EZAutomation

EZSCADA
Getting Started Manual

Version 1.0

Getting Started Manual

EZAutomation

Contents

Getting Started Manual

Overview

EZScada is a PC-based SCADA software which runs on a PC running Windows 7 or Windows 10 operating system. The screens for EZScada Runtime are designed using EZScada Development. Designed screens are then downloaded to the PC running EZScada Runtime. (Development and Runtime may be on the same computer.)

Installation Requirements

A PC running Windows 7 or Windows 10 operating system with 77 MB Space.
USB Port to plug in the license to run EZScada Runtime and EZScada Development.
EZScada Runtime Version i.14.56 or higher is required for running the projects.
EZScada Development Version 1.3.38 or higher is required for screen designs.

Installation

EZScada Runtime and EZScada Development are each distributed as a single install file. To install EZScada-Runtime, run its installation file (EZSCADA-Runtime i.14.56 (FULL) Setup.exe) and follow on screen instructions. To install EZScada-Runtime, run its installation file (EZSCADA-Development 1.3.38 (FULL) Setup.exe) and follow on screen instructions.
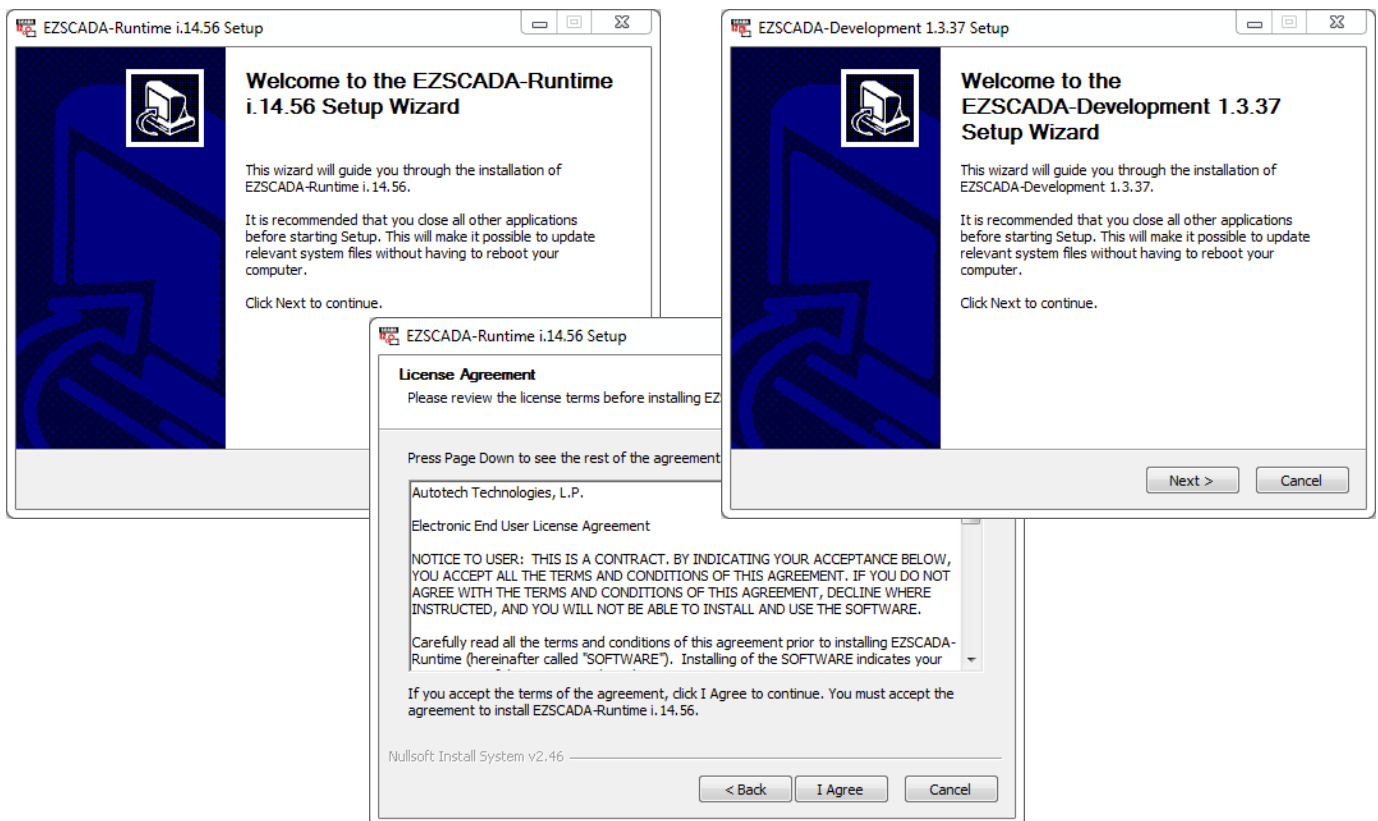
Designing Screens

EZScada Development version 1.3.38 or higher is required to design screens for EZScada.

1. Launch the EZScada Development.

2. Click on the "Edit Offline..." button

2. Fill in the project name (change the Project location through *Browse* if necessary). Click enter to populate the rest of the fields.

4. Set the resolution (screen size).

5. Select appropriate PLC protocol, and set the communication parameters for the protocol selected.

Running the EZScada Runtime

Installation of EZScada-Runtime places an icon on the desktop. Click the icon or run EZScada-Runtime from Program menu.

After a brief appearance of splash screen, following dialog box appears:

Clicking this box will launch the Application Setup dialog box   (see Configuring EZScada-Runtime for details)
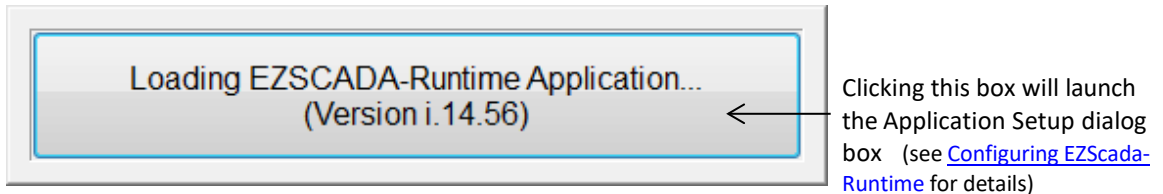
If above dialog box is not clicked, the application continues to load and brings up run-window as shown below indicating that there is no user project (screens) to display:
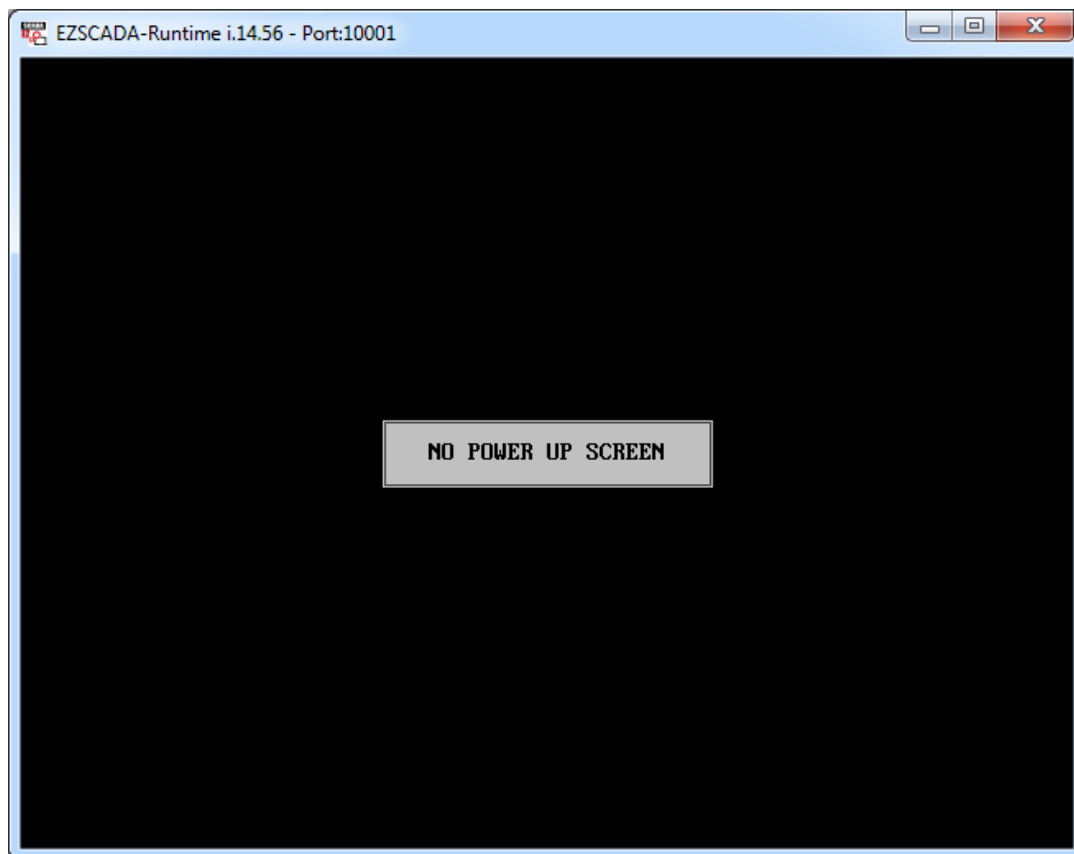
Now we need to "download" user project designed for the EZScada-Runtime using EZScada-Development.

Transferring Project to EZScada-Runtime

Once you have EZScada-Runtime running, the next step is to transfer the project to the EZScada-Runtime. Follow below given steps:

1. Launch EZScada-Development.

2. Open your project.

3. If the EZScada-Runtime and EZScada-Development are running on the same computer, then you can use local host address (127.0.0.1). Otherwise, select Ethernet as Panel to PC connection.

4. If the EZScada-Runtime and EZScada-Development are not running on the same computer then in the "Specify IP/Port" dialog box, enter the IP address of the PC running EZScada-Runtime. (This can also be done from Transfer to Panel Dialog box).

5. Click OK to close the main dialog box

6. To transfer the project, select "File > Transfer to panel" menu and follow the instructions on the dialog box. You may select PC-Panel connection in this dialog box, and modify the IP address without going back to the opening dialog box. See below:

Select Ethernet. Click on Specify IP/Port. Enter IP of the PC running EZScada-Runtime. If on the same PC, use 127.0.0.1

Getting Started Manual

EZAutomation

PC to Panel connection can also be configured in this screen.
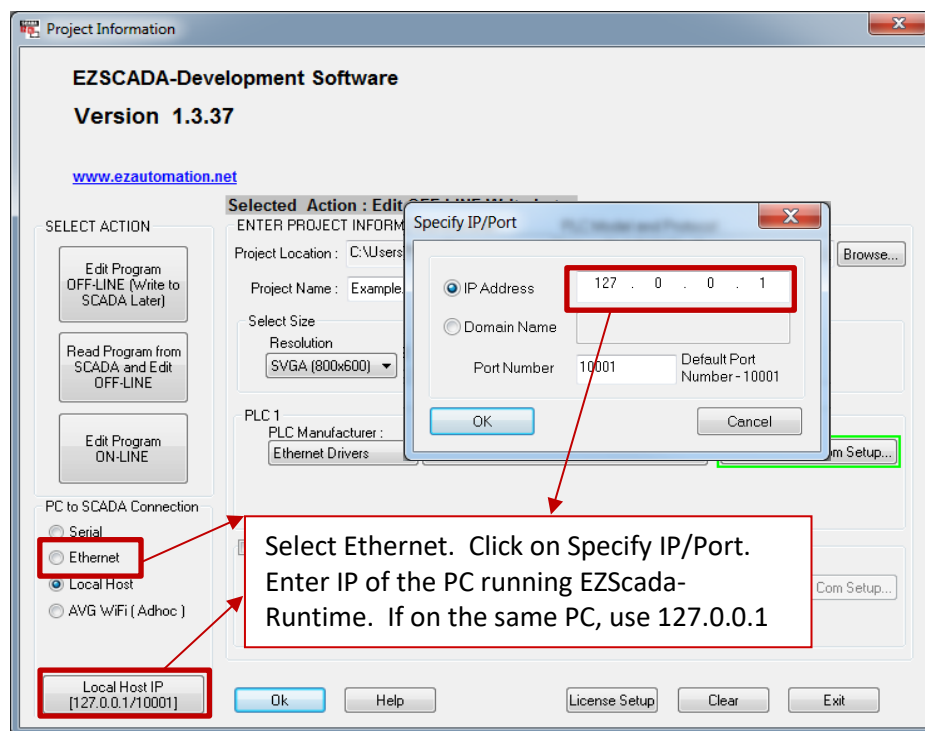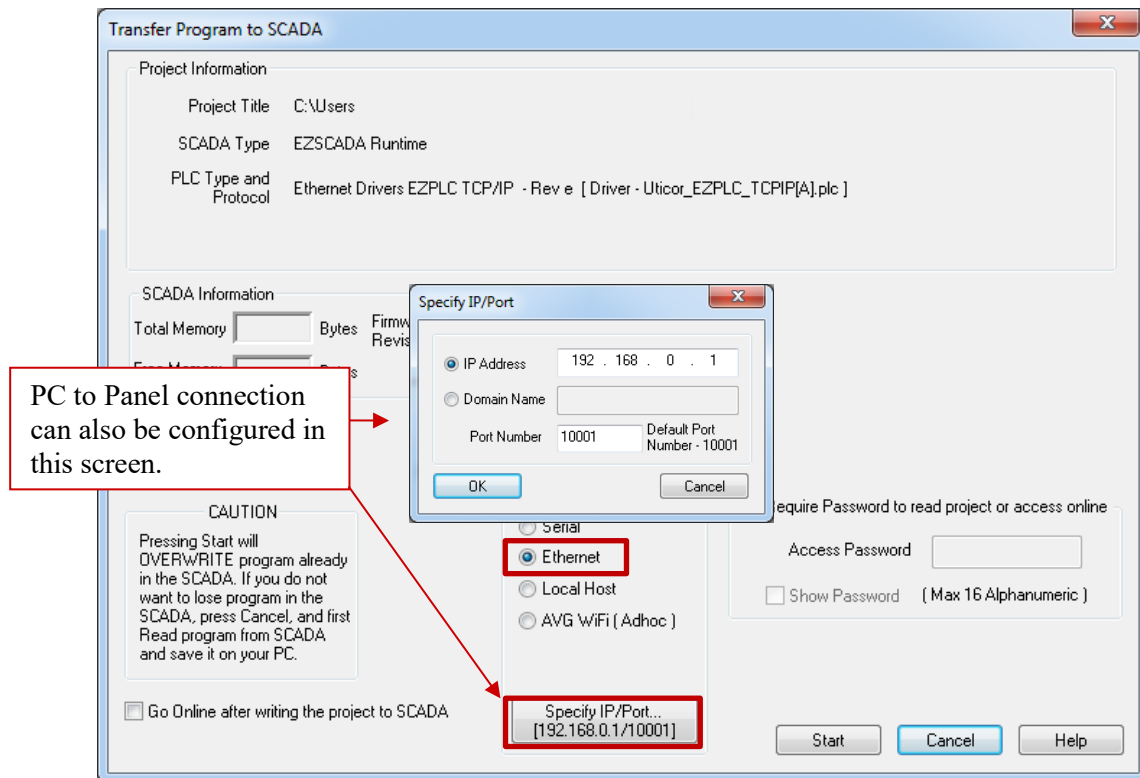
7. When ready to proceed, click Start to transfer the project.

# Getting Started Manual

EZAutomation

Configuring EZScada-Runtime

Once you download a user project, the EZScada-Runtime saves the downloaded project under the same name as that of the original project file, but with extension .img. For example, if your project was named Test.ess, the EZScada-Runtime would save the project as Test.img.

You can set up the EZScada-Runtime so that it can load a project file automatically on application start up. To do so click on the "Loading EZScada-Runtime ..."dialog box when you start the EZScada-Runtime.

> Loading EZSCADA-Runtime Application...
> (Version i.14.56)
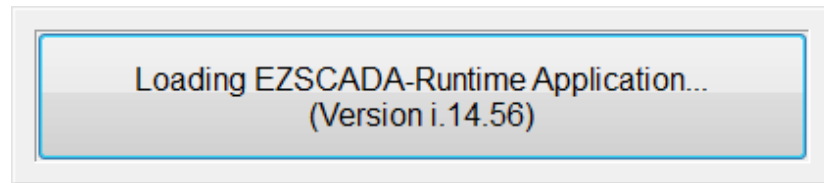
When clicked, the following dialog box appears:
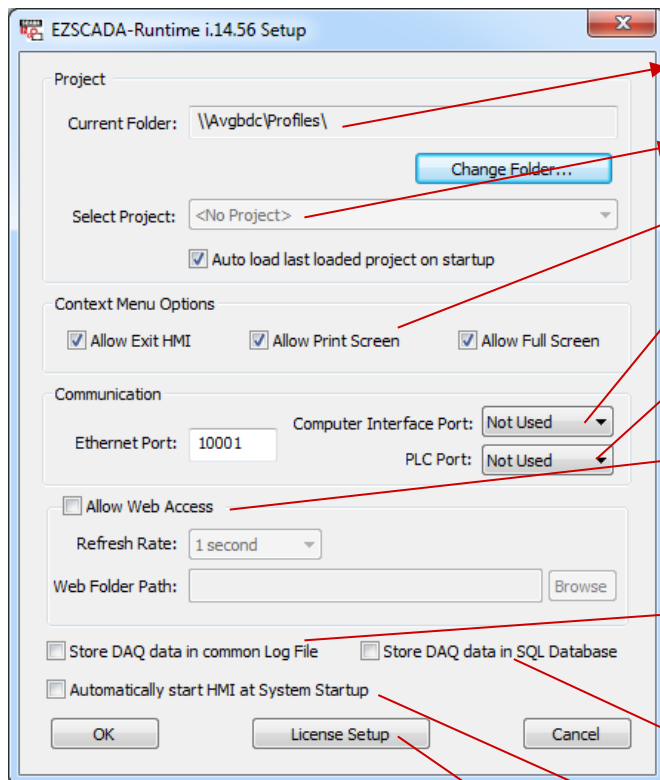
Folder locations where all downloaded projects are saved. Click *Change Folder* to change the location the of project folder.

Select a project to run and/or select checkbox to automatically load last project upon start up.

Select the menu options you want available during operation of EZScada-Runtime. Deselect checkmark(s) to remove options.

Serial port that would be used for serial transfer of project (not necessary to specify if transferring project over Ethernet)

For serially connected PLC, select com port number (not necessary when using Ethernet connection to PLC)

For remote access of HMI screens (using RMC mobile apps or a browser), check "Allow Web access." Select refresh rate and specify web folder path. This path MUST be the same as physical path of the webserver setup on this computer.

To create a log file of DAQ information that is stored, you can check this option. This is to troubleshoot and see all the data that will be stored in a DAQ. Will generate more data than the DAQ itself.

To Store DAQ data in an SQL database check this option (see SQL section for details).

If you would like to start the EZScada upon PC startup use this option.

Click *License Setup* to setup source of license, please see next page for information.

To load a new project to EZScada-Runtime, simply download the new project from the EZScada-Development.

Getting Started Manual

License Setup

The EZAutomation's EZScada Runtime and Development USB License is plug and play. The license on the USB can also be moved to the PC and from PC to USB if situation warrants.

Note: To move the license from the PC to another PC the original USB which came from the factory is required.

Plug and Play

The USB License is plug and play. When the Program that requires the License starts up you can go to License Setup and the USB should be recognized. You will either see the USB recognized at which point you can move the license to the PC. Otherwise the PC License will be recognized.
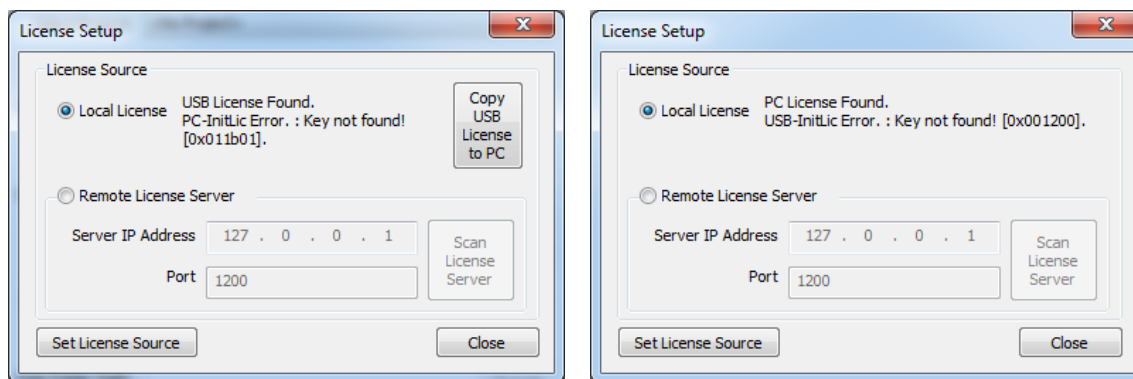
For EZScada Runtime License you will need to press on the startup bar to get to License Setup.

Move License to PC

To move the License to the PC just click on the Copy USB License to PC button. The license will be copied and then a dialogue box will tell you that it has been copied. USB can be then removed.

Note: To move the License back to the USB the same button is used. If the original USB is inserted in to the PC then the button to move the license back to the USB will appear.

Getting Started Manual

Configuring SQL Server

EZScada has the ability to store DAQ data in a SQL database. The data acquisition is still configured the same (for DAQ setup see Data Logging Overview for details). If the Store DAQ in SQL database checkbox is selected in the Runtime Setup then the DAQ data is sent to the setup SQL database. Data in the SQL database can be retrieved at any time but cannot be changed.

To configure the SQL database follow below given steps:

1. In the start menu go to folder **EZAutomation > EZScada-Runtime**
2. Launch the Data Logging Configurator
3. In the screen fill out the details for your SQL database
4. To configure the database settings press the Set DataLog Database settings button
5. Finally make sure that during launch of EZScada-Runtime in the dialog box you select the store DAQ data in SQL database option.

Database Type: Currently only MS SQL Database is supported but more types will be added.

Server: Name of the server where the SQL database is found

Port: If need be you can changes port used for connection

Database Name: Name of the SQL database itself

Username: The username that this EZScada-Runtime will log data as

Password: Password for the above username.

Set DataLog Database settings: Sets the detail that were entered above as the SQL database information.

Clear Datalog Records: Clears all the records in the database before the date and time that you set. This uses the above set username and password to clear the database.

Getting Started Manual

Data Logging Overview

Through our EZScada-Development, users can establish time based or event based schedules for data acquisition. For instance, data can be collected every 10 seconds or at a specific time such as 9 AM. Alternatively, data collection can be activated when a certain event or condition occurs.

The user can define up to 120 schedules as long as each schedule is unique. (For example, there cannot be two identical schedules set to collecting data every 30 seconds.) User can also associate a name (up to 8 characters) with each schedule. Each schedule can currently be used to collect data for up to 1000 tags.

DAQ Schedules

Add / Edit: Use this button to add a data acquisition schedule or highlight an existing schedule and then press the button to edit it. Additional information on adding schedules and schedule types is available in the sections that follow.

**Delete:** Highlight an existing schedule, then press this button to delete it.

Pause / Resume Data Collection Tag: This is a discrete tag that can be controlled by user (e.g. through a Push Button) or by PLC to enable or disable data acquisition. When the tag's value is 0, data collection is enabled; when it is 1, the collection is disabled or paused. Setting the tag to 0 resumes the data collection.

Data Acquisition File Tags:

Request to Close Files Tag: This is a discrete tag that can be controlled by user (e.g. through a Push Button) or by PLC to close the data collection file so it can be accessed by another program. When the tag's value is changed to 1, the program will close the current data acquisition file so it can be edited by other programs. When file closed then value is changed to 0.

Files Closed Status Tag: This is an internal discrete tag that shows whether the file has been closed. When the tag's value is 1 then the file is closed. The file will be in use again once the data collection tag is re enabled, the value of this tag will change to 0 at that point.

Getting Started Manual

Types of Schedules
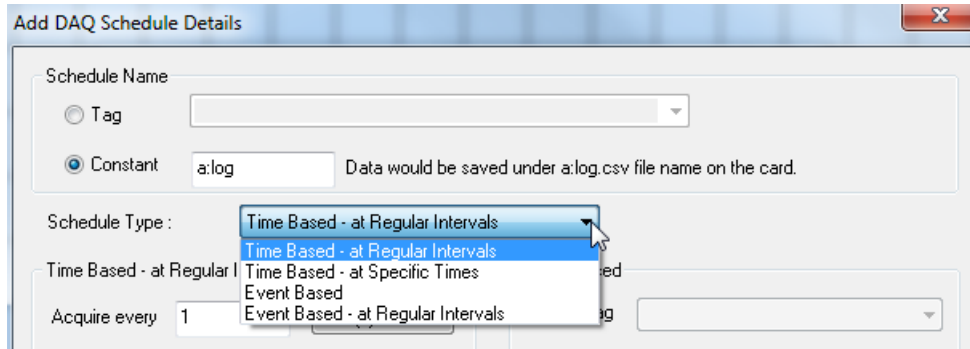
1. **Time based – at regular Intervals**
   Allows you to store the tag value at regular time intervals, anywhere from every millisecond to every 1000 hours.
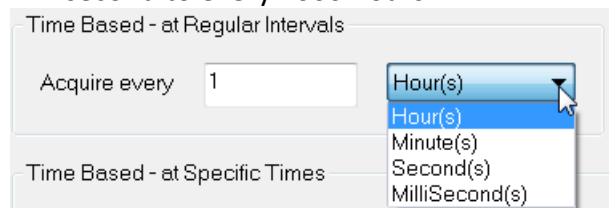
2. **Time based – at Specific Times**
   Allows you to store the value of a group of tags up to 10 specific times. You may always edit / delete a specified time.
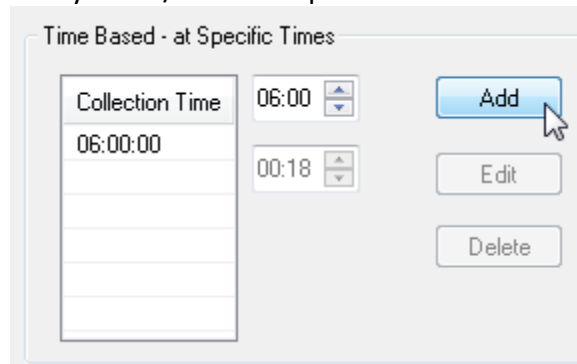
3. **Event Based:**
   Allows you to create an event and store the values of a group of tags on the occurrence of the same. Based on the data type of the event tag, schedule can be either Discrete Event Type or Numeric Event Type.
   - **Discrete Type Event:**
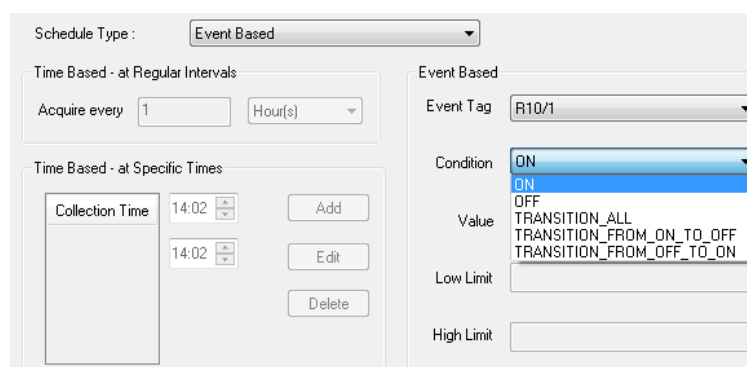
Numeric Type event:

4. **Event Based - at Regular Intervals:**
   Allows you to create an event and store the values of a group of tags on the occurrence of the same during a set time period. Based on the data type of the event tag, schedule can be either Discrete Event Type or Numeric Event Type.
   a. Set how frequently the data is stored through the Time Based interval, anywhere from every millisecond to every 1000 hours.

   b. Select either a Discrete Type Event or a Numeric Event Type.
   Discrete Type Event:

   Numeric Type event:

Adding a Schedule

1. Open your project file for the EZScada-Runtime using the EZScada-Development.
2. Then click **Setup** > **Data Acquisition** to display the DAQ Schedule dialog.
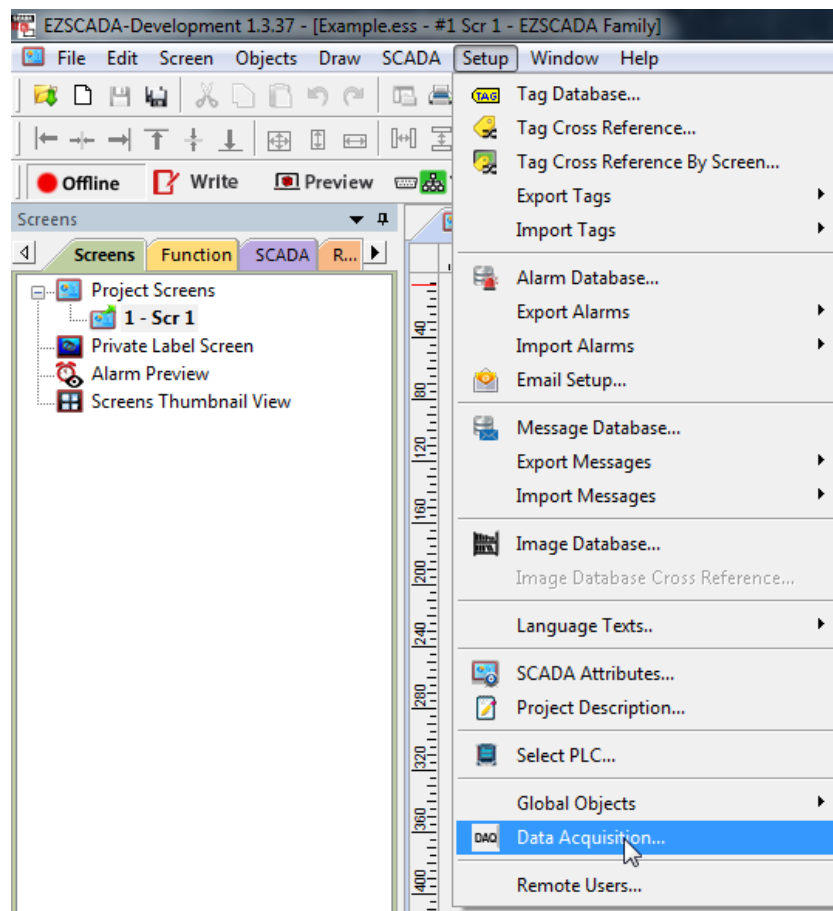
3. The Data Acquisition dialog box will appear which allows you to add new schedules or edit/delete existing ones. Click on Add button to display the "Add DAQ Schedule Details."

4. The "Add DAQ Schedule Details" box will appear. Enter a schedule name. Schedule Names can either be Tag based or a Constant (user defined name).
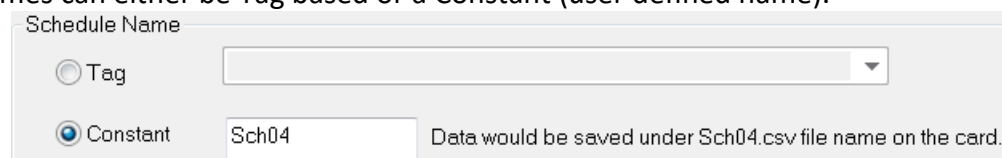
5. Select preferred Schedule Type (options displayed below):
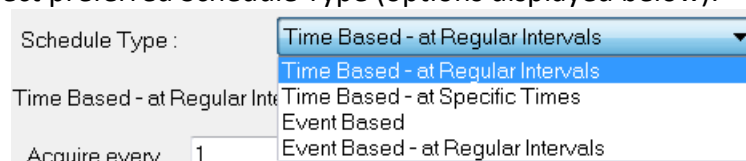
6. Under "Select Tags for Data Acquisition," the selection displays all the tags defined in the panel with their corresponding tag addresses. Use the double arrows to select or deselect tags within the schedule. Maximum tags allowed per schedule is 1000.
   ➢ To select a tag for data acquisition, click on it and then press the >> button.
      Note: Tags can also be selected or deselected by double-clicking on them.
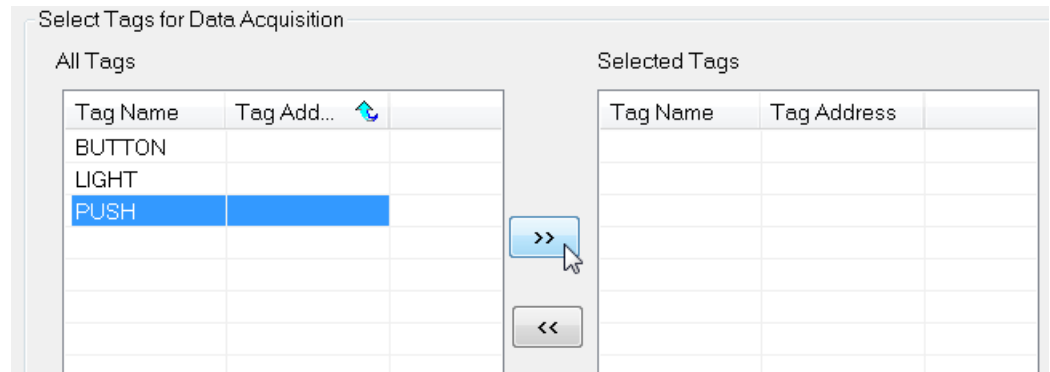
   ➢ To deselect a tag for data acquisition, select it again and press the << button.
      Note: Tags can also be selected or deselected by double-clicking on them.
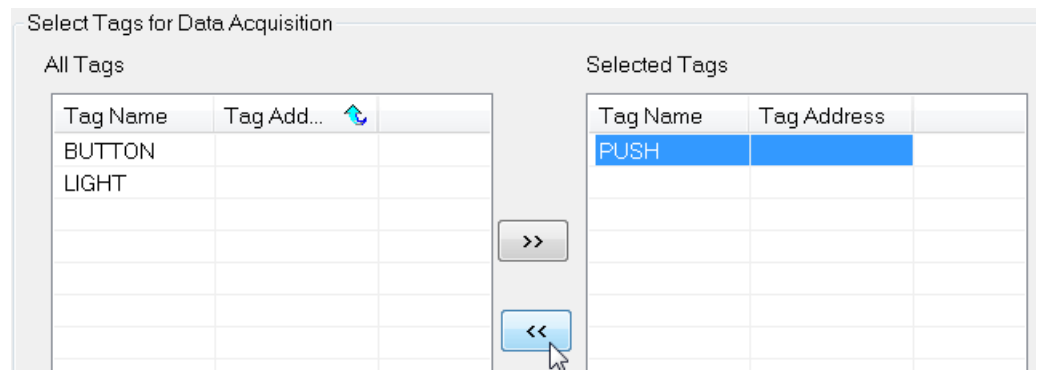
7. Click "Add" when finished making selections. Then click "Close" to return to the main DAQ Schedules dialog box.
8. The added schedules will now be listed. Schedules are saved along with the user project.

Getting Started Manual

Reports and Graphs Overview

Through our EZScada-Development, users can establish a variety of different reports and graphs. These range from simple one tag reports to longer production reports. In terms of graphs we have multiple graph types including bar graphs, line graphs and XY graphs. The line graphs even come with a historian option for data logging.

Adding a Report

A report is a single local instance report that can be printed (through network printer) and/or can be sent to a marquee. This type of report is created for access and printing of single local report. For global reports please look at adding a flex report on page 19.

To configure this type of report follow below given steps:

1. Open your project file for the EZScada-Runtime using the EZScada-Development.
2. Then click **Objects** > **Reports** to open a dialog to create a report generating button.
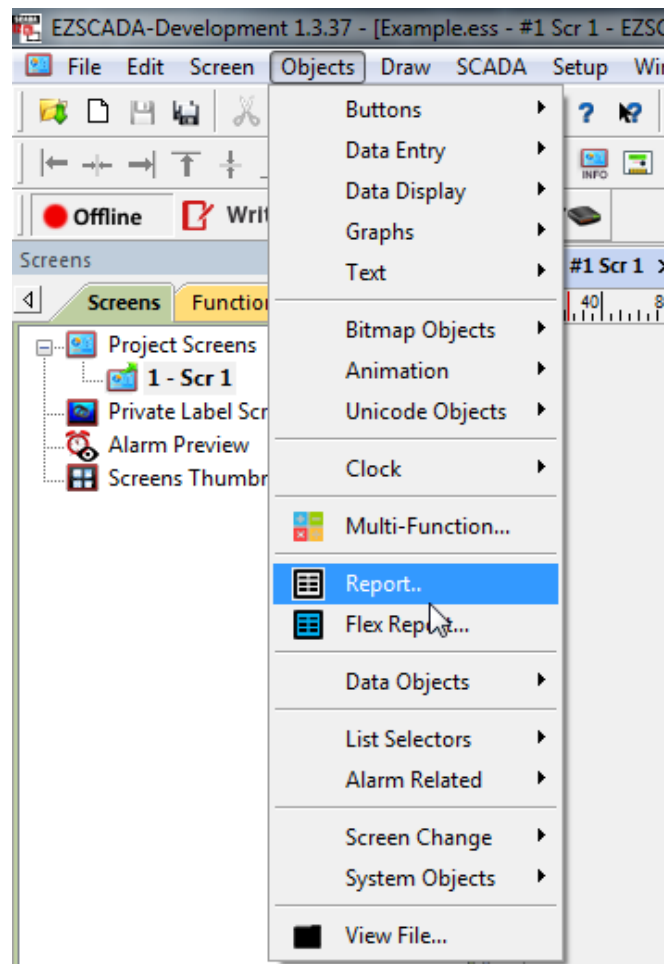
Getting Started Manual

EZAutomation

3. In this dialog you can label and change how the button looks on the screen. Also you can have the button print the report (through a network printer) and/or send it to a marquee.

Add a label above the button. Can change position of label, its color and its size.

Change the text on the seen on the button. Can change its color and its size.

Can select to print report, and/or to send report to a marquee.

4. Then in the next tab, **Messages**; you put together the reports that are created. To create a report you click on Add/Edit Message.

All the different message/reports that are sent are displayed here.
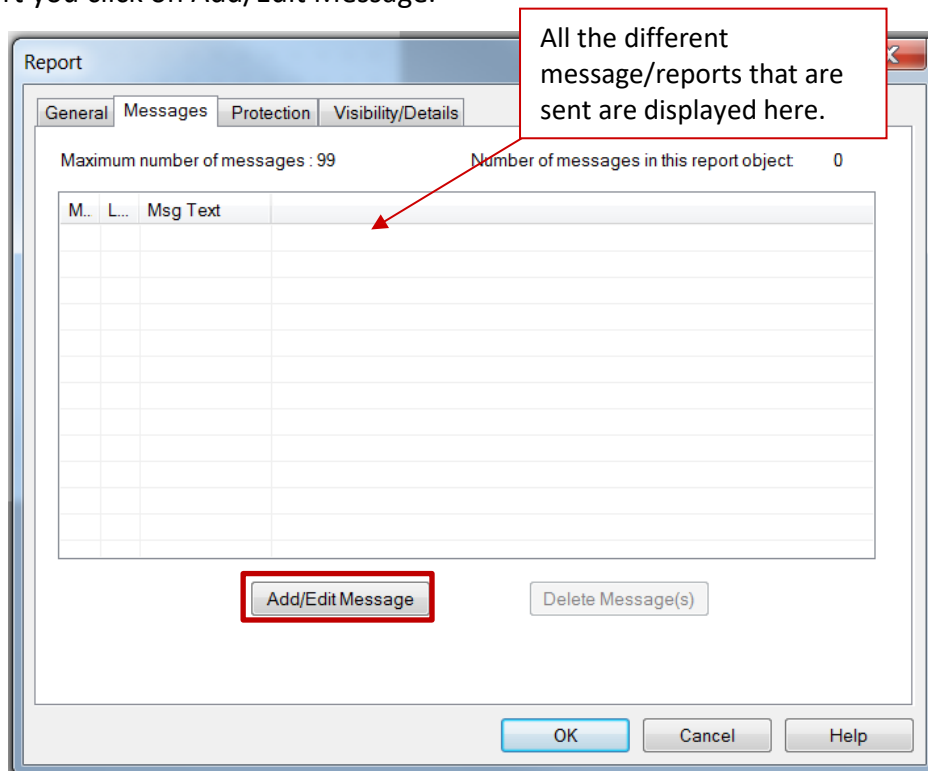
5. In the Add Message Details you input the details of the message that you want to create. Once you have put in the report that you want to print then click add new message. To

2019
Rev 1.0
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16 | P a g e

EZAutomation

embed a data variable press F7. This data variable will be display the current value of the variable at the time that the report is created.
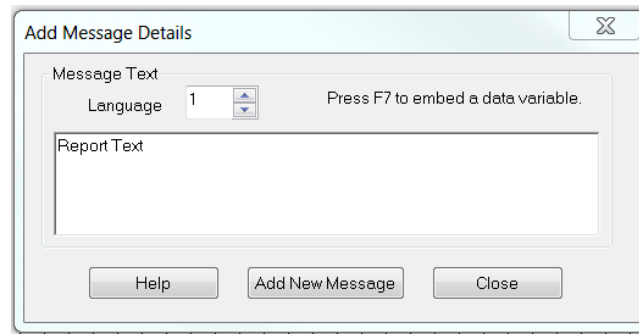
6. If you embed a variable the dialog below displays. Here you decided what variable you want to display information on. Then you click add to embed the variable.
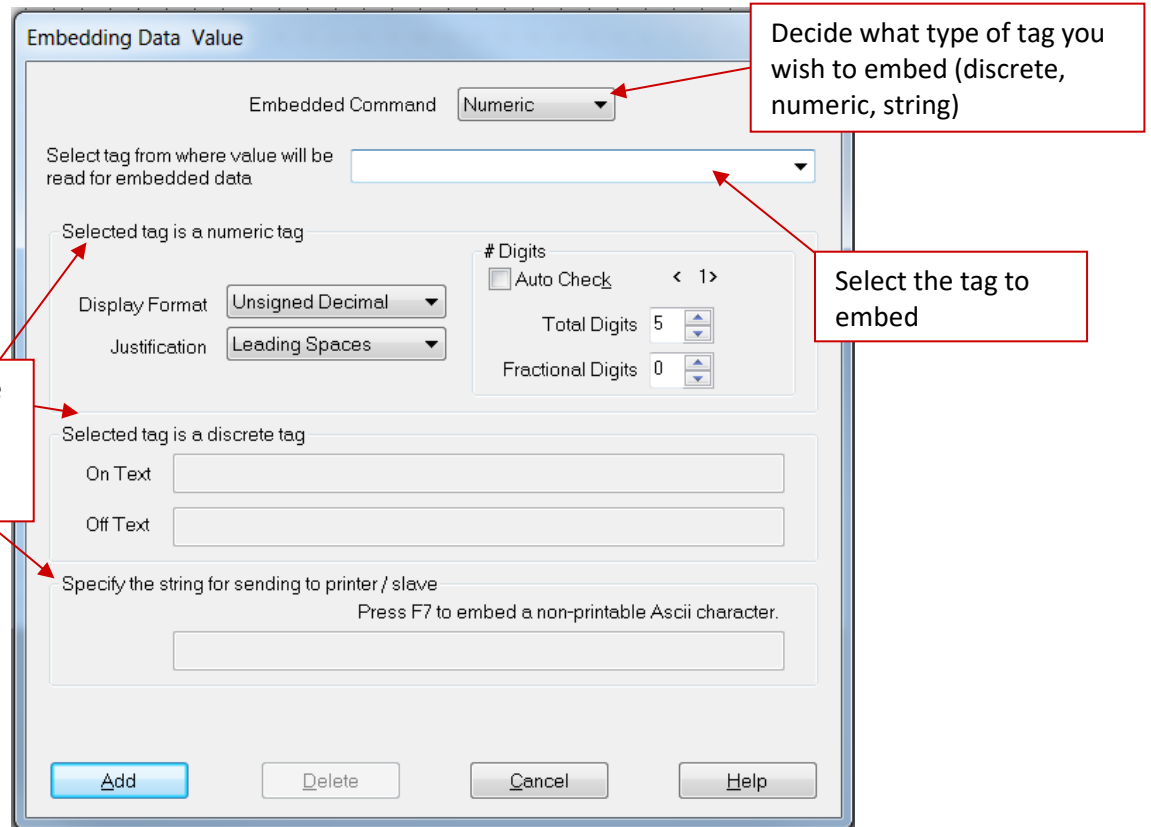
7. Once you have set up the reports. Then you click ok in the setup dialog and place the button in location you want. Then when in the Runtime pressing this button will do the selected action (printing report on a network printer and/or sending report to marquee).

Getting Started Manual

EZAutomation

Adding a Flex Reports

A flex report is a global report that can be printed (through a network printer) and/or can be sent to a marquee. This report is a global object which can be access from multiple screens and printed using the flex report button.
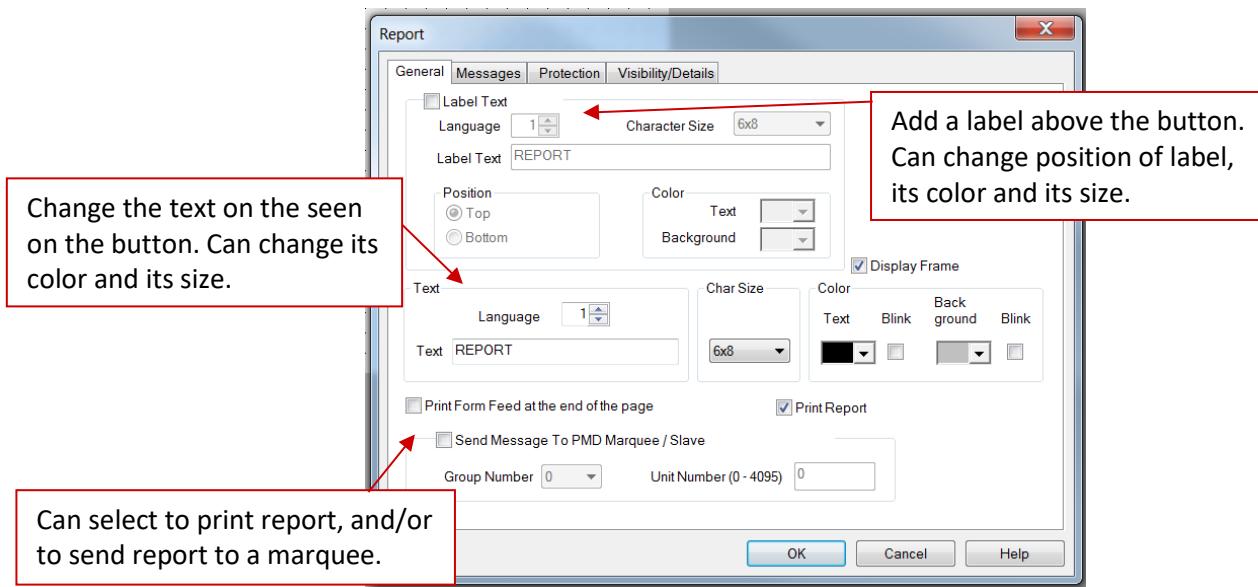
To configure flex reports follow below given steps:

1. Open your project file for the EZScada-Runtime using the EZScada-Development.
2. Then click **Setup** > **Global Objects > Global Flex Report** to open a dialog to create a global flex report. Also in the Global Objects menu is where you can later edit or delete the flex report. For this use the Edit Objects and Delete Objects options.

Getting Started Manual

EZAutomation
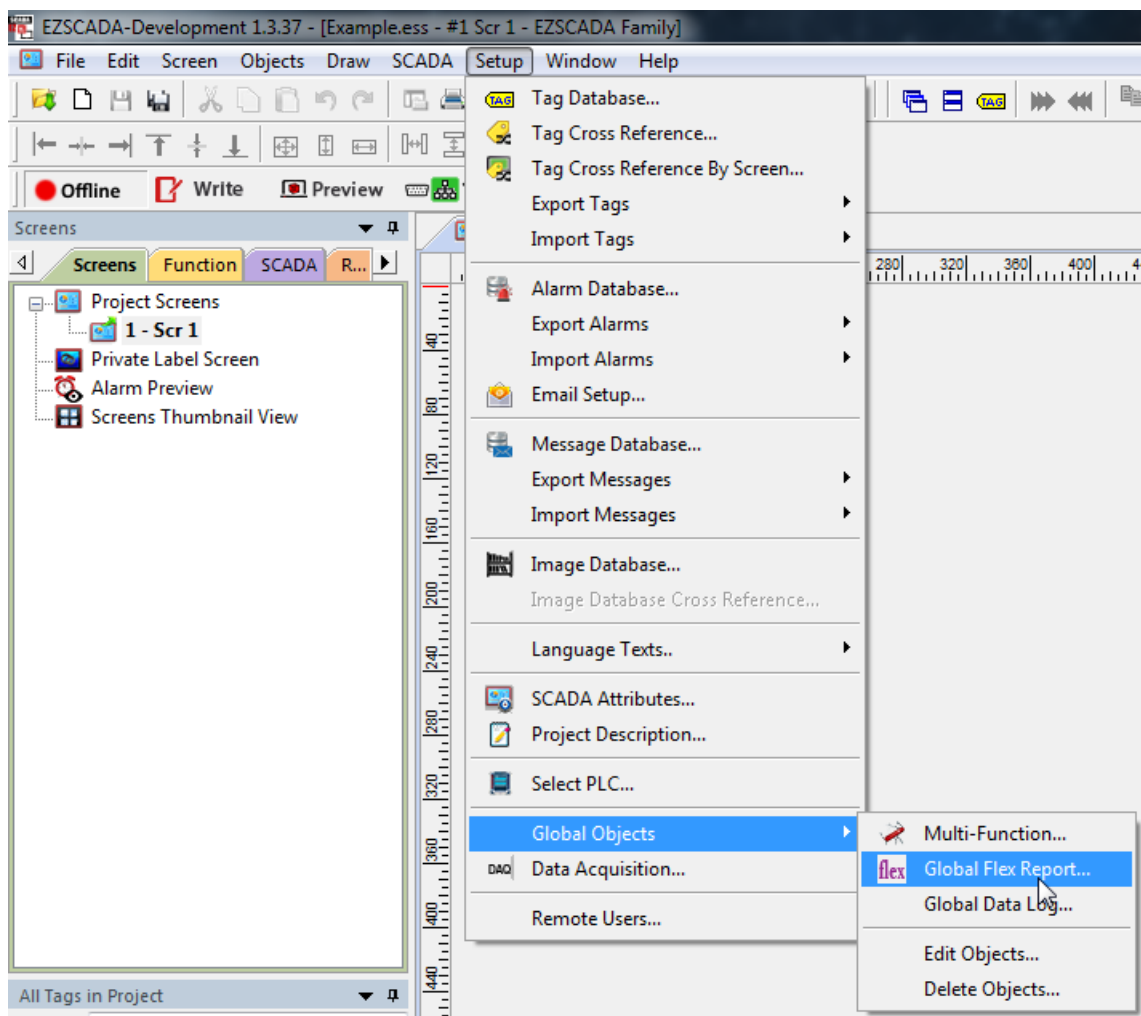
3. In this dialog you configure the flex report. The first tab (General) decides what happens with the report whenever a Flex Report button is pressed. Configure based on your needs.

Input a name for this flex report. Multiple flex reports can be created.

Send the flex report to a serial/ network printer to be printed. Can include printer info at end of report

Send the flex report to a marquee. Select which marquee.

Can use PLC tag to have report printed or sent to Marquee. Select trigger tag and what transition causes the report to be printed.
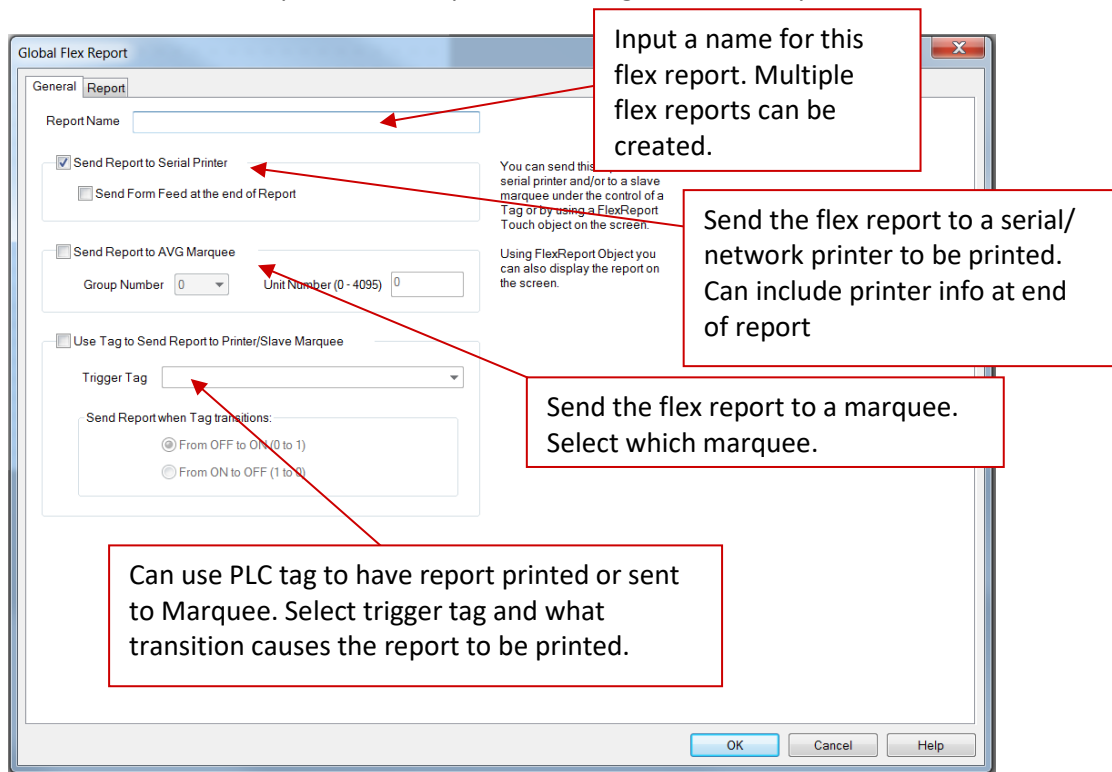
4. Then in the next tab, **Report**; you put together the report that will be printed. You can input multiple different things that you look for in a report including time stamp, varaiable data, and Marquee Commands.

Insert time and date. Format can be modified after button is clicked.

Input report text here.

Report details such are found here.

Report can be previewed by pressing this button.

Commands to print and/or send report to Marquee can also be embedded in report.

Different tags can be embedded in report. Once button is clicked then tag can be selected and settings modified.
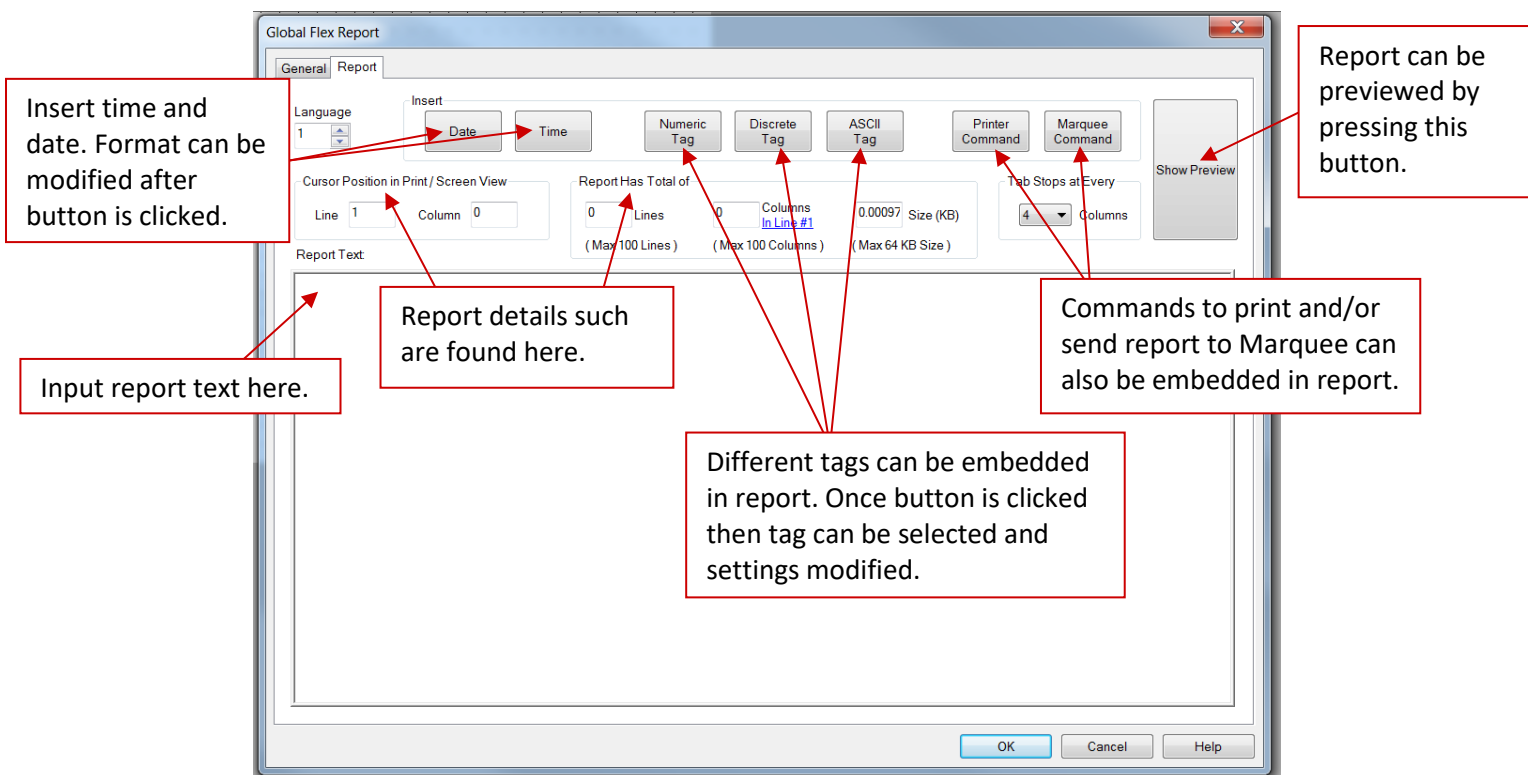
5. Once the details of the report have been put together. Click Ok. With the global flex report created now you can add a button to your screen that shows/prints the report. Go to **Objects > Flex Report** to open a dialog to create a flex report button.
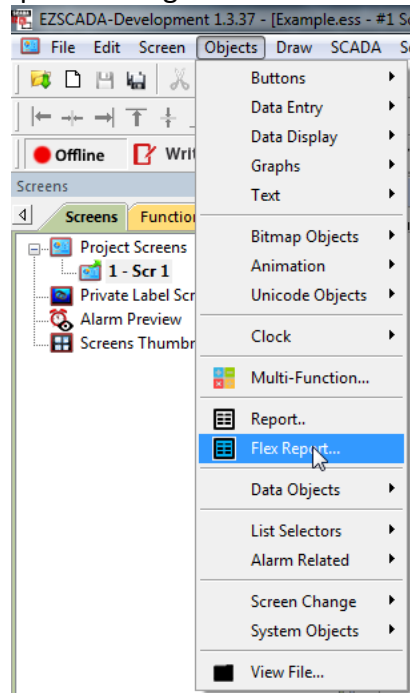
6. In this dialog you can label and change how the button looks on the screen. Also you can have the button display the report before it is printed.
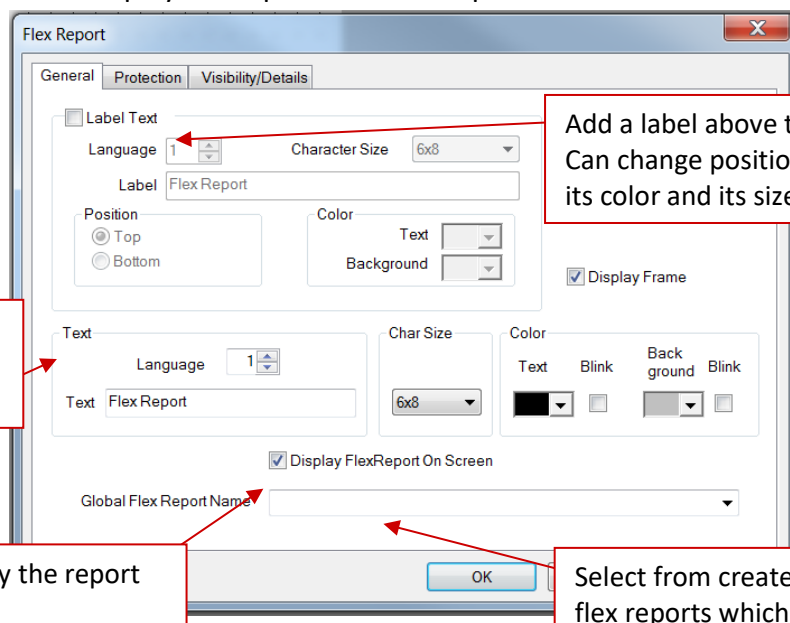
Add a label above the button. Can change position of label, its color and its size.

Change the text on the seen on the button. Can change its color and its size.

Can select to display the report before printing

Select from created global flex reports which one this button will display/print

7. Once you have set up the flex report button. Then you click ok in the setup dialog and place the button in location you want. Then when in the Runtime pressing this button will do the selected action (showing the report, printing the report, sending report to Marquee).

Getting Started Manual

Setting up Graphs

The EZScada software has multiple graph options. These graphs include bar graphs, line graphs and even XY graphs for showing data in multiple different formats. The setup for simple graphs is easy but you can make the graphs more complicated as well. All the graphs are found in the **Objects > Graphs** section.
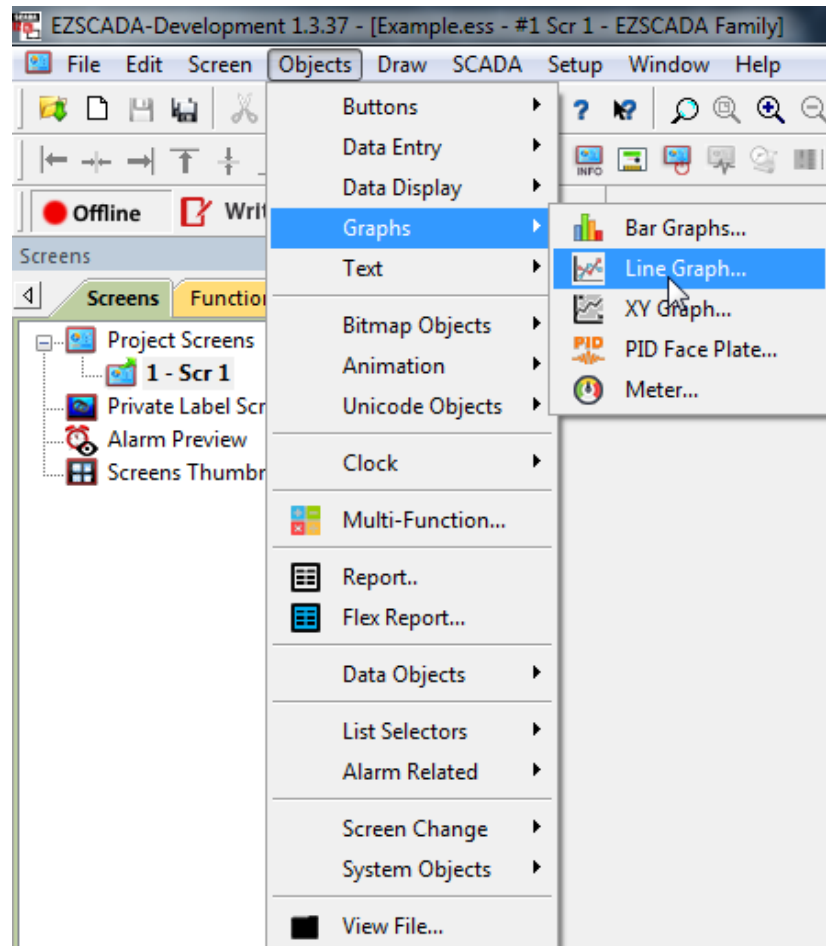
To set up graphs you can follow the steps on the following pages:

Getting Started Manual

EZAutomation

Bar Graphs

A bar graph is easy to set up with only needing the tag to monitor and range to be assigned and it is done. But it also has multiple other options that can be modified.

Add a label above the button. Can change position of label, its color and its size.

Can add a digital display and change the scaling of the graph in these tabs.

Can change the style of the bar graph. It can go up or down, left or right.

Input the tag variable which being displayed on the graph.

Select the range of the graph. Can be set so the range is set by tags.

Can have a midpoint at which the color of the graph changes.

Select to show ticks and there settings like how many, their color, etc.

Change the color of the graph as well as its background.

Line Graph

The Line graph is more advanced but still to set up a basic one all that needs to be assigned is the tag to monitor in Graphs and Pens tab. But there are multiple other options that can be changed including that this type of graph can also be setup as XY graph. As well as having a historian option for recording the samples taken.

General Tab

Add a label above the button. Can change position of label, its color and its size.

Change the color of the graph.

Select the sample rate at which data points are displayed and stored. Can be set by PLC tag.

Can change graph orientation.

Number of samples stored.

Can show date and time on graph.

Number of samples displayed on chart.

Number of readings taken and averaged into sample.

Graph and Pens Tab

Can have simple line graph or XY graph. If XY graph selected then need to input 2 tags. Also can select whether points or line display is used.

Can change color and line type of each tag.

Input Legend descriptions. Also if do not want legend unselect.

Input tag from which samples are taken and displayed. All tags must be of the same type (unsigned or signed). Can have up to 6 different tags on same graph.

Getting Started Manual

EZAutomation

XY Axis Tab

Modify the X and Y axis. Can change the ticks, labels and range.

Make sure to select the range type to be the same as the tag type you are sampling.

Log to File Tab (Historian or Data Logging)

You can log the samples to a file. To activate historian this needs to be selected and file name needs to input. See Historian Section for details.

EZAutomation
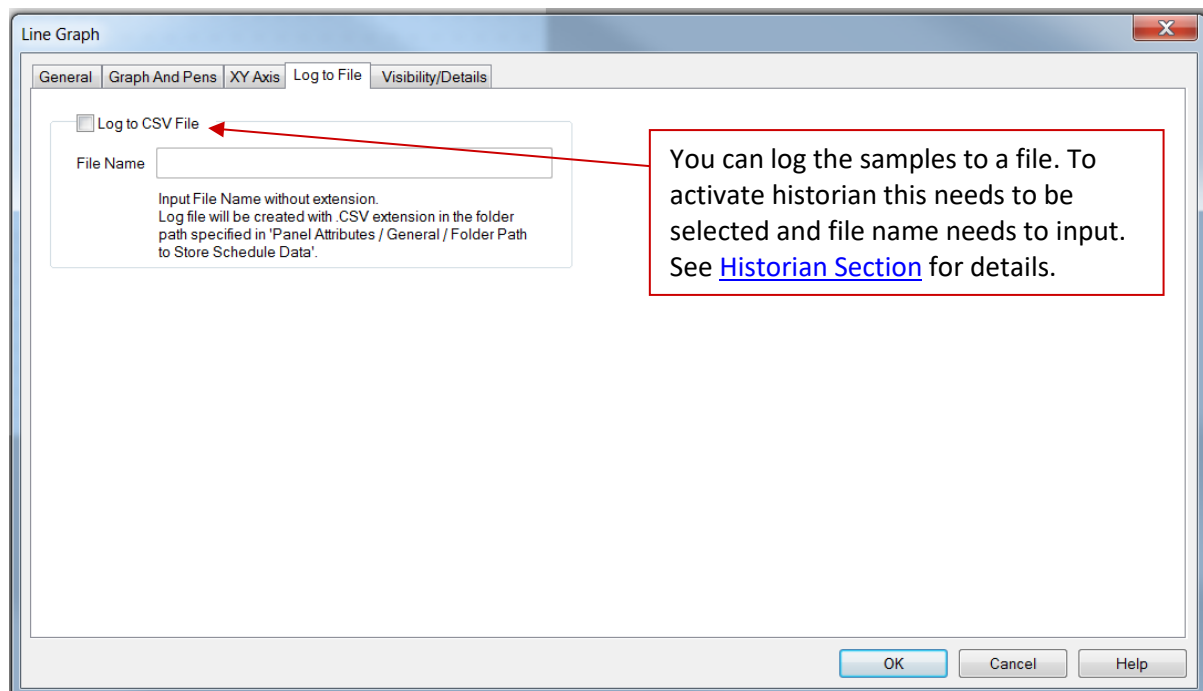
XY Graph

The XY graph is a more advanced option for the XY graph available in the Line graph menu. To set up this graph you need input multiple X and Y tags to be monitored in the Pen tab. These are then all sampled at the same time and results are graphed on the XY graph. This is unlike the Line graph where values are only sampled one point at a time.

General Tab

Add a label above the button. Can change position of label, its color and its size.

Change the background and tick color of the graph.

Change the orientation of the graph.

Change the plot type. Line graph or just points.

Change the number of different data sets looking at. As the number of pens change then each pen has a new tab to setup.

Can show or hide an update button. Graph will not update unless button is pressed or the update tag is setup.

Show or hide the legend.

Getting Started Manual

XY Axis Tab

XY Graph

Tabs: General | XY Axis | Visibility/Details | Pen 1

X-Axis
- ☑ Show Ticks
- Major Divisions: 4
- Minor Divisions: 2
- ☑ Show Y-Axis grid
- ☑ Show Tick Numbers   Precision For Floating Point: 2
- ☑ Label   Language: 1   Color: ▮   Text: X Axis

Range
- Minimum: ○ Tag | ● Value   Data Type: Unsigned   Value: 0
- Maximum: ○ Tag | ● Value   Data Type: Unsigned   Value: 1000

Y-Axis
- ☑ Show Ticks
- Major Divisions: 4
- Minor Divisions: 2
- ☑ Show X-Axis grid
- ☑ Show Tick Numbers   Precision For Floating Point: 2
- ☑ Label   Language: 1   Color: ▮   Text: Y Axis

Range
- Minimum: ○ Tag | ● Value   Data Type: Unsigned   Value: 0
- Maximum: ○ Tag | ● Value   Data Type: Unsigned   Value: 10000

[OK] [Cancel] [Help]

> Can change almost anything about graph including ticks, axis grids, range of axes, labels of axes, and even precision of the points.

Pen Tabs

XY Graph

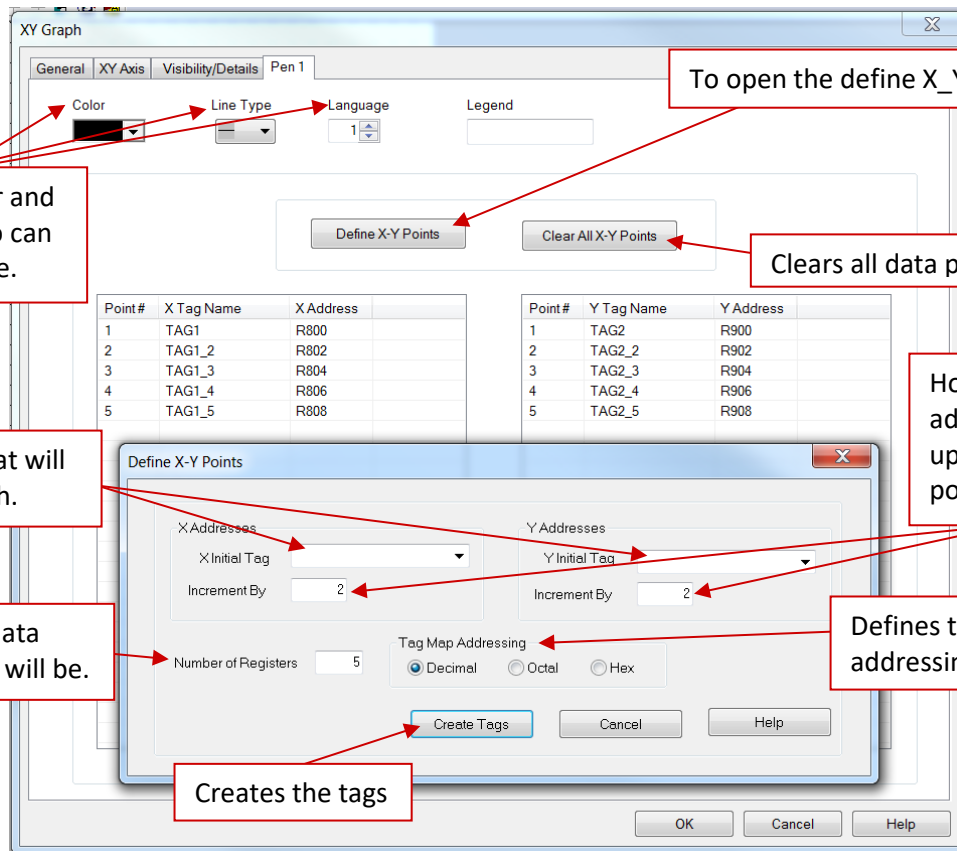Tabs: General | XY Axis | Visibility/Details | Pen 1

- Color: ▮
- Line Type: —
- Language: 1
- Legend:

[Define X-Y Points] [Clear All X-Y Points]

Point #	X Tag Name	X Address
1	TAG1	R800
2	TAG1_2	R802
3	TAG1_3	R804
4	TAG1_4	R806
5	TAG1_5	R808

Point #	Y Tag Name	Y Address
1	TAG2	R900
2	TAG2_2	R902
3	TAG2_3	R904
4	TAG2_4	R906
5	TAG2_5	R908

> To open the define X_Y Points Window.

> Can change the color and line type of pen. Also can add legend label here.

> Clears all data points.

Define X-Y Points

X Addresses
- X Initial Tag:
- Increment By: 2

Y Addresses
- Y Initial Tag:
- Increment By: 2

Number of Registers: 5

Tag Map Addressing
- ● Decimal ○ Octal ○ Hex

[Create Tags] [Cancel] [Help]

[OK] [Cancel] [Help]

> The initial tag that will be used for graph.

> How much the tag address will increment up for each subsequent point.
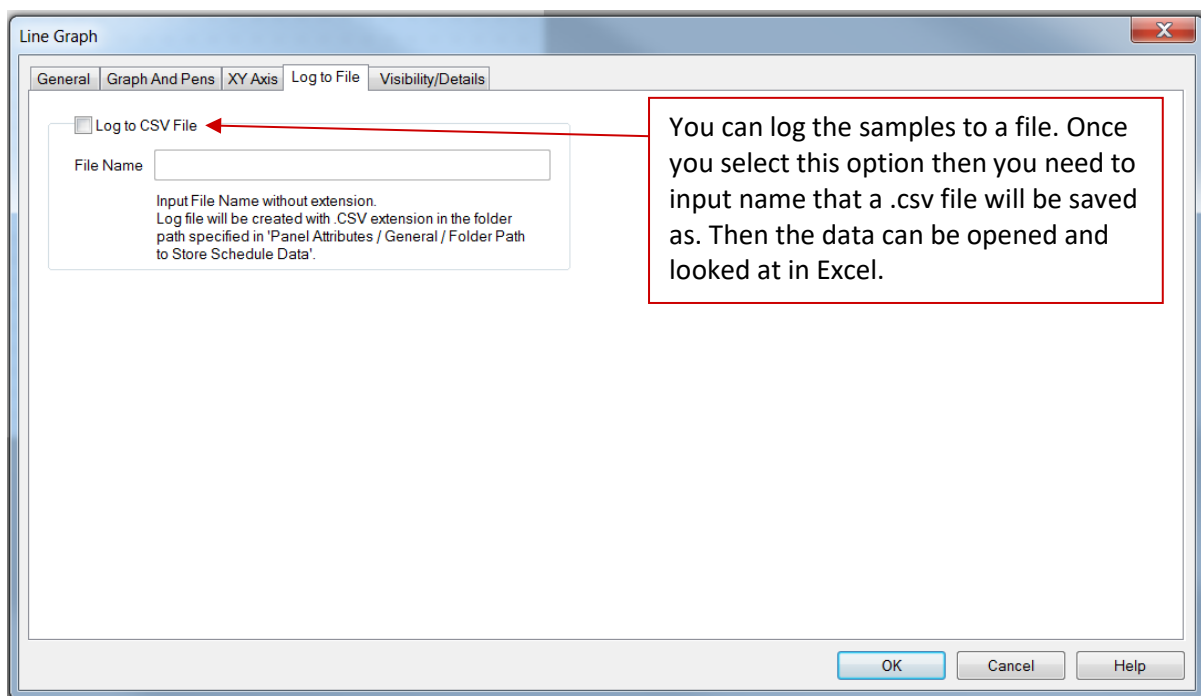
> How many data points there will be.

> Defines the tag addressing type.

> Creates the tags

Getting Started Manual

Setting up Historian Data

The historian option is a type of data logging for graphs where the data taken is also stored in a selected file. The historian option is available for the Line Graph. For more information on setting up Line Graphs please refer to Line Graph Section.

To setup Historian/Data Acquisition go to the Line graph setup dialog and there in the Log to File tab you will select the Log to CSV File option, then input file name to save as. Once this is setup all the samples taken on the different tags will be recorded in the selected CSV File. You can also go back in history on the graph itself to review data.

Line Graph

General | Graph And Pens | XY Axis | Log to File | Visibility/Details

☐ Log to CSV File

File Name

Input File Name without extension.
Log file will be created with .CSV extension in the folder path specified in 'Panel Attributes / General / Folder Path to Store Schedule Data'.

You can log the samples to a file. Once you select this option then you need to input name that a .csv file will be saved as. Then the data can be opened and looked at in Excel.

OK | Cancel | Help

EZAutomation

Printing

Printing for EZScada is accomplished through the Windows printing options. Therefore any time something is printed the default printer is used. Therefore to enable printing from the EZScada Runtime you need to connect a printer to the PC.

This can be done by a direct by a cable or connecting over the network. Then in Devices and Printers of the PC add the selected Printer to your printers and faxes. For more information on adding your specific printers to your PC please refer to the printer's manual.

Once the printer has been added to your list of printers then you should be able to make it your default printer by right clicking on its icon and selecting **Set As Default Printer**. If this is not possible then you can enter the properties of the printer by double left clicking on its icon. Then go to **Printer** drop down menu and select **Set As Default Printer.** Once the printer is set as default then the EZScada-Runtime will print to this printer

Printing reports

Reports are generated by clicking the reports button in EZScada-Runtime. These buttons are configured beforehand in the EZScada-Development (for setup information refer to Reports section). In the configuration of these buttons you select if the report is to be printed. If a default printer is setup and the report printer option is selected then a report will be printed when the Report button is pushed.

Print screen captures

At all times the current screen of the EZScada-Runtime can be printed by right clicking on the screen and selecting Print Screen. This option can be disabled during startup of the EZScada-Runtime (for more information please refer to Configuring EZScada-Runtime section).

# Getting Started Manual

EZAutomation

Alarm Setup

EZScada has multiple alarms available as well as options to set them up and monitor them at all times. Any time an alarm is triggered it will show up in a designated area determined by you the user. The amount of information and what kind is seen is also determined by you the user.

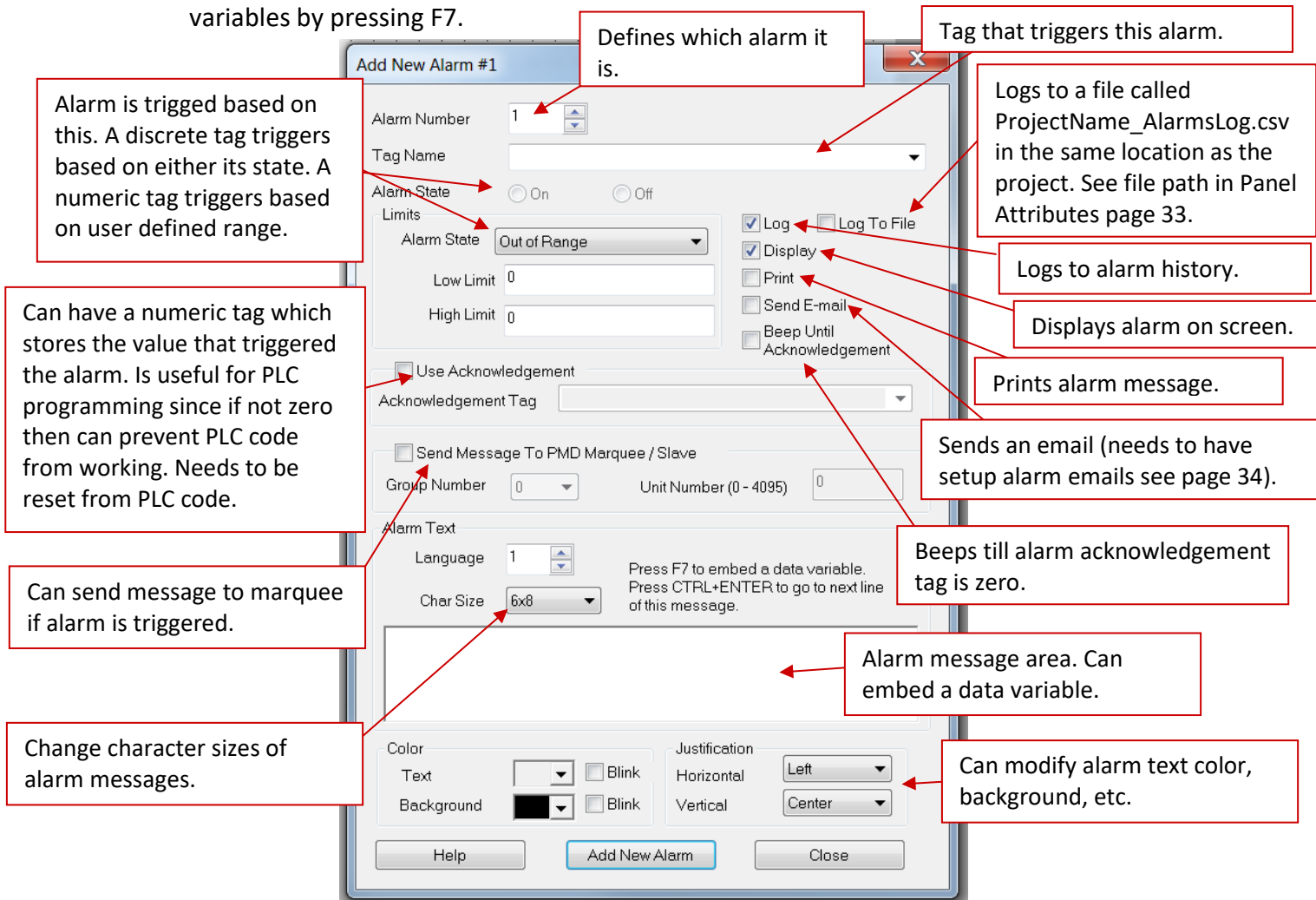To set up an alarm you can follow below given steps:

1. Open your project file for the EZScada-Runtime using the EZScada-Development.
2. Then click **Setup** > **Alarm Database** to open a dialog to create alarms. Also in the Setup menu you can export and import alarms as CSV or Excel files.
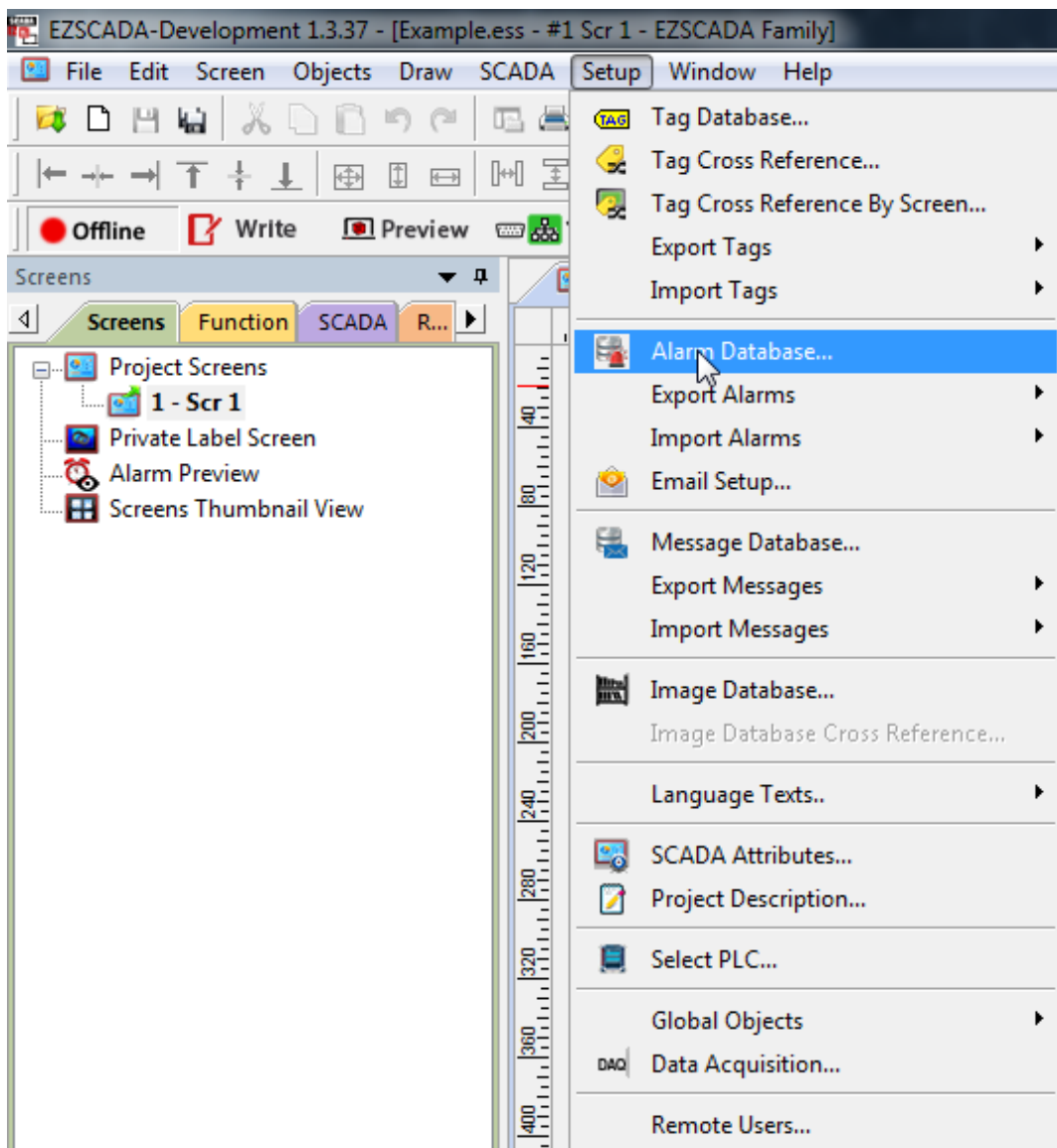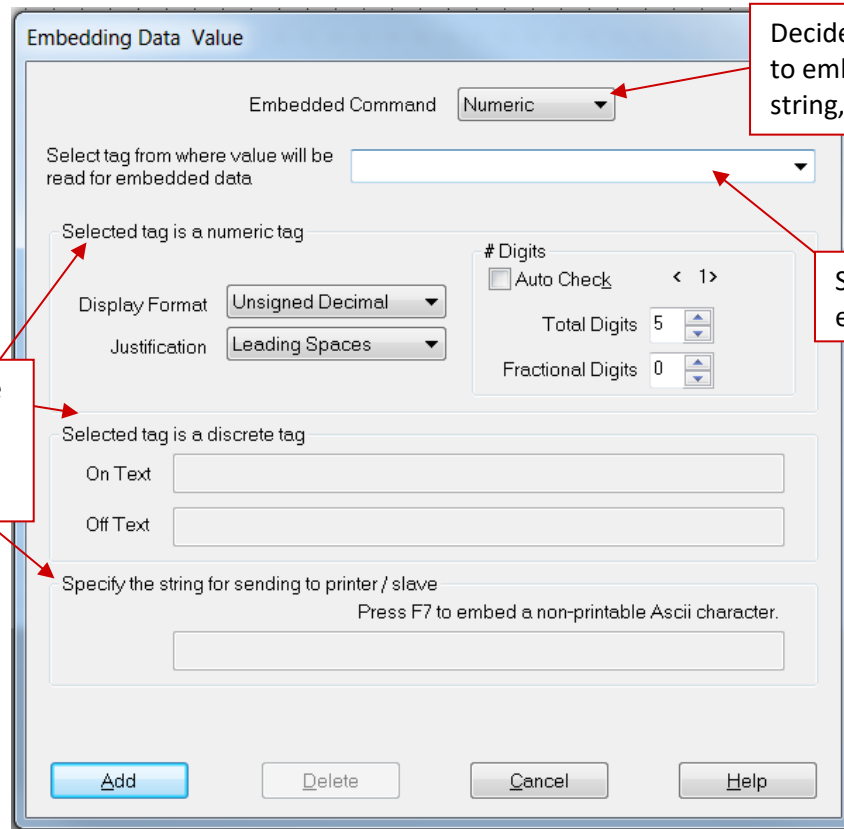
3. In the Alarm database dialog you can see all setup alarms and add and edit the alarms using the Add/Edit button.
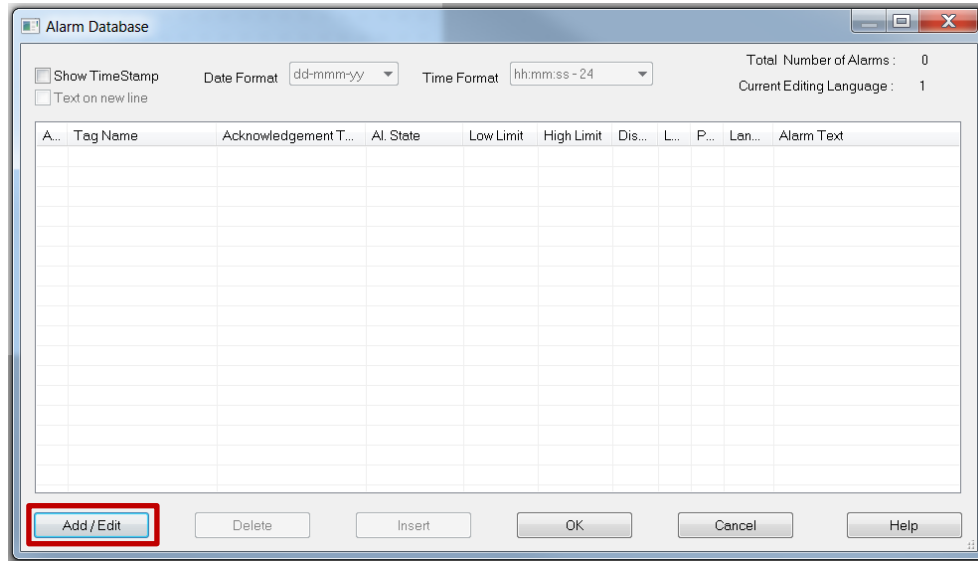
4. In the dialog that the Add/Edit button opens up you configure the tag that triggers the alarm as well as the information displayed when the alarm is triggered. You embed variables by pressing F7.

Defines which alarm it is.

Tag that triggers this alarm.

Alarm is trigged based on this. A discrete tag triggers based on either its state. A numeric tag triggers based on user defined range.

Logs to a file called ProjectName_AlarmsLog.csv in the same location as the project. See file path in Panel Attributes page 33.

Logs to alarm history.

Can have a numeric tag which stores the value that triggered the alarm. Is useful for PLC programming since if not zero then can prevent PLC code from working. Needs to be reset from PLC code.

Displays alarm on screen.

Prints alarm message.

Sends an email (needs to have setup alarm emails see page 34).

Can send message to marquee if alarm is triggered.

Beeps till alarm acknowledgement tag is zero.

Alarm message area. Can embed a data variable.

Change character sizes of alarm messages.

Can modify alarm text color, background, etc.

EZAutomation

5. If you embed a variable the dialog below displays. Here you decided what variable you want to display information on. Then you click add to embed the variable.

Decide what type of tag you wish to embed (discrete, numeric, string, slave and printer).

Select the tag to embed.

Based on the type of tag, configure the settings and what is displayed

6. Once the alarm is setup and you click Add New Alarm. And then you click Ok in the Alarm database. Now you can configure the area the alarm displays by using the side panel and double clicking on the Alarm name. This is unavailable till the first alarm is created.
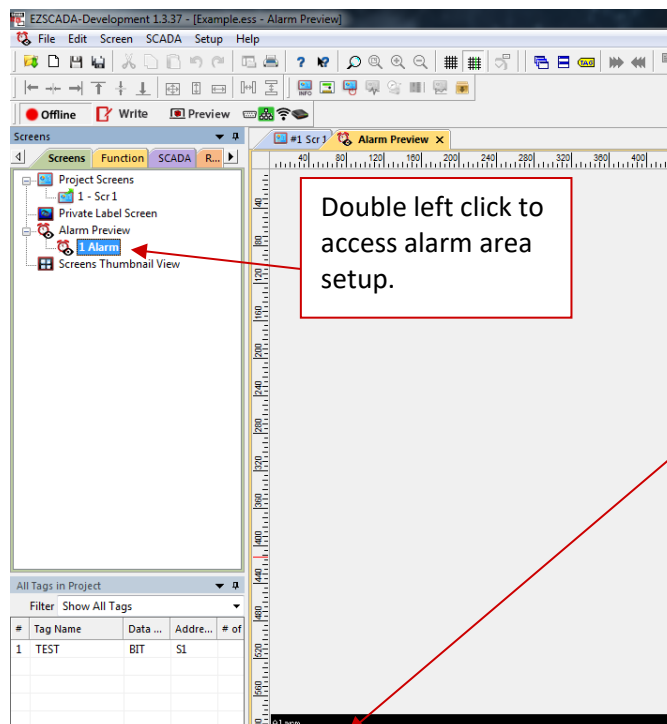
Double left click to access alarm area setup.

Can move this area around and change how it looks. To change character sizes see page 30.

7. We do also have two buttons which work with alarms for easier navigation and alarm logging. These buttons are in the **Objects > Alarm Related** menu. There you have an Alarm History button which shows which alarms were triggered and when. Also it has an Alarm List which displays all current active alarms.
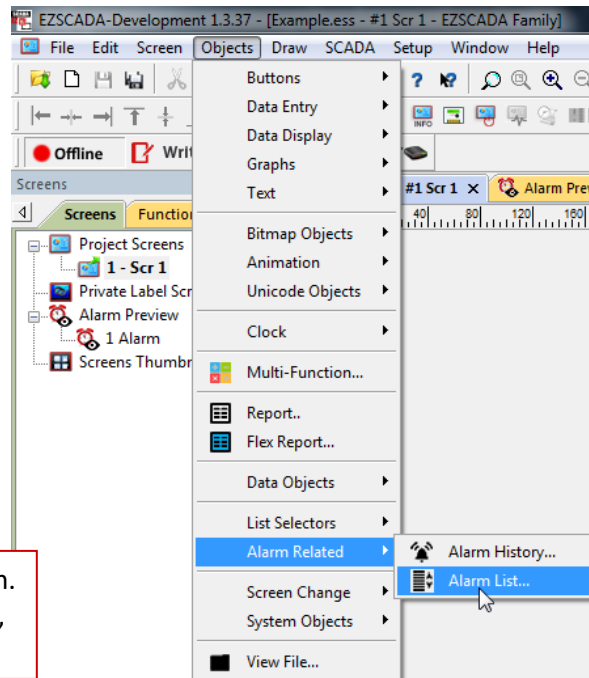
Add a label above the button. Can change position of label, its color and its size.
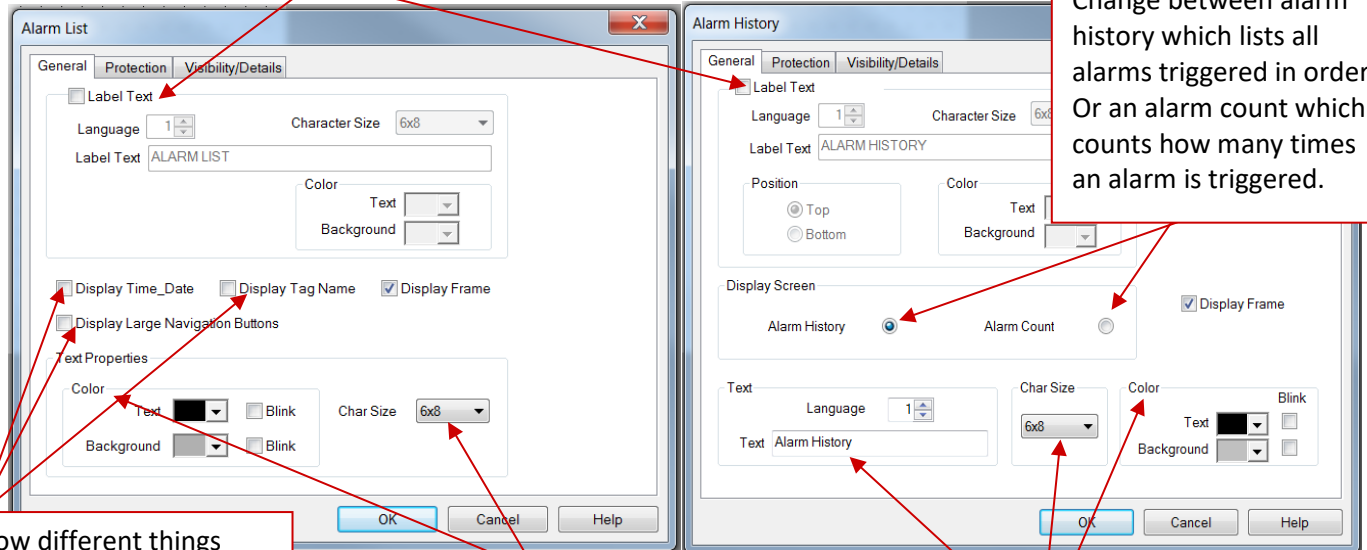
Change between alarm history which lists all alarms triggered in order. Or an alarm count which counts how many times an alarm is triggered.

Can show different things about alarms including time and date, tag names that triggered alarms, and even larger navigation buttons.
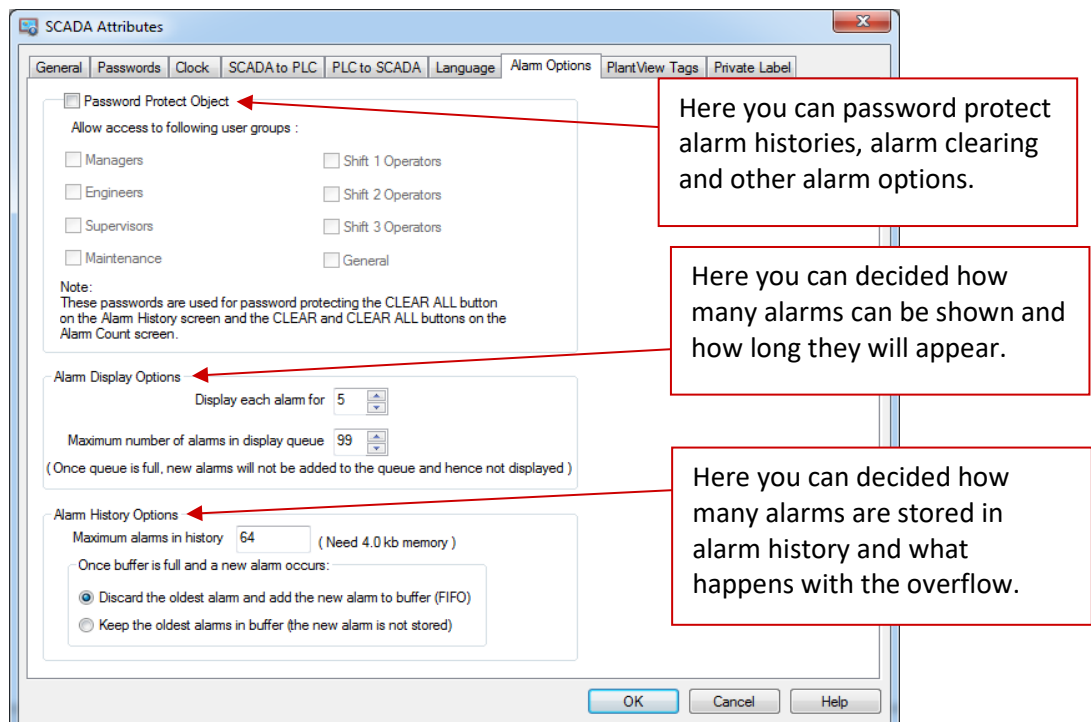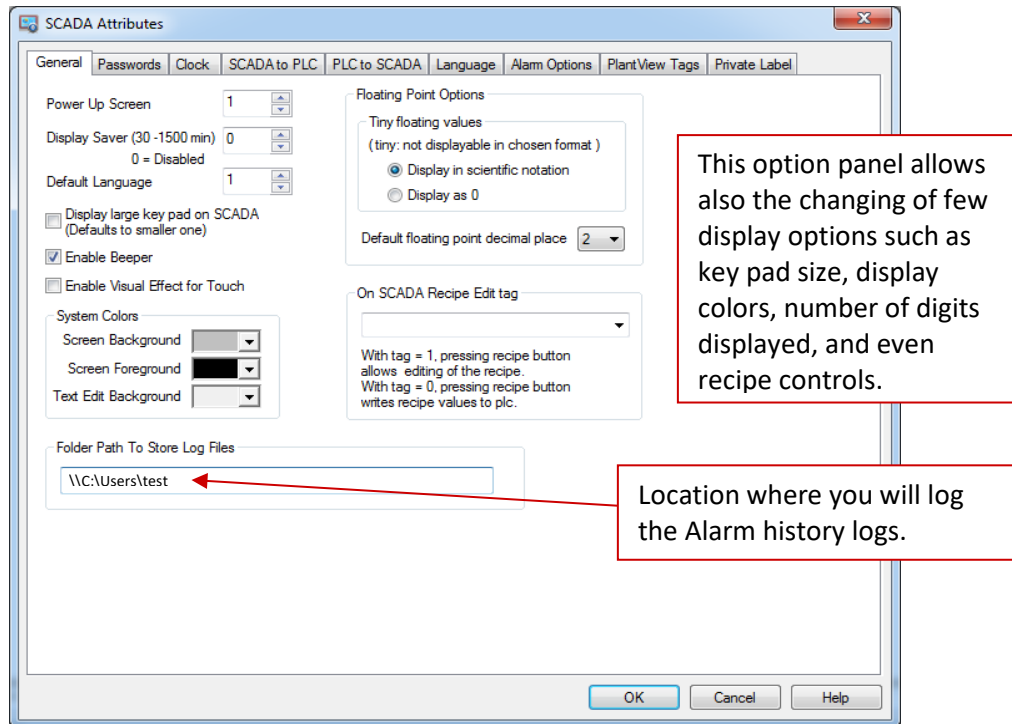
Can change color of display text as well as character size. Text is defined as alarm list.

Can change color of display text as well as character size. Can change text as well.

Alarm Settings

To configure alarm settings go to **Setup** > **SCADA Attributes**. Here you can modify the log to file location as well as Alarm behavior.


This option panel allows also the changing of few display options such as key pad size, display colors, number of digits displayed, and even recipe controls.

Location where you will log the Alarm history logs.

Here you can password protect alarm histories, alarm clearing and other alarm options.

Here you can decided how many alarms can be shown and how long they will appear.

Here you can decided how many alarms are stored in alarm history and what happens with the overflow.

Email Setup

EZScada has an email option for both scheduled emails and for alarm emails. These emails can be configured to be sent by an alarm, a tag or even just at a scheduled time. These emails do not require any client software on the PC, instead you only need a valid email address and password with an email provider. This does include emails from own servers or from providers like gmail. Some IT information is needed for setup so if you do not know something please consult your IT department or your email provider.

To set up emails you can follow below given steps:

1. Open your project file for the EZScada-Runtime using the EZScada-Development.
2. Then click **Setup** > **Email Setup** to open a dialog to create alarms.
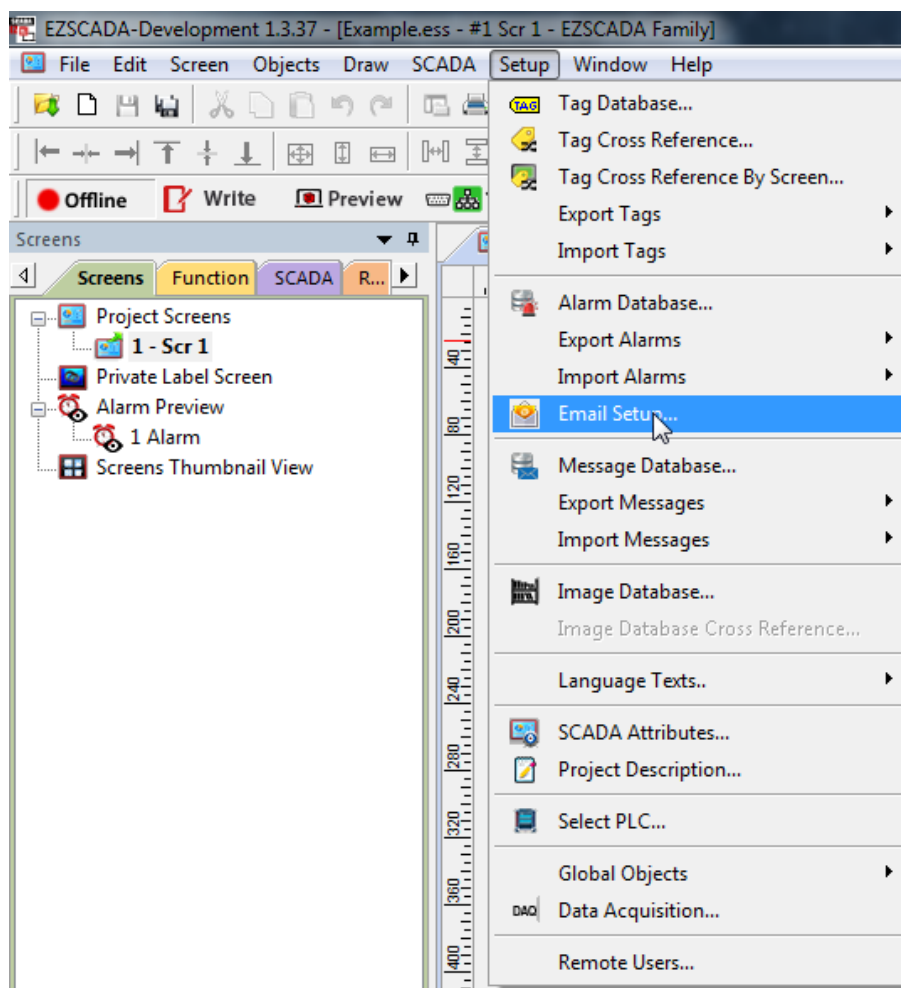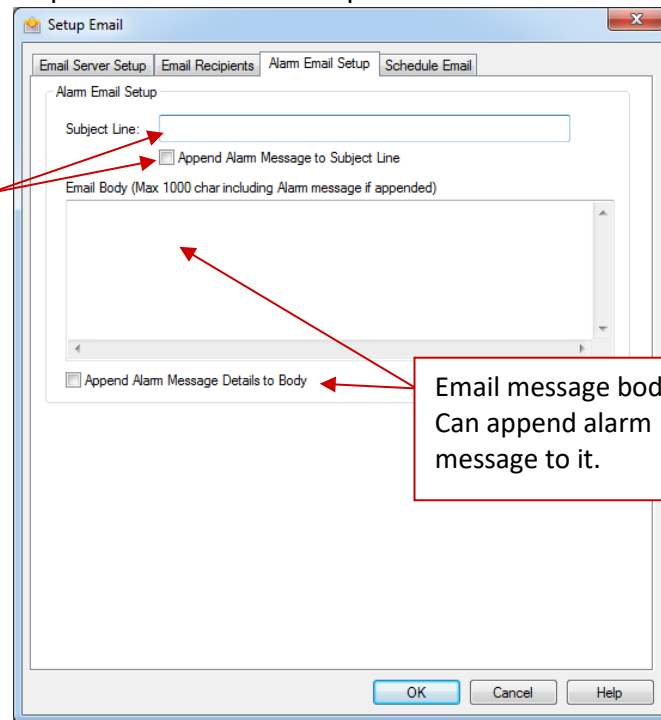
3. In the Setup Email dialog you see details to setup outgoing server and your connection to your account. Please fill out the information with details from your IT department or email provider.

Use domain lookup button to open dialog below. If know IP address of Outgoing server then can enter it directly.

Select the encryption type and port number. Provided by IT department or email provider. You can also have an error tag to troubleshoot. The help file has error codes for this tag.

Input the username and password of your email account that you wish to use. This is not required if SMTP authentication is not needed.

Input domain name like gmail.com. This will look up the IP address of that domain and then select the IP address and press Use Selected IP.

Can send a test email to make sure everything is working. To send a test email please first add email recipients in the email recipients tab.

4. In the Email Recipients tab you input who the emails will be going to. This can be constant or can be tag based.

List of emails that will get alarm emails.

Enter recipient email addresses. Can use a string tag which needs to contain an email address.
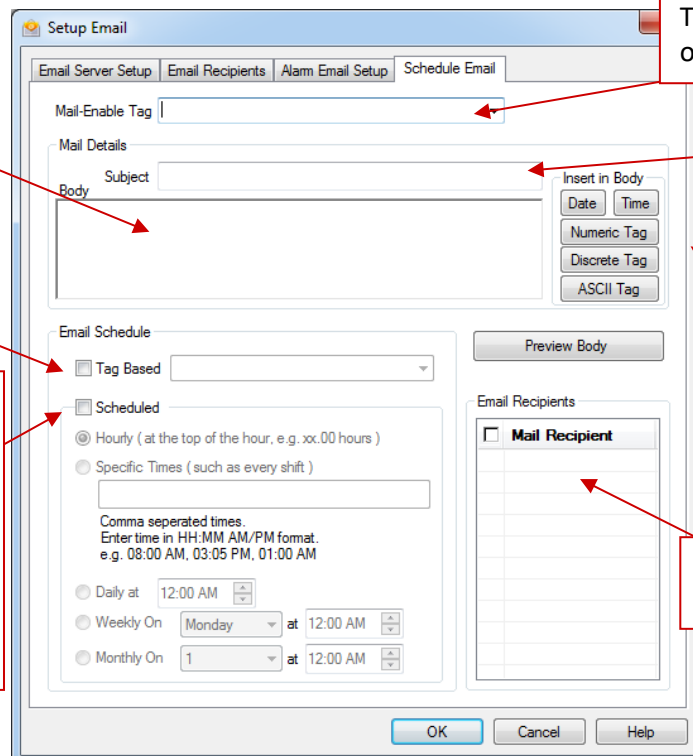
Edit and delete selected emails from email list.

5. In the Alarm Email Setup screen you create the message body as well as input the sender information. You can include the alarm message in the email. To send a test email please first add email recipients in the email recipients tab.

Subject line of alarm email. Can append alarm message to it.

Email message body area. Can append alarm message to it.

6. In the Schedule Email tab you can configure scheduled emails.

Tag that enables sending of scheduled emails.

Body of scheduled emails. Can embed different tags.

Subject of scheduled emails.

Email can be sent based on a tag.

Email can also at the same time be sent on a schedule. This schedule can be at hourly intervals, at specific times, or even at user specified times. There is also a daily, weekly and monthly option.

Embeddable options. Include time/date and different tags.

Select which email recipients get the scheduled email.

7. Once you have set up all the emails you would like then you click OK and your emails are setup to send at the selected time or based on your alarms/tags.

Remote Monitoring & Control

With the introduction of *Remote Monitoring & Control (RMC) software* our EZScada-Development in connection with EZScada-Runtime provides a unique set of remote capabilities. A user can remotely log on to a unit and monitor any of the panel screens with live data including the currently displayed screen.

With the right access permissions and authentication, a user can remotely "touch" the objects on the panel, to control a machine/plant effectively. Remote control feature can be invaluable for remote diagnostics, unmanned operations, or supervisory monitoring.

In addition to remote monitoring and control, user may also program the panels remotely over Ethernet, allowing OEMs to remotely upgrade the screen programs within the panels.

To setup Remote Monitoring and Control, follow these steps:
1. Use EZScada-Development to set up remote users and authentication level.
2. Use RMC software (Remote Monitoring and Control software) to connect to the panel remotely.

Setting up Remote Users

The EZ-RMC has to be used with defined authorized users. Remote users can be given View ONLY or Operation (View + Control) permission. View only permission allows user to ONLY monitor the panel display remotely, while operation permission allows a user to operate panel remotely.

Select **Setup > Remote Users** as shown below to display the following EZ-RMC User Dialog window:
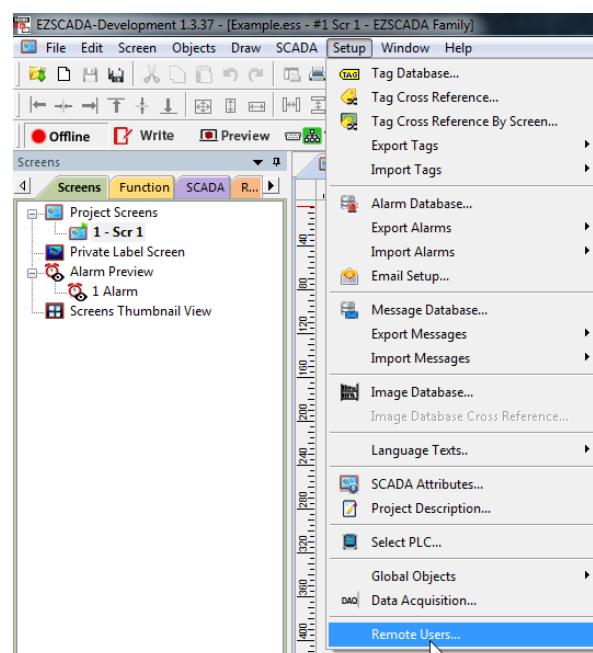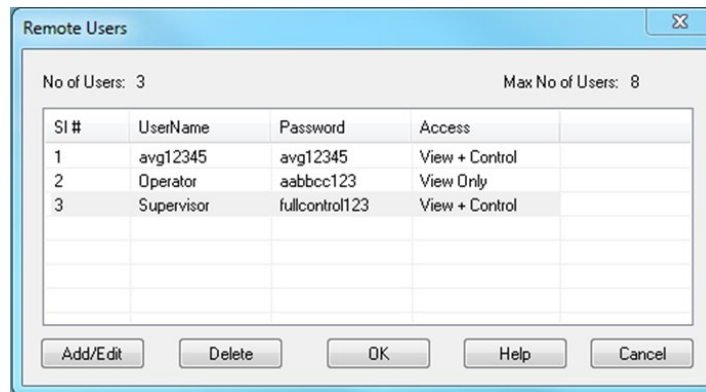
Use this screen to add up to 8 remote users through the *Add/Edit* button or delete existing users using the *Delete* button
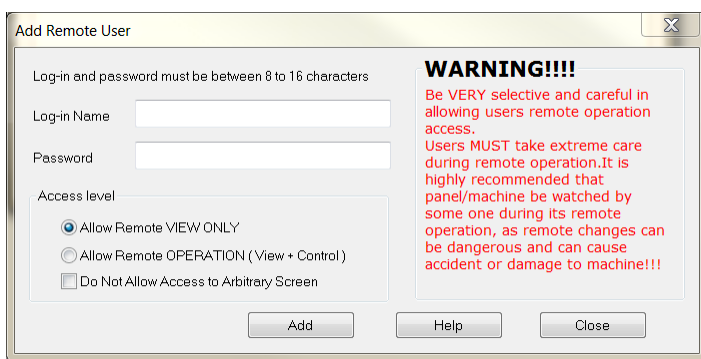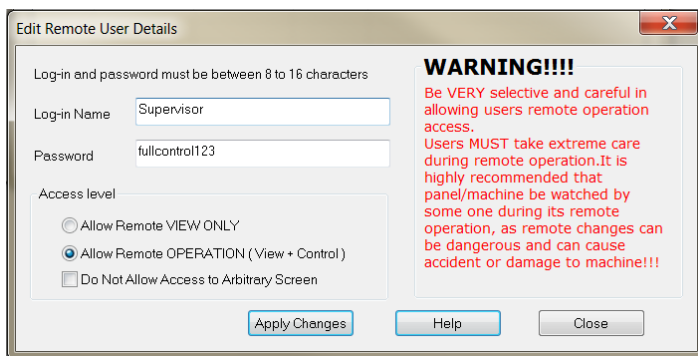

Add Remote User

The Log-in name and the password are case sensitive and both must be between 8 to 16 characters in length. Password must contain at least one letter and one number.

Access Level can be set for remote viewing only or for viewing and control (details below).

OR highlight existing user then click *Add/Edit* to edit user details

Edit User Details

Under Edit Mode, you can make changes to the log-in name, password or access level granted.

When finished, click *Apply Changes* for the new details to take effect.

Access Level

ONLY Remote VIEW - A user can remotely log on to the panel and monitor any of the panel screens with live data including the currently displayed screen.

Remote OPERATION - A user can remotely log on to the panel and monitor any of the panel screens with live data including the currently displayed screen as well as can remotely "touch" the objects on the panel, to effectively operate or control a machine/plant.

Getting Started Manual

EZAutomation

Remote Monitoring & Control software

To access the panel over Ethernet, you need to install and run the EZ-RMC on your PC. Once you run the software, you will see the following EZ-RMC dialog.

Quick Connect
Select either Ethernet or desired COM Port.

(Ethernet option only) Enter the IP address of computer running the EZScada-Runtime.

Polling time determines how often the NVC software reads data from the panel. A lower polling time may impact the performance of the panel. It is recommended to keep polling time as high as possible.

Favorite Panel List
Add panels which you connect to often. Need to input same information as for the quick connect.

Edit the access to favorite panels.

Delete the selected favorite panel.

Connect to the selected panel.

Quick Connect

Once the Quick Connect button is pushed the username and password that were chosen in the EZScada-Development remote user details need to be entered:

Add New Favorite Panel

If you wish to add a new favorite panel then you need to enter panel name.

Select Ethernet or desired COM Port. If Ethernet selected then provide the IP Address.

Enter unlock password. (This is the password that protects the project from downloading or reading. It is set during transfer to EZScada-Runtime from EZScada-Development.)

Enter username and password set up in remote user setup.

PLC Protocols Supported

Allen Bradley / Rockwell Automation:
A-B DF1 Half and Full Duplex (PLC-5, SLC500, Micrologix 1000, 1200 and 1500)
Micro800 CIP Serial
A-B Ethernet I/P (ControlLogix & CompactLogix)
A-B DF1 over Ethernet (for Micrologix & SLC 500 PLCs)

Automation Direct:
ADC K-Sequence (Direct Logic PLCs)
Do-More PLC (Serial & Ethernet)
Modbus (Productivity 3000 PACs, Direct Logic PLCs, Click PLCs)
ECOM Ethernet (Direct Logic PLCs)
Entivity Think&Do (Modbus RTU and Modbus TCP/IP)
EZAutomation:
EZPLC TCP/IP
EZPLC
EZRack TCP/IP
EZRack

GE:
GE SRTP over Ethernet

Modicon / Schneider:
Modbus TCP/IP

Omron:
Modbus TCP/IP

Siemens:
Siemens Ethernet ISO over TCP/IP