Quick Start Manual

PV800 Reporting

PV800-REPORT-QS001-EN-SEPT-2025

Sharadsoft

Contents

End-User License Agreement (EULA)

End-User License Agreement (EULA) for Software developed by Sharadsoft

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Introduction

We are excited to introduce our new Report Designer, developed with a focus on fulfilling your specific reporting requirements. While this tool offers the essential functionality you need, please note that it is designed to provide a streamlined and user-friendly experience rather than compete with feature-rich professional report designers.

Key Highlights:

1. Simplicity and Efficiency: Our Report Designer is built to offer a straightforward and efficient way to generate reports without the complexity often associated with professional tools.
2. Tailored to Your Needs: We have prioritized the features most relevant to your reporting requirements, ensuring the tool meets your specific needs without overwhelming you with unnecessary options.
3. Ease of Use: The intuitive interface enables quick and easy report creation, making it accessible to users with minimal technical expertise.
4. Focused Functionality: While it may not have all the advanced features of professional report designers, our tool is enough to handle your reporting tasks effectively.

We understand that you may compare our Report Designer with more comprehensive professional alternatives. It's essential to recognize that our tool is designed to provide the necessary functionality for your reporting needs, with a focus on simplicity and ease of use. This approach allows us to deliver a solution that is both cost-effective and user-friendly.

Important User Information

- The points and notes mentioned in this manual are based on our sole understanding and the data available to us as of September 23, 2025. Please be aware that interpretations or meanings may vary. Kindly refer to the respective third-party manuals or documentation for further clarification or detailed information.
- The report page will be A4 size only.
- The left & top margin on the report page is fixed, i.e., 20 mm
- The drawing unit in CEDataReportDesigner is measured in millimeters (mm) only.
- Each control in CEDataReportDesigner will initially appear at the X=10, Y=10 location.
- CEDataReportPreview is intended for testing report formats only. Please note that the report print drivers used while scripting differ for CEDataReportPreview & CEDataReport due to driver limitations. The report format may vary if compared.
- This release features report retrieval functionality based on start and end times with an interval.
- Images used in the HMI demo application are for demo purposes only and are licensed by Sharadsoft for use in applications developed by Sharadsoft. To maintain optimal CPU performance, avoid using multiple images within the application. Excessive image usage can lead to increased processing demands, potentially impacting overall application efficiency.
- Please keep in mind the CPU performance, Resource constraints, Real-time processing, and Power consumption of the HMI while designing & deploying the reporting functionality on the HMI.
- Do not trigger multiple processes, such as Report view, CSV to Database data update, or Database management, at the same time. Allow time for one process to complete its execution successfully and then trigger the second process.
- Even though SQLite can store more data, please limit the data storage capacity in live databases by implementing SOP for data management. For example, take a backup and then clear the data of the live database using the 'CEDataMgmt' application on fixed intervals, such as every 7, 15, 30, 60, or 90 days, depending on the actual live database size and your process.
- Reporting utilities developed for HMI are scripted to trap errors; however, if any error occurs, the HMI terminal should be restarted after resolution. Such an error may turn off running services on HMI, such as the Alarm log service.
- An industrial MicroSD card offers superior durability and temperature tolerance compared to standard cards, crucial for demanding automation environments where data integrity and reliable operation are essential. Rockwell has an industrial micro-SD card with Catalog number 2080-SD-2GB
- This utility supports the generation of Analog Data Reports and Alarm Reports. Audit Trail Reports are currently not available.
- Refer to the YouTube video on ‘PanelView 7 Performance (Series B) HMI Reporting’ for guidance on using CEDataReportDesigner. However, ensure you use only the CEDataReportDesigner and CEDataReportPreview tools provided in the ‘PV800Report’ folder
- For most industrial applications, a 1-minute logging interval combined with minute-based report retrieval is the preferred and optimal configuration. This approach balances performance, storage efficiency, and readability—especially for long-duration monitoring and periodic diagnostics. Note: Using 1-second intervals may increase storage usage and processing time.

- For data logging and related operations, Micro SD storage is preferred over USB storage due to better reliability.
- Do not remove the Micro SD card while the PanelView 800 is powered on, as this may lead to data corruption or system instability.
- In short, first flash the firmware of the HMI terminal first, then configure the basic settings of the HMI terminal, use USB Storage to initial setup of the report supporting files, power off HMI and insert SD card and power on the HMI, download the HMI application, enable data log, simulate alarms, turn off data log, export alarm log, export logged data to local database and finally check the reports.
- Ensure 'CEService' is started during initial HMI terminal boot up process. You will see pop up of 'CEService' named small window at top left corner of the HMI terminal. MicroSD card must be present to run this 'CEService' app since it is executed from the MicroSD card.

Prerequisites

System requirement-Hardware & Software

	Firmware/Software Revision Used
HMI Terminal-PanelView 800	8.14
HMI App Development Software	Connected Component Workbench V23
Windows Operating System	Windows 10 Pro / Windows 11 Pro
Dot Net Framework	4.8.1
Workstation RAM	8 GB or more (Preferred 16GB)
Sharadsoft Software	1.00.00
Network Printer, A4 Paper	Print Language: PCL 5/5e *2 (Preferred HP makes *1)

Note:

1. We have tested the above application on HP make LaserJet Pro M403n, M405n, M4004dn
2. Check for 'PCL 5'/' PCL 5e' in HP printer specification before purchasing the printer.

Sharadsoft software details

Description	Activation	Functionality	Manual intervention /Trigger using PLC bit
CEDataReport *3 (HMI Level)	Requires *1	View, Save & Print report from HMI	Manual intervention required
CEDataAlarmExport (HMI Level)	Free with CEDataReport	Alarm log export from Internal log to HMI internal memory	Can be triggered using PLC bit
CEDataCSVReader *4 (HMI Level)	Requires *1	Read data from CSV files & stored it in SQLite database on HMI	Can be triggered using PLC bit
CEDataMgmt (HMI Level)	Free with CEDataReport	Manage SQLite databases like database backup, clearing, etc.	Manual intervention required
CEFileMgmt (HMI Level)	Free with CEDataReport	Manage report files like transfer file from SD Storage to USB Storage on HMI itself. Delete report files from SD Storage.	Manual intervention required
CEDataClear (HMI Level)	Free with CEDataReport	SQLite database clearing	Can be triggered using PLC bit
CETimeSync (Optional) *5 (HMI Level)	Requires *2	Time sync between NTP server & HMI	Can be triggered using PLC bit
CEDataReportDesigner (PC Level)	Free until further notice	Design HMI Report Templates	NA
CEDataReportPreview (PC Level)	Free until further notice	Preview designed HMI Report	NA

Note:

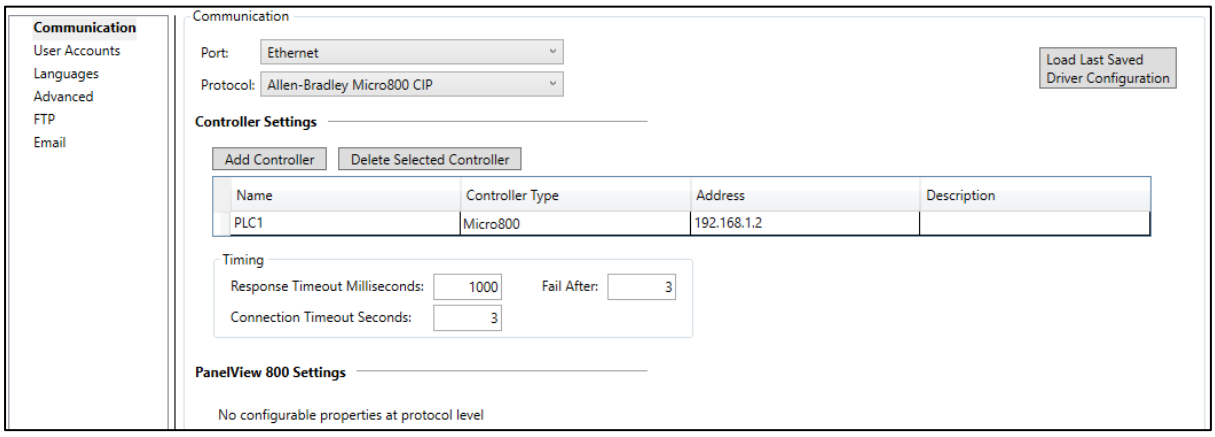
1. CEDataReport & CEDataCSVReader have a common activation key
2. CETimeSync is a separate purchase and requires a separate activation key
3. Without activation, it will print 'Sample Print' as a watermark on the report
4. Without activation, it will keep only today's data
5. Without activation, it will trigger 50 successful time synchronization

Section1: Configuration of HMI Application

Your first step will be creating the HMI application using HMI application development software. Configure the different parts of the application as follows:

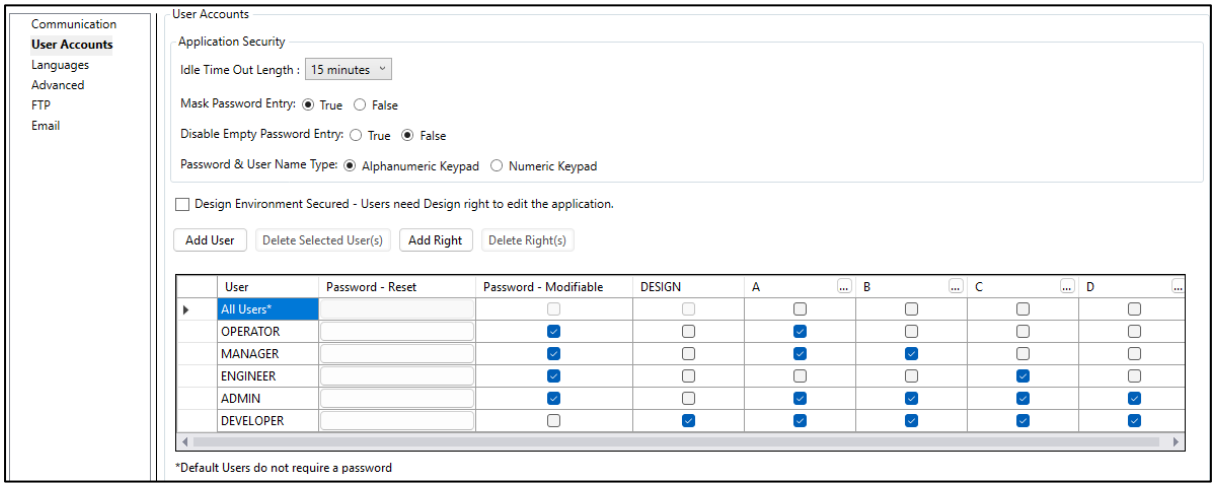
Configuration-Communication

Configure the controller settings as per your requirements. The reference snap is shown below.



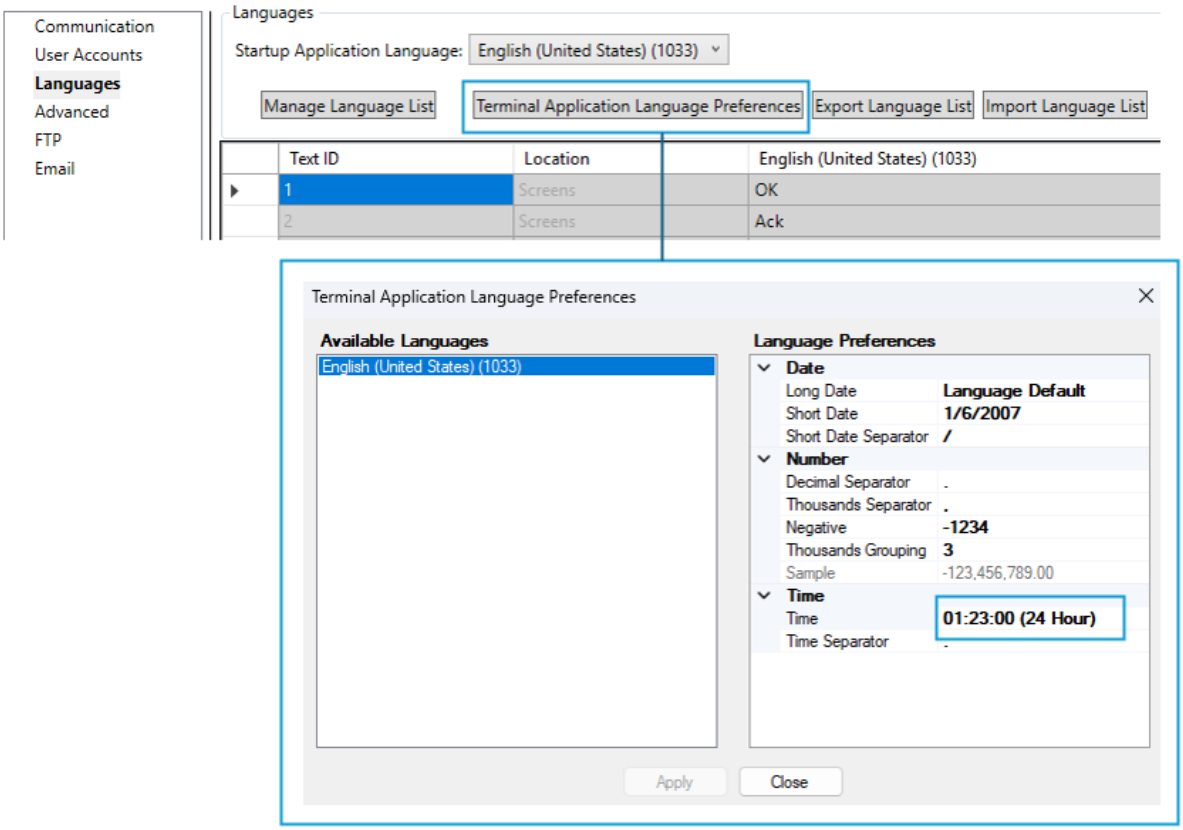
Configuration-User Accounts

Configure the users under User Accounts. Add ‘Rights’ and assign to the users as per your application requirements.



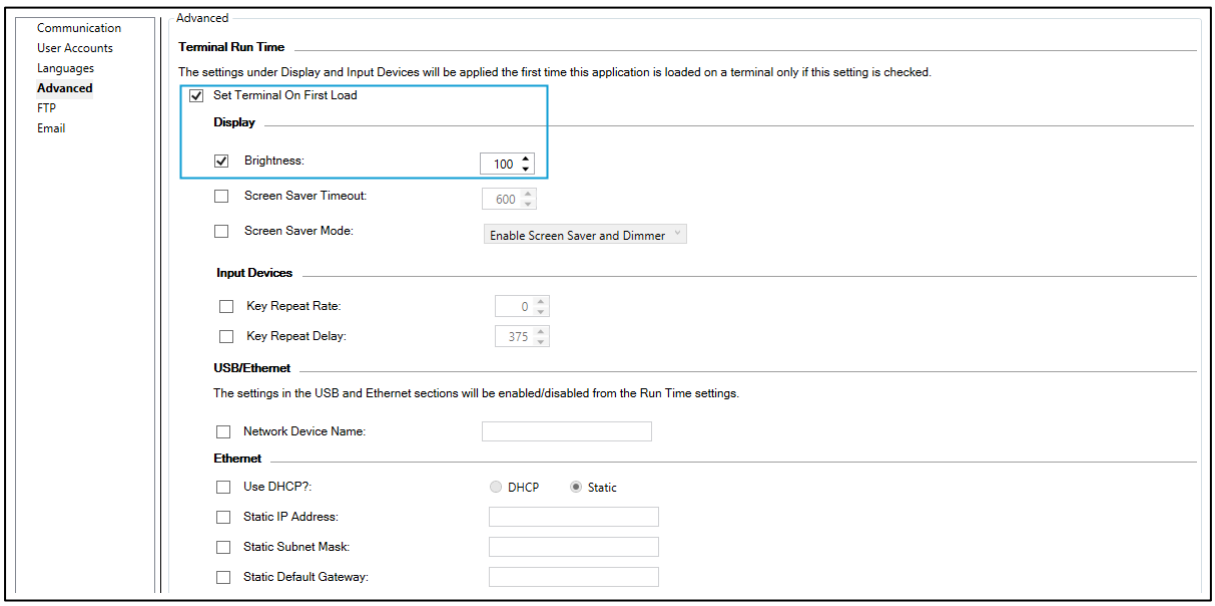
Configuration-Languages

Configure the time as a 24-hour format in Languages→Terminal Application Language Preferences→Time



Configuration-Advanced

Configure the terminal run-time settings using the 'Advanced' tab, as shown below.



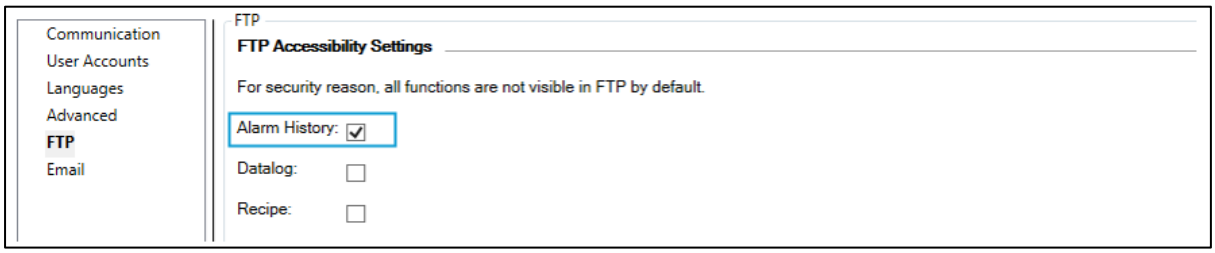
Important Note: Do not set the brightness value from 81 to 99, as it is reserved for third-party applications triggered in our utility scripting.

Brightness value and relevant triggers are shown below.

```
{ 91, @"\SD Storage\Sharadsoft\Release\CEDataAlarmExport.exe" },
{ 92, @"\SD Storage\Sharadsoft\Release\CEDataCSVReader.exe" },
{ 93, @"\SD Storage\Sharadsoft\Release\CEDataReport.exe" },
{ 94, @"\SD Storage\Sharadsoft\Release\CEFileMgmt.exe" },
{ 95, @"\SD Storage\Sharadsoft\Release\CEDataMgmt.exe" },
{ 96, @"\SD Storage\Sharadsoft\Release\CEDataClear.exe" },
{ 97, @"\SD Storage\Sharadsoft\Release\CETimeSync.exe" },
```

Configuration-FTP

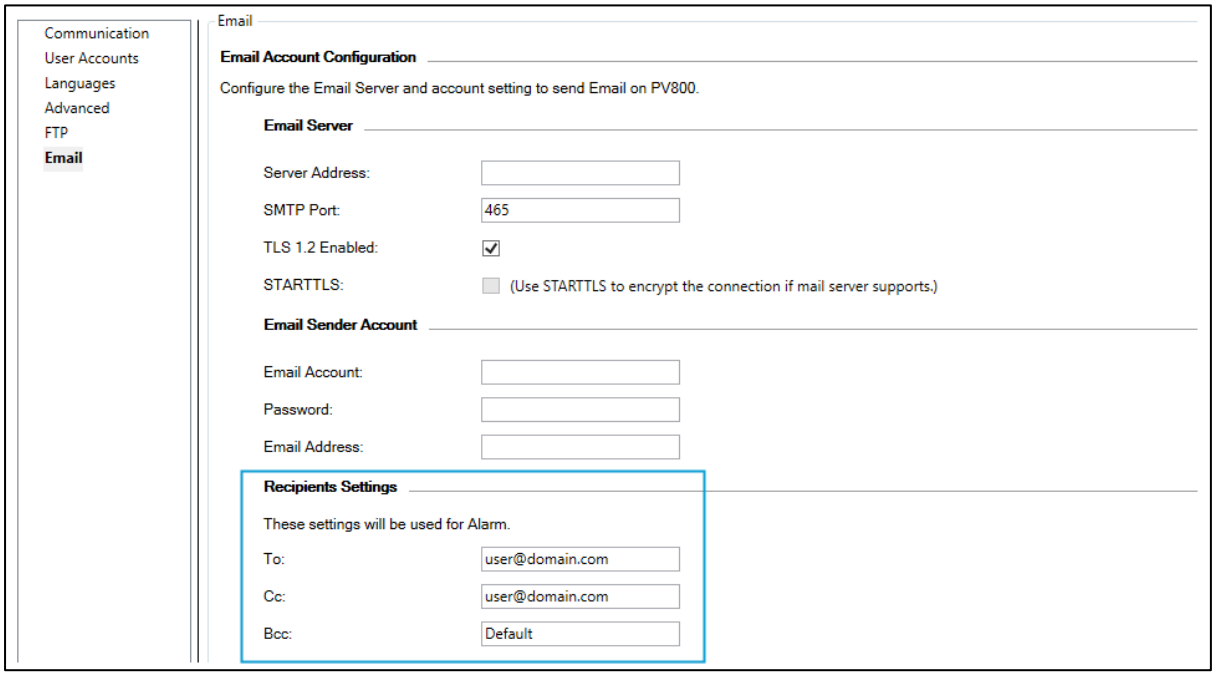
Enable the 'Alarm History' option in FTP accessibility settings. It is useful to export the alarm log from the internal log to the HMI's internal memory.



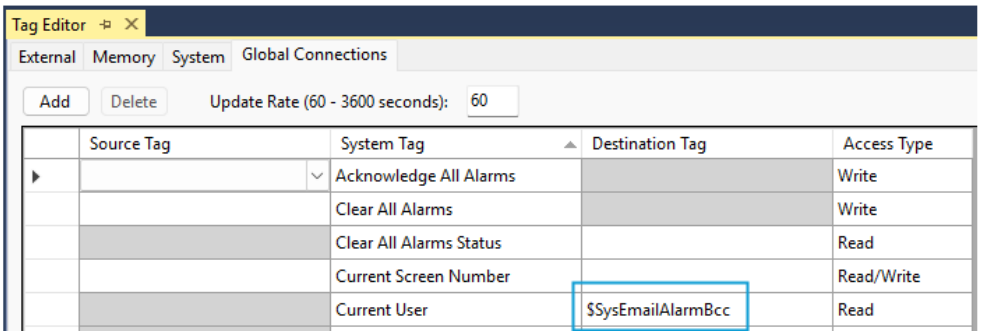
Important Note: At any given time, only one connection is supported for HMI FTP.

Configuration-Email Account

Configure the Email account settings as shown below. It is helpful to get the current username of the HMI running application.



Assign the 'Recipients Settings-Bcc' system tag to the' Current User' destination tag in global connections, as shown below.

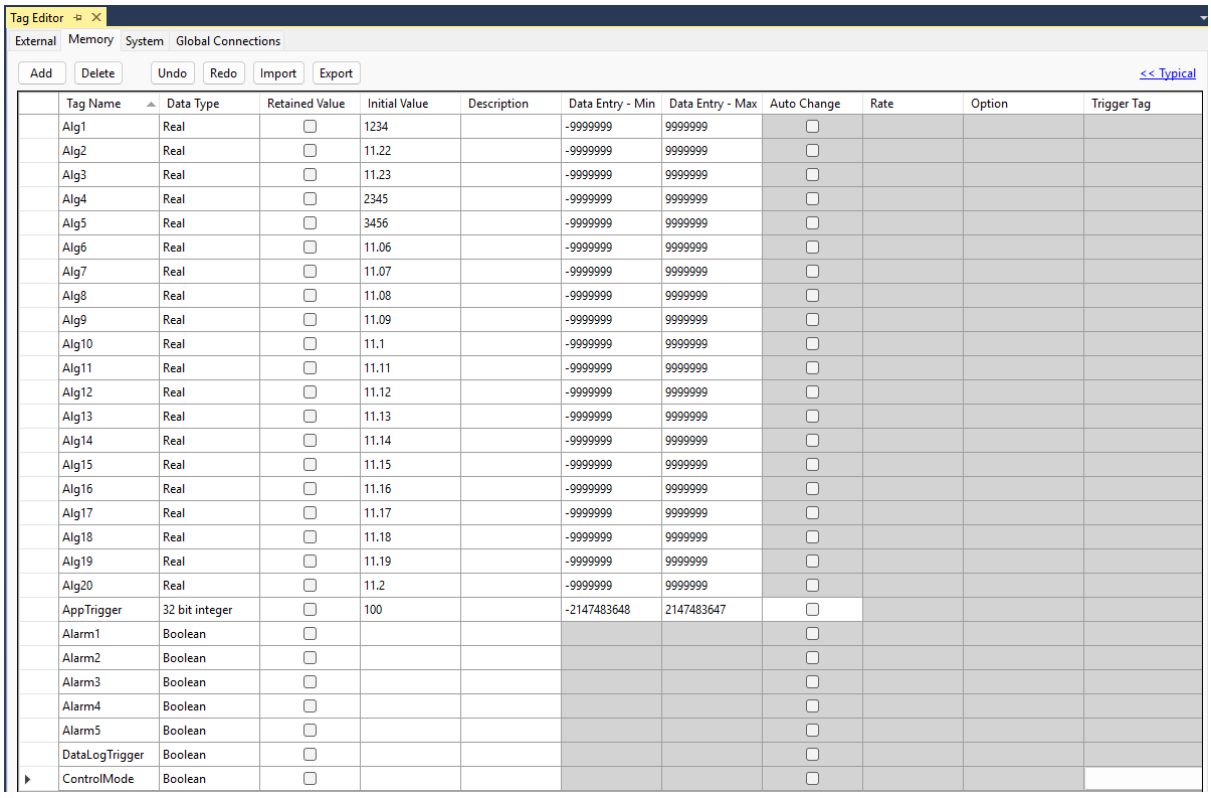


Configuration-Tag Editor

Configure the HMI Tags as shown in the snap below.

You can export the memory tags from the demo application's Tags database and import it into your application. In the demo application, all tags are ‘Memory’ type to avoid controller requirements during HMI report concept testing.

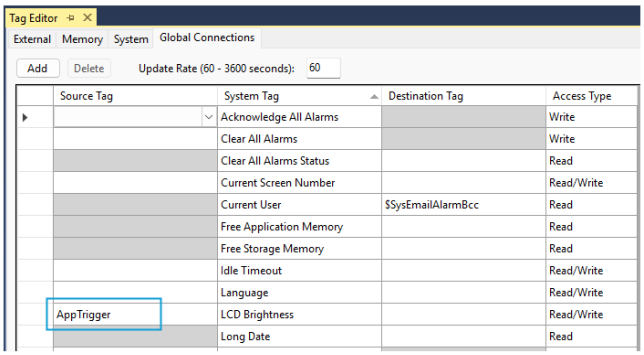
After understanding HMI's whole report generation process, you can decide which tags can be referenced directly and which tags can be referenced as HMI tags.



Tag Name	Data Type	Retained Value	Initial Value	Description	Data Entry - Min	Data Entry - Max	Auto Change	Rate	Option	Trigger Tag
Alg1	Real	☐	1234		-9999999	9999999	☐			
Alg2	Real	☐	11.22		-9999999	9999999	☐			
Alg3	Real	☐	11.23		-9999999	9999999	☐			
Alg4	Real	☐	2345		-9999999	9999999	☐			
Alg5	Real	☐	3456		-9999999	9999999	☐			
Alg6	Real	☐	11.06		-9999999	9999999	☐			
Alg7	Real	☐	11.07		-9999999	9999999	☐			
Alg8	Real	☐	11.08		-9999999	9999999	☐			
Alg9	Real	☐	11.09		-9999999	9999999	☐			
Alg10	Real	☐	11.1		-9999999	9999999	☐			
Alg11	Real	☐	11.11		-9999999	9999999	☐			
Alg12	Real	☐	11.12		-9999999	9999999	☐			
Alg13	Real	☐	11.13		-9999999	9999999	☐			
Alg14	Real	☐	11.14		-9999999	9999999	☐			
Alg15	Real	☐	11.15		-9999999	9999999	☐			
Alg16	Real	☐	11.16		-9999999	9999999	☐			
Alg17	Real	☐	11.17		-9999999	9999999	☐			
Alg18	Real	☐	11.18		-9999999	9999999	☐			
Alg19	Real	☐	11.19		-9999999	9999999	☐			
Alg20	Real	☐	11.2		-9999999	9999999	☐			
AppTrigger	32 bit integer	☐	100		-2147483648	2147483647	☐			
Alarm1	Boolean	☐					☐			
Alarm2	Boolean	☐					☐			
Alarm3	Boolean	☐					☐			
Alarm4	Boolean	☐					☐			
Alarm5	Boolean	☐					☐			
DataLogTrigger	Boolean	☐					☐			
ControlMode	Boolean	☐					☐			

In this report release, you **must** assign the Alg1 to Alg20 analog tags to the trend data log mechanism, as the script is written for all 20 tags. If your reporting requirement is only 10 tags, then assign zero value to the remaining tags, i.e., Alg11 to Alg20.

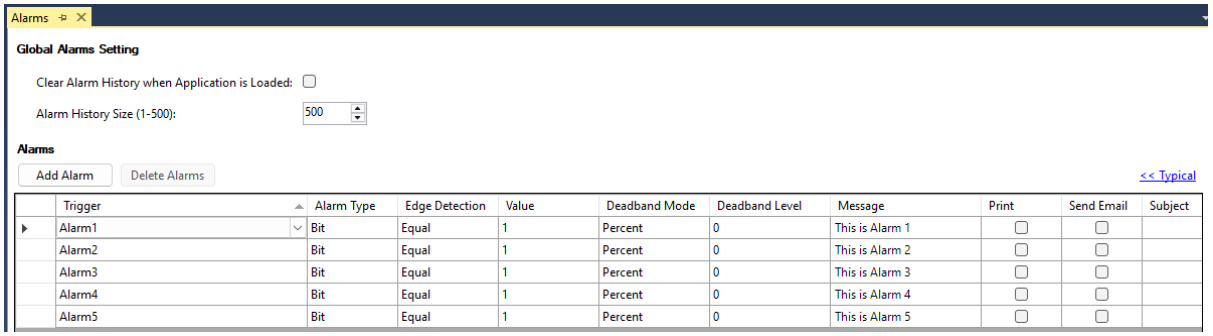
We are using ‘AppTrigger’ tag to write the brightness value of the HMI. Assign this tag to ‘LCD Brightness’ source tag connection as shown below.



Source Tag	System Tag	Destination Tag	Access Type
	Acknowledge All Alarms		Write
	Clear All Alarms		Write
	Clear All Alarms Status		Read
	Current Screen Number		Read/Write
	Current User	$SysEmailAlarmBcc	Read
	Free Application Memory		Read
	Free Storage Memory		Read
	Idle Timeout		Read/Write
	Language		Read/Write
AppTrigger	LCD Brightness		Read/Write
	Long Date		Read

Configuration-Alarm Setup

Configure the alarms in 'Global Alarms Setting' as shown below. Set 'Alarm History Size' to 500. 'Clear Alarm History when Application is Loaded' checkbox must be unchecked.



Trigger	Alarm Type	Edge Detection	Value	Deadband Mode	Deadband Level	Message	Print	Send Email	Subject
Alarm1	Bit	Equal	1	Percent	0	This is Alarm 1	☐	☐	
Alarm2	Bit	Equal	1	Percent	0	This is Alarm 2	☐	☐	
Alarm3	Bit	Equal	1	Percent	0	This is Alarm 3	☐	☐	
Alarm4	Bit	Equal	1	Percent	0	This is Alarm 4	☐	☐	
Alarm5	Bit	Equal	1	Percent	0	This is Alarm 5	☐	☐	

Important Note: Avoid the use of a comma in message text.

HMI Screens-Startup Screen

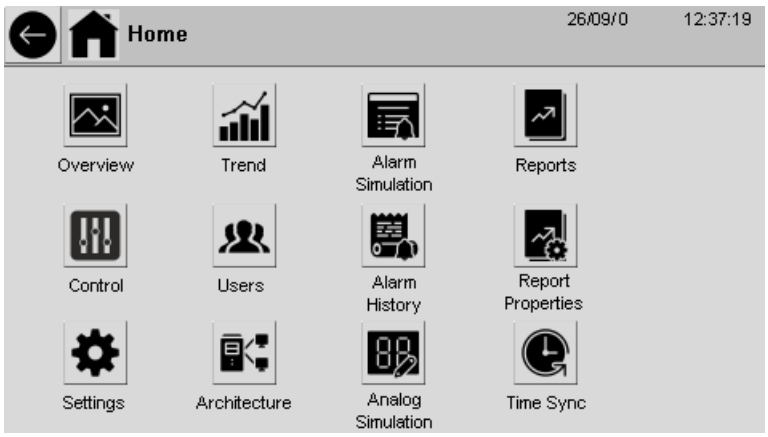
Create a screen that you want to display at power-up of the HMI terminal. We have created a screen called 'StartupScreen' and set it as the startup screen in our demo application.

In above screen, you can perform the login/logout of the user. The Home button will direct you to the main menu screen, and the Info button will display terminal information. Note that not all displays are secured for the ease of PV800 reporting concept testing.

'SystemInfo' screen is designed to indicate hardware & software details used for this application. Use 'HMI Configuration' button to access the terminal configuration default screen.

HMI Screens-Home Screen

The home screen will be useful for navigating different sections of the application.

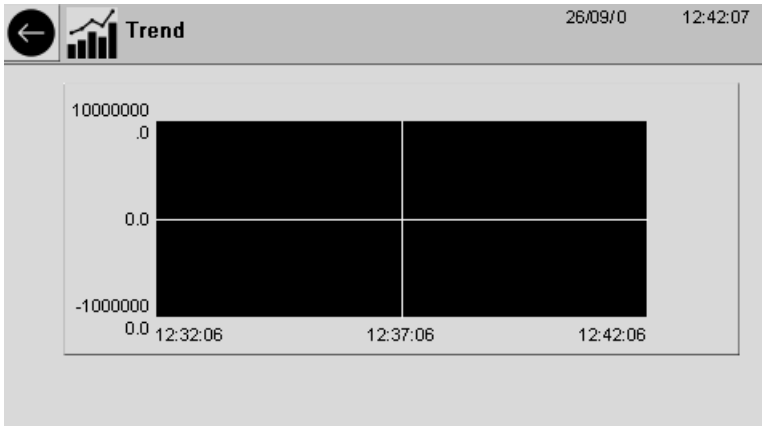


HMI Screens-Overview Screen

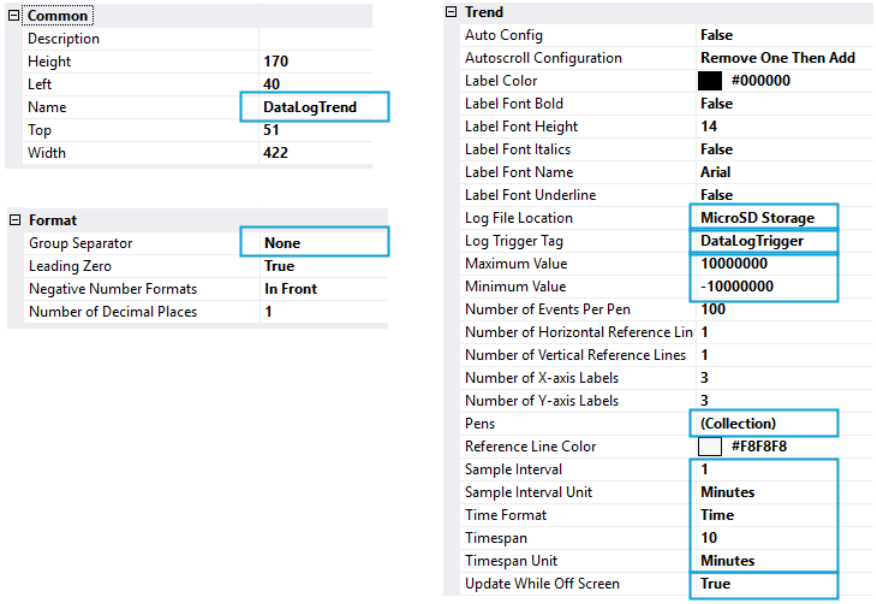
You can enable/disable the data log from this overview screen.

HMI Screens-Trend Screen

The trend screen is essential for configuring the analog data log. Note that you can use the data log functionality for only one trend.



Set the trend properties as shown in the following snap.



Common	
Description	
Height	170
Left	40
Name	DataLogTrend
Top	51
Width	422

Format	
Group Separator	None
Leading Zero	True
Negative Number Formats	In Front
Number of Decimal Places	1

Trend	
Auto Config	False
Autoscroll Configuration	Remove One Then Add
Label Color	#000000
Label Font Bold	False
Label Font Height	14
Label Font Italics	False
Label Font Name	Arial
Label Font Underline	False
Log File Location	MicroSD Storage
Log Trigger Tag	DataLogTrigger
Maximum Value	10000000
Minimum Value	-10000000
Number of Events Per Pen	100
Number of Horizontal Reference Lin	1
Number of Vertical Reference Lines	1
Number of X-axis Labels	3
Number of Y-axis Labels	3
Pens	(Collection)
Reference Line Color	#F8F8F8
Sample Interval	1
Sample Interval Unit	Minutes
Time Format	Time
Timespan	10
Timespan Unit	Minutes
Update While Off Screen	True

Important Note:

1. Trend name must be ‘DataLogTrend’,
2. Group separator must be ‘None’,
3. Log File Location must be ‘MicroSD Storage’
4. Update While Off Screen must be True

If you want the print interval unit in the reporting utility to be 'Minute', then set 'Sample Interval' to 1, ‘Sample Unit’ to 'Minute', and set 'PrintIntervalUnit' to 1 in the Settings.xml file.

If you want the print interval unit in the reporting utility to be 'Second', then set 'Sample Interval' to 1, ‘Sample Unit’ to 'Second', and set 'PrintIntervalUnit' to 0 in the Settings.xml file.

Note: Prefer to log data on a per-minute basis, as it will help keep the database size smaller, and in result, the retention period can be longer for the live database.

Any other value apart from '1' in ‘Sample Interval’ is not compatible with the reporting utility.

Pens Collection

Pens

Name : DataLogTrend
Type : Trend

Add Delete

	Read Tag	Appearance Line Color	Appearance Line Style	Appearance Line Width	Visibility
01	Alg1		Solid Line	1	False
02	Alg2		Solid Line	1	False
03	Alg3		Solid Line	1	False
04	Alg4		Solid Line	1	False
05	Alg5		Solid Line	1	False
06	Alg6		Solid Line	1	False
07	Alg7		Solid Line	1	False
08	Alg8		Solid Line	1	False
09	Alg9		Solid Line	1	False
10	Alg10		Solid Line	1	False
11	Alg11		Solid Line	1	False
12	Alg12		Solid Line	1	False
13	Alg13		Solid Line	1	False
14	Alg14		Solid Line	1	False
15	Alg15		Solid Line	1	False
16	Alg16		Solid Line	1	False
17	Alg17		Solid Line	1	False
18	Alg18		Solid Line	1	False
19	Alg19		Solid Line	1	False
20	Alg20		Solid Line	1	False

All 20 pens **must be** assigned for data log. If your reporting requirements involve only 10 tags, then assign the remaining 10 tags as memory tags with a zero value.

Prepare the parameters mapping table with respect to the report column as follows:

Report Column Name	Process Parameter Name
Alg1	Process Temperature
Alg2	Process Flow
…	…
Alg20	Process Pressure

The data log will remain active until the 'DataLogTrigger' tag value remains '1'. You can stop the data log by setting the 'DataLogTrigger' tag value to '0' when the data log is no longer required. It will help to keep the database size smaller.

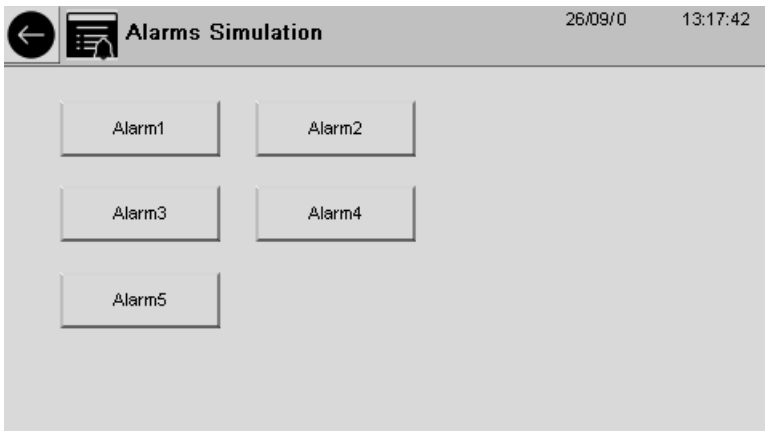
The data log file on SD Storage will look like the one shown below.

PV800101_DataLogTrend_Datalog.csv

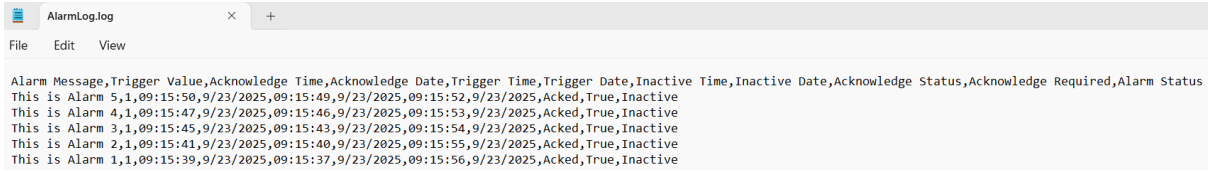
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Time	Date	Alg1	Alg2	Alg3	Alg4	Alg5	Alg6	Alg7	Alg8	Alg9	Alg10	Alg11	Alg12	Alg13	Alg14	Alg15	Alg16	Alg17	Alg18	Alg19	Alg20
2	09:16:10	9/23/2025	1234	11.220000	11.229999	2345	3456	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
3	09:17:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
4	09:18:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
5	09:19:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
6	09:20:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
7	09:21:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
8	09:22:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
9	09:23:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
10	09:24:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
11	09:25:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
12	09:26:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137
13	09:27:10	9/23/2025	11.0100	11.220000	11.229999	11.039999	11.050000	11.060000	11.069999	11.079999	11.090000	11.100000	11.109999	11.119999	11.130000	11.140000	11.149999	11.159999	11.170000	11.180000	11.189999	11.199999809265137

HMI Screens-Alarm Simulation

The alarm simulation screen will be helpful for simulating alarms.



Alarm log will look as follows:



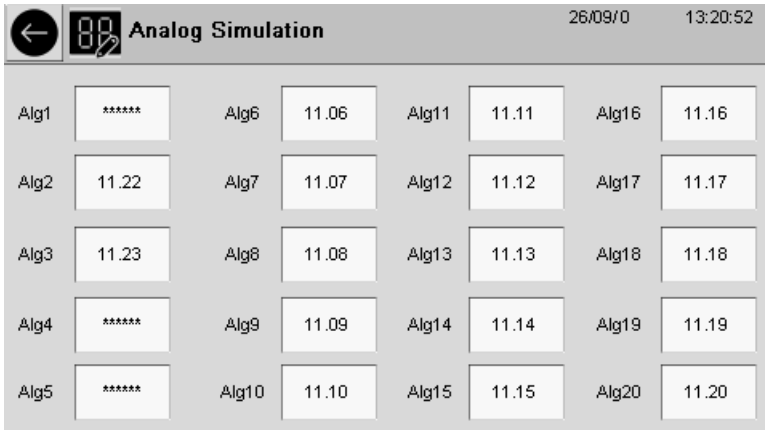
AlarmLog.log

File Edit View

```
Alarm Message,Trigger Value,Acknowledge Time,Acknowledge Date,Trigger Time,Trigger Date,Inactive Time,Inactive Date,Acknowledge Status,Acknowledge Required,Alarm Status
This is Alarm 5,1,09:15:50,9/23/2025,09:15:49,9/23/2025,09:15:52,9/23/2025,Acked,True,Inactive
This is Alarm 4,1,09:15:47,9/23/2025,09:15:46,9/23/2025,09:15:53,9/23/2025,Acked,True,Inactive
This is Alarm 3,1,09:15:45,9/23/2025,09:15:43,9/23/2025,09:15:54,9/23/2025,Acked,True,Inactive
This is Alarm 2,1,09:15:41,9/23/2025,09:15:40,9/23/2025,09:15:55,9/23/2025,Acked,True,Inactive
This is Alarm 1,1,09:15:39,9/23/2025,09:15:37,9/23/2025,09:15:56,9/23/2025,Acked,True,Inactive
```

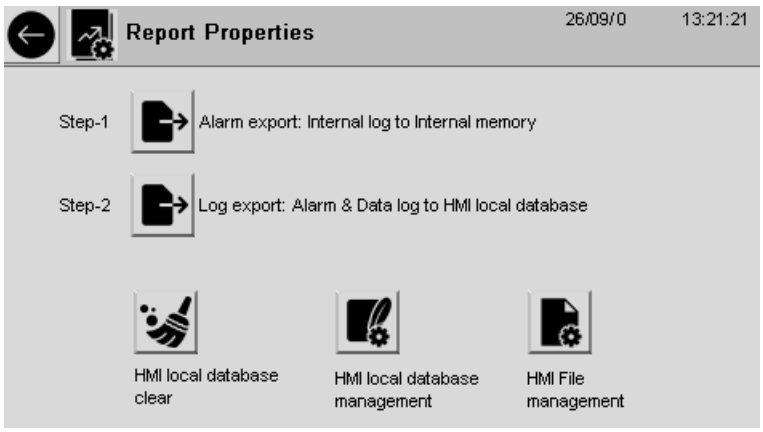
HMI Screens-Analog Simulation

The analog simulation screen will help simulate the analog values used for data logging.

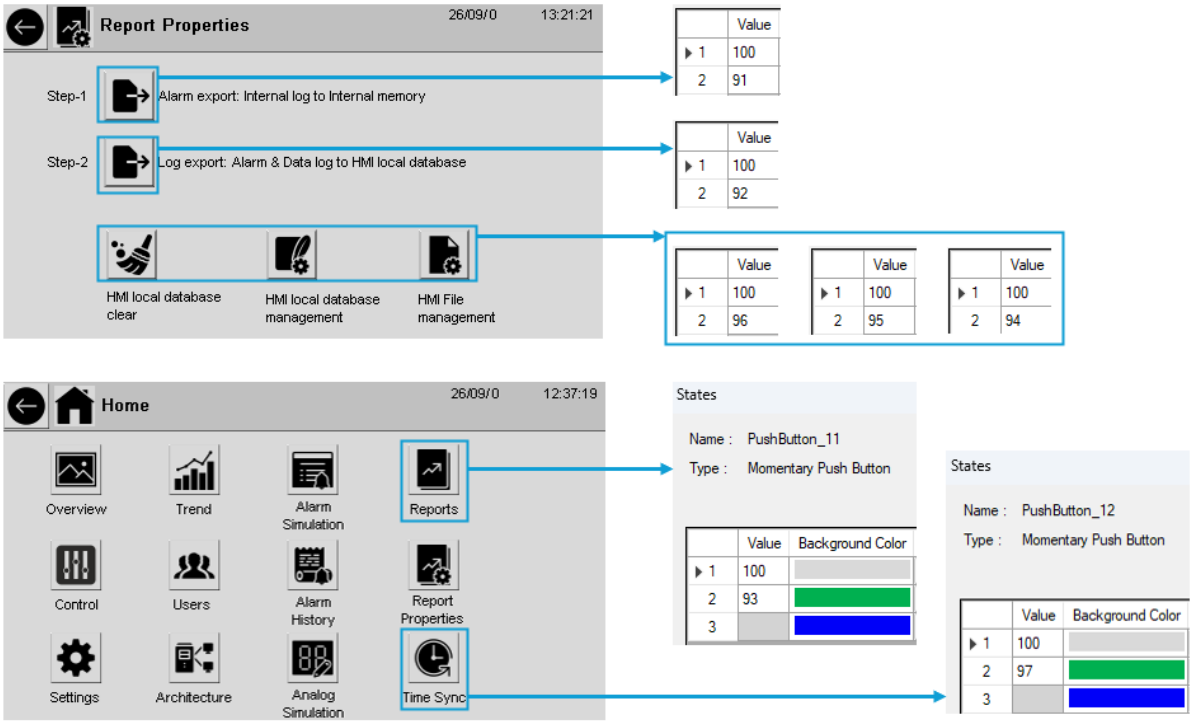


HMI Screens-Report Properties

'Report Properties' screen offers multiple options for the reporting-related work.



A momentary push button is used to trigger the reporting functionality of related executables. All buttons write the specific value to the 'AppTrigger' tag. Once it is written, it will automatically revert to 100.



'ReportProperties' screen is designed to understand the data flow diagram.

You can place the database management button on any secure screen, as per your application requirements.

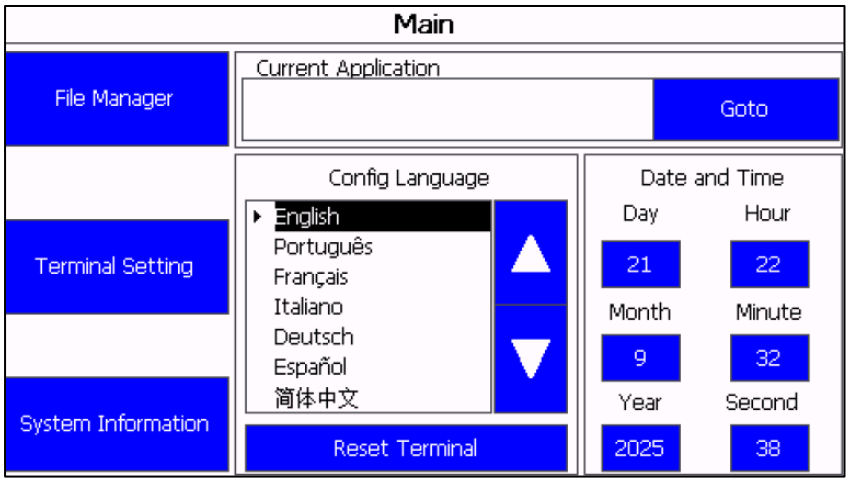
If you plan to clear the data using PLC bit, then the 'HMI Local Database Clear' button is not required. Ensure no parallel task is running relevant to SQLite database access while executing data clear or performing database management like 'Backup', 'Clear', 'Post Data Clear' etc.

Section2: Configuration of HMI

This section will prepare the HMI terminal for the application run.

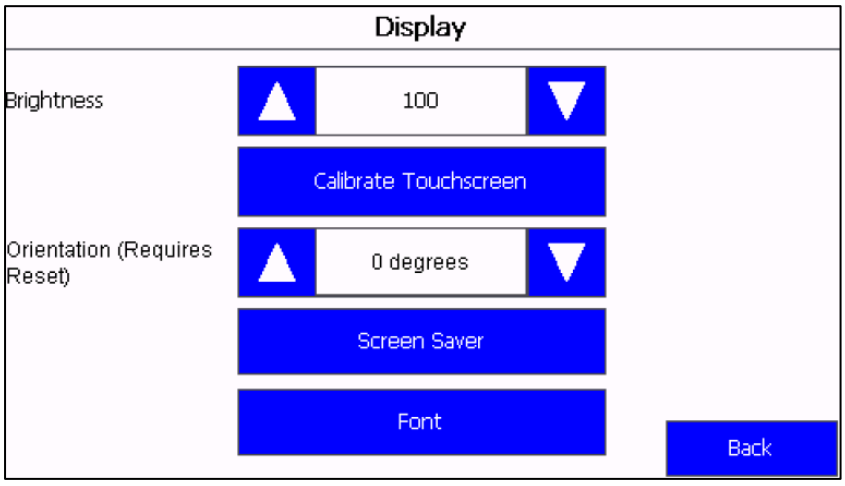
HMI Configuration-Main Configuration Screen

Now, set the basic settings of the HMI terminal using the 'Main' configuration option.



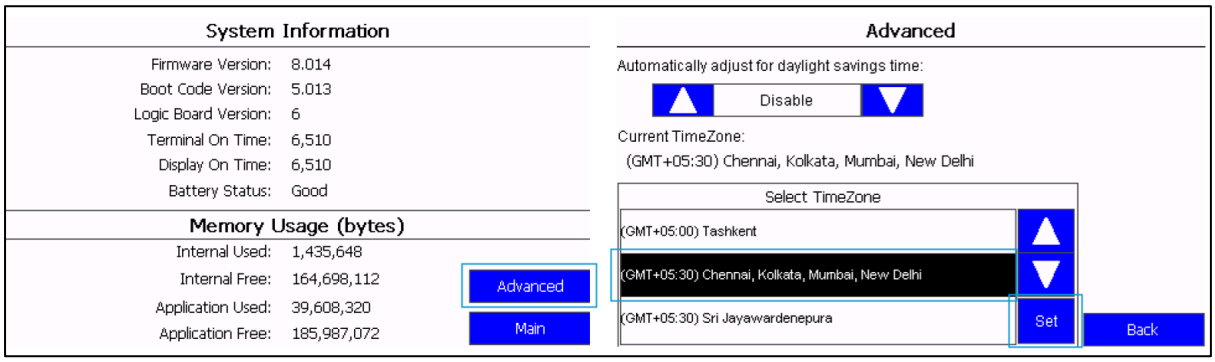
Terminal Setting-Display-Calibrate Touchscreen

To calibrate the HMI touchscreen, navigate to Terminal Settings and select the 'Display – Calibrate Touchscreen' option. Follow the on-screen prompts to complete the calibration process.



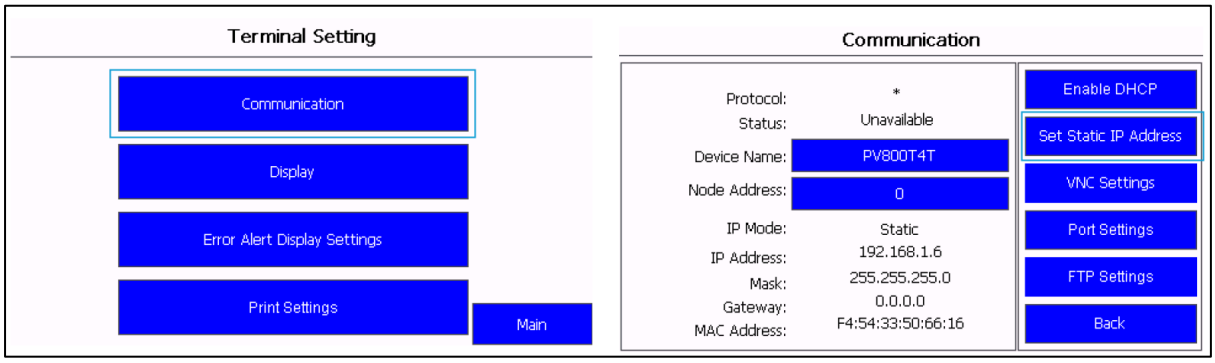
System Information-Advanced-Current Time Zone

Set the proper time zone according to the final installation location of the HMI.



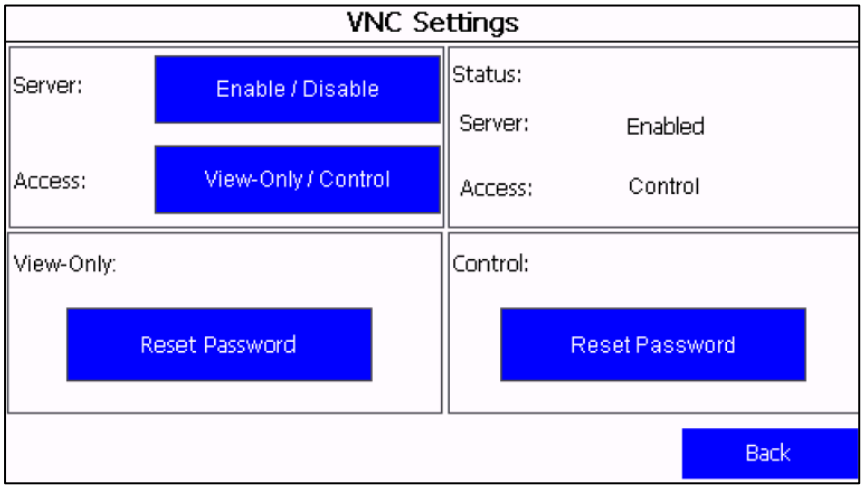
Terminal Setting-Communication-Set Static IP Address

Set the static IP address for the HMI terminal.



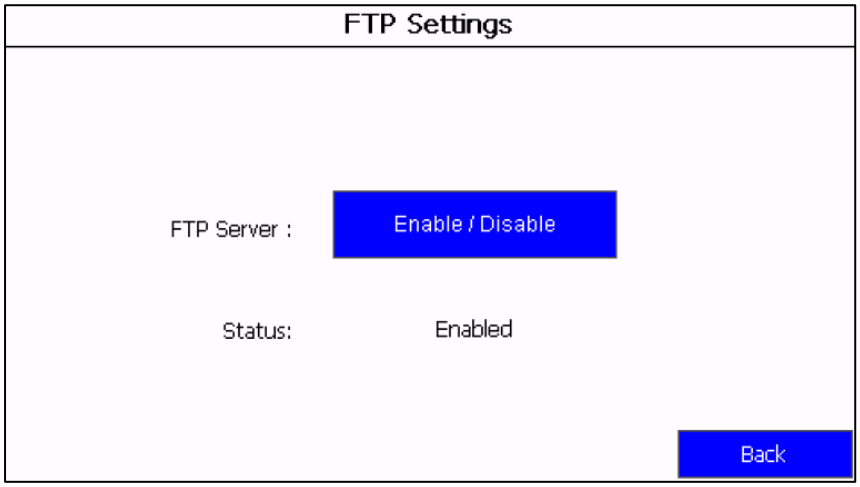
Terminal Setting-Communication-VNC Setting

To remotely access and control the HMI from a PC, enable the VNC server on the PanelView 800. Set the access level to ‘Control’ and configure a password that applies to both ‘View-only’ and ‘Control’ modes for secure connectivity.



Terminal Setting-Communication-FTP Setting

To successfully export the Alarm Log, ensure the FTP server is active on the PanelView 800 terminal.



Initial setup for PV800 reporting utility

Step 1: Prepare MicroSD Card

- Navigate to the downloaded files: PV800Report\HMI23092025\HMI\SD Storage

- Copy the entire Sharadsoft folder to your MicroSD card.

- Insert the MicroSD card into the PanelView 800 terminal only when the HMI is powered OFF.

  Do not insert or remove the MicroSD card while the HMI is powered ON.

Step 2: Prepare USB Storage

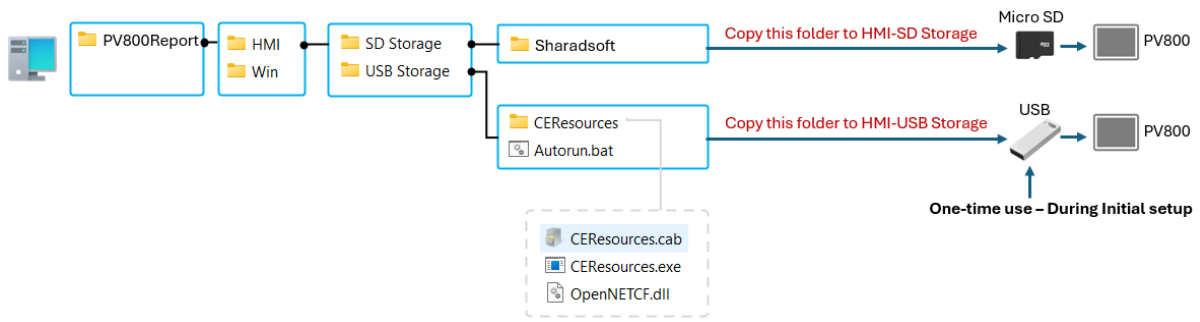
- Navigate to: PV800Report\HMI23092025\HMI\USB Storage

- Rename the file Autorun.txt to Autorun.bat.

- Copy both the CEResources folder and the renamed Autorun.bat file to your USB drive.

- Connect the USB drive to the PanelView 800 terminal while the HMI is powered ON.

- Follow the on-screen instructions to complete the basic setup process.

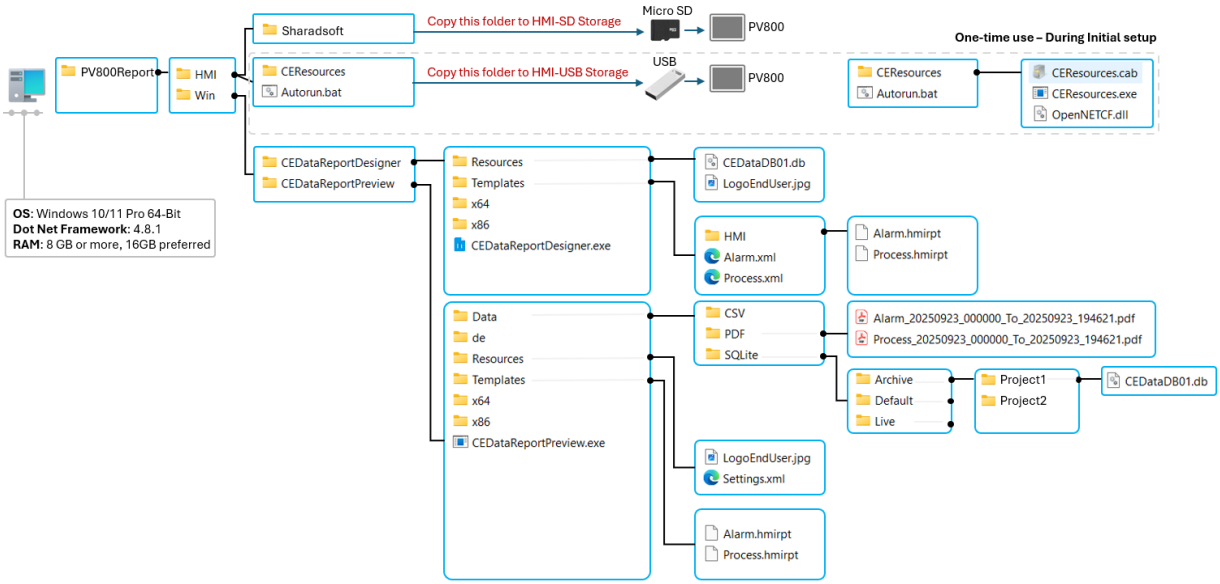


Section3: Configuration of Report-PC Level

In this section, we will design the report templates using the 'CEDataReportDesigner' software.

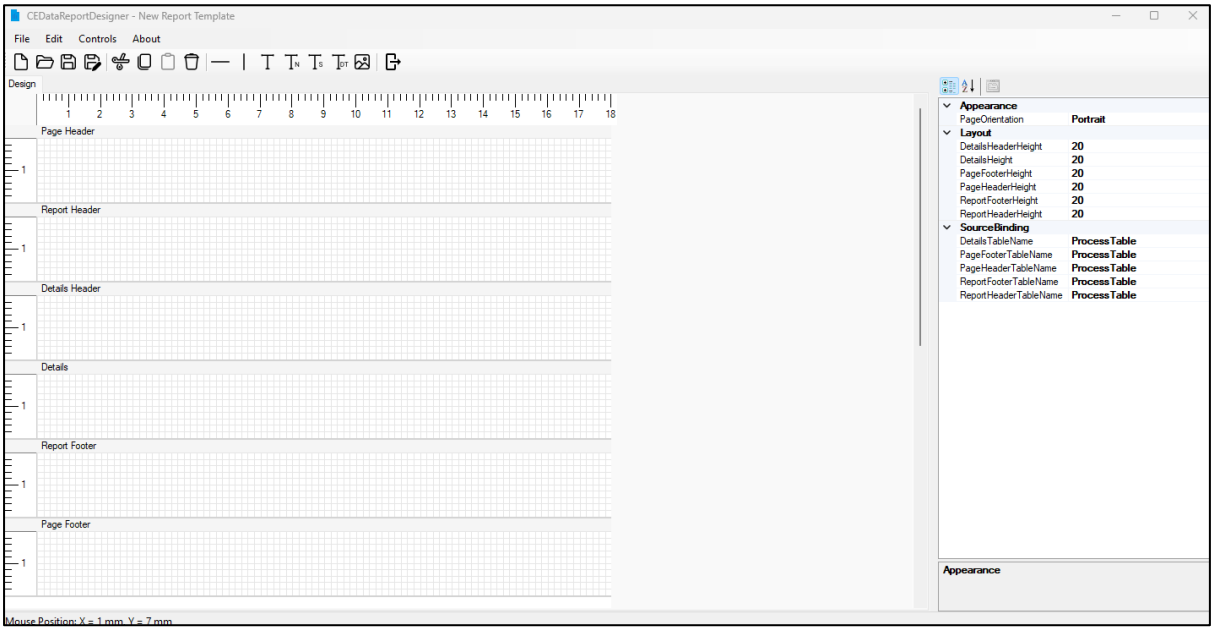
Insight-PC Level-Folder & File Structure

Please review the folder & file structure before proceeding with the report template design.



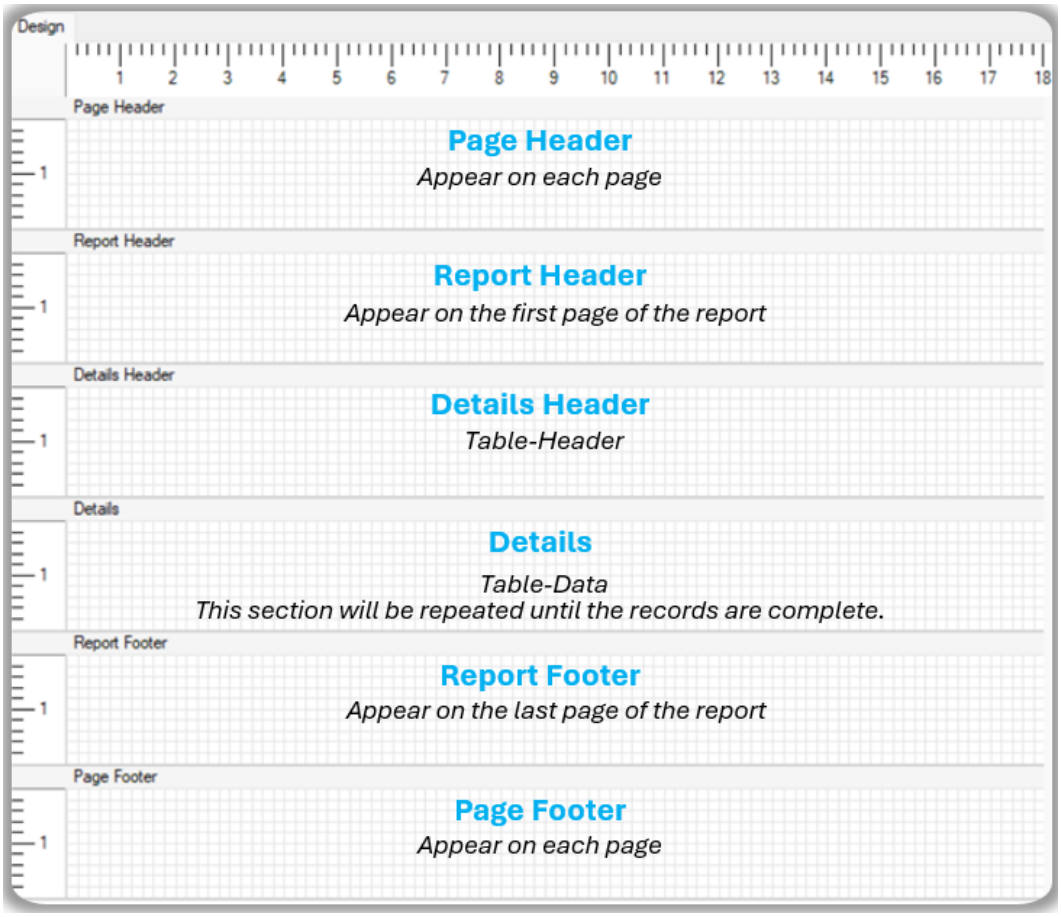
CEDataReportDesigner

Design Page First Look



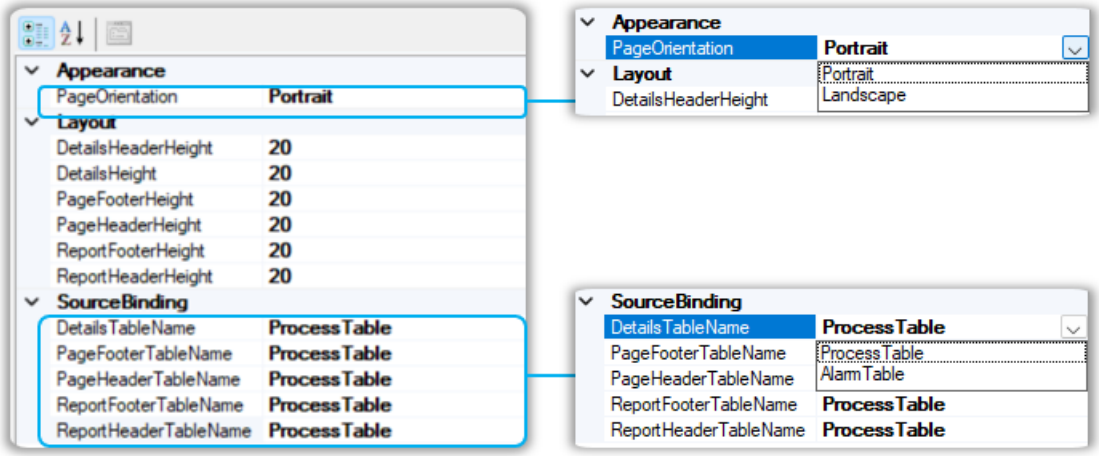
Design Page Sections

Understand the sections of the design page.



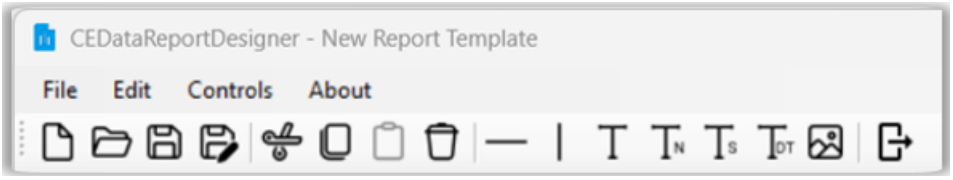
Page Orientation & Source Binding

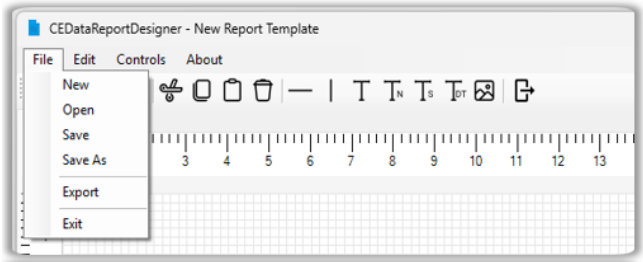
First, you need to set the report template's page orientation (Portrait/Landscape). Note that, in both cases, the left & top margins will be fixed, i.e., 20 mm. The design page drawing unit is measured in millimeters (mm) only. 'Details Header' section content will always be static. The remaining section's content can be dynamic and hence bind the data source for each section at Design Page Properties → Source Binding

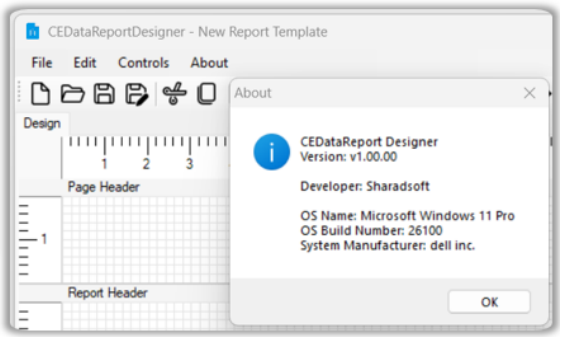


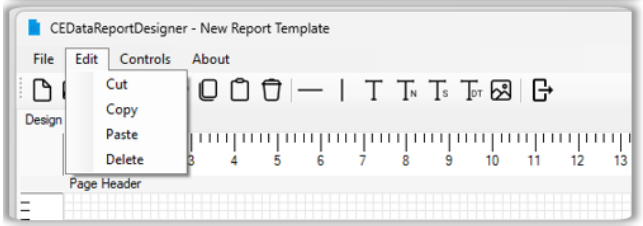
Menu & Toolbar

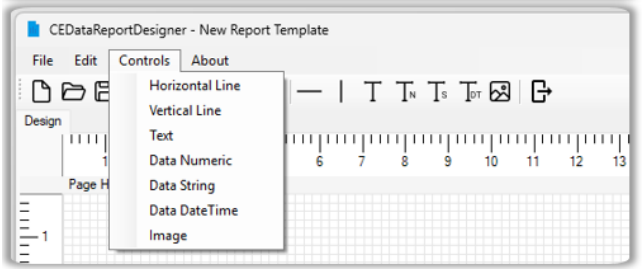
You can design the report template with the help of the Menu/Toolbar. Keyboard shortcut keys are unavailable for cut/copy/paste/delete functionality in this report designer release.







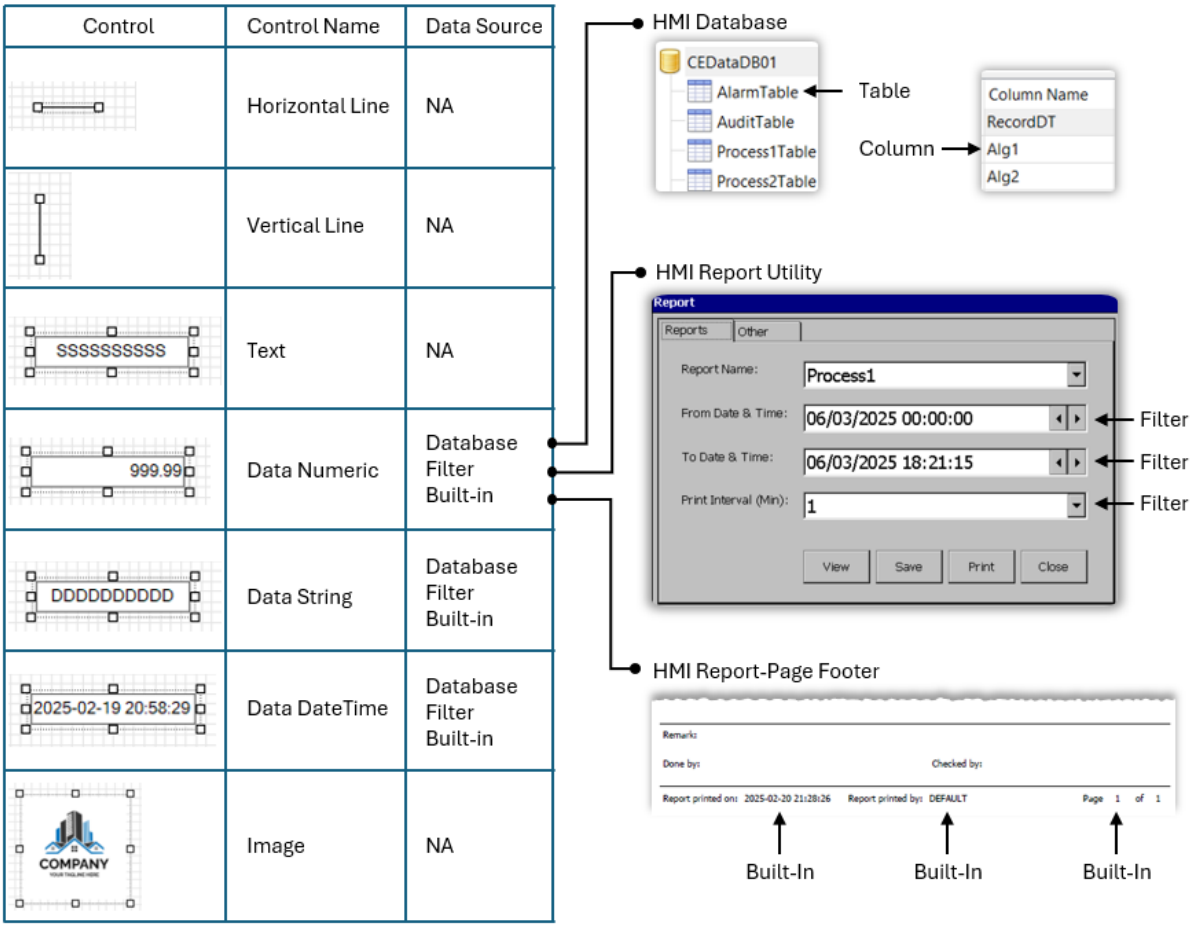




Menu/Tool	Menu/Tool Name	Function
	New	Create a new report template
	Open	Open the existing report template
	Save	Save a report template
	Save As	Save as a report template
	Cut	Cut the control
	Copy	Copy the control
	Paste	Use the paste function to insert the Cut/Copied control
	Delete	Delete the control
	Export	Export the report template to a file that is compatible with HMI

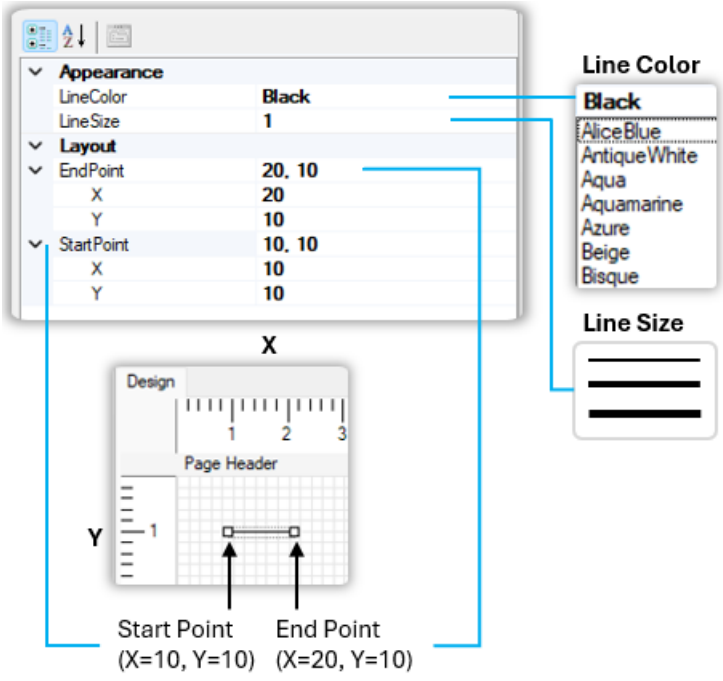
Controls available for template design are as follows:

Control	Control Name	Data Source
	Horizontal Line	NA
	Vertical Line	NA
SSSSSSSSS	Text	NA
999.99	Data Numeric	Database Filter Built-in
DDDDDDDDD	Data String	Database Filter Built-in
2025-02-19 20:58:29	Data DateTime	Database Filter Built-in
COMPANY	Image	NA

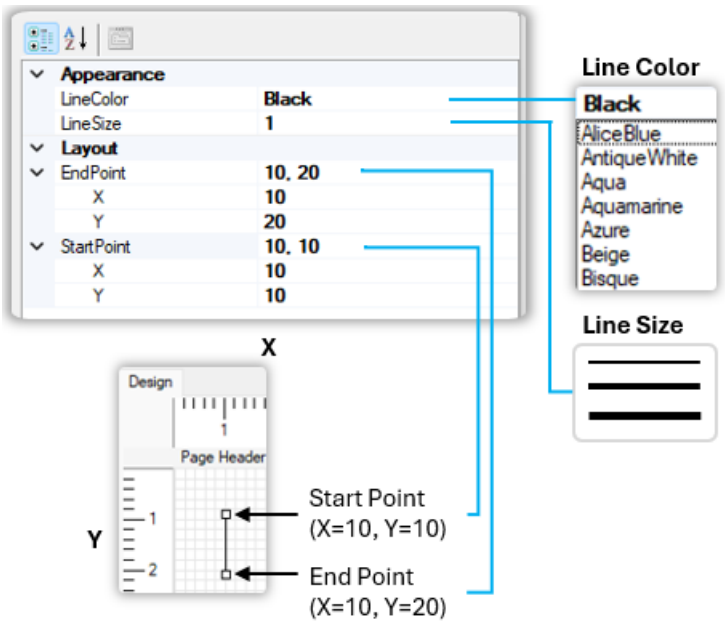


Use the properties window to change the control's properties.

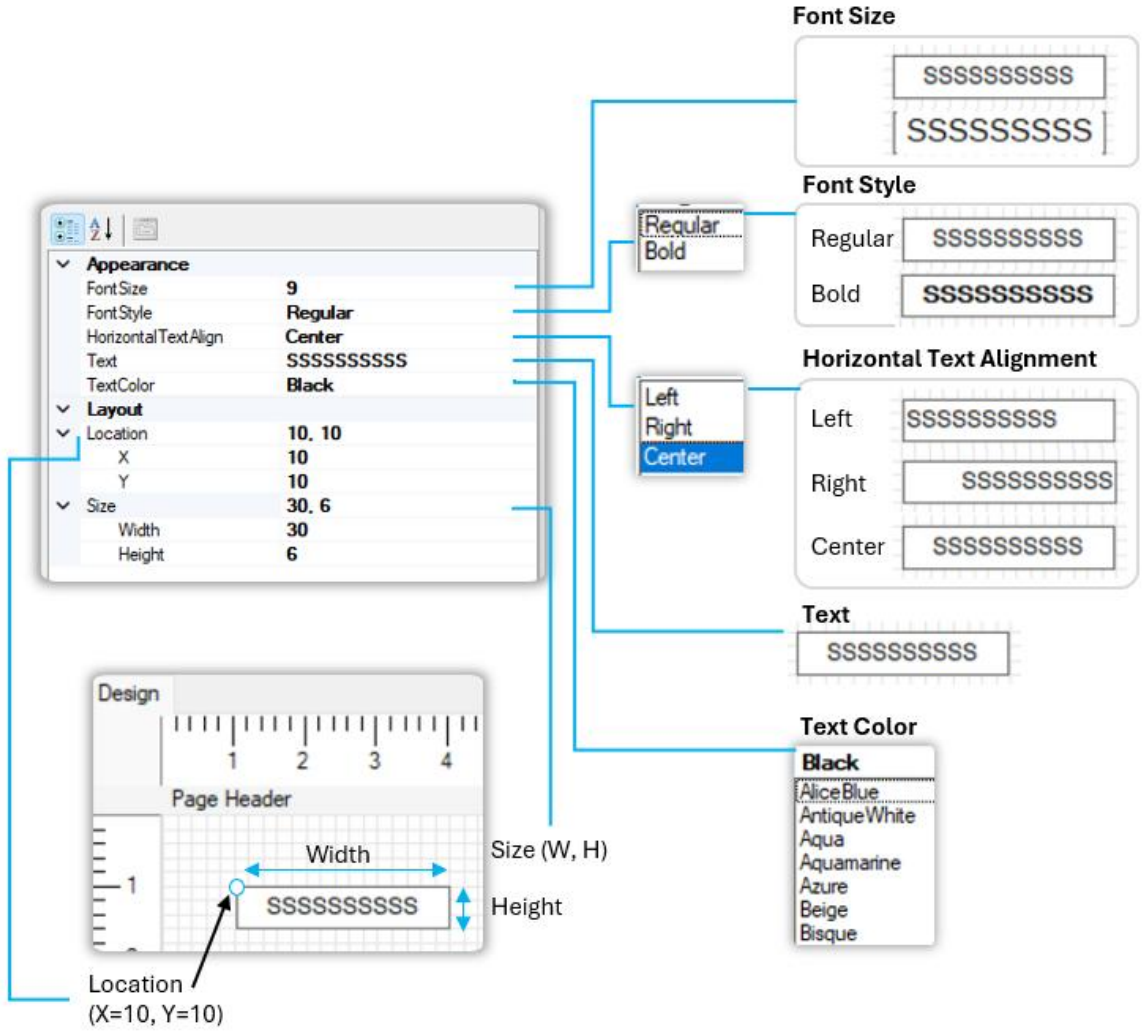
Control Properties-Horizontal Line



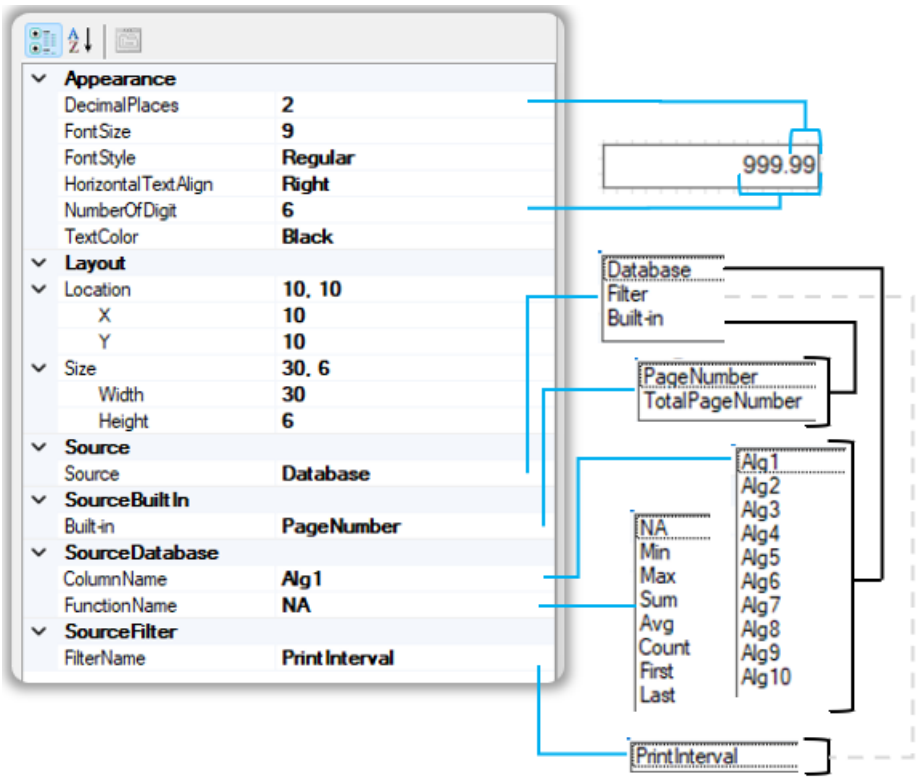
Control Properties-Vertical Line



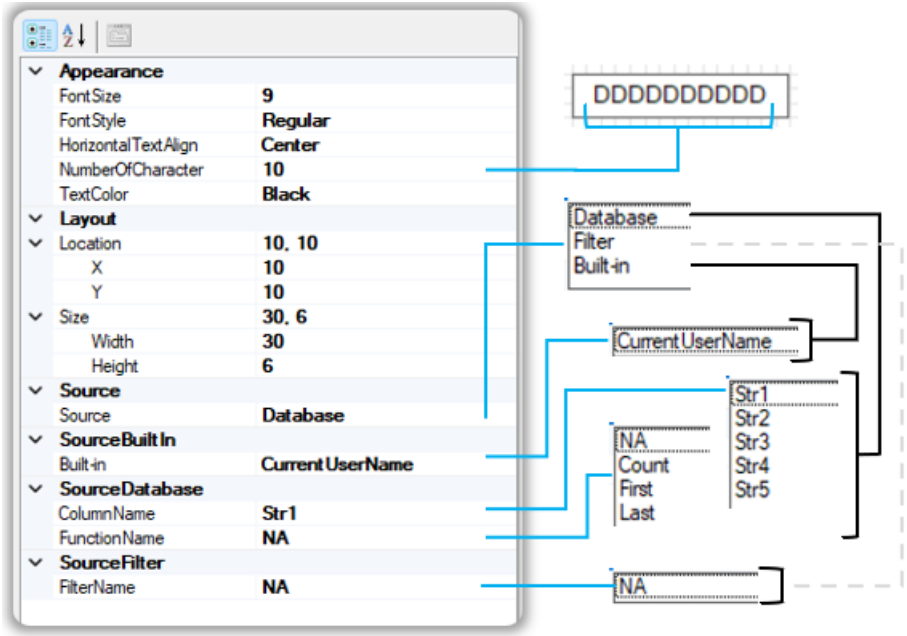
Control Properties-Text



Control Properties-Data Numeric

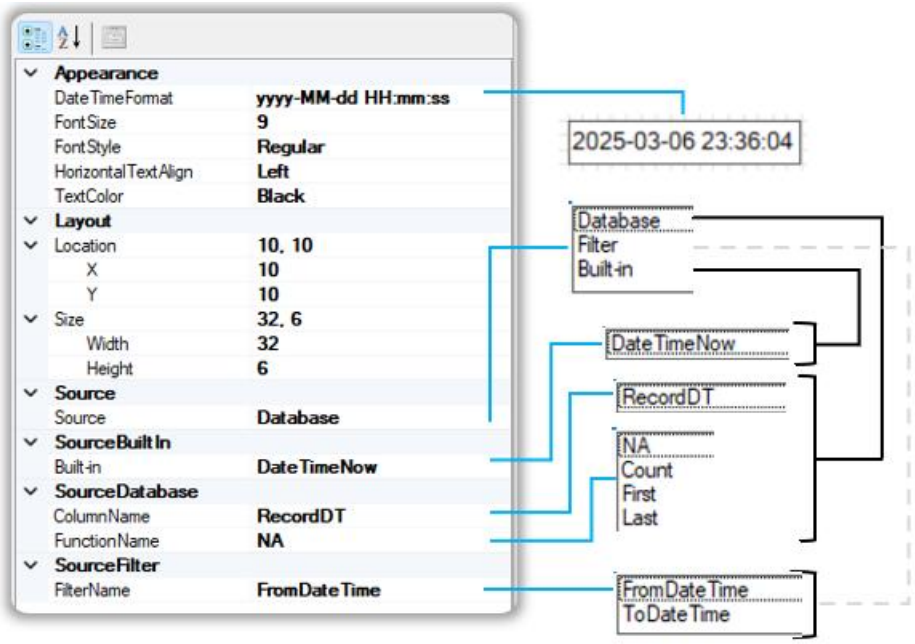


Control Properties-Data String



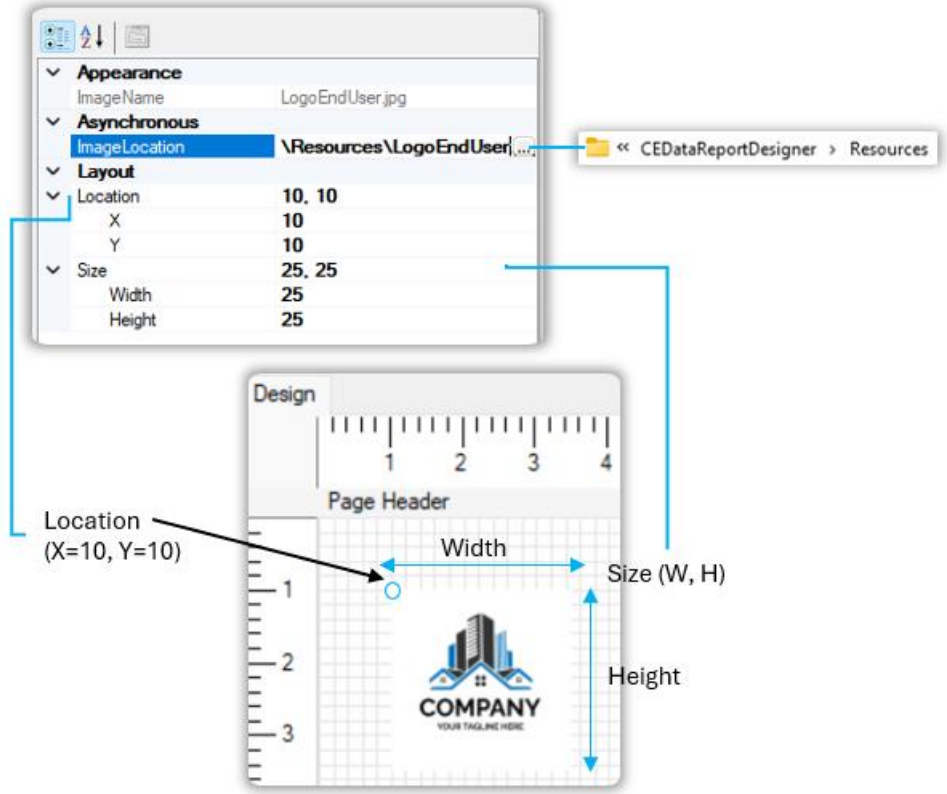
Control Properties-DateTime

Follow the global standards letters for Date & Time, which can be combined to create custom date and time formats based on your needs.



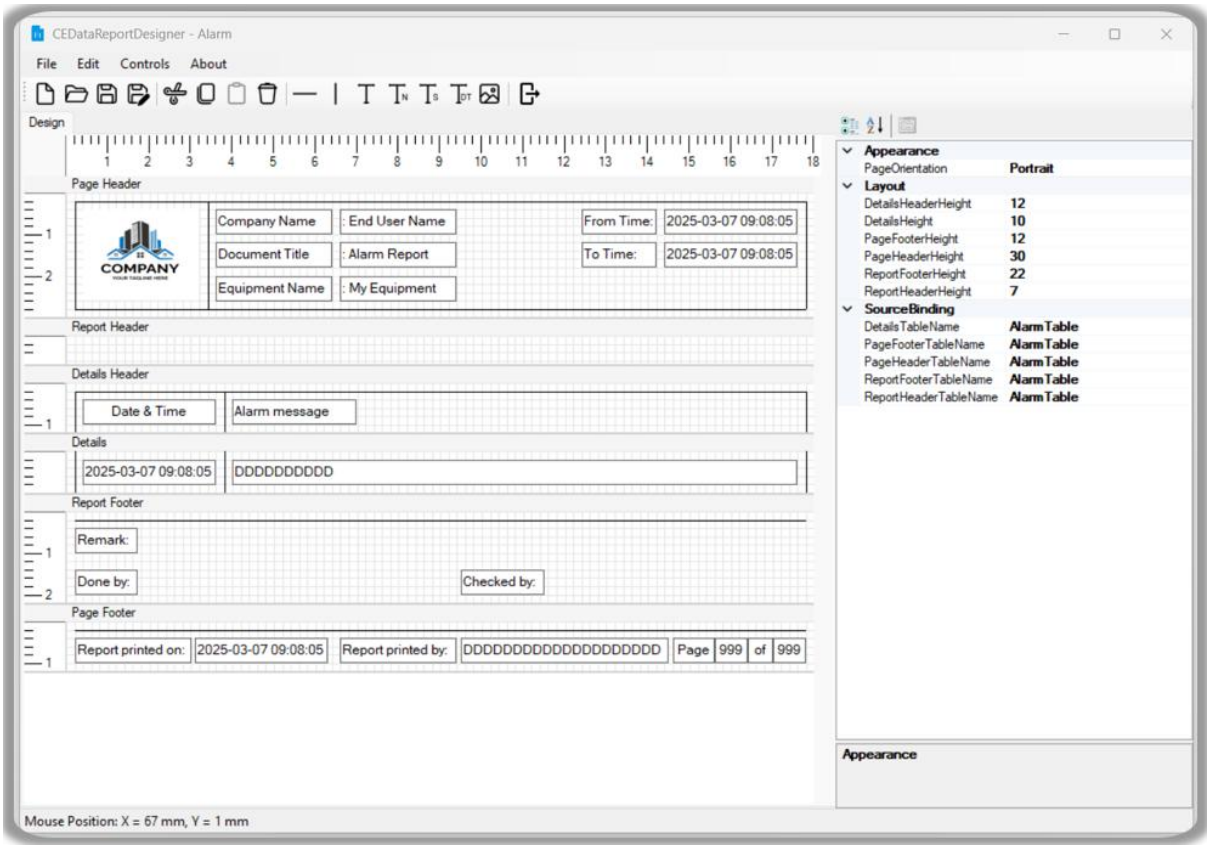
Control Properties-Image

You can use image control in the 'Page Header' section only.



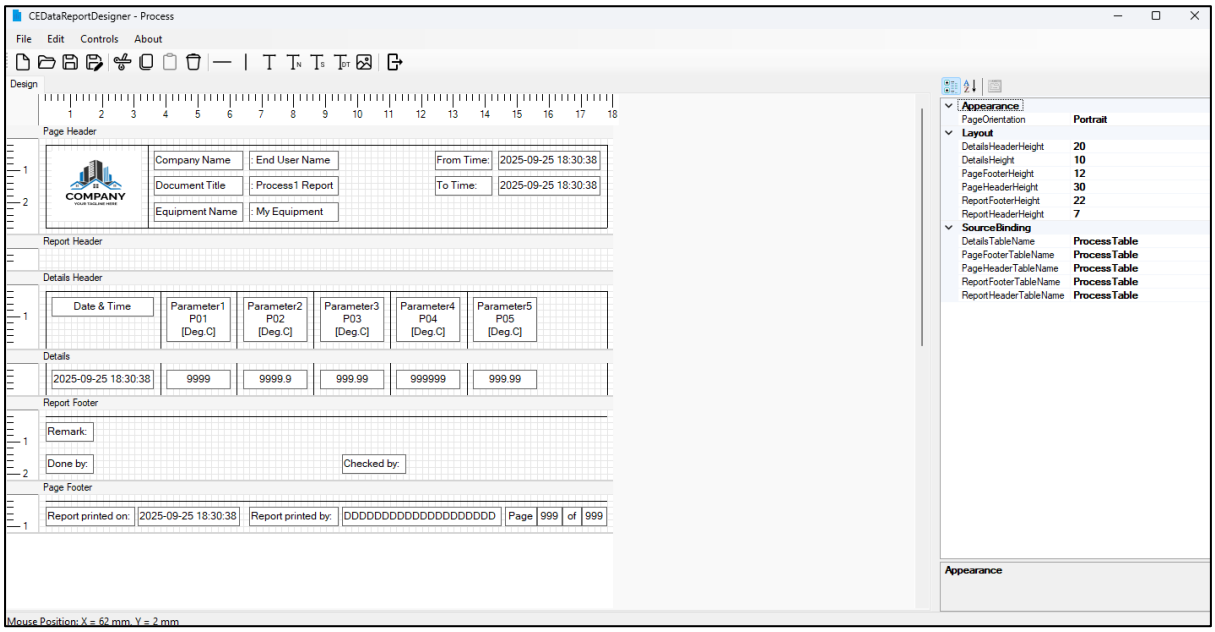
Sample Template-Alarm

We have designed an alarm report template sample as follows:



Sample Template-Process

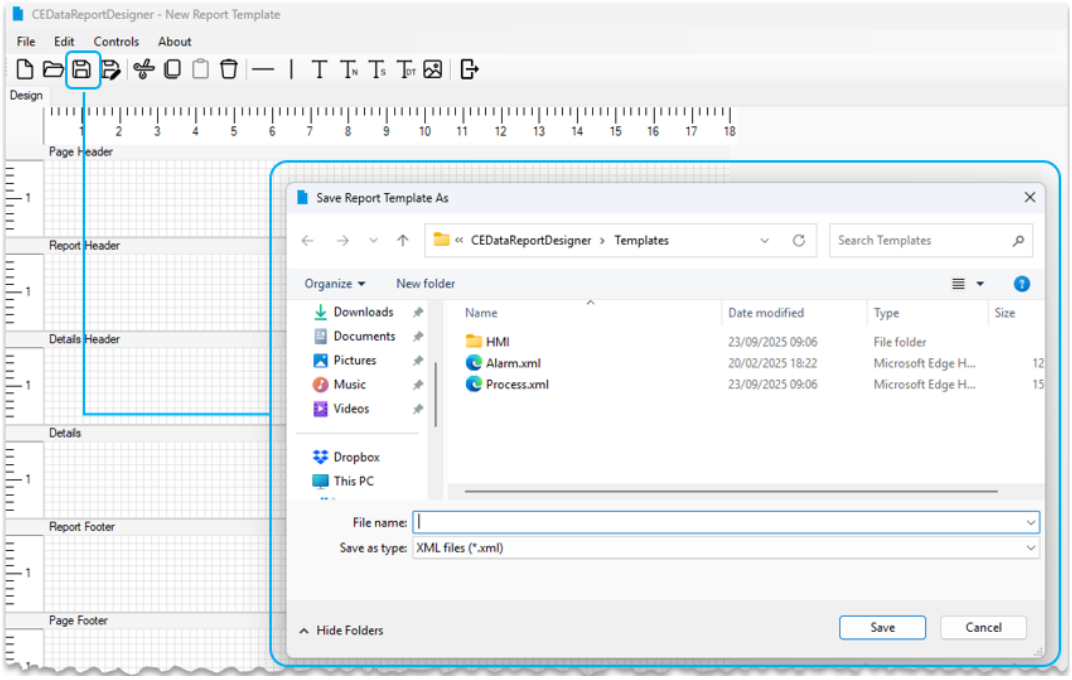
We have designed a process report template sample as follows:

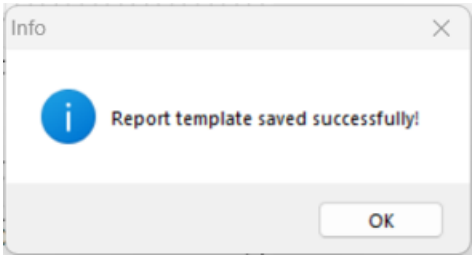


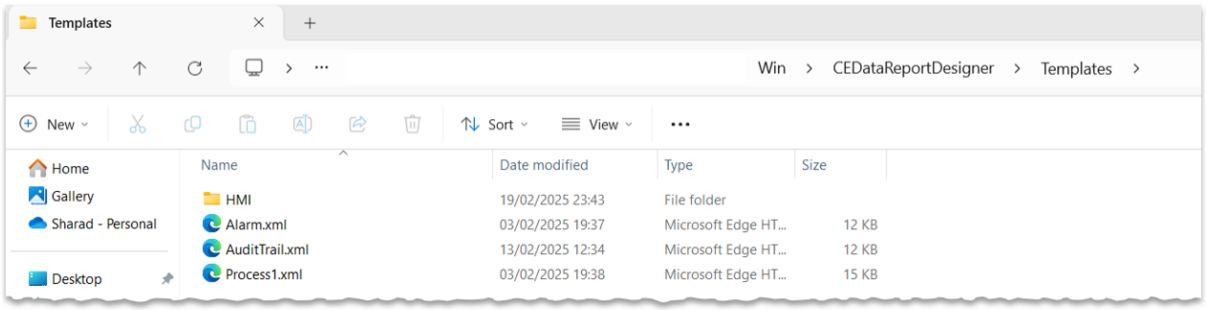
Template Save

The report template will be saved with an XML extension.

We recommend using ‘CEDataReportDesigner\Template’ path during template save.

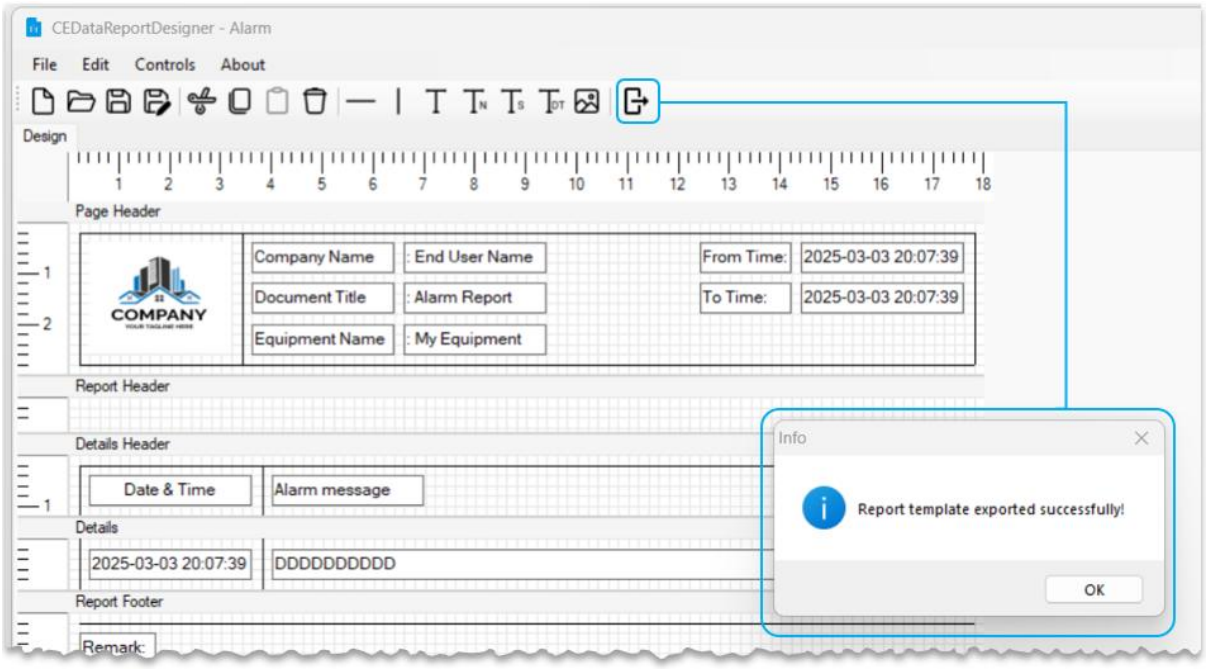


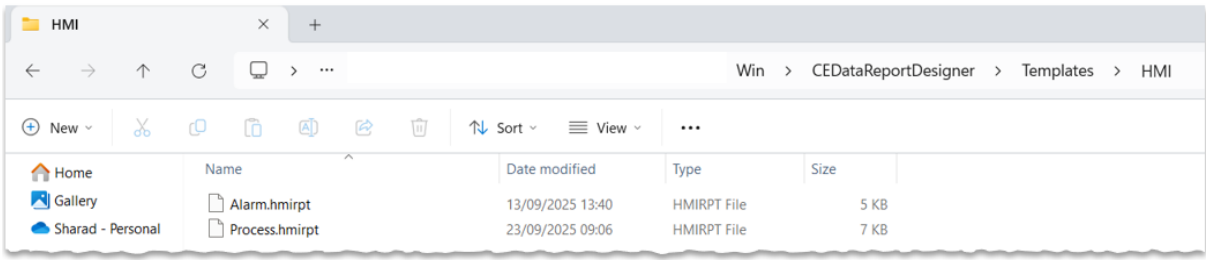




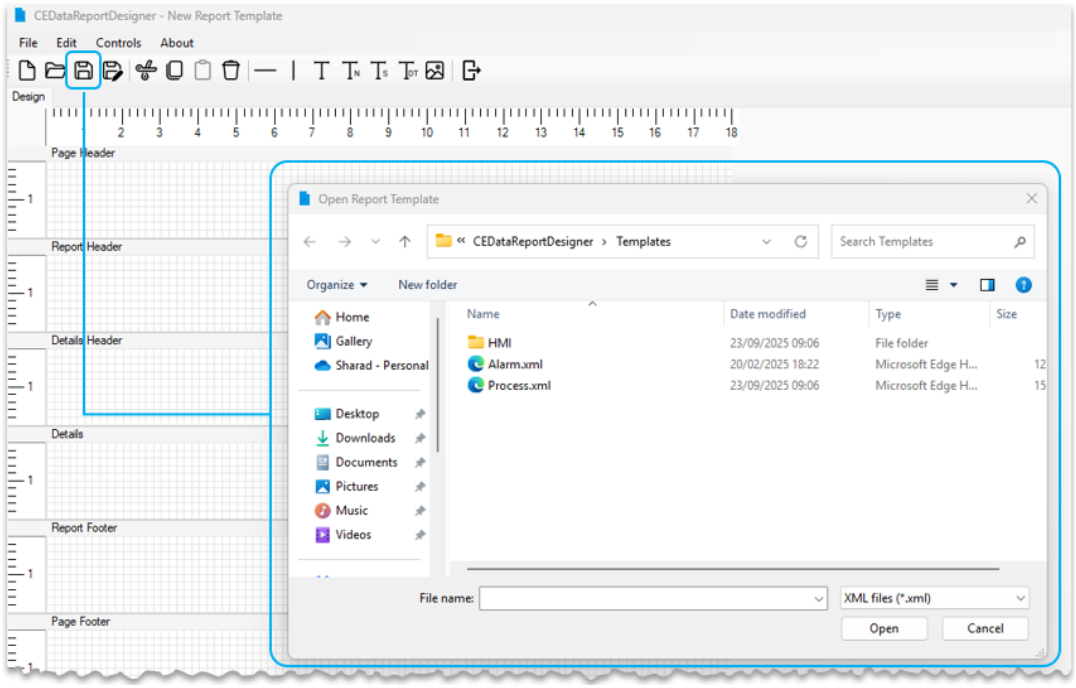
Template Export for HMI

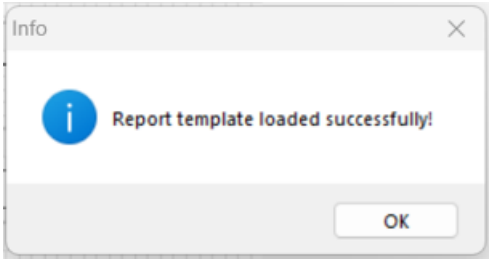
Use the export button to export the report template to a file compatible with HMI. The compatible report template will be exported with the 'hmirpt' extension and saved at 'CEDataReportDesigner\Template\HMI' path.





Template Open



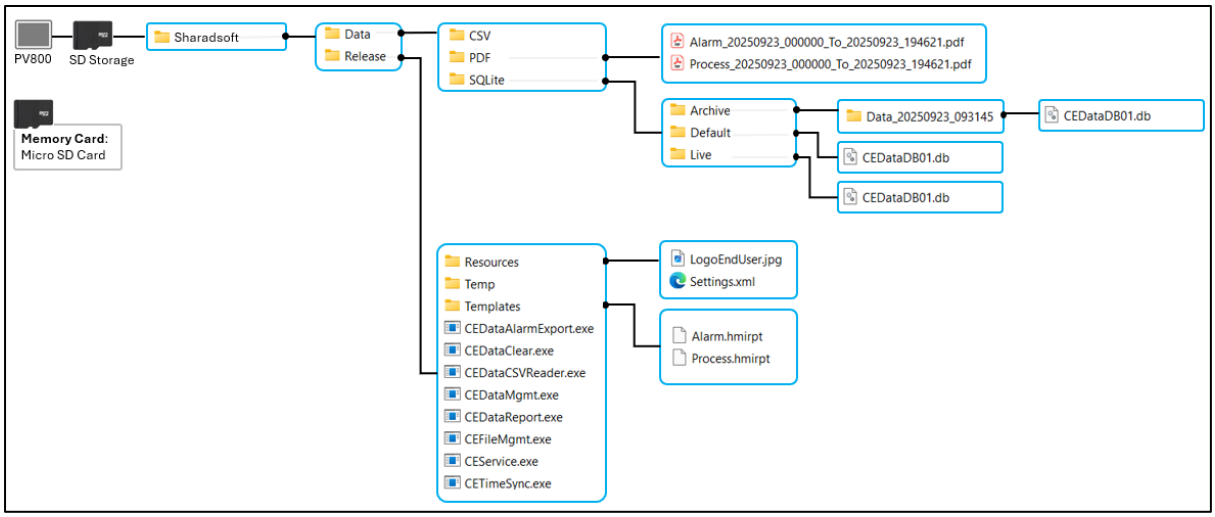


Section4: Configuration of Report-HMI Level

In this section, we will configure the HMI terminal for reporting.

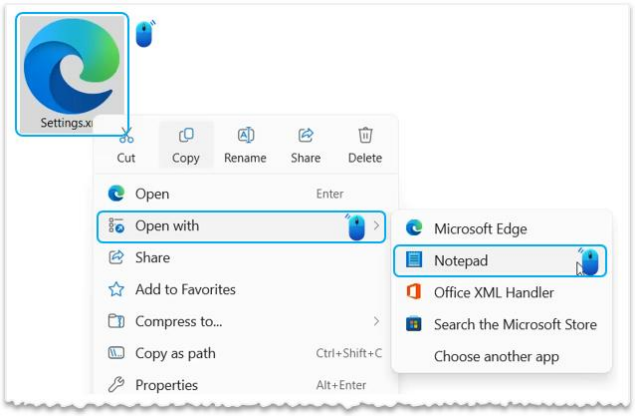
Insight-HMI Level-Folder & File Structure

Please review the folder & file structure before proceeding to HMI level configuration for reporting.



Settings file update

Open the 'Settings.xml' file at 'SD Storage\Sharadsoft\Release\Resources' using Notepad.



You can edit the ‘Settings.xml’ file as per your application requirements.

Settings.xml

File Edit View

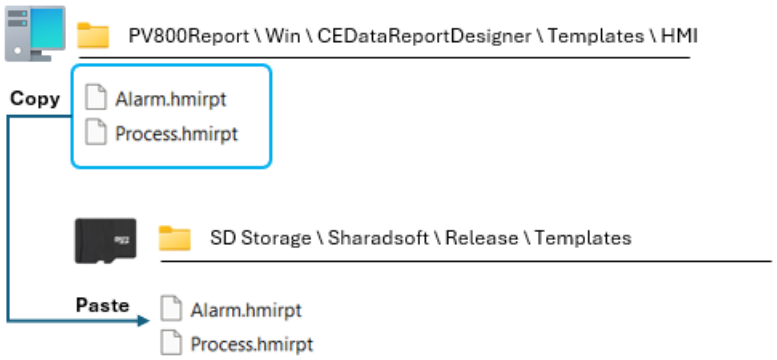
```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <appSettings>
    <add key="ActivationKey1" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
    <add key="ActivationKey2" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
    <add key="ActivationKey3" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
    <add key="ActivationKey4" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
    <add key="ActivationKey5" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
    <add key="PrinterMaker" value="19" />
    <add key="PrinterPath" value="192.168.1.10" />
    <add key="PrintIntervalUnit" value="1" />
    <add key="PrintInterval" value="1" />
    <add key="PDFPath" value="\SD Storage\\Sharadsoft\\Data\\PDF\\" />
    <add key="BackupPath" value="\SD Storage\\Sharadsoft\\Data\\SQLite\\Archive\\" />
    <add key="DataRetentionDays" value="7" />
    <add key="ShortDatePattern" value="dd/MM/yyyy" />
    <add key="TimeServerIP" value="192.168.1.21" />
    <add key="TimeOffsetMin" value="0" />
  </appSettings>
</configuration>
```

Settings file parameters & its description is shown below:

Settings Name	Default Value	Value Description
ActivationKey1	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH	Activation Key for CEDataReport & CEDataCSVReader
ActivationKey2	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH	Activation Key for CETimeSync
ActivationKey3	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH	Reserved
ActivationKey4	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH	Reserved
ActivationKey5	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH	Reserved
PrinterMaker	19	19=For HP PCL 5 compatible printer
PrinterPath	192.168.1.10	Printer IP Address
PrintIntervalUnit	1	Reporting utility print interval unit. 0=Sec, 1=Min **(Preferred 1 Min for PV800)**
PrintInterval	1	Default print interval. 1 Sec/1 Minute **(Preferred 1 Min for PV800)**
PDFPath	\SD Storage\\Sharadsoft\\Data\\PDF\\	PDF storage path when the user uses the 'Save' button from 'CEDataReport' utility
BackupPath	\SD Storage\\Sharadsoft\\Data\\SQLite\\Archive\\	Database backup storage path when the user uses the 'Backup' button from 'CEDataMgmt' utility
DataRetentionDays	7	When the user triggers the 'CEDataClear' utility, Live database will keep last 7 days data and clear previous data
ShortDatePattern	dd/MM/yyyy	Short date pattern for 'CEDataReport' utility DateTime based filter
TimeServerIP	192.168.1.21	NTP Time Server IP Address
TimeOffsetMin	0	Offset to NTP Time Server time in Minute

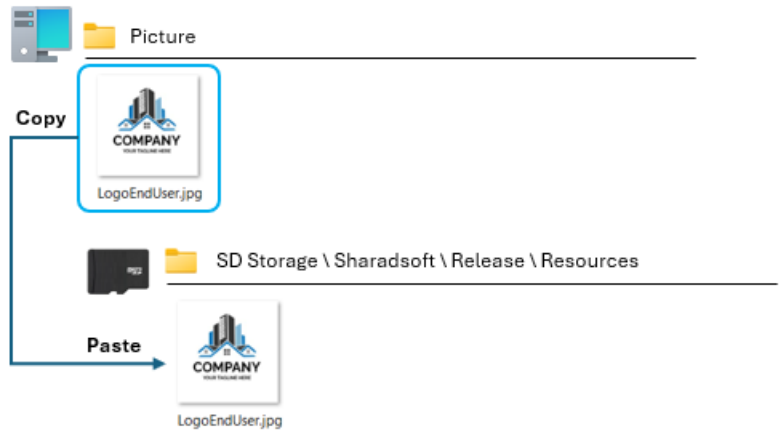
Copy Report Templates to HMI

Copy HMI-compatible report templates (exported after report template design completion using ‘CEDataReportDesigner’ Software) to the SD storage at ‘SD Storage\Sharadsoft\Release\Templates’ path.



Copy Logo Image to HMI

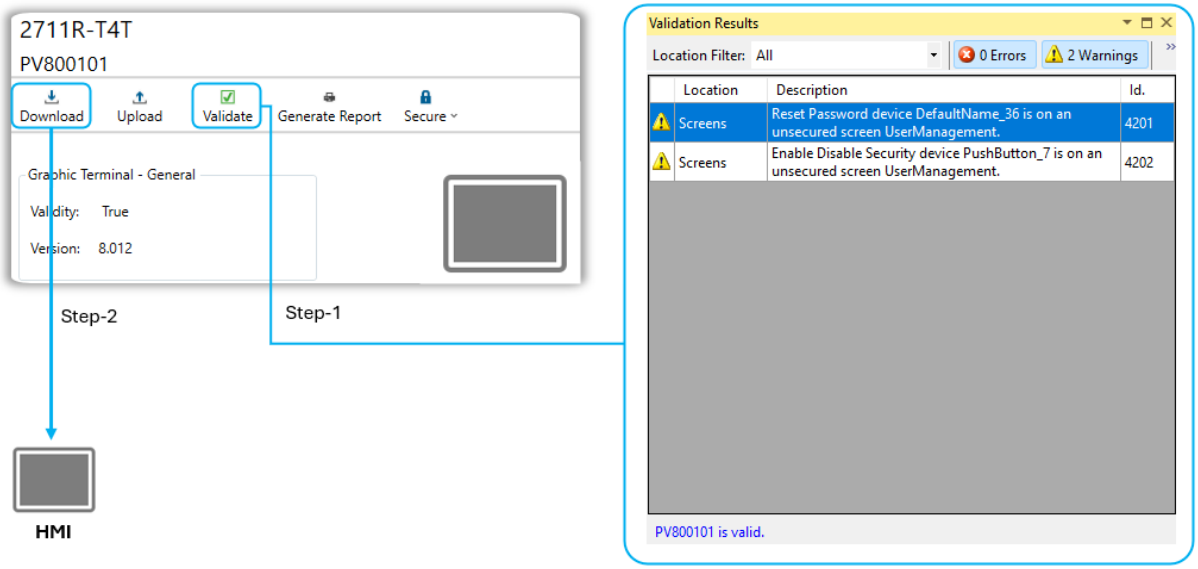
Copy the logo to the SD storage at ‘SD Storage\Sharadsoft\Release\Resources’ path



Section5: Transfer Runtime to HMI

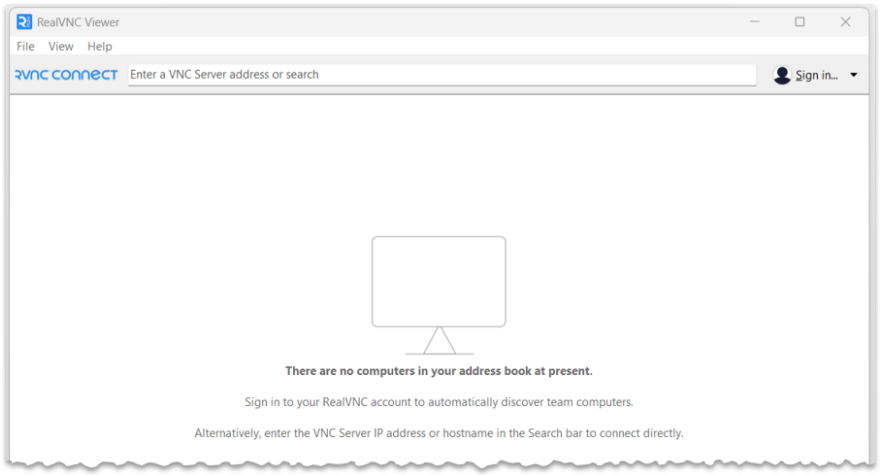
Validate application & Download to HMI

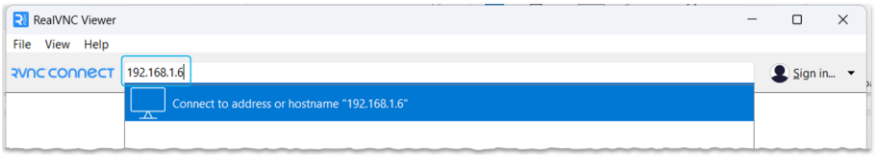
Validate the HMI application and download it to the HMI terminal.

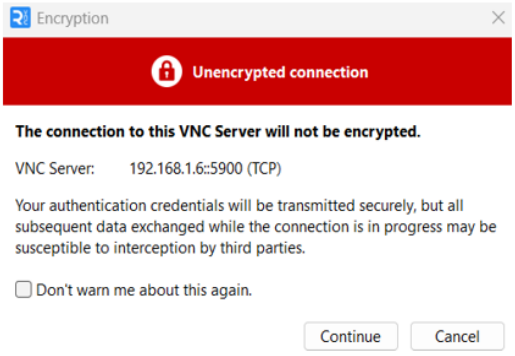


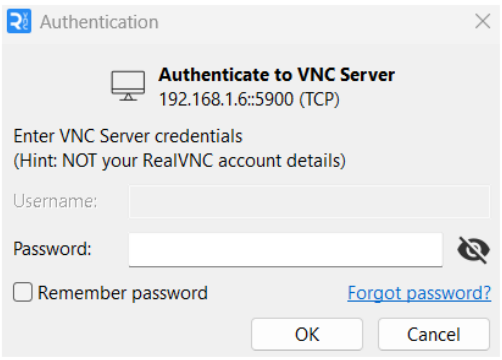
Access HMI using VNC Viewer

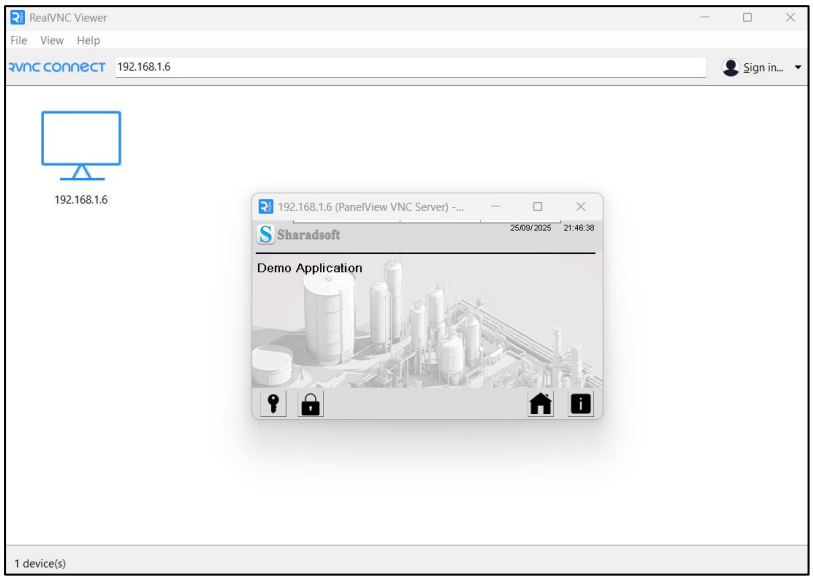
You can use any VNC Viewer software to control the HMI terminal remotely from a PC. We have used 'RealVNC' Viewer for our testing purposes.











Section6: Demo Application

In this section, we have attached a snapshot of the HMI Terminal taken during the demo application testing for your reference. You can follow the same for demo application testing.

Login with User

Log in with username (Operator/Manager/Engineer/Admin) and password (‘1234’ for all users). Password for ‘Developer’ user is ‘4321’.

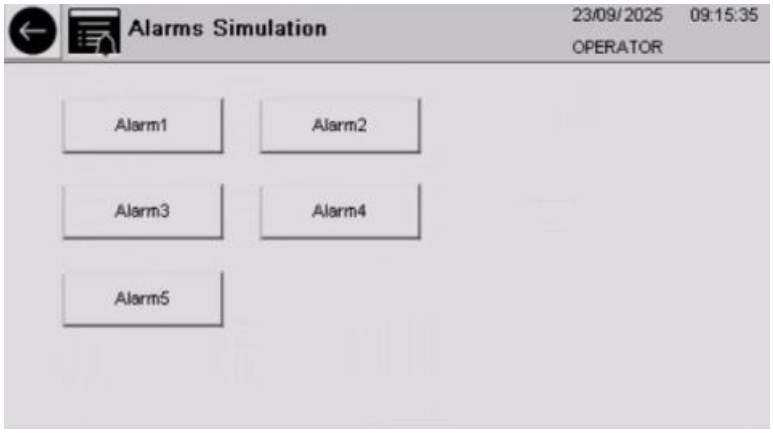
Navigate to the ‘Home’ screen.

Data Log Start

Start the data log using the button at the bottom of the 'Overview' screen. Keep the data log running for at least 30 minutes.

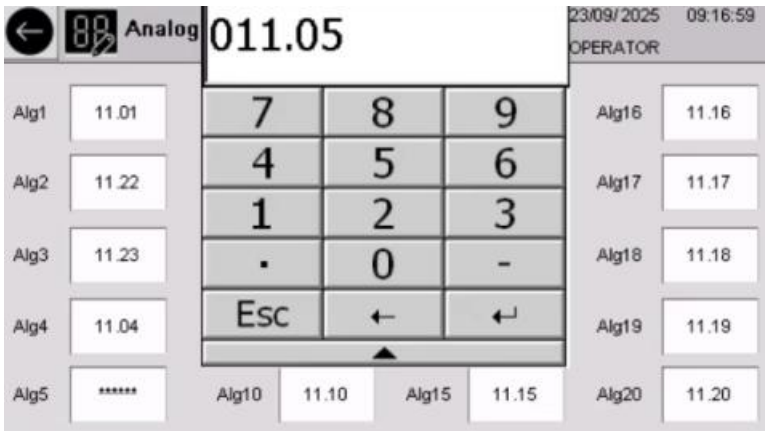
Trigger Alarms

Trigger the alarms during data logging for simulation purposes.



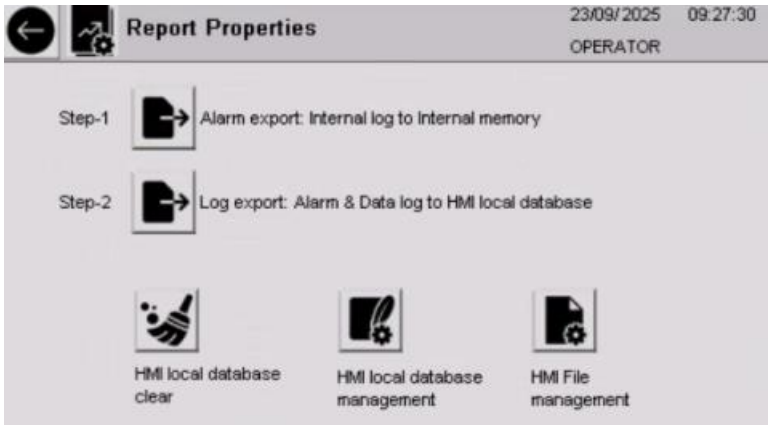
Change Parameters Values

You can alter any parameter value during data logging.



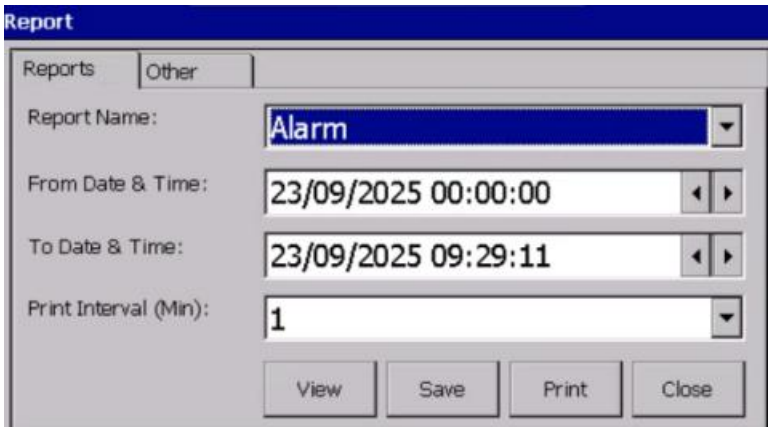
Data update sequence

After turning off the data log, first trigger the Alarm export, and then export Alarm log & Data log CSV to the local database (SQLite on HMI). Allow sufficient time between each trigger to complete the required process execution. You can use the 'Database Management' button to perform database-related tasks like backup, clear, etc. To clean the database, use 'Database Clear' button. You can transfer report files from SD Storage to USB Storage using 'HMI File Management'.



Report View, Save & Print

Open the reporting utility window using 'Report' button available on the 'Home' screen. Select the report name from the drop-down list, select the time span, select the print interval (this option applies to process report only), then execute the View/Save/Print button.

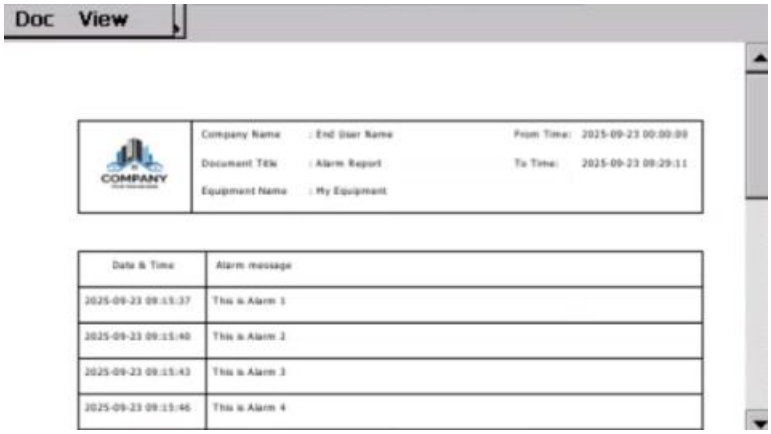


If you click the 'View' button, the report will open in the utility background. Close the utility.

'Save' button will save the report in PDF format at 'SD Storage\Sharadsoft\Data\PDF'

'Print' button will print the report directly to the network printer.

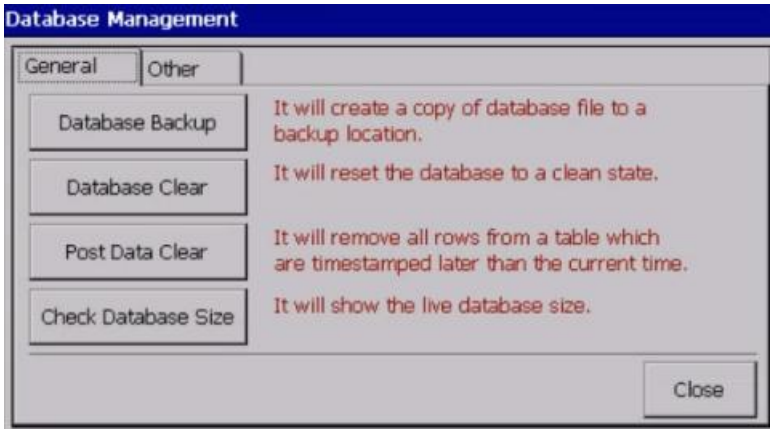
You can now view the report in pdf format.



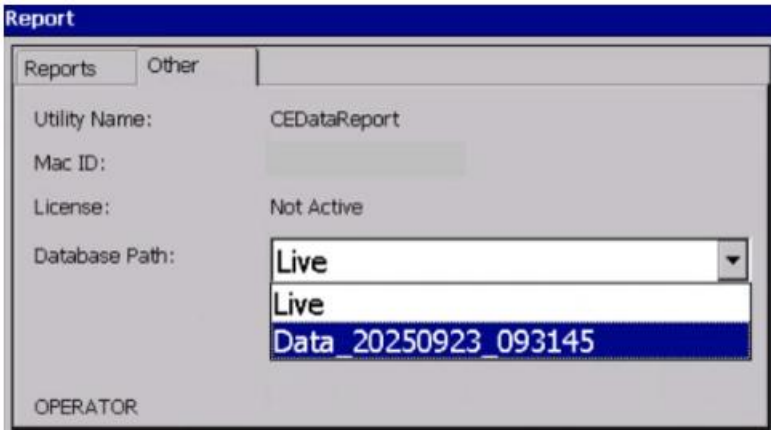
Close the pdf file using the 'Doc→Quit' option available at the pdf viewer menu bar.

Database Management

You can use ‘CEDataMgmt’ utility to manage the HMI local database. Follow the on-screen button to perform the database-related task.

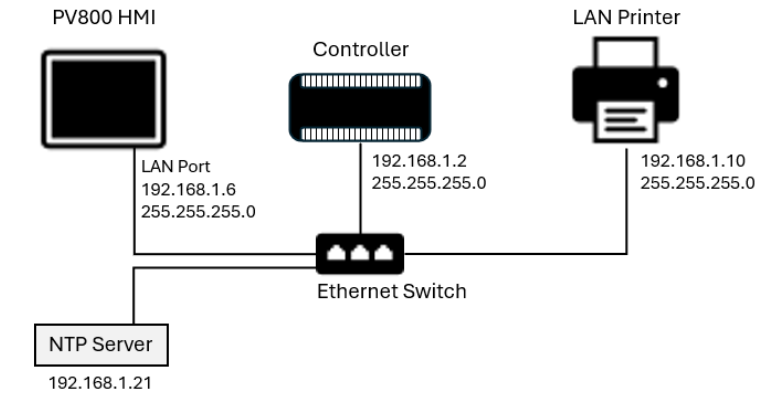


If you want to view/print the report from the archived database, select the archived database path from the drop-down list available at ‘Other’ tab in the reporting utility, then configure the required filter at ‘Reports’ tab and execute the view/print button.

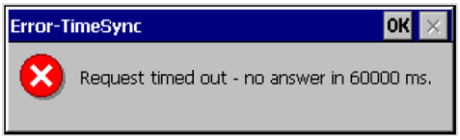


HMI Time Sync

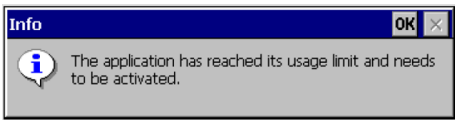
HMI terminal time sync with reference to the NTP time server available at your premises is an optional utility. The time between two triggers of time sync **must be** greater than one Minute.



Once triggered, it will check the availability of the time server for one Minute. It will show an error without a time server, as shown below. On the availability of the time server, it will sync the time and close the time sync app within 10/15 seconds or less.



You can sync the time for 50 successful attempts without a valid activation key.

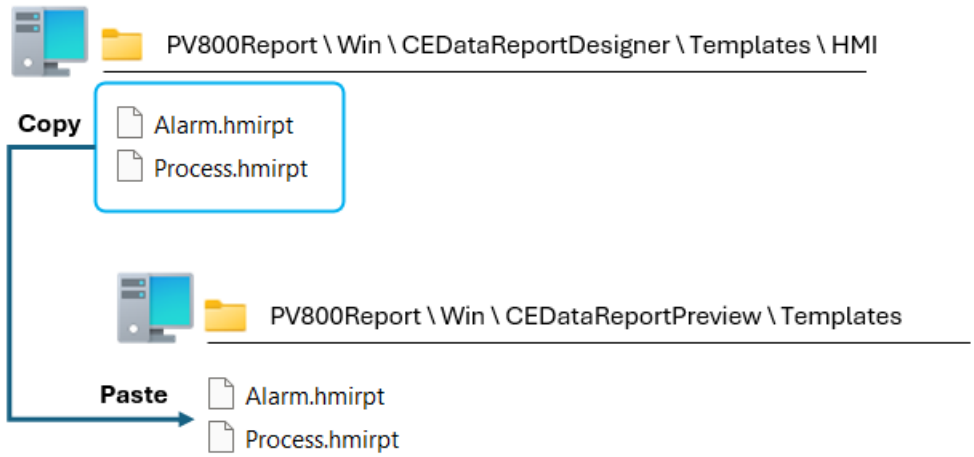


Section7: Report Format Testing at PC

This section describes the steps for using the 'CEDataReportPreview' application on PC. 'CEDataReport' & 'CEDataReportPreview' functionalities are the same except for the non-availability of the 'View' and 'Print' buttons at the 'CEDataReportPreview' application. The CEDataReportPreview application is designed to test the report format without requiring an HMI terminal.

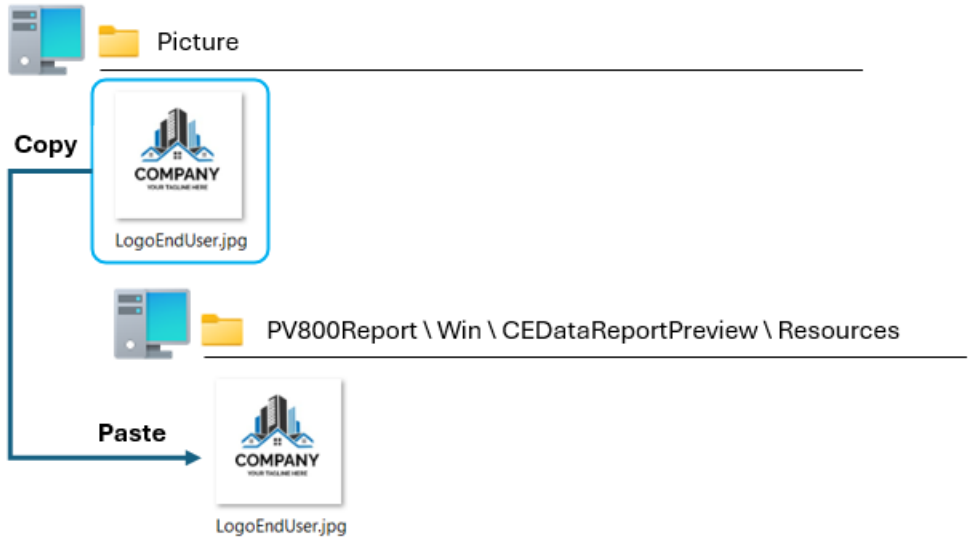
Copy Report Templates

Copy HMI-compatible report templates from 'CEDataReportDesigner' to 'CEDataReportPreview' as shown below:



Copy Logo Image

Copy the logo image from 'CEDataReportDesigner'/'Other Image Resource' to 'CEDataReportPreview' as shown below:

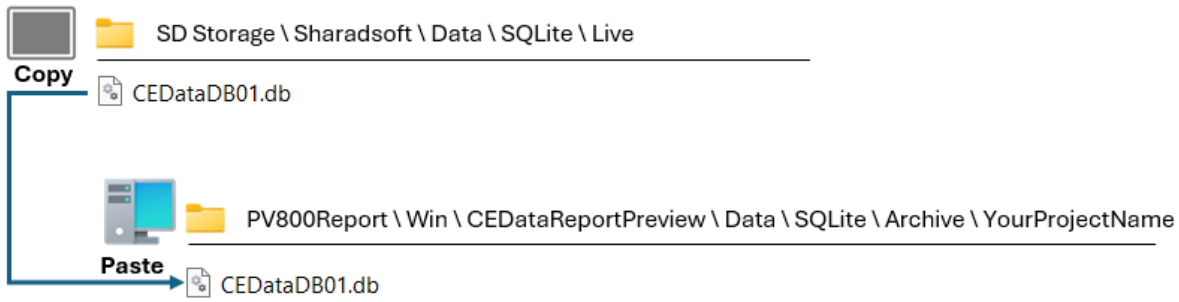


Settings File Update

Set the settings file to the same as 'CEDataReport' application settings file.

Copy Database File

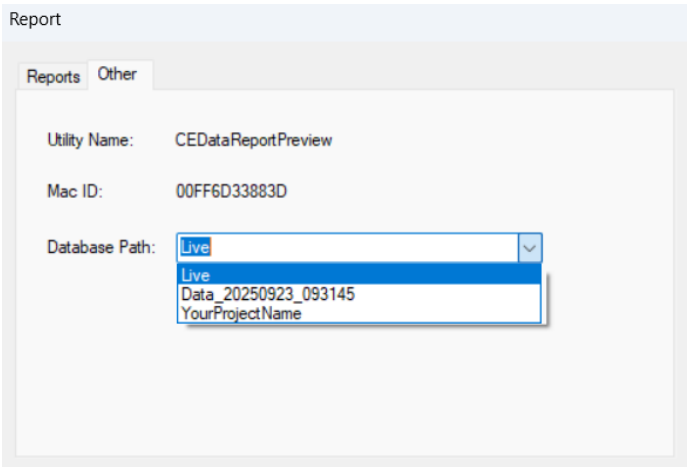
Copy the existing database file with sample data logged or the actual live database file from the HMI terminal, as shown below:



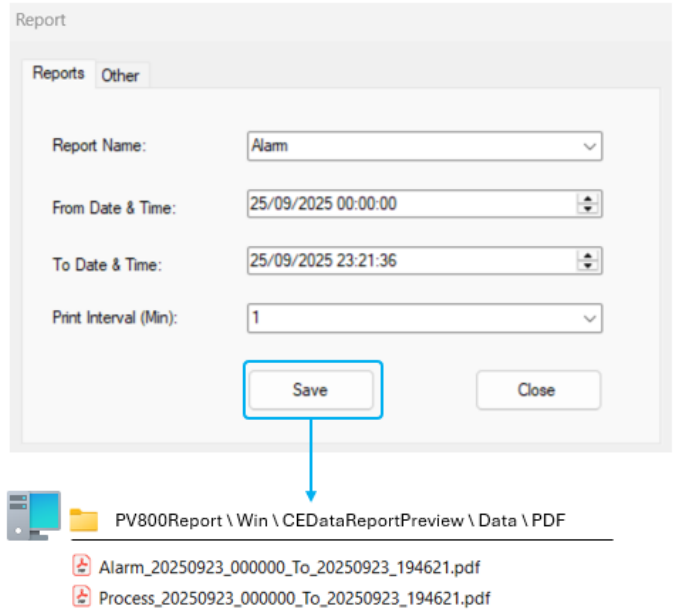
CEDataReportPreview

Run the 'CEDataReportPreview' application on PC.

Select the copied database path from the database path drop-down list available at the 'Other' tab of the reporting utility.

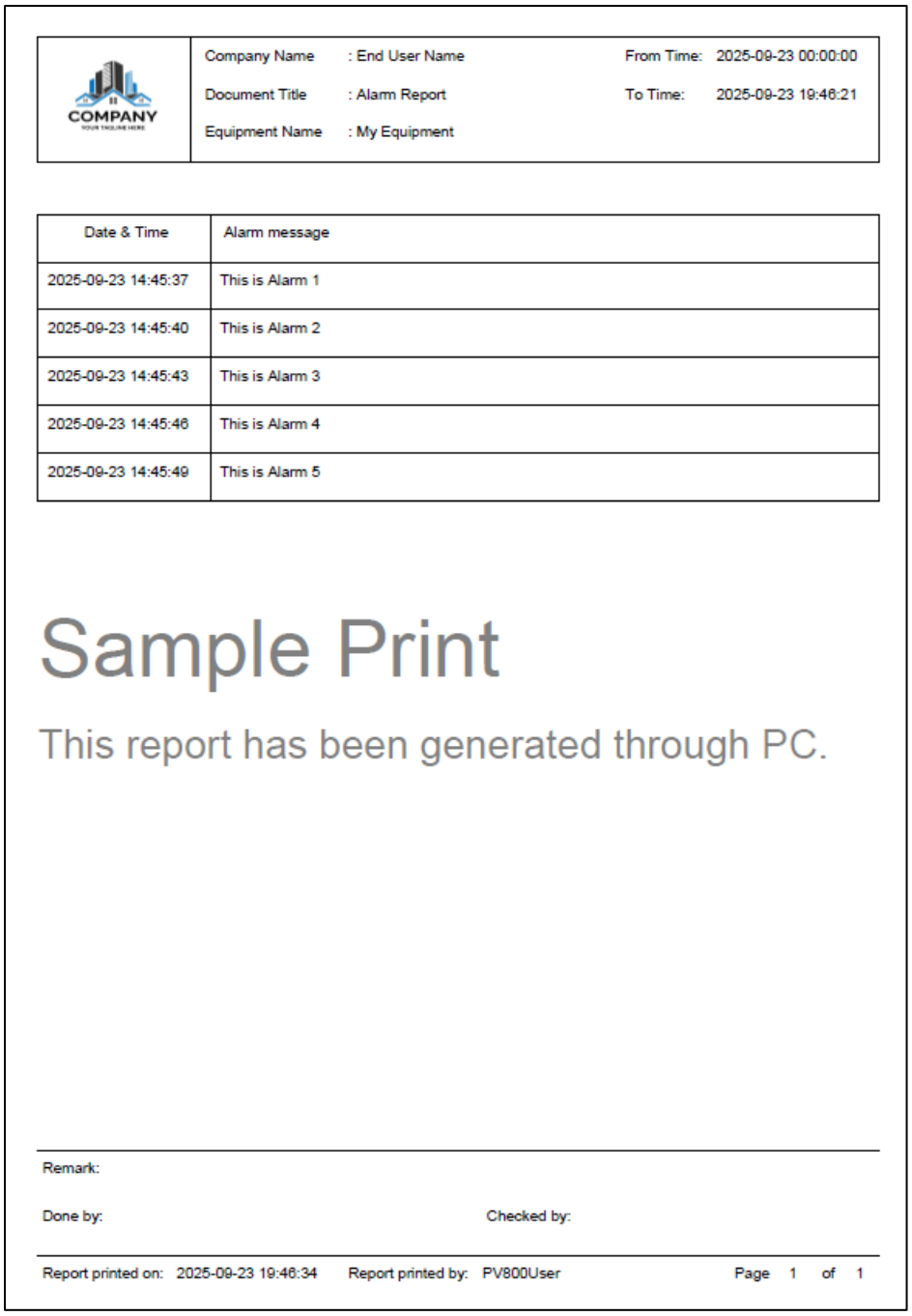


Select the required report name, configure the selection criteria, and save the report in pdf format.



Sample reports snapshots are as follows:

Alarm Report



COMPANY

Company Name	: End User Name	From Time:	2025-09-23 00:00:00
Document Title	: Alarm Report	To Time:	2025-09-23 19:46:21
Equipment Name	: My Equipment		

Date & Time	Alarm message
2025-09-23 14:45:37	This is Alarm 1
2025-09-23 14:45:40	This is Alarm 2
2025-09-23 14:45:43	This is Alarm 3
2025-09-23 14:45:46	This is Alarm 4
2025-09-23 14:45:49	This is Alarm 5

Sample Print

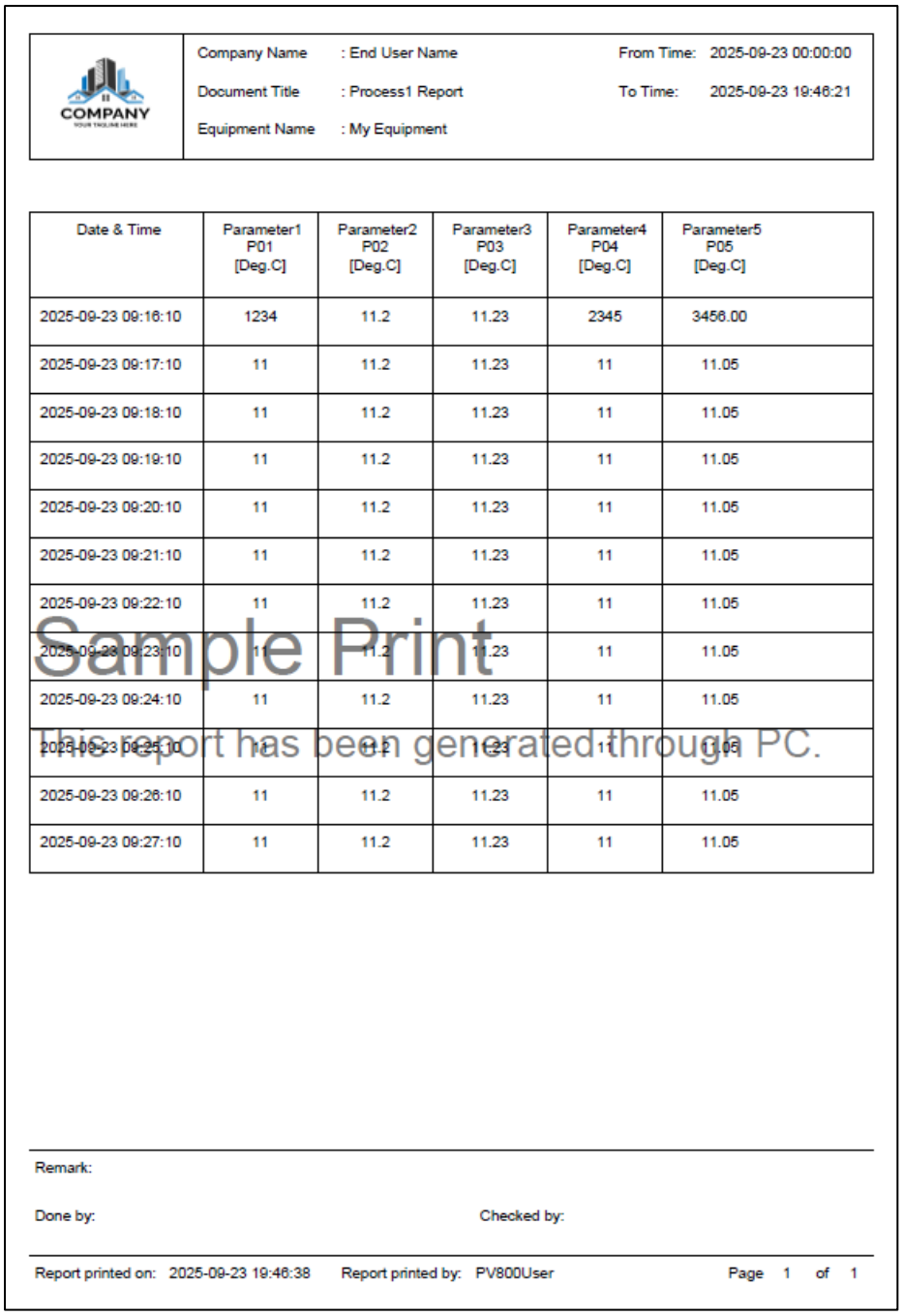
This report has been generated through PC.

Remark:

Done by: Checked by:

Report printed on: 2025-09-23 19:46:34 Report printed by: PV800User Page 1 of 1

Process Report



COMPANY

Company Name : End User Name
From Time: 2025-09-23 00:00:00
Document Title : Process1 Report
To Time: 2025-09-23 19:46:21
Equipment Name : My Equipment

Date & Time	Parameter1 P01 [Deg.C]	Parameter2 P02 [Deg.C]	Parameter3 P03 [Deg.C]	Parameter4 P04 [Deg.C]	Parameter5 P05 [Deg.C]
2025-09-23 09:16:10	1234	11.2	11.23	2345	3456.00
2025-09-23 09:17:10	11	11.2	11.23	11	11.05
2025-09-23 09:18:10	11	11.2	11.23	11	11.05
2025-09-23 09:19:10	11	11.2	11.23	11	11.05
2025-09-23 09:20:10	11	11.2	11.23	11	11.05
2025-09-23 09:21:10	11	11.2	11.23	11	11.05
2025-09-23 09:22:10	11	11.2	11.23	11	11.05
2025-09-23 09:23:10	11	11.2	11.23	11	11.05
2025-09-23 09:24:10	11	11.2	11.23	11	11.05
2025-09-23 09:25:10	11	11.2	11.23	11	11.05
2025-09-23 09:26:10	11	11.2	11.23	11	11.05
2025-09-23 09:27:10	11	11.2	11.23	11	11.05

Sample Print
This report has been generated through PC.

Remark:

Done by: Checked by:

Report printed on: 2025-09-23 19:46:38 Report printed by: PV800User Page 1 of 1

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Feedback/Support

Your comments will help us better serve your HMI reporting needs. If you have any suggestions/ require support, then drop the email to 'info@sharadsoft.com'.

Location: Mumbai, India.

Document updated on 26-Sept-2025