variable at setpoint. If you configure a PID override control, the primary loop is normally in control of the control device. The override loop can take over control at a process, if required.



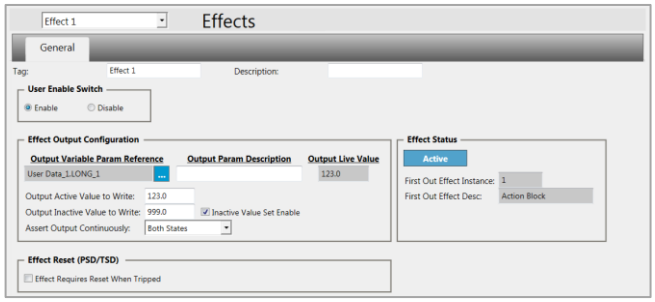
PID Loops

Action Blocks – Action blocks are used in conjunction with effect blocks to monitor a configured condition and to perform an action (effect) when the logic is "true." An action block consists of a user defined Boolean logic statement with two variables. These variables can either be live parameter values or constants.



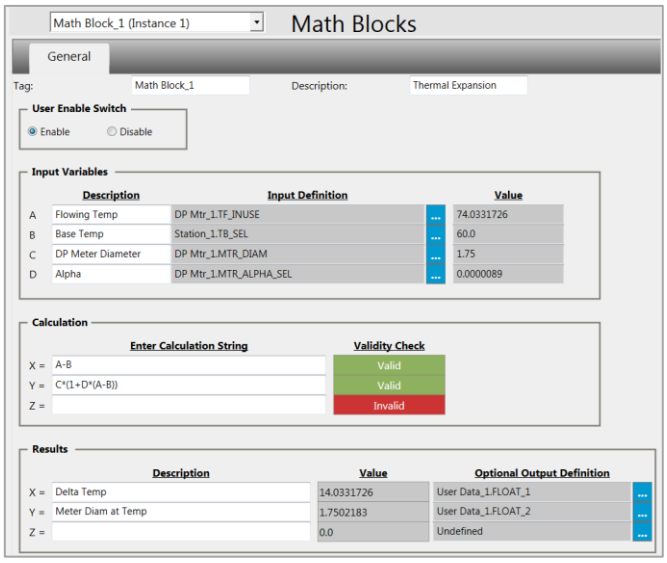
Action Blocks

Effects –Effects cause an action to occur when the result of one or more action blocks is active ("true"). Multiple action blocks can cause the same effect, such as shutting a valve or enabling an alert beacon.



Effects

Math Blocks –Math blocks perform mathematical equations using user-defined variables as inputs. Each math block consists of up to four user-defined variables, three mathematical calculations, and the results of each calculation can be assigned to "user-data" inputs and other read/write parameters. FBxConnect checks each calculation string for the correct syntax and uses double precision floating point math throughout the calculation.



Math Blocks

Logs and Reports

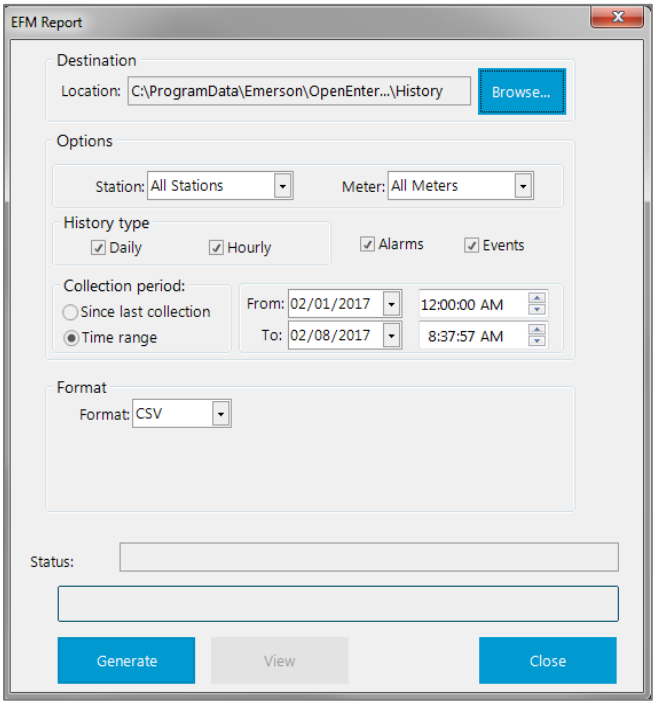
FBxConnect provides the ability to set-up, view, and collect logs for periodic history, event, and alarm data.

Collection of the data from the flow computer particularly at remote sites, is simplified and safer with the use of Mobile SCADA to securely collect the data wirelessly while remaining in the safe area.

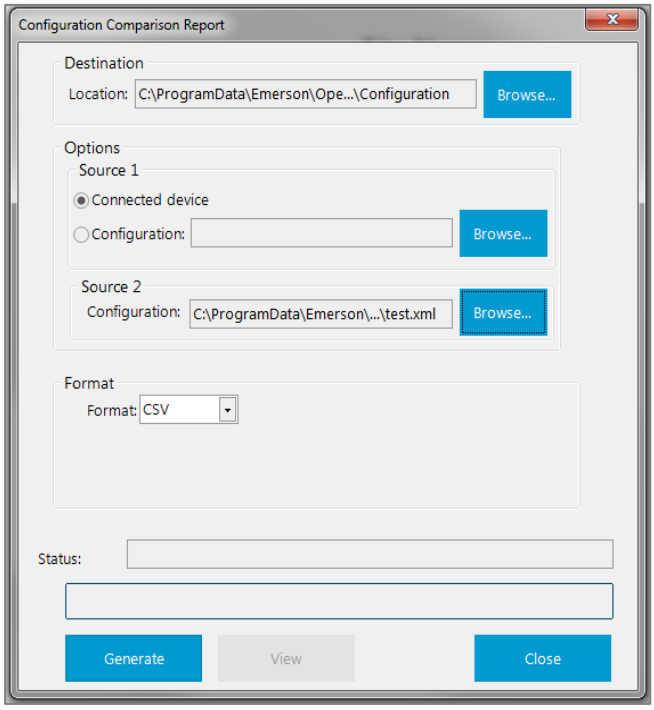
History and logs can be collected as either a .csv file or secure .pdf file on your PC for later offline analysis.

FBxConnect provides the following log reports:

- **EFM Reports** – Contains the audit trail (configuration / history / alarms / events)
- **CFX Report** – For use with the FlowCal™ Enterprise software
- **Standard Periodic History** – includes hourly, daily, weekly and monthly data
- **User Periodic History** – includes historical data based on user selected time periods typically between 1 minute and 12 hours
- **Alarms** – Alarm log entries for the device
- **Events** – Event log entries for the device
  Event log can be configured to either a standard single event log or to have separate logs for metrology/legal events and operational events



EFM Report Collection



Config Comparison Report Generator

FBxConnect provides the following configuration reports:

- **Configuration** – Contains a summary of the device's configuration
- **Config Comparison** – Allows the comparison of two configurations to determine any differences
- **Gas Composition** – Contains the record of the gas composition
- **Parameter Status** – Contains reports which show which parameters are currently in a fault state, an override state, or left in their default state

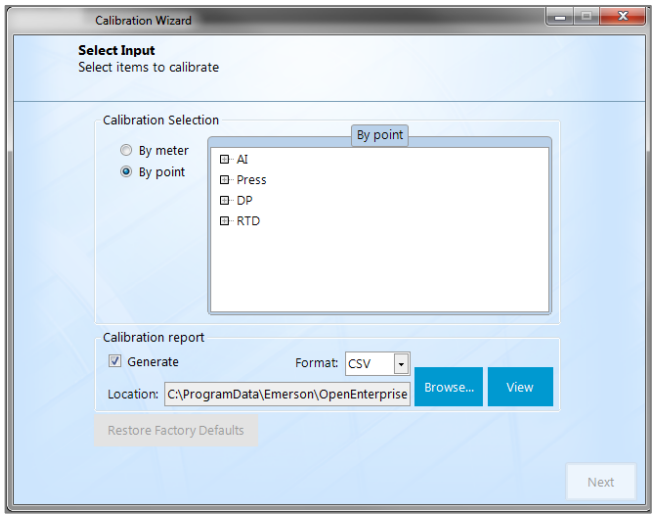
FBxConnect also creates calibration and verification reports:

- **Calibration –** Contains a summary of the calibration information for a device I/O point
- **Verification –** Contains a verification of the calibration information for a device I/O point

Calibration Wizard

The calibration wizard guides the user through the calibration and verification process for DP, pressure, and temperature as well as any analogue channels.

This can be a simple zero shift or zero and span, up to a full 5-point calibration, if required.



Calibration Wizard

Requirements

The software is designed to run on a personal computer (PC), laptop, or a windows tablet having the following minimum requirements:

- Intel® Core™ 2 Duo T7100 or similar (1.8 GHz or greater)
- Windows 7 with Service Pack 1 (32- or 64-bit) or Windows 8.1 (32- or 64-bit) or Windows 10 (32- or 64-bit)
- 2 GB of RAM (Random Access Memory)
- 8 GB of available hard disk space
- Monitor with 1366 x 768 or better resolution
- Connection through Wi-Fi (optional), Ethernet, or RS-232 serial port.

The FBxConnect requires download of the FieldTools 2.1 software. The software and user documentation is available as a free download from our SupportNet site.

Note: Activating a new SupportNet account may take up to 24 hours to process; plan your need for this software accordingly.

For customer service and technical support,
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