Data Connect

Using XLReporter with AutomationDirect C-more

Overview

XLReporter imports historical log files created on a C-more panel to a local PC to automatically populate workbooks, periodically or on event. XLReporter's award-winning reporting engine returns either raw or calculated metrics from the data.

C-more's Line Trend Graph object creates files that can be accessed using a flash drive, SD card, or the FTP server running on the panel.

When reports are generated, the data appears as a single entity which means collection can be done across multiple files. Tag names are catalogued from the files and accessed from XLReporter tag browser. Database features like filtering and sorting are supported together with summaries like min, max, average, and machine uptime/downtime.

Finished reports are distributed by email, FTP, file server and printers. Enable XLReporter's Web Portal and access reports from any device supporting a web browser such as a smart phone or tablet.
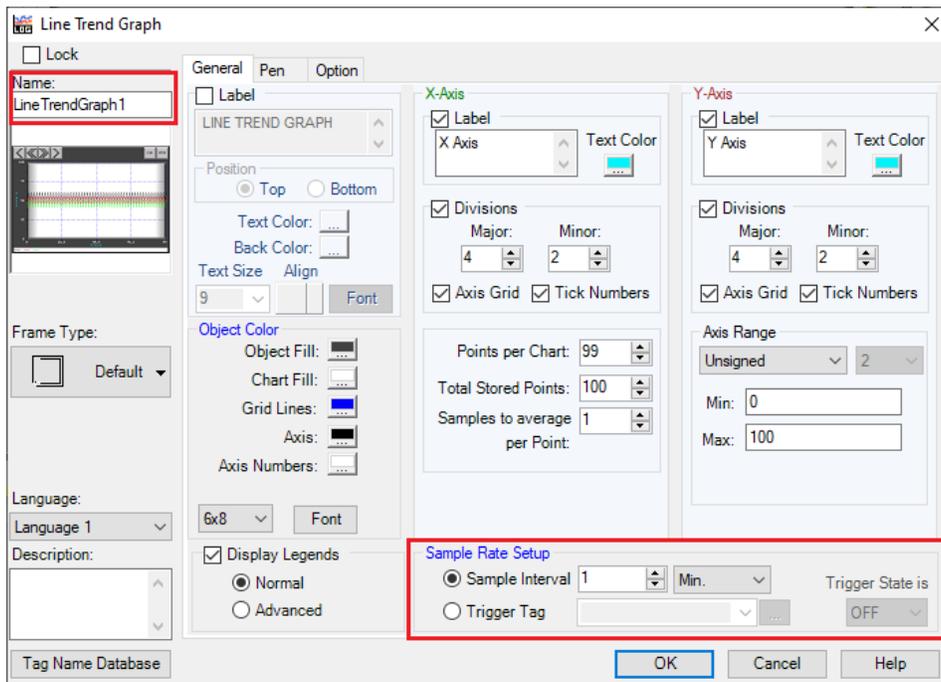
Configure a Line Trend Graph Object

The Line Trend Graph is used, in addition to displaying trends on the HMI, to collect data in tab-delimited files (.txt).

In the C-more Programming Software, place the **Line Trend Graph Object** on a display that cannot be closed by a user.


The **General** tab settings determine the logging behavior.

To optimize reporting runtime, enable the following:

- Set **Name** to reflect the data being logged to the file. This parameter is used to name the file set.
- Configure **Sample Rate Setup** based on the reporting requirements. Higher resolution data produces more accurate summaries but reduces the performance at report runtime.

The **Pen** tab settings determine which tags connected to the C-more project are logged to the text files.
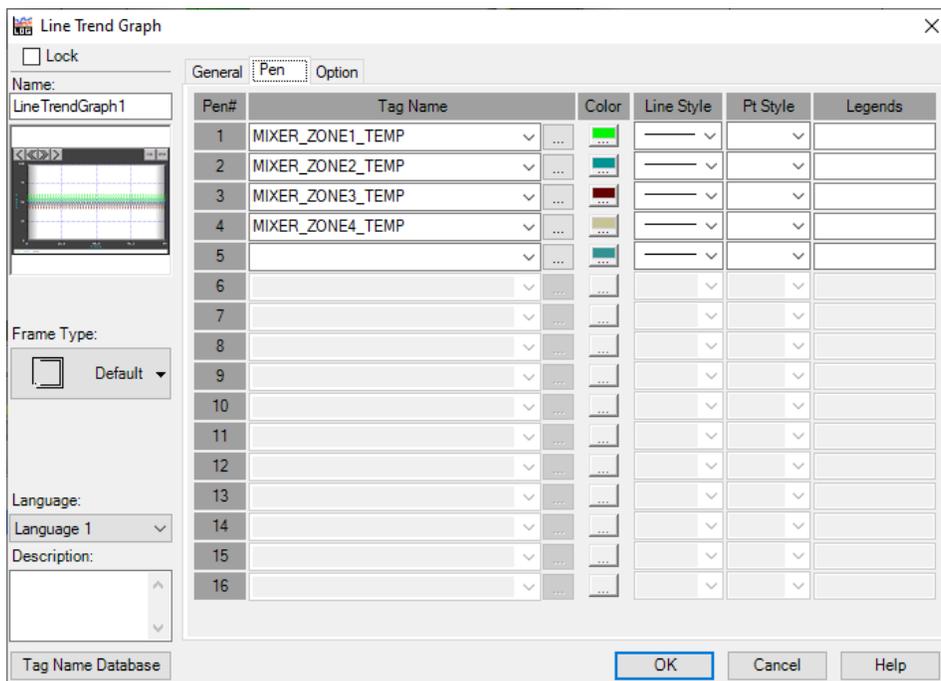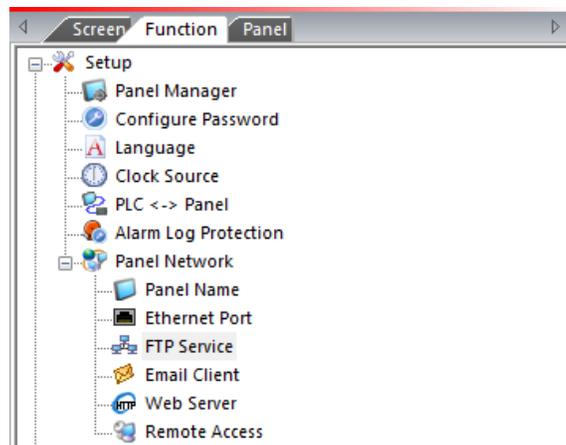
The **Option** tab settings determine where the csv files are saved.
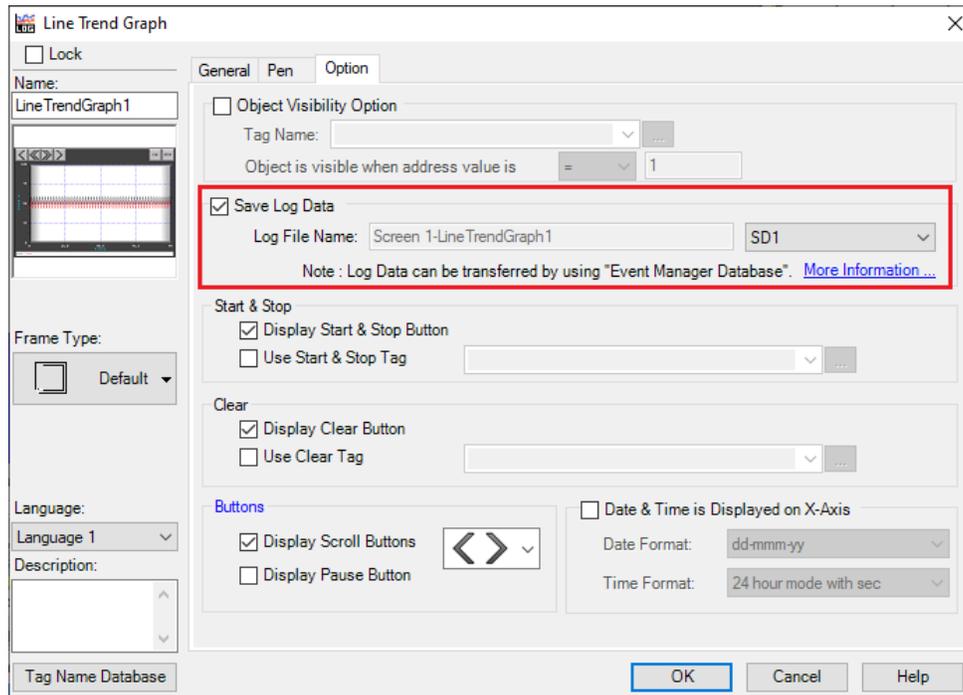
Enable **Save Log Data** and specify the location, e.g. *SD1, SD2, USB*.

Configure FTP Server

For FTP access, first enable the **Ethernet Port** from the **Function** menu. Then, enable the **FTP Service**. For more information on these functions, consult the documentation available in C-more Programming Software.

Prerequisites

Files

On the C-more panel, verify that txt files have been created by the Line Trend Graph. A connector cannot be defined in XLReporter until at least one txt file is generated.

If txt files are not being generated, contact AutomationDirect technical support to troubleshoot and correct this issue.

Connectivity

FTP

Open **Windows File Explorer** and navigate to:

ftp://<C-more IP Address>

If successful, a list of files and folders on the C-more is displayed.
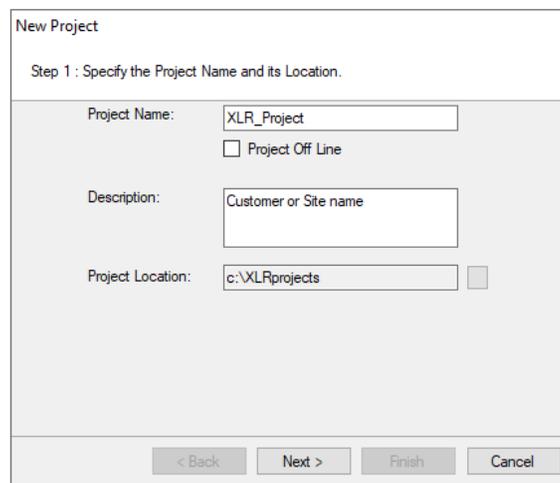
If this cannot be done, please contact the local network administrator for further assistance.

Create a Project

From the **XLReporter Project Explorer** select **File, New** to start the **Project Wizard**. This will give step-by-step instructions on creating a project.
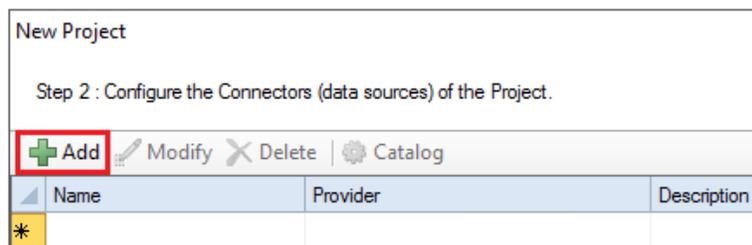
Step 1

- Enter a **Project Name** and **Description** (optional).

New Project

Step 1 : Specify the Project Name and its Location.

Project Name:	XLR_Project
	☐ Project Off Line
Description:	Customer or Site name
Project Location:	c:\XLRprojects

< Back   Next >   Finish   Cancel

Step 2

- Configure the data connector, click **Add.**

New Project

Step 2 : Configure the Connectors (data sources) of the Project.

➕ Add   ✏ Modify   ✖ Delete | ⚙ Catalog

	Name	Provider	Description
✳			

Select **Text File, Text Historian (time series).**

Connector

Check **Enable File Transfer**. For details more information, see the **File Transfer** section below.

When the **Folder** containing the files is selected, the **File Name Format** is determined from the most recent file in the folder, displayed as the **Base File**. In addition, the **File Content** settings are automatically filled out (if possible). If the **File Name Format** is not determined correctly, it can be changed manually and clicking the **Refresh** button re-establishes the **Base File** and **File Content** settings.

Click **View** to view the **Base File**. If the file does not appear or is shown incorrectly, this could mean that the file is not adhering to a Text File standard i.e., first row contains headings, and each subsequent row of data. This situation can be "repaired" using the **Settings** option (see the **File Settings** section below).

The **Date Column** and **Time Column** lists contain all the columns that were found from the **Base File** and an attempt is made to select the most suitable columns. This can be changed if needed.
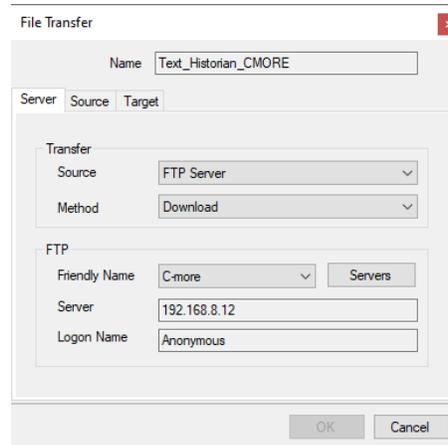
File Transfer

If the text files are in a remote location e.g., Operator Terminal or Data Logger, they can be scheduled to be transferred to the local machine.

Check **Enable File Transfer** and click **Settings** button to open the **File Transfer Settings**.

Transfer Configuration

The **Transfer Configuration** is set to the name of the connector. Click the browse button […].

For details on **File Transfer**, see the **Transfer Reports to an FTP Server** document. This is found in the **Project Explorer** by clicking **Documentation**.
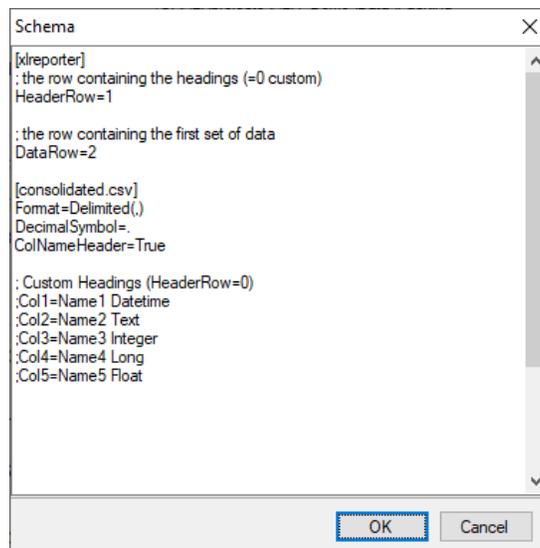
Transfer Schedule

Clicking **OK** for the **File Transfer** setting creates a new line into the schedule. This can be viewed and modified from the **Schedule Designer**.
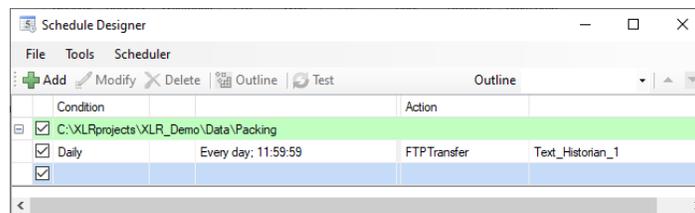
File Settings

When the text file content is non-standard the **Settings** option in **File Location and Name** can be used for a certain level of customization.

There are two sections in this display, one section is [xlreporter] and the other is [consolidated.csv].

A row starting with semi-colon (;) is treated as a comment.

[xlreporter]

Usually, the first row of the file contains the headings and the remaining rows the data. If this is not the case, then set **Header Row** and **Data Row** accordingly.

For example, consider the following text file:

```
Date: June 8, 2021
Station: Plant 7
Operator: Jim

LocalDate,LocalTime,Flow,Pressure,Torque,Level,Rate,State,Speed,Temp
6/8/2021,0:00:00,2021,6,8,0,0,0,10,20
6/8/2021,0:01:00,2021,6,8,0,1,0,20,30
6/8/2021,0:02:00,2021,6,8,0,2,0,30,40
6/8/2021,0:03:00,2021,6,8,0,3,0,40,50
6/8/2021,0:04:00,2021,6,8,0,4,0,50,60
6/8/2021,0:05:00,2021,6,8,0,5,0,60,70
6/8/2021,0:06:00,2021,6,8,0,6,0,70,80
6/8/2021,0:07:00,2021,6,8,0,7,0,80,90
6/8/2021,0:08:00,2021,6,8,0,8,0,90,100
6/8/2021,0:09:00,2021,6,8,0,9,0,100,110
6/8/2021,0:10:00,2021,6,8,0,10,0,110,120
6/8/2021,0:11:00,2021,6,8,0,11,0,120,130
6/8/2021,0:12:00,2021,6,8,0,12,0,130,140
6/8/2021,0:13:00,2021,6,8,0,13,0,140,150
```

The following would need to be specified:

HeaderRow=5

DataRow=6

If the text file does not contain headers, set **HeaderRow** to *0* and, under the **[consolidated.csv]** section, set **ColNameHeader** to *False*. Since there are no headers, you must add each header manually. See **Custom Column Names** below for details.

[consolidated.csv]

The settings in this section follow those for the **Text File Driver from Microsoft** so a detailed description of each can be found on the internet.

Below are some common settings

Custom Column Names

If the text file(s) does not contain headers or the headers that are included are not usable/descriptive, then custom column names can be used.

Add the following **for every column** in the file:

Colx= Name Type

- *x* is 1 based
- *Name* is the custom name of the column
- *Type* is the column data type e.g., Text

For example, if the file contains a *Timestamp, Speed, Pressure, Temperature* and *Name*, the following would be set:

Col1=DateAndTime DateTime

Col2='Mixer Speed" Double

Col3="Mixer Pressure" Double

Col4=Temperature Double

Col5="Operator Name" Text

Enclose column names containing a space with double quotes.

Custom Date Format

If the format of the date values in the file is not the same as that of the operating system, then the format must be explicitly stated as follows:

DateTimeFormat=Format

- *Format* is a valid *Date* or *Date and Time* format.

For example, if the date format in the text file is in universal format 2010-01-01 but the operating system is not, then the following would be set:

DateTimeFormat=yyyy-MM-dd

Note that this format also applies to columns that just contain time. In those cases, the time format should also be added to the setting. For example:

DateTimeFormat=yyyy-MM-dd hh:nn:ss

Notice that minute is denoted as *nn*.

Connector Settings

The bottom **Settings** button gives access to settings that define how the name and file content are interpreted at runtime.
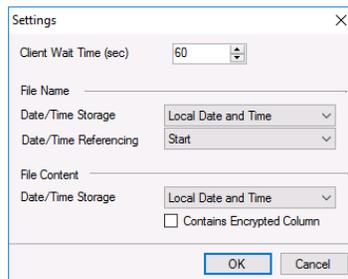
If queries timeout, increase the **Client Wait Time**.

File Name

The File Name settings define how the values date and time keywords defined for the **File Name Format** behave.

If the date/time elements in the file names represent date/time in UTC format, set **Date/Time Storage** to *UTC Date and Time*, otherwise select *Local Date and Time*.

If the records in the files start at the date/time found in the file name, set **Date/Time Referencing** to *Start*, otherwise if the records start at the end of the date/time found in the file name set *End*.

File Content

If the Date Column (and Time Column if specified) in the text files are stored in UTC format, set Date/Time Storage to UTC Date and Time, otherwise select Local Date and Time.

Some text files contain one or more columns of encrypted data to validate the file. Good examples of this are Alarm and Audit Log text files produced by Rockwell Software's FactoryTalk View ME application.
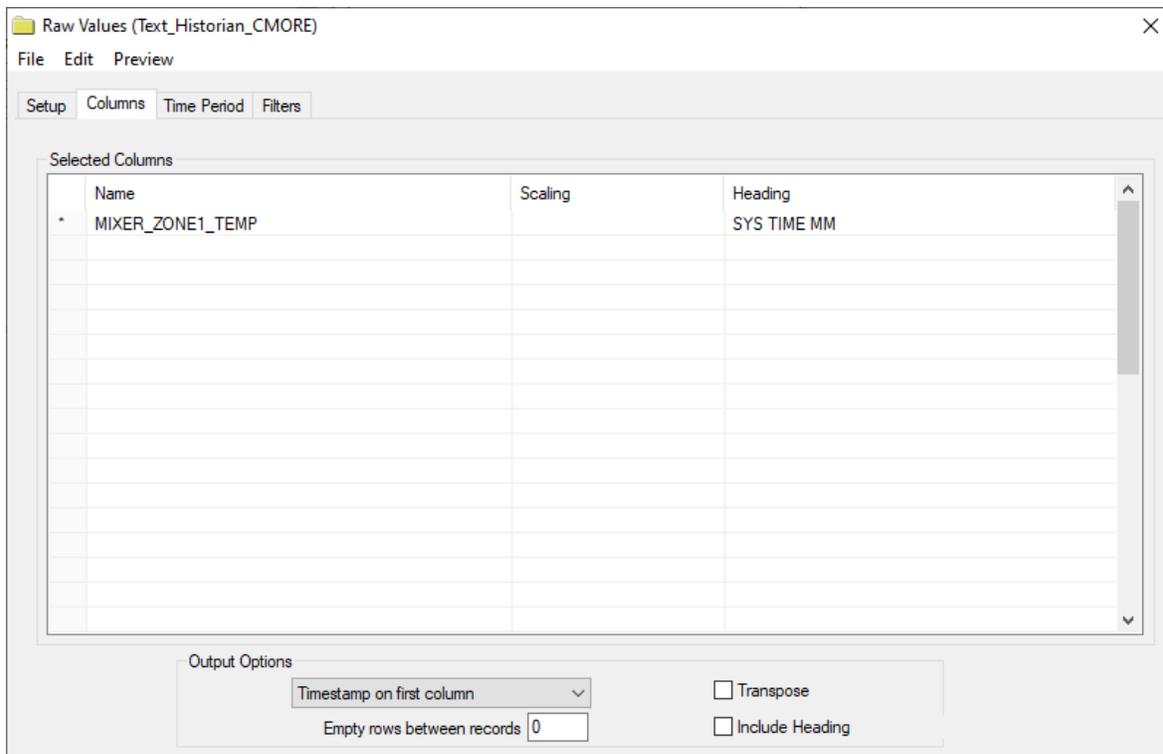
If the text files contain one or more of these encrypted columns the **Contains Encrypted Column** option must be checked.

Verify Data Communication

Open the **Project Explorer** and select the **Tools** tab. Open **Connector Groups.** Select your Text Historian connector and then select **Add**.
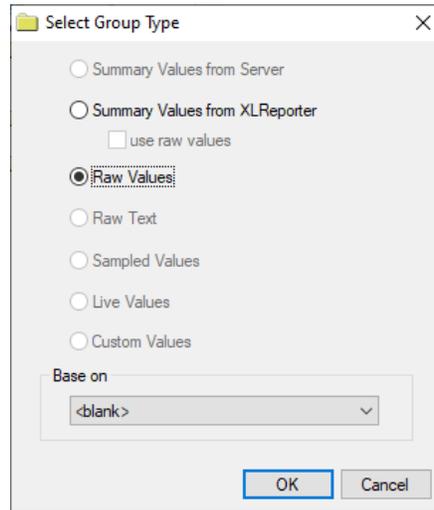
Set the **Group Type** to *Raw Values* and click **OK**.

On the **Columns** tab:

- Select the first row under the Name column
- Click the browse pushbutton (…)
- In the Tag Browser expand **Catalog, General** and add **Items** from the lower left.
- Click **OK** to add these to the group.

To retrieve data, select **Preview.** In the **Preview** window, use the data picker to select a date and time with for which you have data in a csv file on the local system. Click **Refresh** to view data. The first 60 records starting at the date and time specified should be displayed.