

# FSCOMMAQ OPERATORS MANUAL



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Operators Manual FSCommAQ.

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## **Introduction**

FSCommaQ is a software program for the windows operating system used for the following products; SASS, E-FRM, C-SASS, E-SEQ-FRM, and Super SASS. FSCommaQ was designed to allow users to connect to their filter sampler via serial RS 232 or Ethernet and download their event data manually. Once the data has been downloaded, FSCommaQ allows users to graph and view their data with FSCommaQ's easy to use graphical interface. FSCommaQ also has an option for printing reports and/or exporting data to a csv file.

## **System Requirements**

Disk Space:           10MB for program  
                          50MB for .NET 4.0

Operating Systems:  Windows XP Service Pack 3 or newer  
                          Windows Vista (32-bit and 64-bit systems)  
                          Windows 7 (32-bit and 64-bit systems)  
                          Windows 8 (32-bit and 64-bit systems)  
                          Windows 10 (64-bit)

### Minimum System Requirements:

Processor Speed:    2GHz or faster  
Memory:             2GB minimum

### Recommended System Requirements:

Processor Speed:    2GHz or faster for 32-bit and 64-bit systems  
Memory:             4GB or more

# 1 Installation

All of the necessary installation files are supplied on a standard CD-ROM.

## 1.1 Getting Started

Insert the CD-ROM into your computer and the auto-run program will automatically begin the software installation process. If the installation program does not automatically launch upon inserting the CD-ROM, you may manually begin the installation process. Press the Windows START button and select "Run..." Press the "Browse..." button and select your CD-ROM drive. Open the "Software" folder, select the file labeled "setup.exe" and press the "Open" button. Press the "OK" button to begin the installation process.

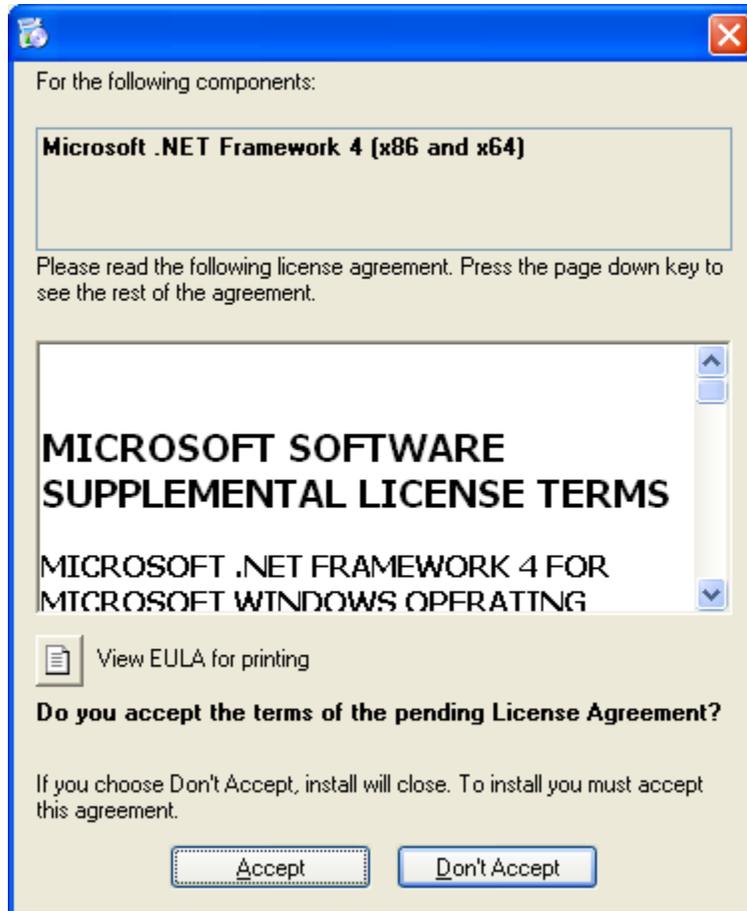
## 1.2 Installation Options

The FSCommAQ cd comes with the software installation package, the software user manual, and the optional adobe acrobat used to view the user manual's pdf file type. Select the appropriate option from the menu to begin the installation and/or to view the manual.



### 1.3 .NET 4 Framework Installation

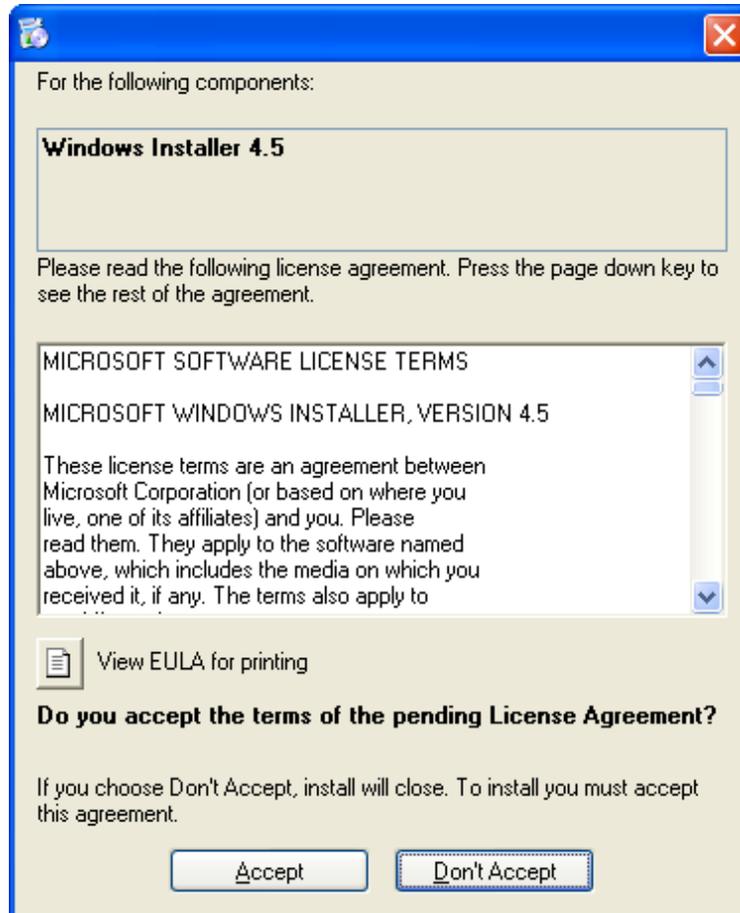
This software uses the .NET 4 framework. The installation process will detect if you meet the requirements. If your computer does not meet these requirements, you will be prompted to install the necessary files for the software to install properly.



It will take a few minutes for .NET Framework 4 to install. Once completed, the setup may ask you to reboot your computer. Once rebooted, the installation will continue.

## 1.4 Windows Installer 4.5

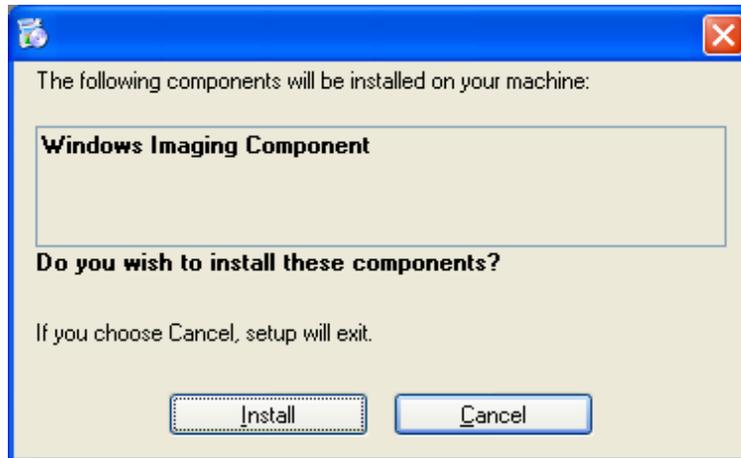
This software uses the newest version of windows installer, version 4.5. The installation process will detect if you meet the requirements. If your computer does not meet these requirements, you will be prompted to install Windows Installer 4.5.



It will take a few minutes for windows installer to install. Once completed, the setup may ask you to reboot your computer. Once rebooted, the installation will continue.

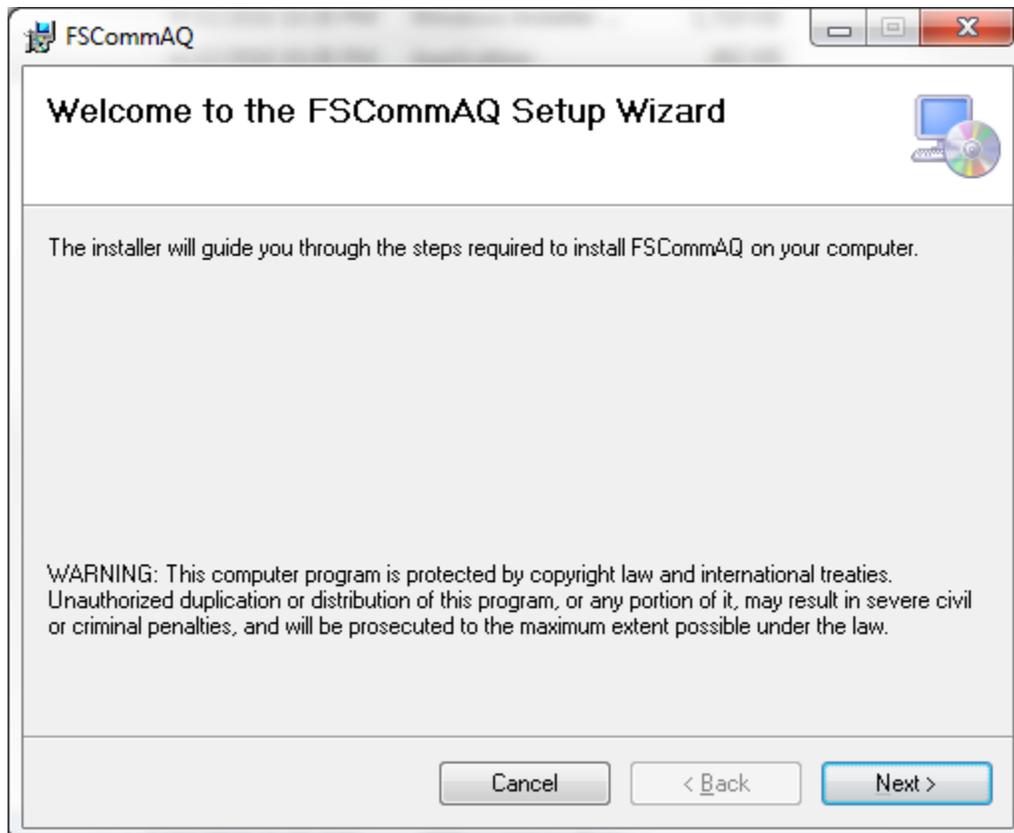
## 1.5 Windows Imaging Component (Windows XP Only)

On Windows XP machines, in order to properly install the .NET 4 Framework, Windows Imaging Component may be needed. The installation process will detect if you meet the requirements. If your computer does not meet these requirements, you will be prompted to install Windows Imaging Component.

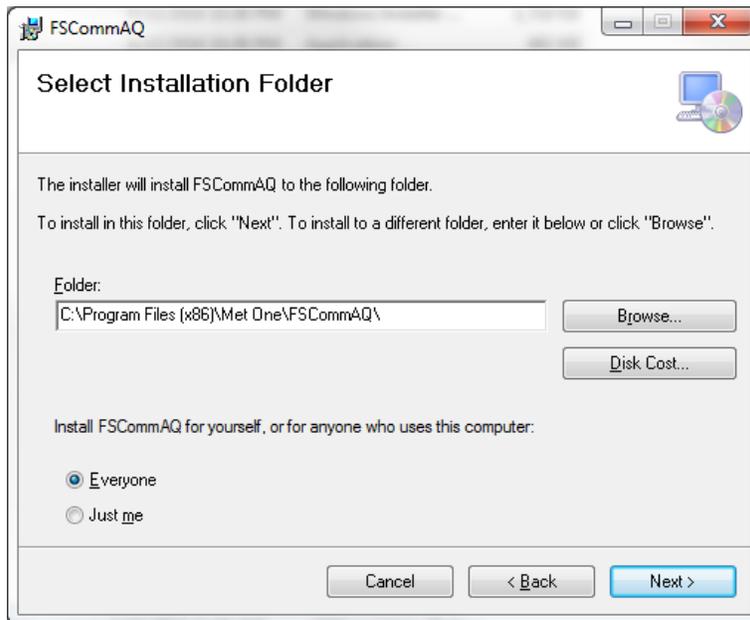


It will take a few minutes for Windows Imaging Component to install. Once completed, the setup may ask you to reboot your computer. Once rebooted, the installation will continue.

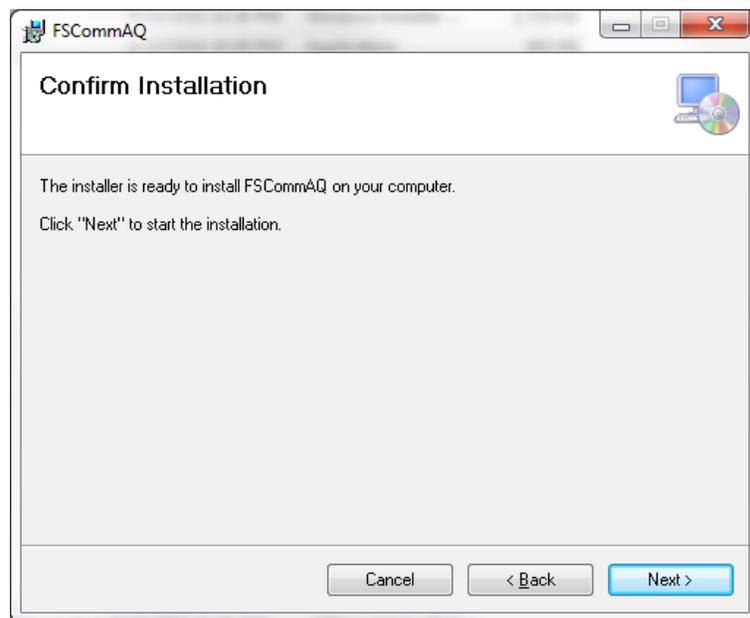
## 1.6 FSCommAQ Installation



Determine where the program files will be loaded and decide whether all users will have access to the software or just the current computer user.



You will then need to confirm that you wish to install FSCCommAQ.

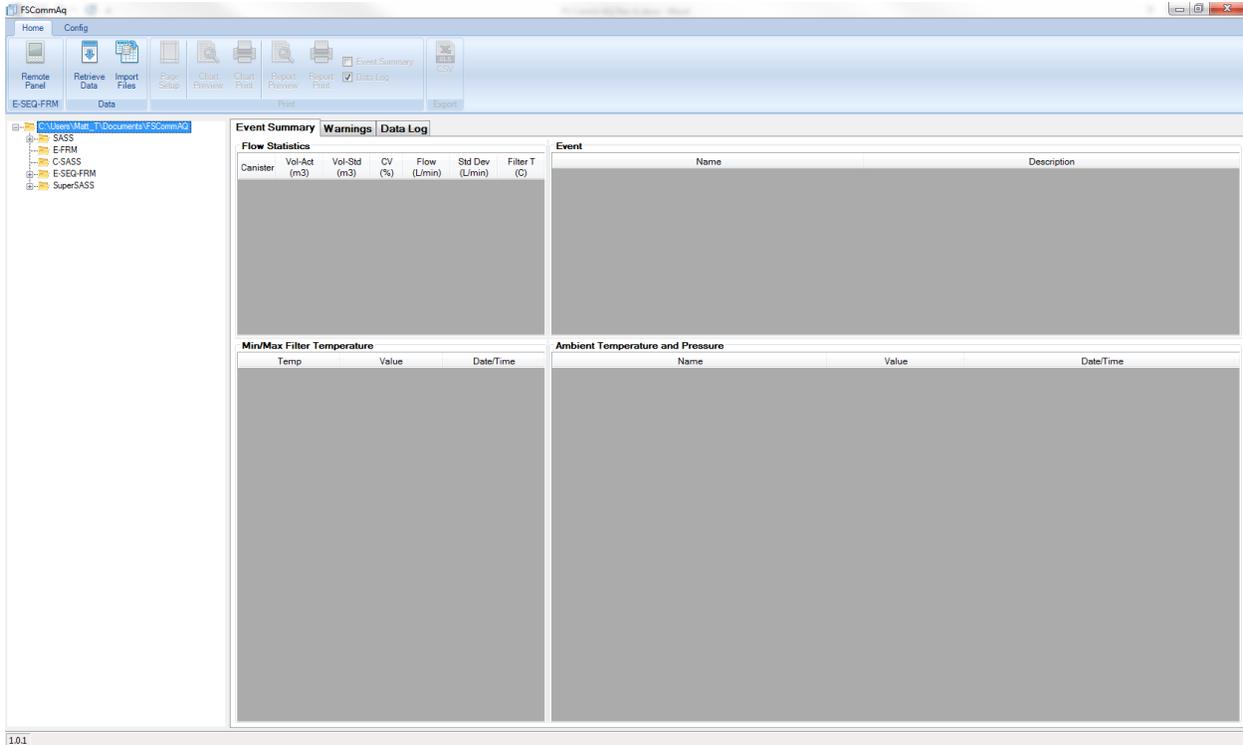


Once confirmed, the software will be installed on your computer with the options you have chosen. After the installation has finished, the installation wizard will confirm when the process is complete.

**IMPORTANT:** Once installation is complete, it is important to run Windows Update and download all critical updates.

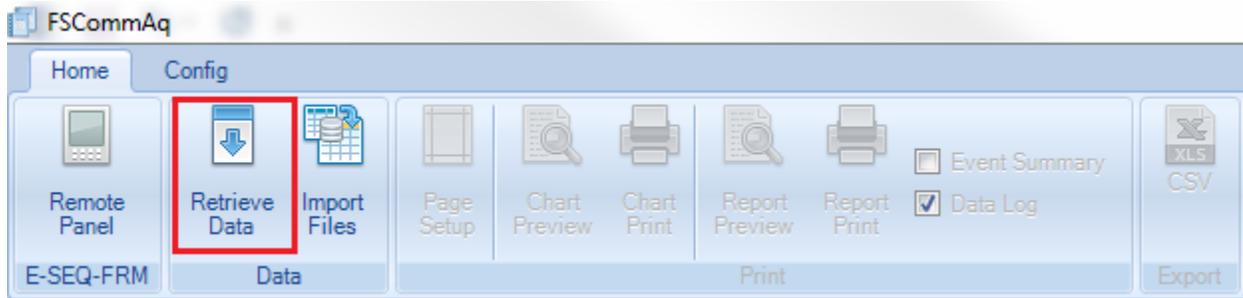
## 2 Getting Started

After installing the software for the first time, run the program by going to Start → All Programs → Met One → FSCommAQ. Once open, you will be prompted with the screen shown below.

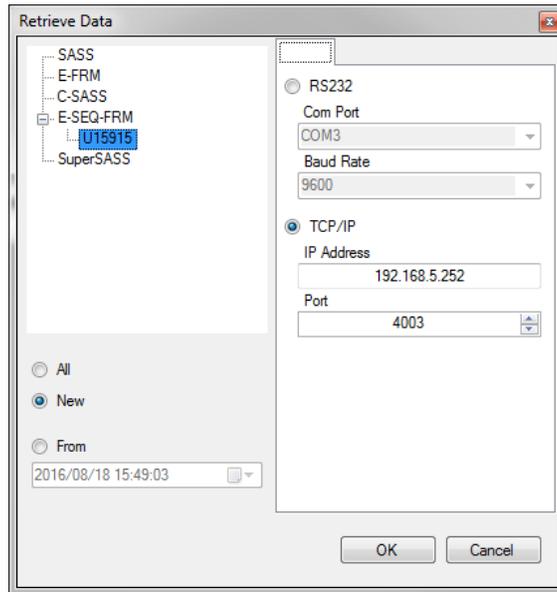


## 3 Retrieving Data

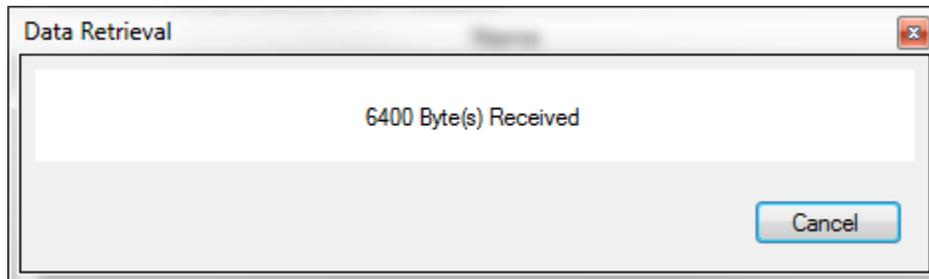
From the home panel, press the retrieve data button to open the retrieve data menu where users can add their devices and download the data.



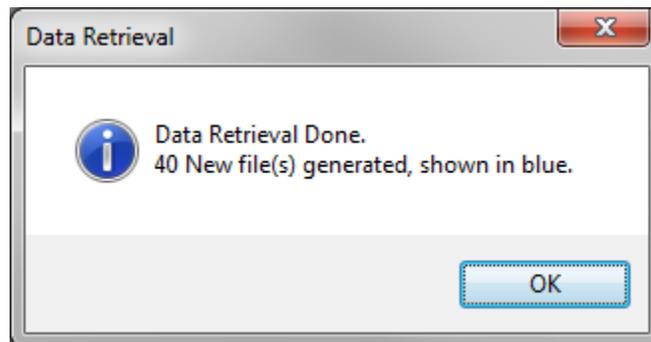
Once the retrieve data button has been pressed, users will be prompted with the retrieve data menu.



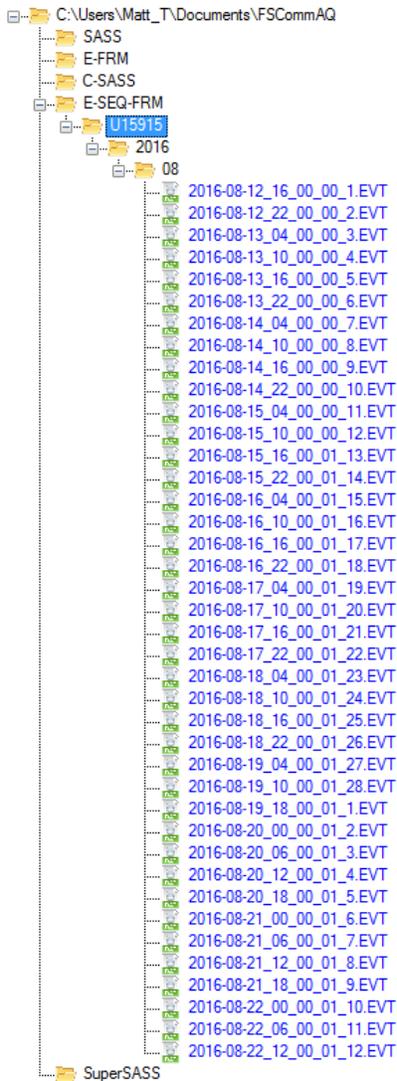
On the left side, a quick connect tree will be displayed with previous connection info. Select a serial # from the quick connect or enter your connection settings on the right hand side for a new connection. Choose to download “All”, “New”, or “From” and press OK to connect and retrieve the data from the unit.



After pressing Ok, the software will attempt to connect to the unit and download the event data for your selected download choice (all, new, from). Once complete, the program will confirm how many new files were retrieved.

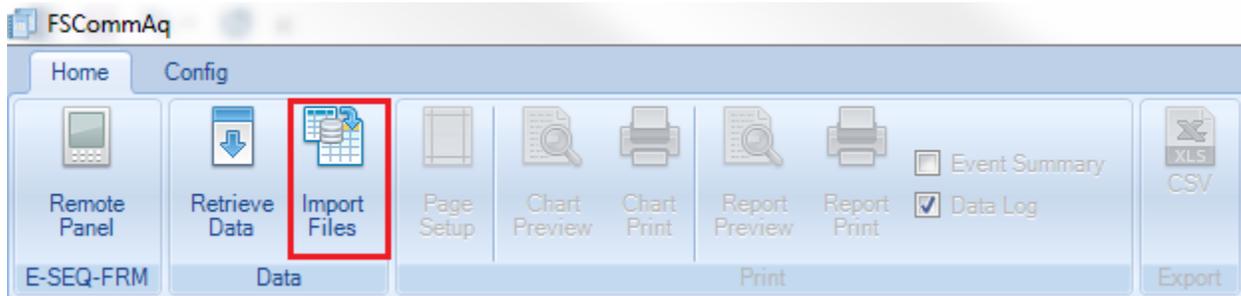


The newly retrieved files will show up in tree on the left side of the program under the unit's serial number as shown in the screen shot below. Selecting an event record will load it into the tables and charts in the center of the screen.

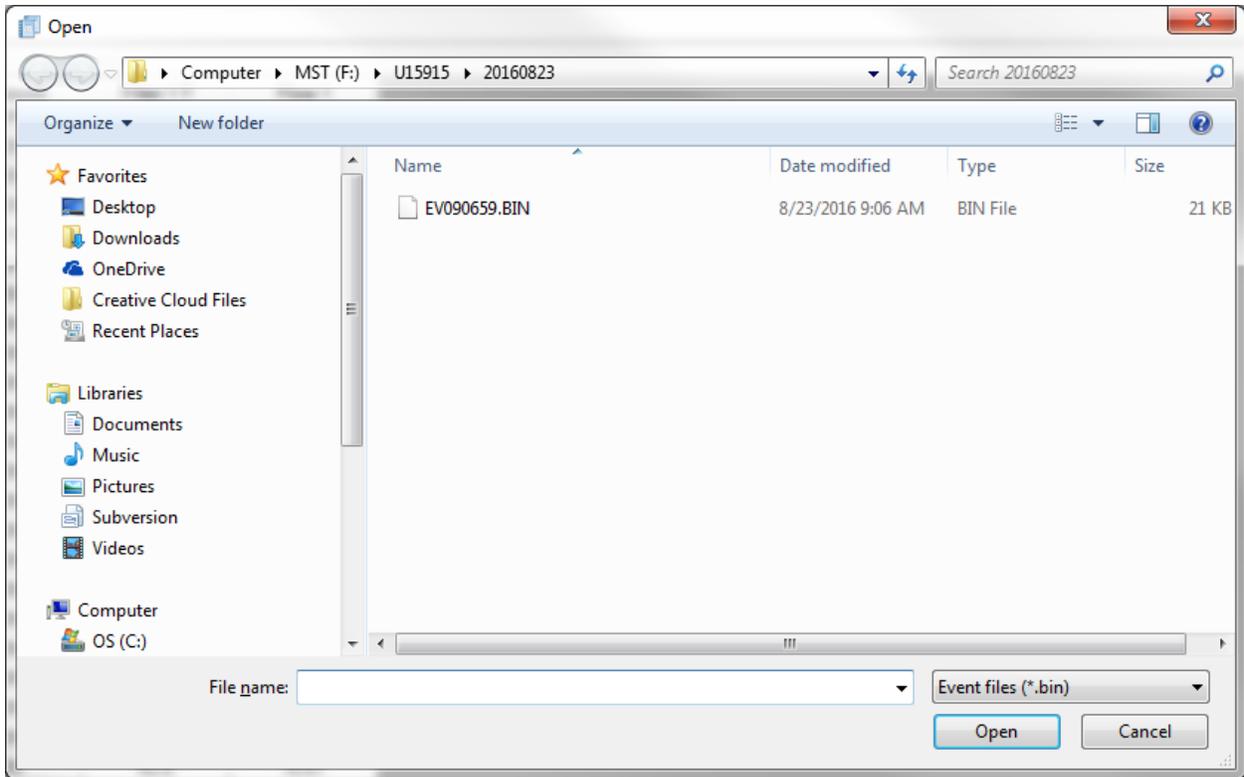


## 4 Import Data

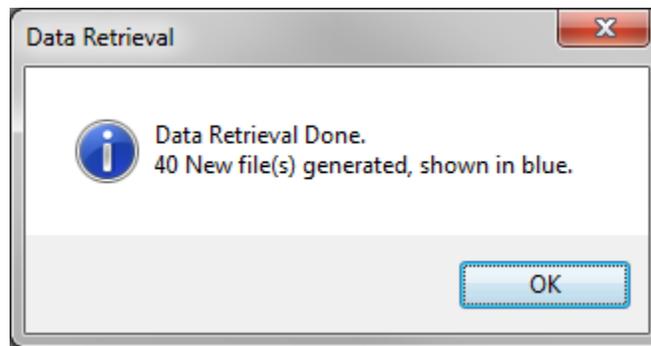
To begin importing data, select the “Import Files” button from the home menu.



Once pressed, a file select dialog will appear in which users can select the file they would like to import. Most users use this method to import their data from a USB stick.



A confirmation window will appear if the data was imported successfully. The new events will show up in the tree view on the left.



## 5 Viewing Data

To begin viewing data, select an event from the tree view on the left. All that event's data will then be displayed in the appropriate windows.

The screenshot shows the FSCommAQ software interface. On the left is a tree view of the data structure. The main window is titled '11 Event Summary' and contains several data tables:

Flow Statistics						
Canister	Vol-Act (m3)	Vol-Std (m3)	CV (%)	Flow (L/min)	Std Dev (L/min)	Filter T (C)
1	5.997	5.901	0.0	16.67	0.01	18.8

Min/Max Filter Temperature		
Temp	Value	Date/Time
Filter 1 Avg Temp (C)	18.8	
Filter 1 Max Temp (C)	23.2	2016-08-15 09:59:23
Filter 1 Min Temp (C)	17.1	2016-08-15 07:11:58

Event			
Name	Value	Value	Date/Time
Filter ID	11		
Status	Finished		
Start	2016-08-15 04:00:14		
Stop	2016-08-15 10:00:00		
EIapse	05:59:46		
Serial #	U15915		
Unit ID	1		
Model	E-SEQ-FRM		
Version	R0.2.0.1a		
PM Type	PM2.5 SCC		
Std-Temp	25 C		

Ambient Temperature and Pressure			
Name	Value	Value	Date/Time
Avg Temp (C)	18.4		
Max Temp (C)	24.0		2016-08-15 09:59:43
Min Temp (C)	16.1		2016-08-15 06:10:19
Avg Pressure (mmHg)	731		
Max Pressure (mmHg)	732		2016-08-15 07:53:34
Min Pressure (mmHg)	731		2016-08-15 04:45:16

### 5.1 Event summary

The event summary gives all the details about the current event that ran. It includes flow statistics, basic details, the min/max filter temperature, and the ambient temperature and pressure readings.

This is a detailed view of the '11 Event Summary' window. It contains the same data tables as the screenshot above, but with a larger font and more space around the tables.

Flow Statistics						
Canister	Vol-Act (m3)	Vol-Std (m3)	CV (%)	Flow (L/min)	Std Dev (L/min)	Filter T (C)
1	5.997	5.901	0.0	16.67	0.01	18.8

Min/Max Filter Temperature		
Temp	Value	Date/Time
Filter 1 Avg Temp (C)	18.8	
Filter 1 Max Temp (C)	23.2	2016-08-15 09:59:23
Filter 1 Min Temp (C)	17.1	2016-08-15 07:11:58

Event			
Name	Value	Value	Date/Time
Filter ID	11		
Status	Finished		
Start	2016-08-15 04:00:14		
Stop	2016-08-15 10:00:00		
EIapse	05:59:46		
Serial #	U15915		
Unit ID	1		
Model	E-SEQ-FRM		
Version	R0.2.0.1a		
PM Type	PM2.5 SCC		
Std-Temp	25 C		

Ambient Temperature and Pressure			
Name	Value	Value	Date/Time
Avg Temp (C)	18.4		
Max Temp (C)	24.0		2016-08-15 09:59:43
Min Temp (C)	16.1		2016-08-15 06:10:19
Avg Pressure (mmHg)	731		
Max Pressure (mmHg)	732		2016-08-15 07:53:34
Min Pressure (mmHg)	731		2016-08-15 04:45:16

## 5.2 Warnings

The warnings tab displays all the details pertaining to any warnings the device encountered during an event. This includes flow warnings, power failures, and general warnings.

Flow Warnings				Power Failures	
Canister	Warning	Flow (L/min)	Date/Time	Event	Date/Time
1	No				

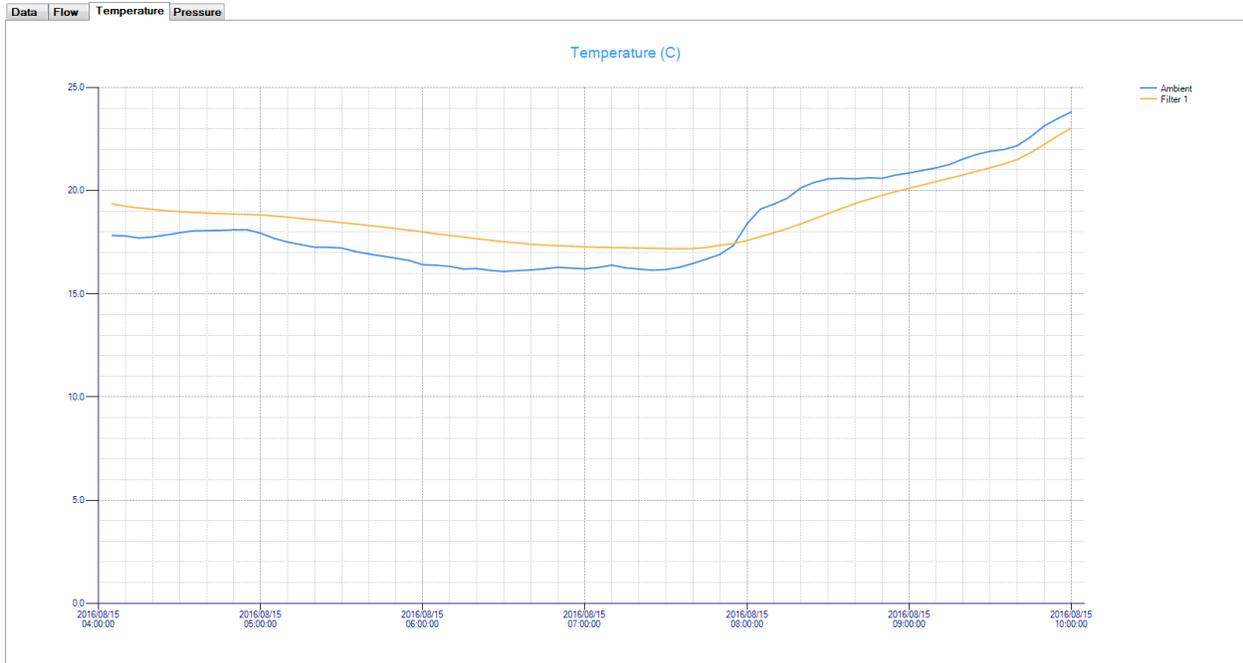
  

Name	Warning	Elapsed Time	MaxdT(C) / Stat	Warning
Elapse Warning	Yes	05:59:46	<	23:00:00
Filter 1 Warning	No			
Filter 1 MaxDT			2.2	2016-08-15 04:00:17

## 5.3 Data Log

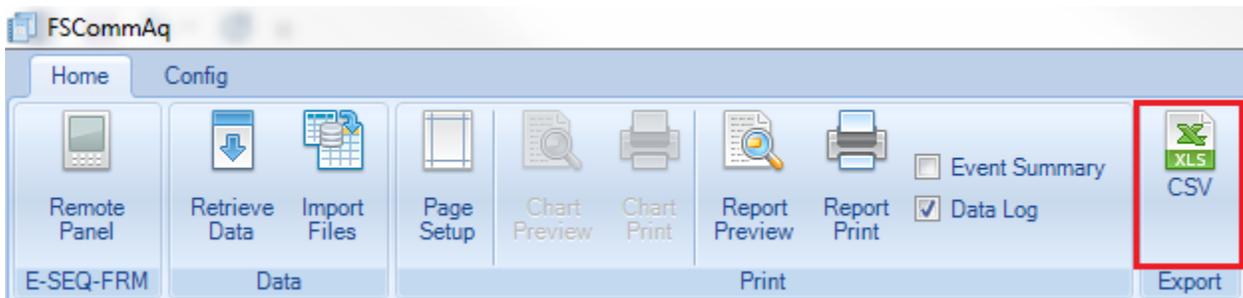
The data log tab allows users to view all the tabular data and chart the flow, temperature, and pressure for the current event selected.

Date/Time	Ambient T (C)	Pressure (mmHg)	Filter 1 T (C)	Flow 1 (L/min)
2016-08-15 04:05:00	17.8	731	19.4	15.87
2016-08-15 04:10:00	17.8	731	19.2	16.67
2016-08-15 04:15:00	17.7	731	19.2	16.67
2016-08-15 04:20:00	17.8	731	19.1	16.67
2016-08-15 04:25:00	17.9	731	19.0	16.67
2016-08-15 04:30:00	18.0	731	19.0	16.67
2016-08-15 04:35:00	18.0	731	18.9	16.67
2016-08-15 04:40:00	18.1	731	18.9	16.67
2016-08-15 04:45:00	18.1	731	18.9	16.67
2016-08-15 04:50:00	18.1	731	18.9	16.67
2016-08-15 04:55:00	18.1	731	18.9	16.67
2016-08-15 05:00:00	17.9	731	18.8	16.67
2016-08-15 05:05:00	17.7	731	18.8	16.67
2016-08-15 05:10:00	17.5	731	18.7	16.67
2016-08-15 05:15:00	17.4	731	18.6	16.67
2016-08-15 05:20:00	17.3	731	18.6	16.67
2016-08-15 05:25:00	17.3	731	18.5	16.67
2016-08-15 05:30:00	17.2	731	18.5	16.67
2016-08-15 05:35:00	17.1	731	18.4	16.67
2016-08-15 05:40:00	16.9	731	18.3	16.67
2016-08-15 05:45:00	16.8	731	18.2	16.67
2016-08-15 05:50:00	16.7	731	18.2	16.67
2016-08-15 05:55:00	16.6	731	18.1	16.67
2016-08-15 06:00:00	16.4	731	18.0	16.67
2016-08-15 06:05:00	16.4	731	17.9	16.67
2016-08-15 06:10:00	16.3	731	17.8	16.67
2016-08-15 06:15:00	16.2	731	17.8	16.67
2016-08-15 06:20:00	16.2	731	17.7	16.67
2016-08-15 06:25:00	16.1	731	17.6	16.67
2016-08-15 06:30:00	16.1	731	17.5	16.67
2016-08-15 06:35:00	16.1	731	17.5	16.67
2016-08-15 06:40:00	16.2	731	17.4	16.67
2016-08-15 06:45:00	16.2	731	17.4	16.67
2016-08-15 06:50:00	16.3	731	17.3	16.67
2016-08-15 06:55:00	16.2	731	17.3	16.67
2016-08-15 07:00:00	16.2	731	17.3	16.67
2016-08-15 07:05:00	16.3	731	17.3	16.67
2016-08-15 07:10:00	16.4	731	17.2	16.67

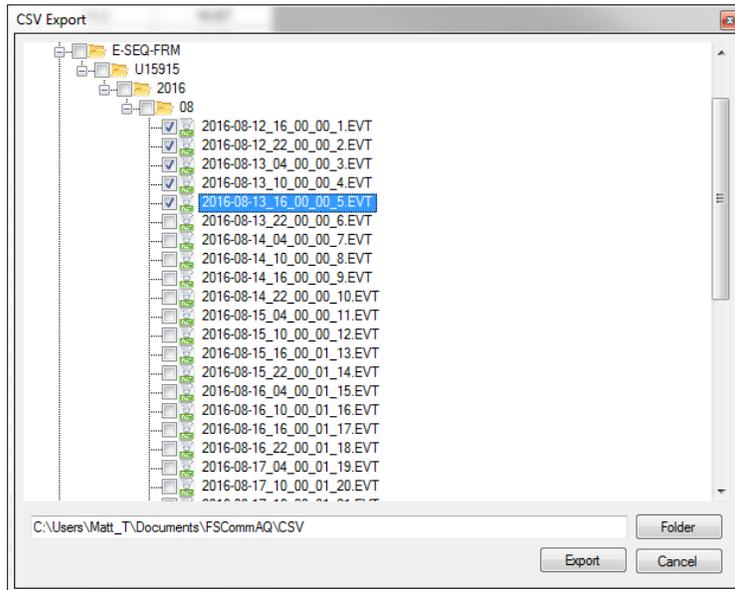


## 6 Exporting Data

FSCommaAQ allows users to export their data to a readable csv file. Press the CSV button under the export section of the home menu at the top of the page to launch the export tool.



Once pressed, the export tool will be displayed in which all the available events can be selected for export.



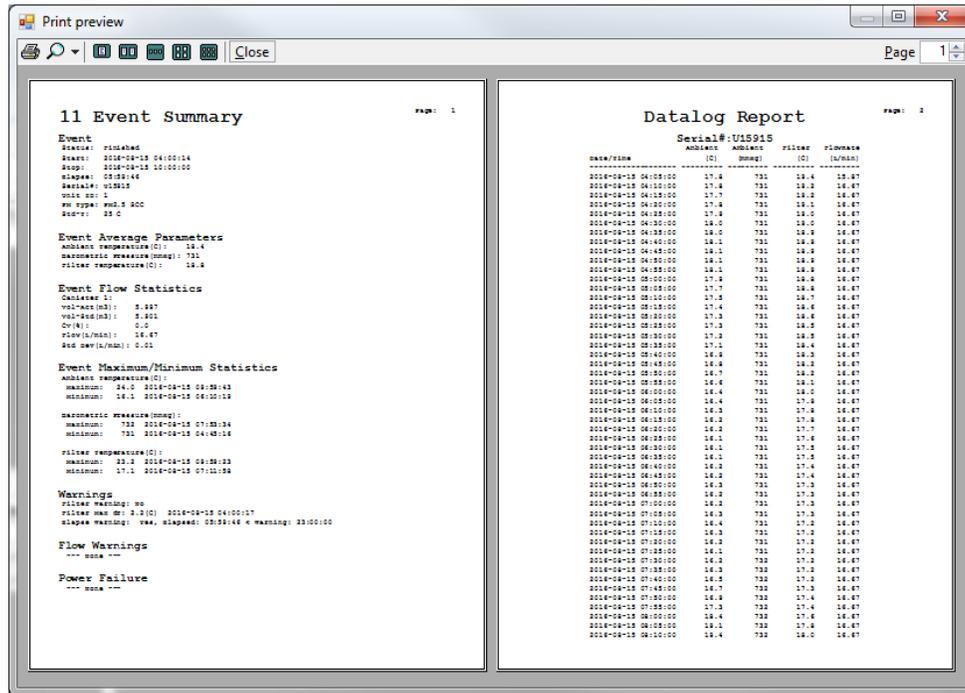
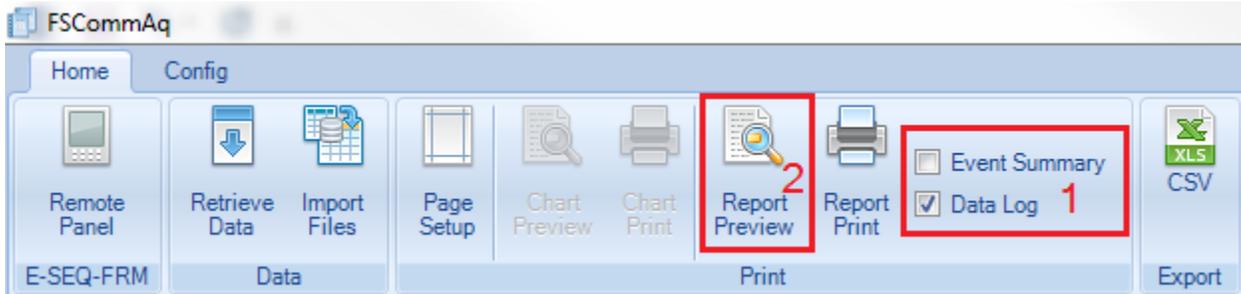
Users can select one file to export, or they can select multiple. Press the export button to begin exporting to the file path shown in the text box. To change file paths, press the Folder button.

## 7 Reports

FSCCommAQ allows users to print their event data as reports for easy viewing and record keeping. The sections below describe how to print a report.

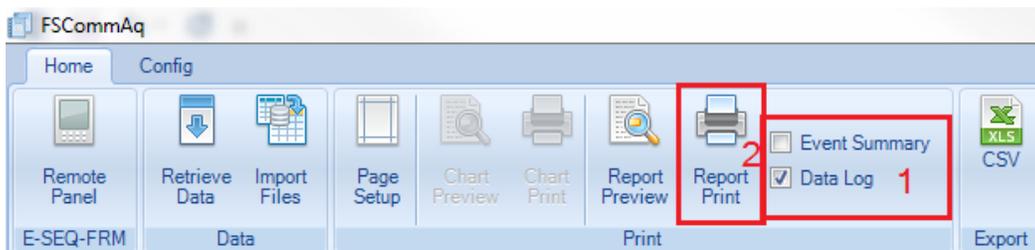
### 7.1 Report Preview

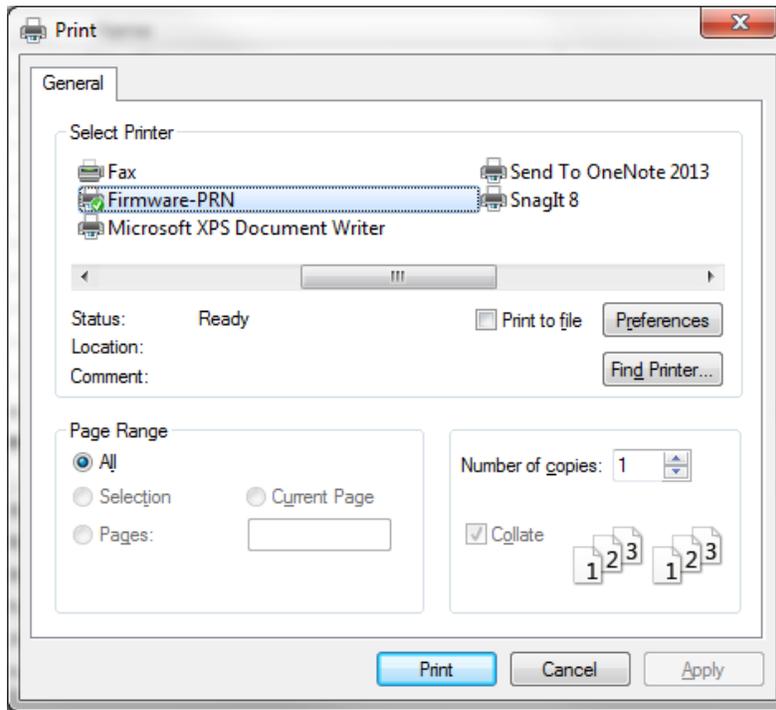
Select the appropriate check boxes to choose what reports are printed. Press the report preview button to preview what the report will look like before it prints.



### 7.2 Report Print

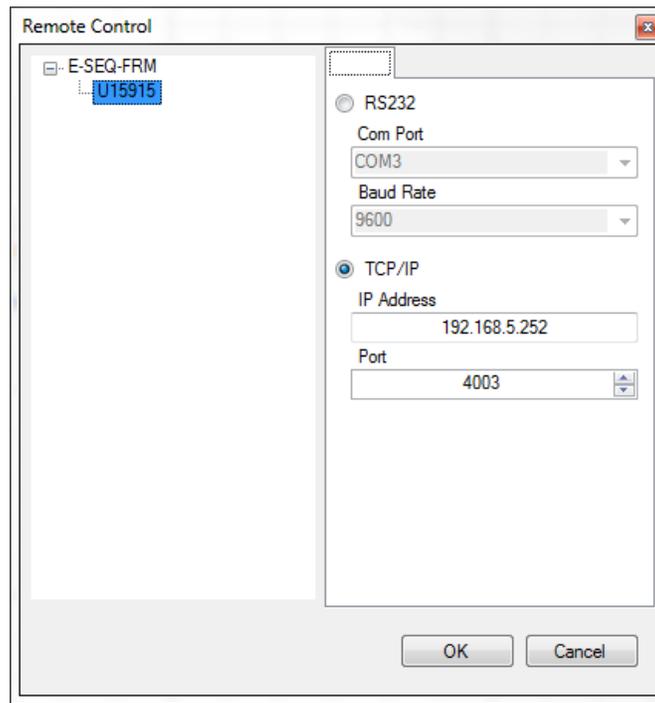
Select the appropriate check boxes to choose what reports are printed. Press the report print button to print the report for the currently selected event. This will launch the printer options, in which users can specify their preferences before printing the report.





## 8 Remote Control

For certain device models with a touch screen, FSCCommAQ allows users to remote control to their unit and navigate through its menu's without having to go out to the field. To start a remote control session, press the "Remote Panel" button under the home menu.



Once the remote panel button is clicked, the remote control panel will launch. From here users can use existing device information to connect to a unit or users can manually enter the

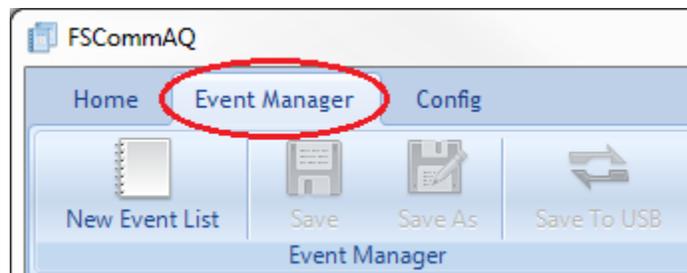
information on the right side. Once the settings have been selected, users can press the OK button to begin a remote control session.

E-SEQ-FRM		2016-08-23 16:07:39
Filter ID	2	
Status	Sampling	
Remaining	05:52:22	
Sample Duration	00:07:24	
Sample Start	2016-08-23 16:00:14	
Sample Stop	2016-08-23 22:00:01	

Users may click on buttons to navigate through the unit menus.

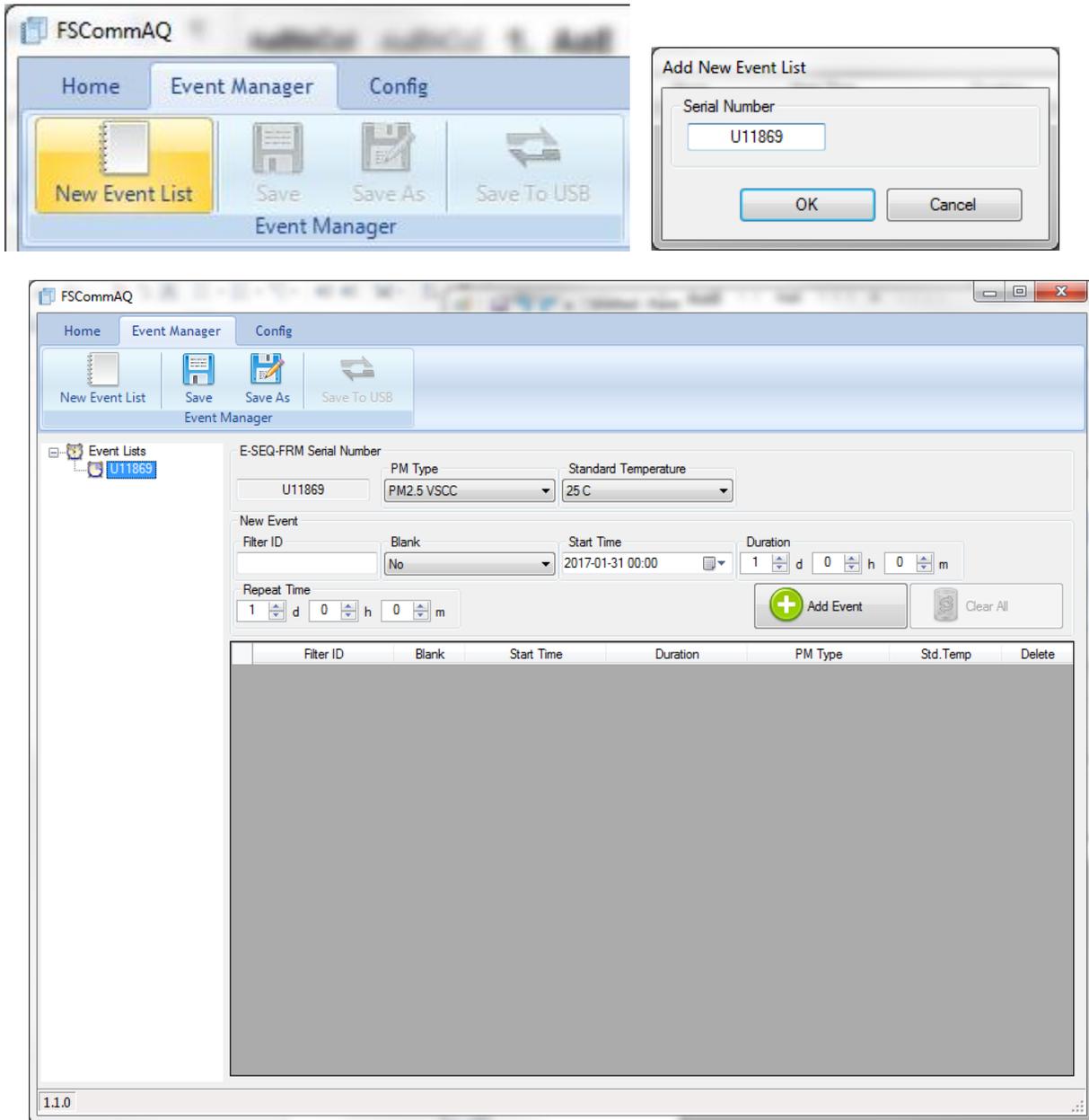
## 9 Event Manager

The Event Manager tab contains the event manager tool that allows user to easily create schedules for their filter samplers. Currently, the E-SEQ-FRM is the only filter sampler supported by this tool. Users will be able to go into this tab, create an event schedule and save it to their USB stick in which they can upload the schedule into the sampler.



## 9.1 Creating a New Event List

To create a new event list, press the “New Event List” button located in the top left ribbon bar on the screen. Once pressed, users must enter a serial number for the device they are building a schedule for. Type in your devices’ serial number and press ok. Your serial number will appear in the tree on the left and automatically be selected. This will enable the tool area in which users can begin building schedules.



## 9.2 Adding an Event

To add an event, fill out the required fields and press the “Add Event” button. A description of each required field can be found below. Once the “Add Event” button has been pressed, the event will be added to the schedule grid located at the bottom of the page. The schedule grid displays all the events that will be saved.

The screenshot shows the FSCommAQ Event Manager interface. At the top, there are tabs for Home, Event Manager, and Config. Below the tabs are buttons for New Event List, Save, Save As, and Save To USB. The main area contains a form for adding a new event. The form includes fields for E-SEQ-FRM Serial Number (U11869), PM Type (PM2.5 VSCC), and Standard Temperature (25 C). There are also fields for Filter ID (Blank), Start Time (2017-01-31 00:00), and Duration (1 d 0 h 0 m). A Repeat Time field is also present. The Add Event button is circled in red.

Filter ID	Blank	Start Time	Duration	PM Type	Std.Temp	Delete
A1234567	No	2017-01-31 00:00	01d 00h 00m	PM2.5 VSCC	25 C	Delete
A1234568	No	2017-02-01 00:00	01d 00h 00m	PM2.5 VSCC	25 C	Delete

### 9.2.1 Serial Number

The serial number field will display the serial number of the current device that is being editing. This field is not changeable.

### 9.2.2 PM Type

The “PM Type” option is used to identify the physical inlet configuration of the sampler for quality assurances purposes, and will also appear in the sampler data files. It is up to the user to make sure that this value matches the actual physical configuration of the inlet parts. The PM type option is a global setting; changing the PM type from the drop down menu will update the entire schedule grid to match the selected type.

### 9.2.3 Standard Temperature

The “Standard Temperature” parameter is the value of Standard Temperature to be used when calculating the Standard Volume if required for reporting purposes. The value can be set as 0° C, 20° C, or 25° C. This option is a global setting; changing the standard temperature option will update the entire grid to match the selected standard temperature.

### 9.2.4 Filter ID

The “Filter ID” is used to enter a unique lab identification number of the sample filter, which will then appear in the sampler data files to all the data to be correlated to the specific filter for quality assurance purposes. The filter ID is alpha-numeric and limited to 8 characters.

### 9.2.5 Blank

The “Blank” parameter is either Yes or No, and it defines whether the specified filter number is intended to be used as a sampling filter or a blank filter. Setting this option to “Yes” implies the user wants to run a blank filter for this event.

### 9.2.6 Start Time

The start time field allows the user to set the time they want that event to begin. Event times cannot overlap and must be unique.

### 9.2.7 Duration

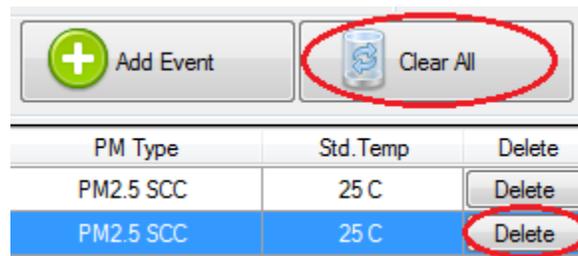
The duration field determines how long the event will sample for. The duration is formatted in Days, Hours, and Minutes.

### 9.2.8 Repeat Time

The repeat time is used to calculate the next start time after the user presses the “Add Event” button. This just makes it faster for the user to quickly add schedules without having to pick the start time each add.

## 9.3 Deleting an Event

To delete an event, select the event you would like to delete and press the “Delete” button located under the delete column. To clear all the events, press the “Clear All” button.



## 9.4 Editing an Event

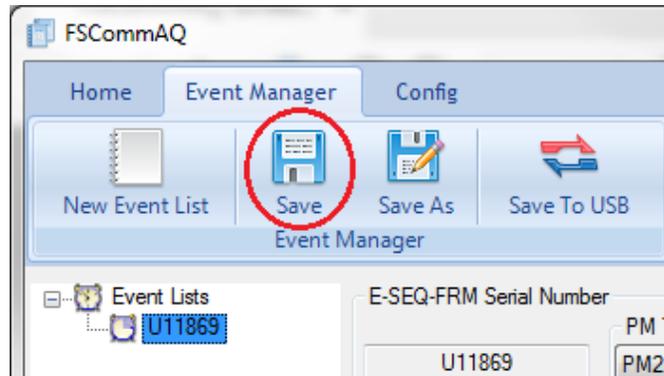
The schedule grid allows users to edit their filter ID, the pm type, and the standard temperature. Simply click on the filter ID to edit the string field to the name you desire. The PM type and the standard temperature are global settings, selecting a different value from the drop down list will change them for all events in the schedule grid.

## 9.5 Saving an Event List

FS Comm AQ allows users to save their event lists in multiple ways; save to the local machine or save to a USB stick.

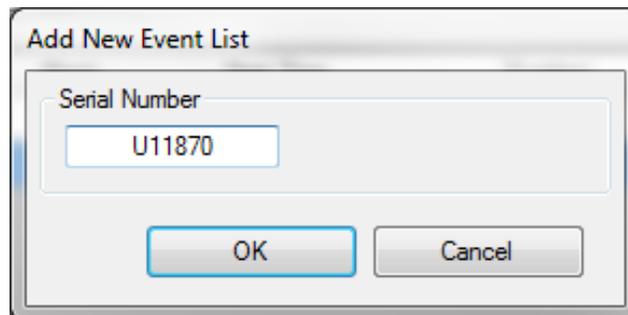
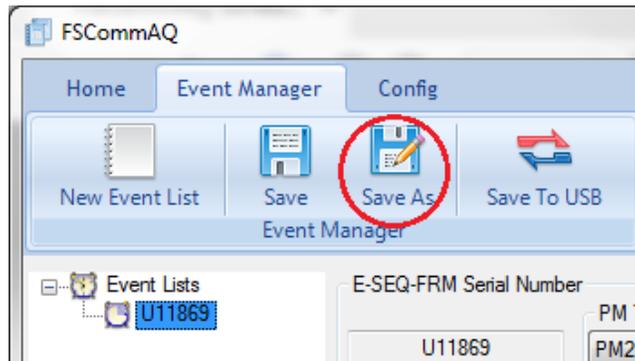
### 9.5.1 Save

Pressing the save button saves the current event list being edited locally on the computer. Making changes and switching to a different serial # will prompt the user to save. Pressing “No” will revert all changes.



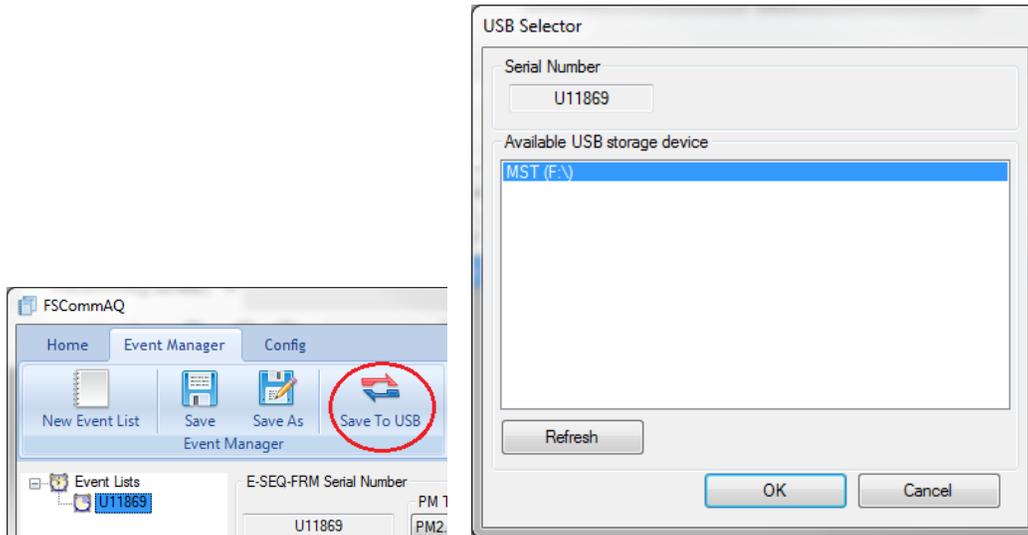
### 9.5.2 Save As

The “Save As” feature allows users to make an event list and save it as a different serial #. This allows users with multiple filter samplers to easily create the same schedules for multiple filter samplers. Simply press the “Save As” button, enter the new serial # you would like to save the current schedule as, and press “Ok”. Your new serial # will show up in the tree along with the event list that you saved from.



### 9.5.3 Save to USB

The products supported by this event manager load the event schedules via an USB stick. This tool allows users to build their event list then save it to their USB stick. Users will then take their USB stick to their device and load the events schedule into the unit. To save the event list to a USB stick, simply press the “Save to USB” button. A new screen will appear and display a list of available USB sticks. Select your USB stick from the list and press the “Ok” button.

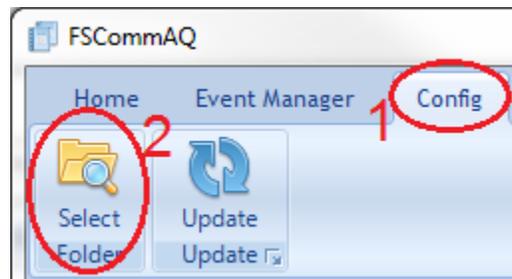


## 10 Configuration

The configuration tab contains special user settings that users can go in and change if needed. There is also an option to check for program updates. More information about each are below.

### 10.1 Default Save Location

The default save location for downloaded events is in the users My Documents area. The tree view for selecting events uses this default path for saving all files. To change this path and the path where all files are saved, go to the “Config” tab menu located at the top near the home tab. Press the folder “Select” button to choose a new default location to use for saving and loading files.



## 10.2 Updates

FS Comm AQ provides an easy way for user to check for updates and update the program if desired. To check for updates, go to the “Config” tab menu and press the “Update” button. The program will then connect to the internet and see if there are any updates available. If there are updates available, it will give users the option to download and install them.

