



Quick Start Manual

HMI Report

HMI-REPORT-QS001-EN-MAR-2025

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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 that are most relevant to your reporting requirements, ensuring that the tool meets your specific needs without overwhelming you with unnecessary options.
3. **Ease of Use:** The intuitive interface allows for quick and easy report creation, making it accessible even for 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 important to recognize that our tool is designed to provide the essential functionality required for your reporting needs, focusing 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 March 1, 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 mm only.
- Each control in CEDataReportDesigner will appear initially at X=10, Y=10 location.
- CEDataReportPreview is meant for report format testing purposes only. Please note that report print drivers used while scripting differ for CEDataReportPreview & CEDataReport due to driver limitations. The report format may vary if compared.
- This initial release has report retrieval functionality based on Start & End time with interval. Batch-based report retrieval functionality has been scheduled for the next release.
- Images used in the HMI demo application are for demo purposes only and licensed by Sharadsoft for their use in application 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 a 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 data of the live database using the 'CEDataMgmt' application on fixed intervals like every 7/15/30/60/90 day, depending on actual live database size monitoring for your process.
- Reporting utilities developed for HMI are scripted to trap the error; however, if any error occurs, then the HMI terminal should be restarted after resolution. Such an error may disable running services on HMI, such as the Audit Trail/Alarm log service.
- Use an Industrial SD card (SLC type), if required. SLC-type SD card provides the best performance and the highest endurance. You can store PDF reports and archived databases on an SD card to save the HMI internal memory.

Prerequisites

System requirements-Hardware & Software

Description	Firmware/Software Revision	
	Minimum	Recommended
HMI Terminal-PVP7 Performance (Series-B)	12.108 or later	15.100
HMI App Development Software	Version 12 or later	Version 15
Windows Operating System	Windows 10 Pro / Windows 11 Pro	-
Dot Net Framework	4.8.1	-
Workstation RAM	8 GB or more	16 GB
Sharadsoft Software	1.00.00	-
Network Printer, A4 Paper	Print Language: PCL 5/5e *2	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
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
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-Users, User Groups & Runtime Security

Configure the users under FT Directory→System→Users and Groups→Users.

Configure the user groups under FT Directory →System→Users and Groups→User Groups.

Allocate the users under 'User Groups'

Configure the runtime security under the HMI Server→System→Runtime Security

Add 'User Groups' to the 'Runtime Security' and assign the security alphabets as per your application requirements.

The image shows a screenshot of the HMI configuration software interface. On the left is the 'Explorer - PVP7B101' tree view. In the center is the 'Runtime Security - /PVP7B101/' configuration window. Below these are two panels: 'User Groups' and 'Users'. A dashed box highlights the 'User Groups' panel with the text 'Allocate the 'User' under the 'User Group''. A 'Users' panel is also shown with 'Op1' selected, and an 'Op1 Properties' dialog box is open, showing 'Group Membership' with 'Operator' listed as a member.

Runtime Security - /PVP7B101/

ME Runtime 4.00 and later | ME Runtime 3.20 and earlier

Use this tab to specify the FactoryTalk Security accounts for Machine Edition Runtime (MER) versions 4.0 and later. Select a FactoryTalk Security account with the Add button and then assign A-P security codes. Click the browse buttons (...) to select optional Login and Logout macros for the account.

Account ID: DEFAULT | Security Codes: A B C D E F G H I J K L M N O P P

Login Macro: | Logout Macro: | Add... | Remove | Close | Prev | Next | Help

Account	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Login	Logout
1 [DEFAULT]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	
2 [ADMIN]	N	N	N	N	Y	N	Y	N	N	N	N	N	N	N	N	N	Y	
3 [DEVELOPER]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
4 [ENGINEER]	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	
5 [OPERATOR]	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	
6 [QA]	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y	
7 [SUPERVISOR]	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y		

User Groups

- Authenticated Users
- Windows Administrators
- Admin
- Administrators
- Developer
- Engineer
- Operator
- QA
- Supervisor

Users

- Ad1
- Anonymous Logon
- En1
- Op1
- Qa1
- Sharad
- Su1

Op1 Properties

General | Group Membership

Member of:

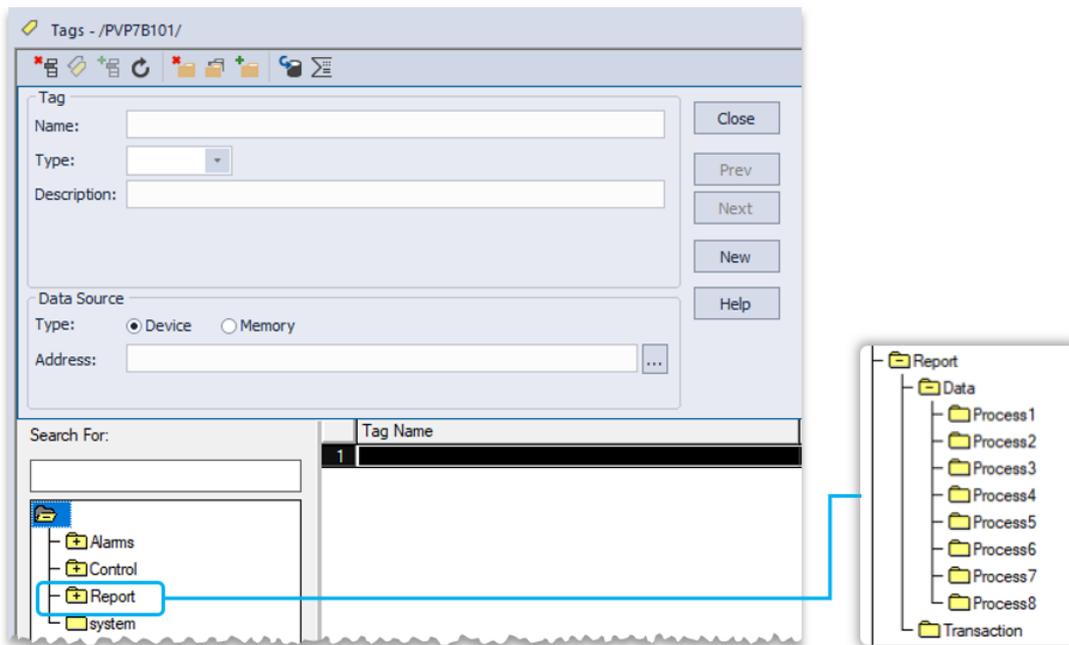
- Operator

Configuration-Tag Database

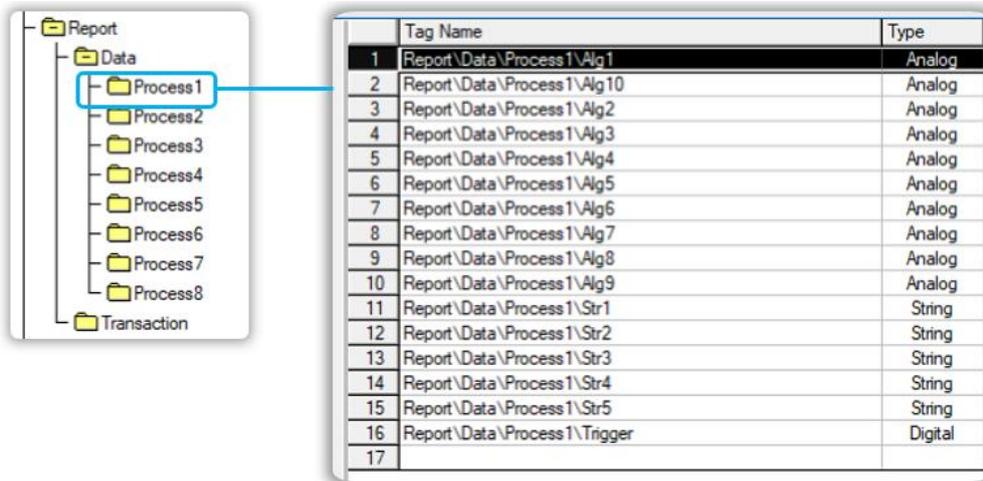
Configure the HMI Tag database under the HMI Server →HMI Tags→Tags

You can export the 'Report' folder from the demo application Tags database and import it into your application. After a successful import task, you can modify the tag data source to match your application requirements. In the demo application, all tags data source type is set to 'Memory' to avoid controller requirements while 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.



In this report release, you can log data of a maximum of 8 processes, 1 Alarm & 1 Audit Trail log. Each process will include a maximum of 10 analog tags, five-string tags & 1 digital tag.



In our demo application, we have configured tag properties as follows:

Tag Name	Type
1 Report\Data\Process1\Alg1	Analog
2 Report\Data\Process1\Alg10	Analog
3 Report\Data\Process1\Alg2	Analog
4 Report\Data\Process1\Alg3	Analog
5 Report\Data\Process1\Alg4	Analog
6 Report\Data\Process1\Alg5	Analog
7 Report\Data\Process1\Alg6	Analog
8 Report\Data\Process1\Alg7	Analog
9 Report\Data\Process1\Alg8	Analog
10 Report\Data\Process1\Alg9	Analog
11 Report\Data\Process1\Str1	String
12 Report\Data\Process1\Str2	String
13 Report\Data\Process1\Str3	String
14 Report\Data\Process1\Str4	String
15 Report\Data\Process1\Str5	String
16 Report\Data\Process1\Trigger	Digital
17	

Tag Name	Type
1 Report\Transaction\CEDDataClearTrigger	Digital
2 Report\Transaction\CEDDataCSVReaderTrigger	Digital
3 Report\Transaction\CEDDataMgmtTrigger	Digital
4 Report\Transaction\CEDDataReportTrigger	Digital
5 Report\Transaction\CETimeSyncTrigger	Digital
6 Report\Transaction\HMIRestartTrigger	Digital
7 Report\Transaction\RALogClearTrigger	Digital
8 Report\Transaction\RALogToCSVTrigger	Digital
9 Report\Transaction\UpdateUserTrigger	Digital

Tag Configuration 1: Name: Report\Data\Process1\Alg1, Type: Analog, Description: , Minimum: -100000, Scale: 1, Maximum: 100000, Offset: 0, Data Type: (Default), Data Source: Memory, Initial Value: 1001, Retentive:

Tag Configuration 2: Name: Report\Data\Process1\Str1, Type: String, Description: , Length: 82, Data Source: Memory, Initial Value: P1Str1, Retentive:

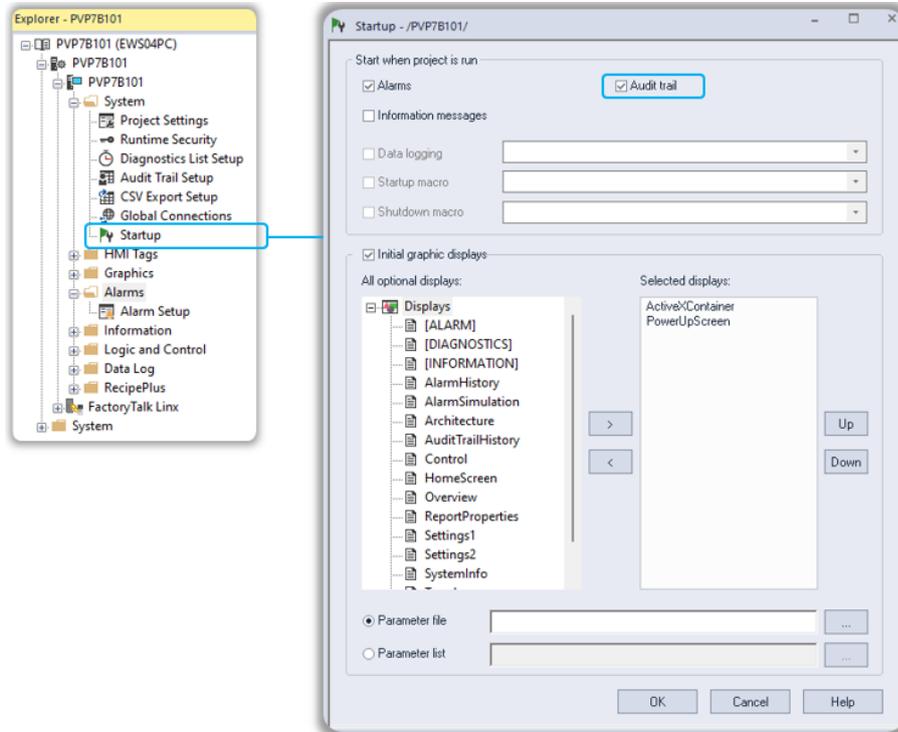
Tag Configuration 3: Name: Report\Data\Process1\Trigger, Type: Digital, Description: , Data Source: Memory, Initial Value: 0, Retentive:

Tag Configuration 4: Name: Report\Transaction\CEDDataClearTrigger, Type: Digital, Description: , Data Source: Memory, Initial Value: 0, Retentive:

Tag Configuration 5: Name: Report\Transaction\UpdateUserTrigger, Type: Digital, Description: , Data Source: Memory, Initial Value: 1, Retentive:

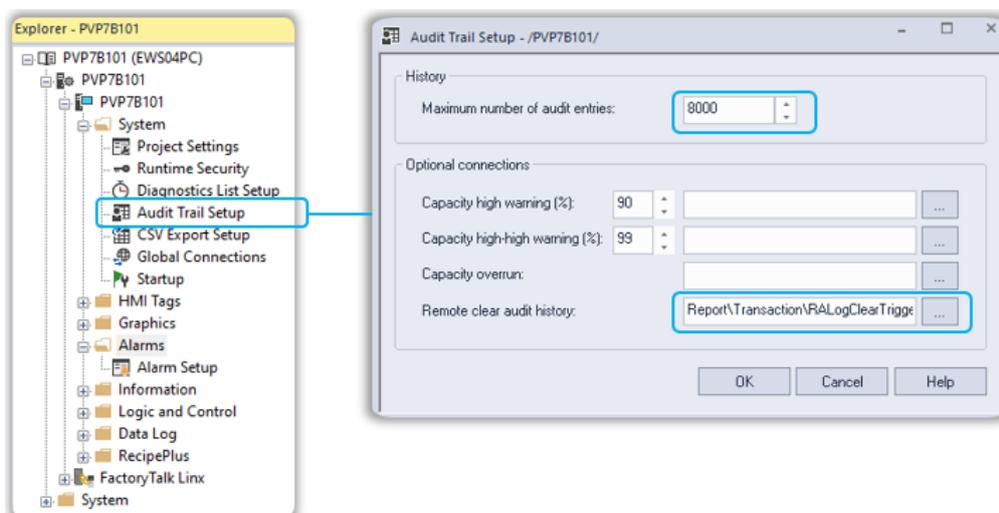
Configuration-Audit Trail Setup

If you expect audit trail log and its report, then Enable 'Audit Trail' option under HMI Server →System→Startup



Configure 'Maximum number of audit entries' and 'Remote clear audit history' under HMI Server →System→Audit Trail Setup

You can set maximum number of audit entries to 10,000. Assign tag to 'Remote clear audit history' option to clear the internal audit trail log (not the SQLite stored log or exported CSV file) remotely.



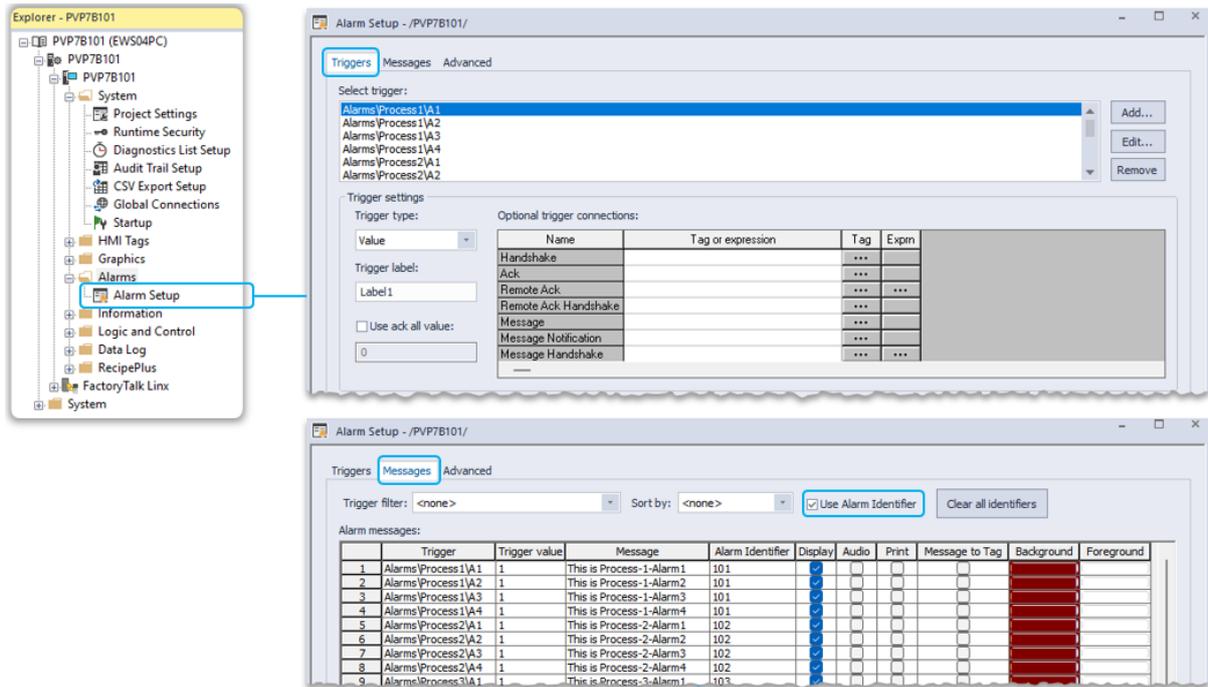
Configuration-Alarm Setup

Configure 'Triggers', 'Messages' and 'Advanced' tab under

HMI Server → Alarms → Alarm Setup

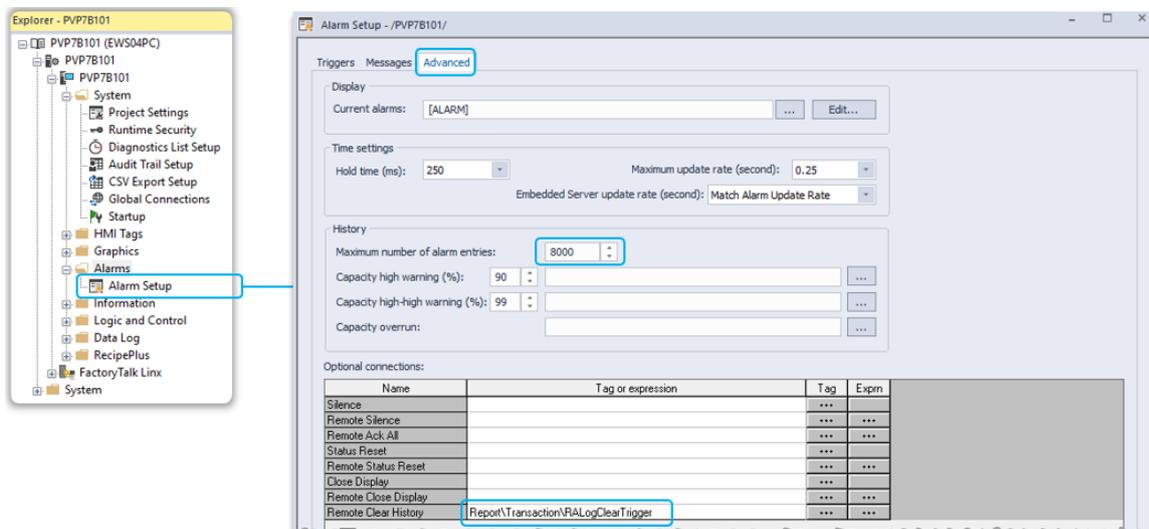
Avoid the use of comma in message text.

You can define 'Alarm Identifier' with respect to process group to segregate the alarms. It will be useful in future release of report where one can retrieve the alarm report process wise.



Configure 'Maximum number of alarm entries' and 'Remote clear history' under 'Advanced' tab.

You can set maximum number of alarm entries to 10,000. Assign tag to 'Remote clear history' option to clear the internal alarm log (not the SQLite stored log or exported CSV file) remotely.



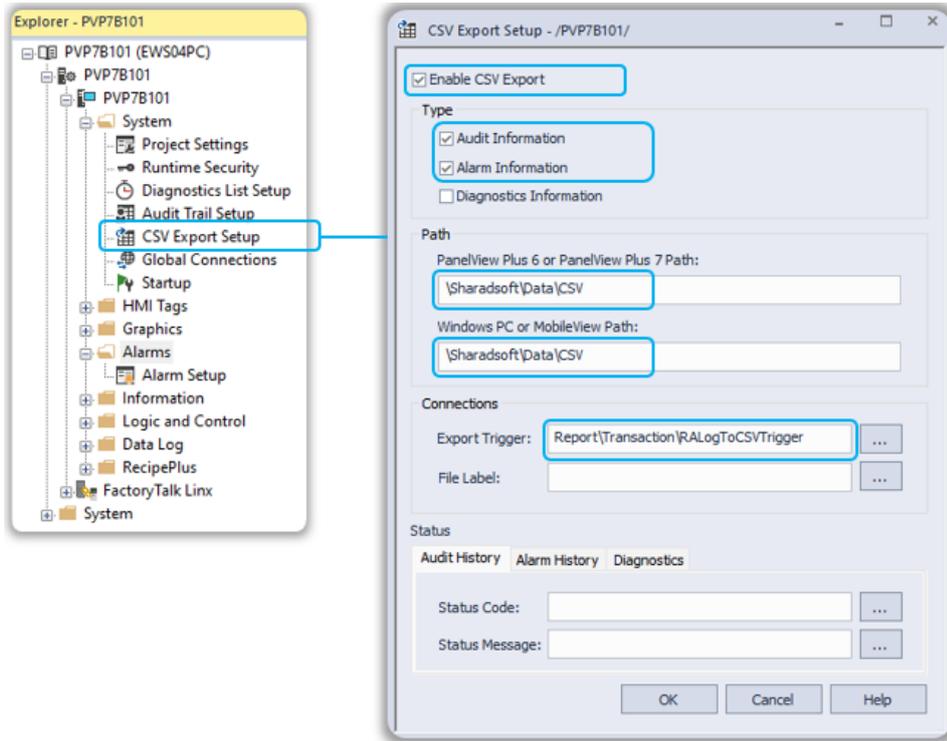
Configuration-CSV Export Setup

Configure CSV export options under HMI Server →System→CSV Export Setup

Enable the 'Enable CSV Export' option. Enable the 'Audit Information' & 'Alarm Information' option.

Define the path where exported CSV files get stored.

Assign tag to 'Export Trigger' option to export the internal alarm & audit trail log remotely.



When you export the alarm log to CSV, it will look like as follows:

2025_02_19_12_48_09-PVP23620-ALARM.csv

	A	B	C	D	E	F	G	H	I	
1	Trigger Index	Trigger Name	Trigger Value	Message	Identifier	<AllTriggers>	Active	Alarm Time (UTC)	Acknowledge Time (UTC)	LmbHneN1r1G@;e0jy0
2	0	Alarms\Process1VA1	1	This is Process-1-Alarm1	101	FALSE	FALSE	02/19/2025 07:15:22	02/19/2025 07:15:25	O0kcKl' bO#mEichHk
3	1	Alarms\Process1VA2	1	This is Process-1-Alarm2	101	FALSE	FALSE	02/19/2025 07:15:27	02/19/2025 07:15:30	O0mgHl' dLr1G@;e0jy0
4	2	Alarms\Process1VA3	1	This is Process-1-Alarm3	101	FALSE	FALSE	02/19/2025 07:15:32	02/19/2025 07:15:34	O0maO' mN1r1G@;e0jy0
5	3	Alarms\Process1VA4	1	This is Process-1-Alarm4	101	FALSE	FALSE	02/19/2025 07:15:36	02/19/2025 07:15:38	O0jgHo' F#mEichHk
6	>70\InfS@9l >6LugK>yMGheJ =-10 f lo--G#mcO h` Fl n									

When you export the audit trail log to CSV, it will look like as follows:

2025_02_19_12_48_09-PVP23620-AUDIT.csv

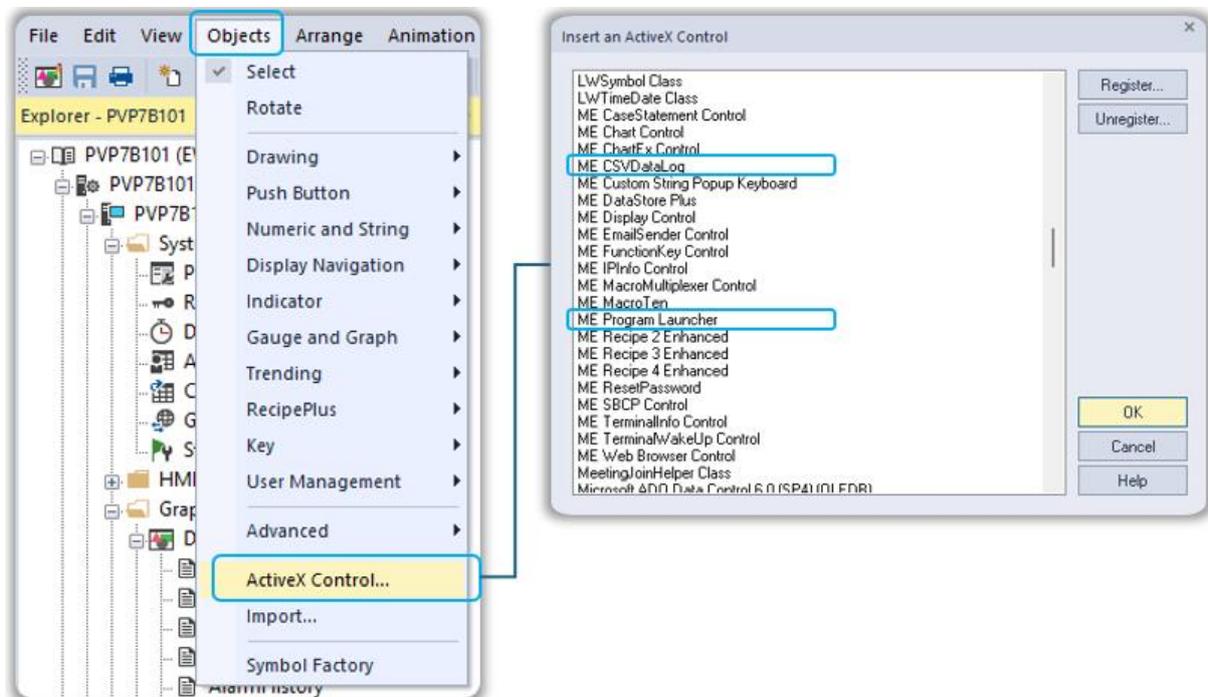
	A	B	C	D	E	F
1	Occurred Time (UTC)	Source	Location	Resource	Username	Message
2	02/19/2025 05:49:16	FactoryTalk Security	PVP23620	Local	Op1	Successful login of user [Op1] on directory [Local]
3	02/19/2025 05:49:16	FactoryTalk View SATag	PVP23620		Op1	Write 'Op1' to 'System\User'. Previous value was 'DEFAULT'.
4	02/19/2025 05:49:16	FactoryTalk View ME Station	PVP23620		Op1	Successful login of user 'op1'.
5	02/19/2025 07:14:57	FactoryTalk View SATag	PVP23620		Op1	Write '1' to 'Report\Data\Process1\Trigger'. Previous value was 'False'.
6	O0k` \InISClmJ 5K u5 Jky Dh2 :dH oeT hbT reLkaJ k L					

Configuration-Graphics-Displays

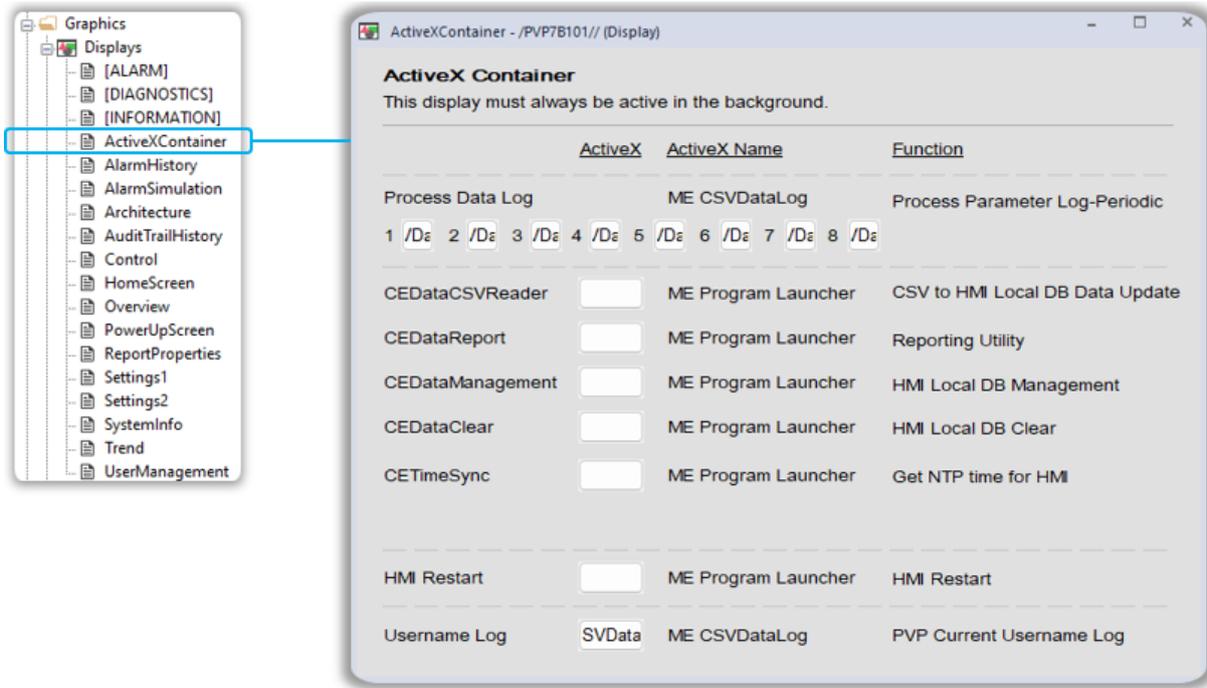
Create a display which is going to be appear first at HMI power up. For our demo application, we have created 'PowerUpScreen' display for that purpose.



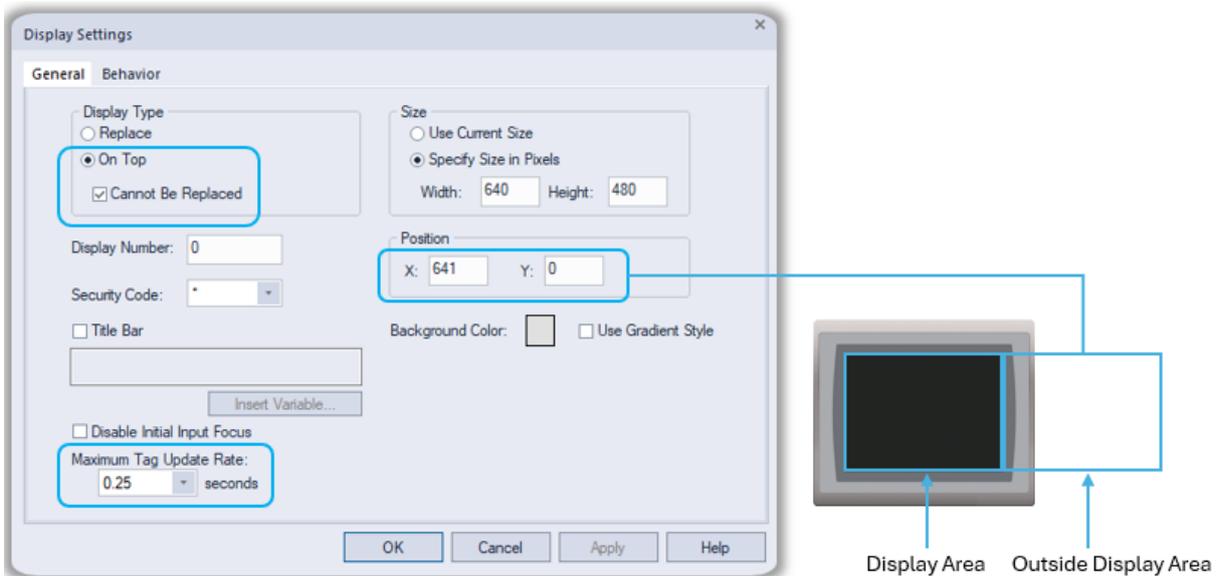
Create another display for multiple ActiveX accommodation which will play important role in HMI reporting. We are going to use two ActiveX majorly, i.e., ME CSVDataLog & ME Program Launcher.



We have created a 'ActiveXContainer' display in our demo application for this purpose. You can import same into your application.



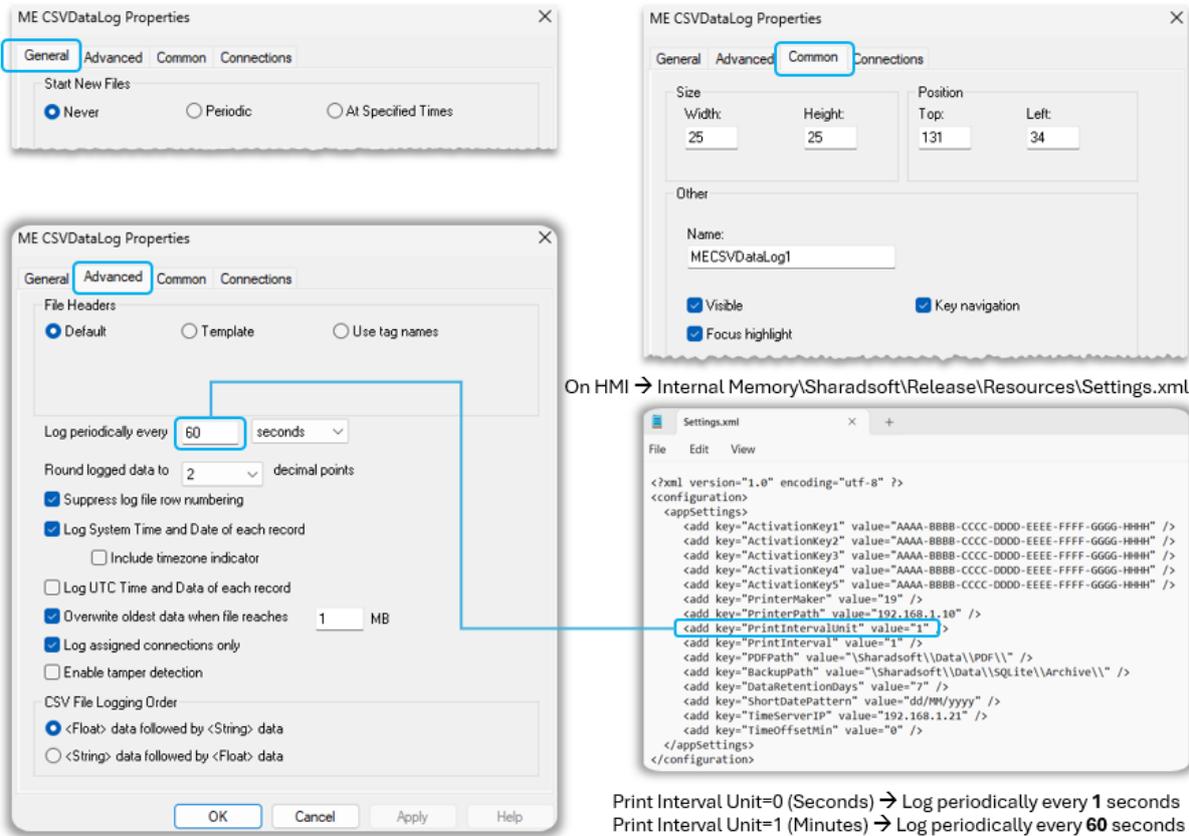
Set the display settings as shown in below snapshot. This display set to 'On Top' & 'Cannot Be Replaced'. Position the display such as it will remain always active outside the display area. Tag update rate for this display must not be too fast or too slow.



We are using 'ME CSVDataLog' ActiveX for process data log to CSV on interval basis (1 Second/60 Second) and current username log to CSV (per 2 Seconds). This current username can be use in report footer for 'CurrentUserName' parameter value.

ActiveX! 'ME Program Launcher' is useful to trigger the executable files available at HMI.

Properties of 'ME CSVDataLog' ActiveX for process data log is as follows:



If you want print interval unit in reporting utility shall be Minute, then set 'Log periodically every' to 60 seconds and set 'PrintIntervalUnit' to 1 in Settings.xml file.

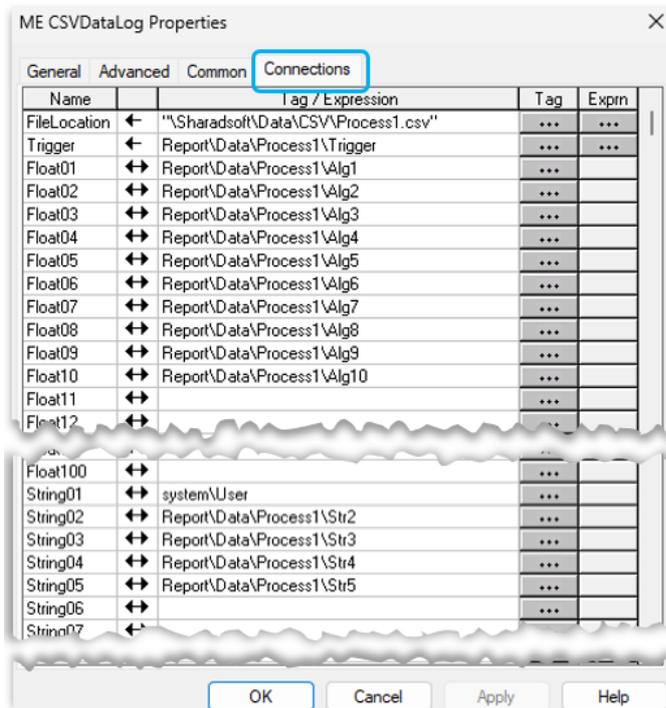
If you want print interval unit in reporting utility shall be seconds, then set 'Log periodically every' to 1 seconds and set 'PrintIntervalUnit' to 0 in Settings.xml file.

Note: Prefer to log data on per 60 seconds basis since it will help to keep database size smaller and in result retention period can be a more for live database.

Any other value apart from '1' or '60' seconds is not compatible with reporting utility.

Other settings must be same as shown above in ActiveX Properties → Advanced

Connection properties of 'ME CSVDataLog' ActiveX for process data log is as follows:



'File Location' **must be** the same as shown in the above snapshot.

'Float01 to Float10' and 'String01 to String05' connections **must be** assigned. If you do not have actual tag data to log, then assign a memory tag with a valid data type (Analog/String).

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
Str1	Username
Str2	Process Step Description

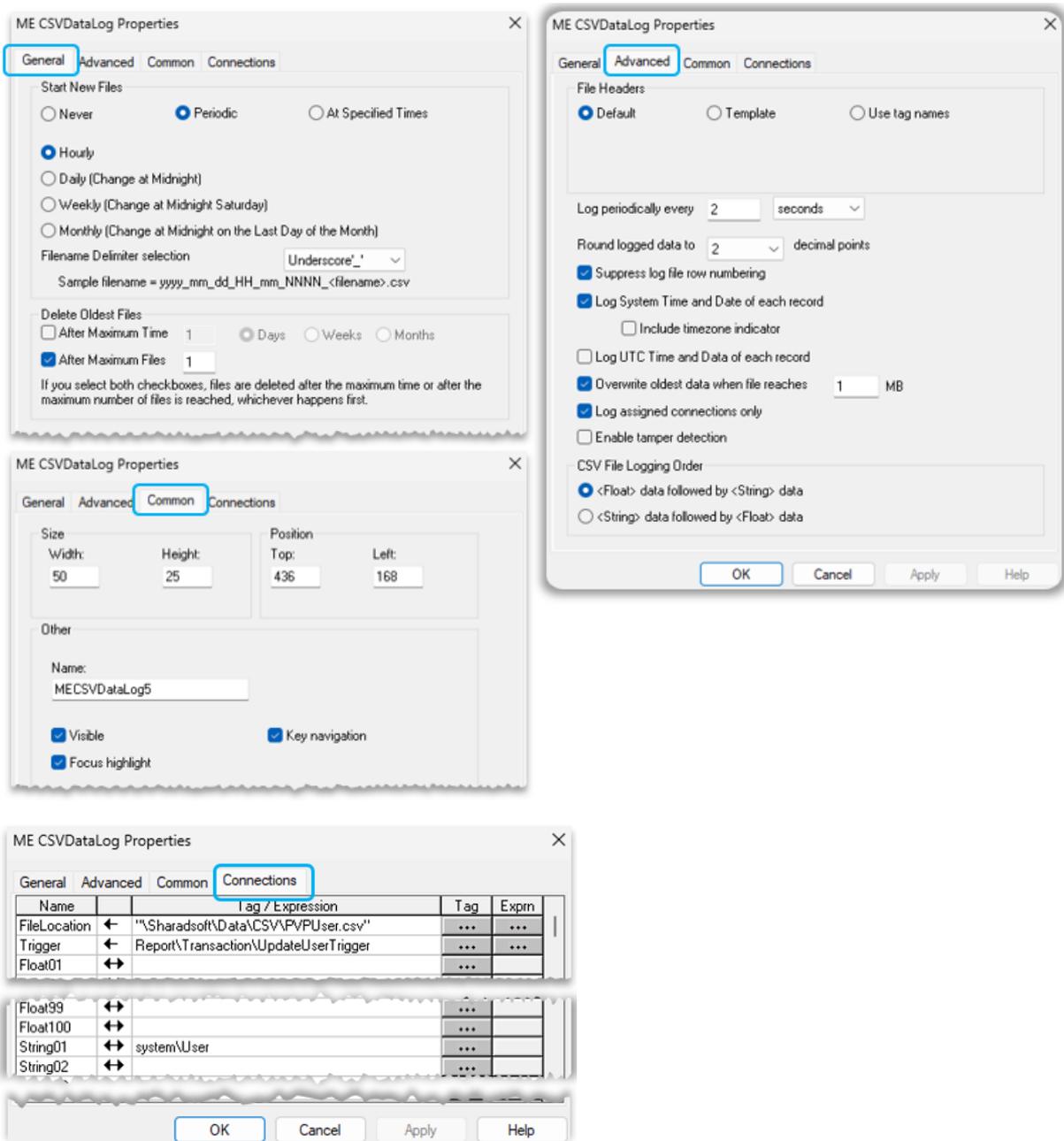
The data log will remain active until the 'Trigger' tag value remains '1'. You can stop the data log by setting the 'Trigger' tag value to '0' whenever the data log is not required. It will help to keep the database size smaller.

After the data log, the CSV file must look like the one shown in the snapshot below regarding the column name and its sequence. Different column names or sequences will result in errors during the 'CEDataCSVReader' application execution. Avoid the use of comma in string data.

Process1.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	LocalDate	LocalTime	Alg1	Alg2	Alg3	Alg4	Alg5	Alg6	Alg7	Alg8	Alg9	Alg10	Str1	Str2	Str3	Str4	Str5
2	02/11/2025	20:07:48	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	DEFAULT	P1Str2	P1Str3	P1Str4	P1Str5
3	02/11/2025	20:08:48	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	DEFAULT	P1Str2	P1Str3	P1Str4	P1Str5
4	02/11/2025	20:09:48	1011	1002	1003	1004	1005	1006	1007	1008	1009	1010	DEFAULT	P1Str2	P1Str3	P1Str4	P1Str5

Properties of 'ME CSVDataLog' ActiveX for the Current Username log are as follows:



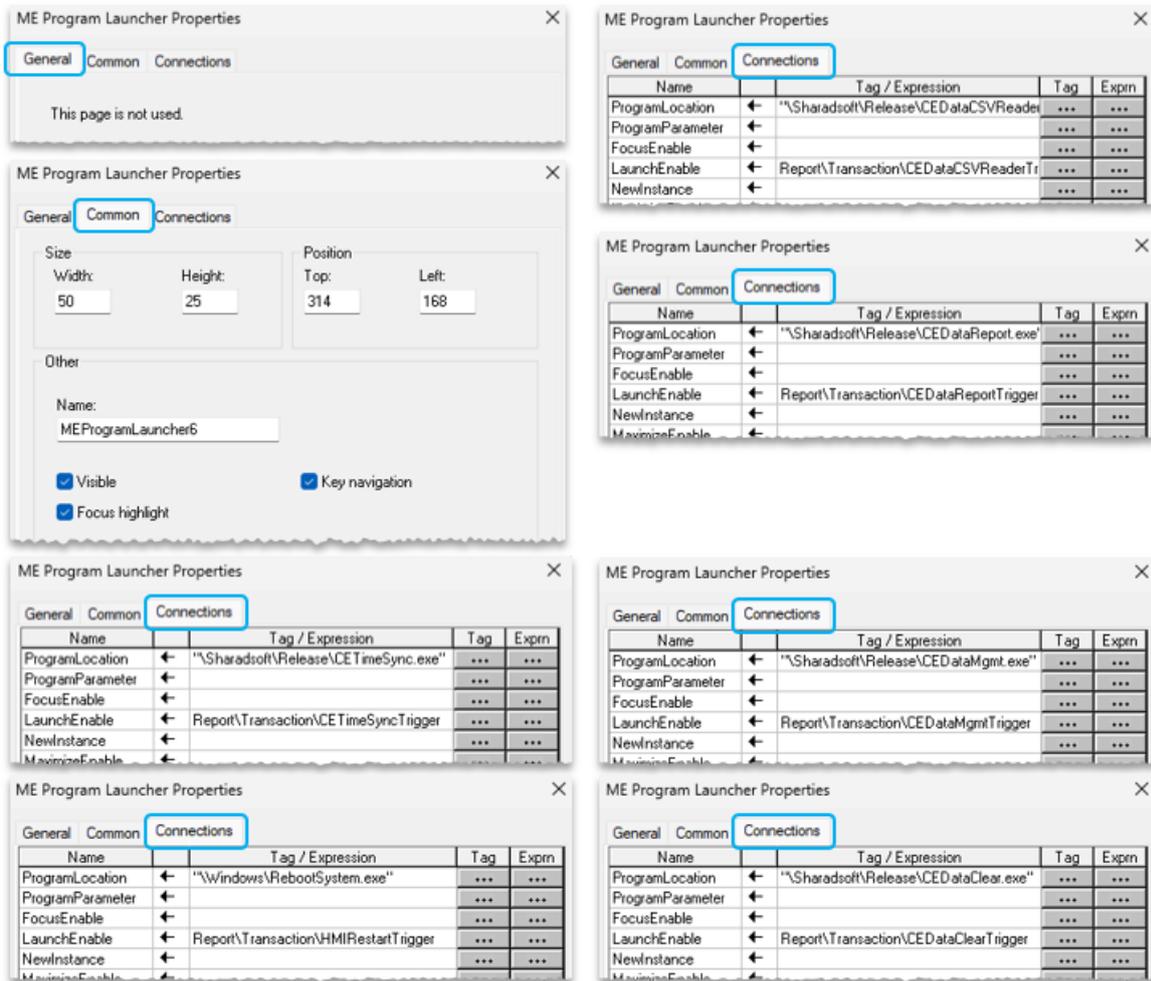
'General', 'Advanced' & 'Connections' **must be** the same as shown in the above snapshot.

After the data log, the CSV file must look like the one shown in the snapshot below regarding the column name and its sequence. Different column names or sequences will show no value at 'CurrentUserName' and may be an error during the reporting utility window popup.

2025_03_04_19_00_0001_PVUser.csv

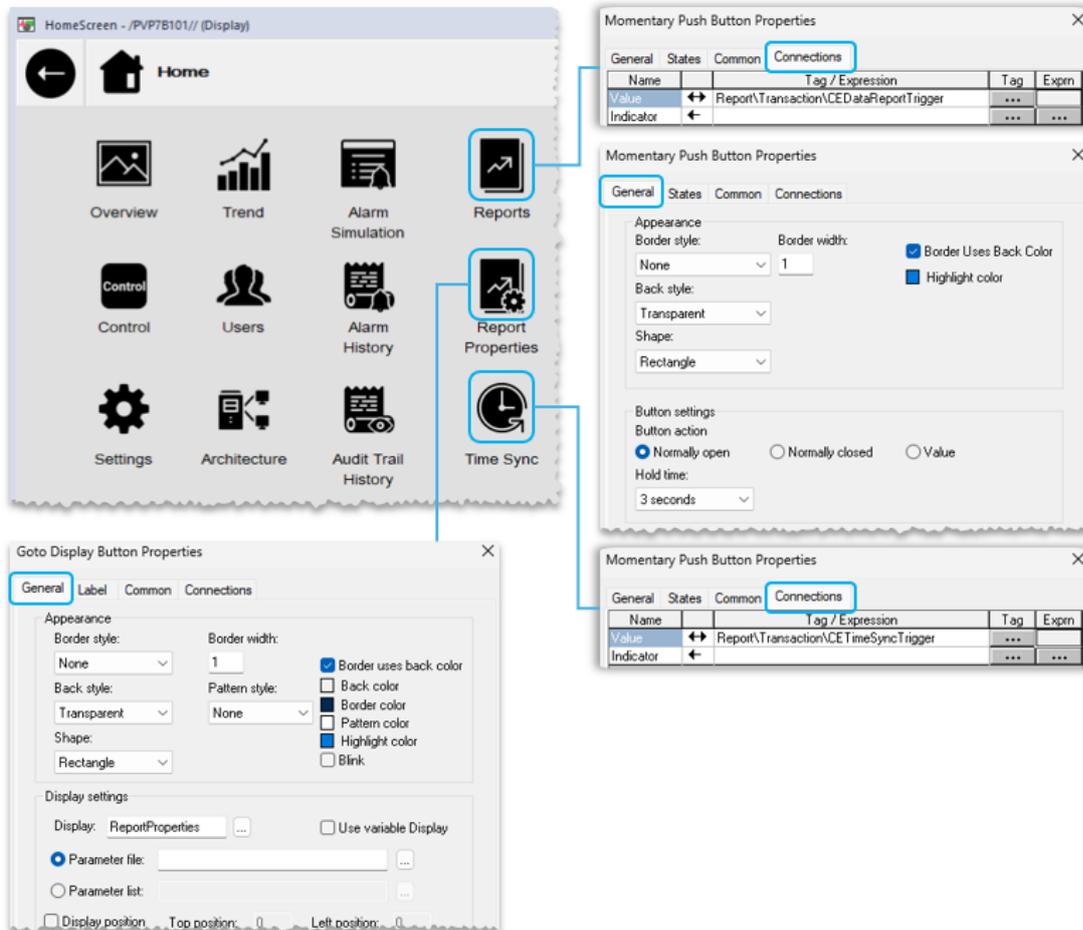
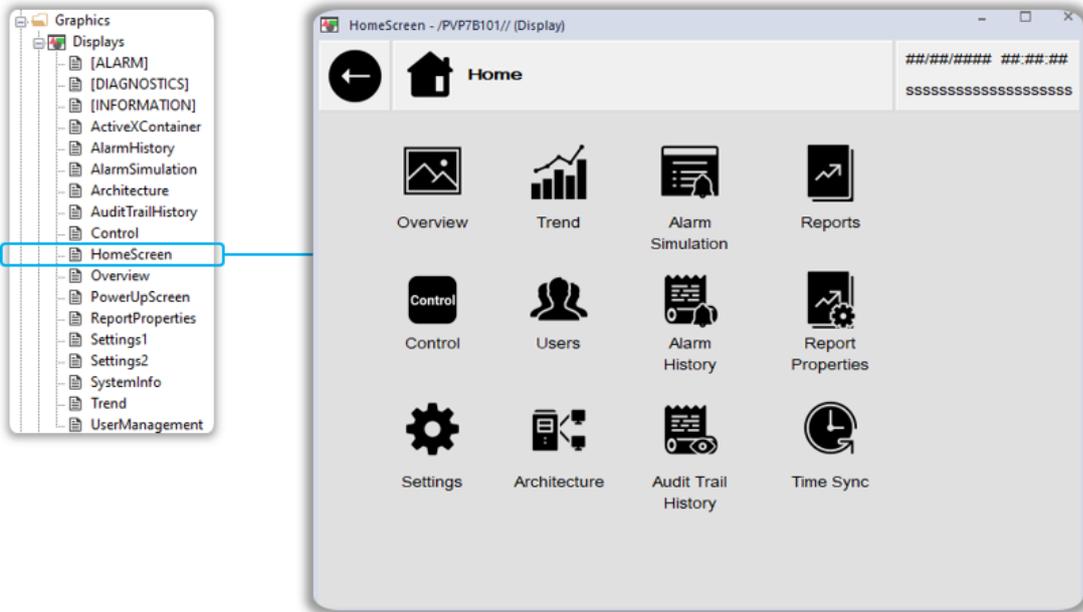
	A	B	C
1	LocalDate	LocalTime	Str 1
2	03/04/2025	19:00:01	DEFAULT
3	03/04/2025	19:00:03	DEFAULT
4	03/04/2025	19:00:05	DEFAULT
5	03/04/2025	19:00:07	DEFAULT

Properties of 'ME Program Launcher' ActiveX for different executables calling are as follows:



'LaunchEnable' tag **must be** digital and keep it true/active for at least 3/5 seconds during any executable file calling requirement.

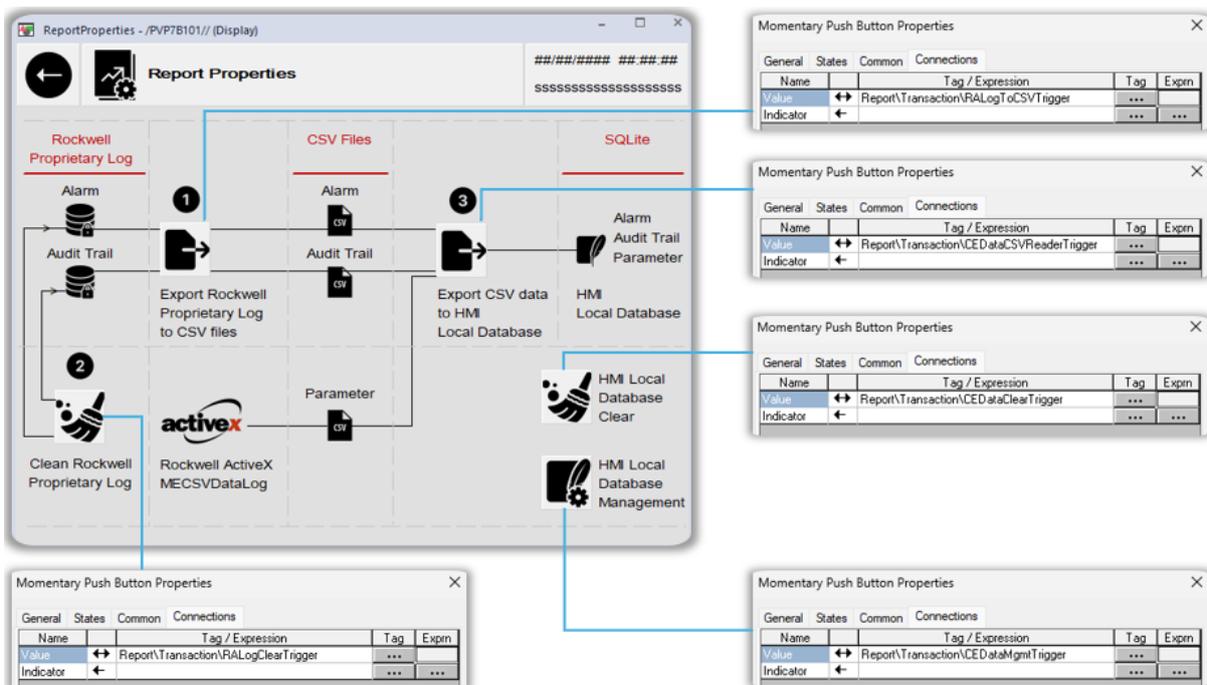
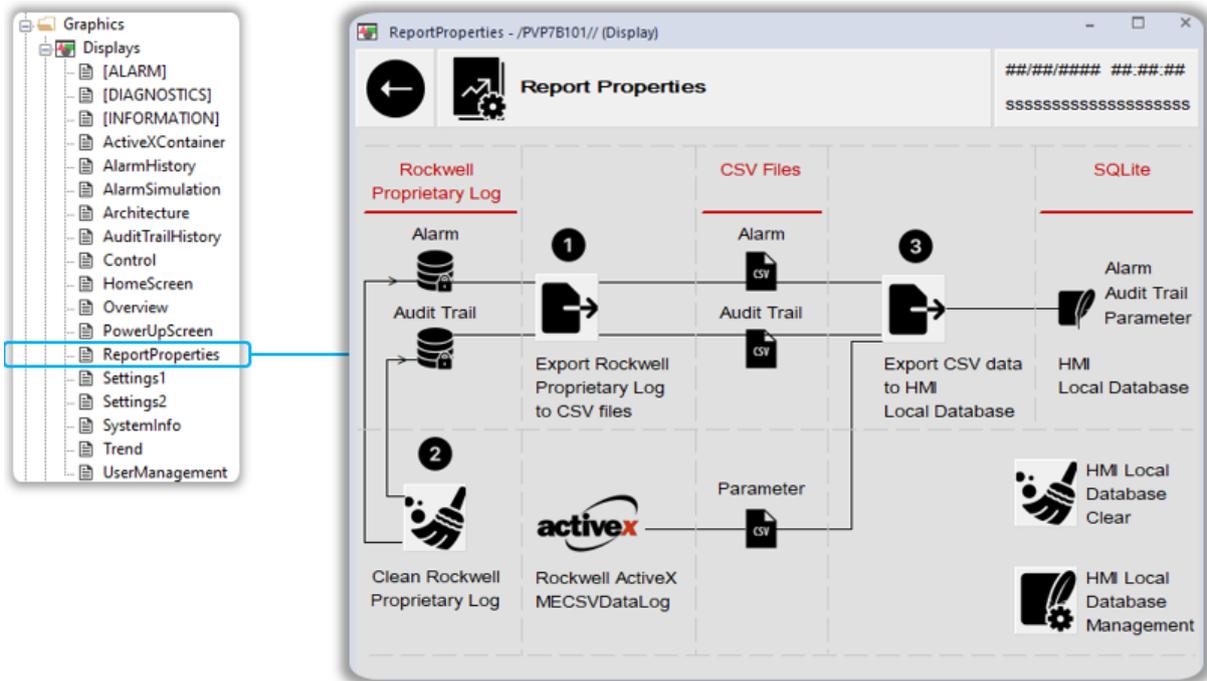
Create a display where you want user-call executable files like 'CEDataReport', 'CETimeSync', etc. In our demo application, we have created a 'HomeScreen' & 'ReportProperties' display for those purposes.



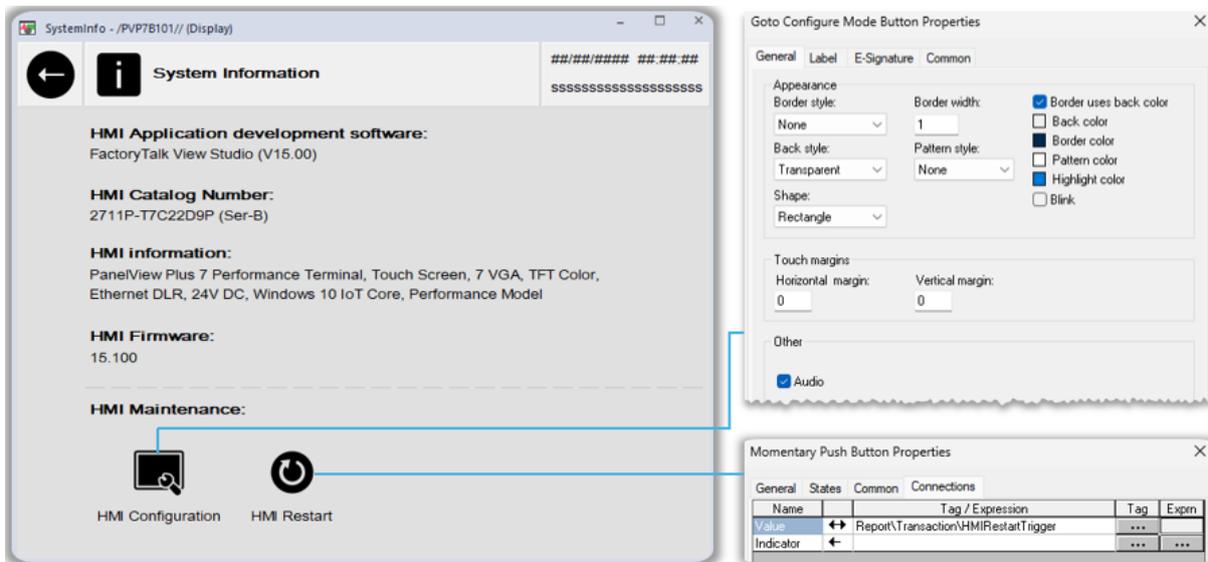
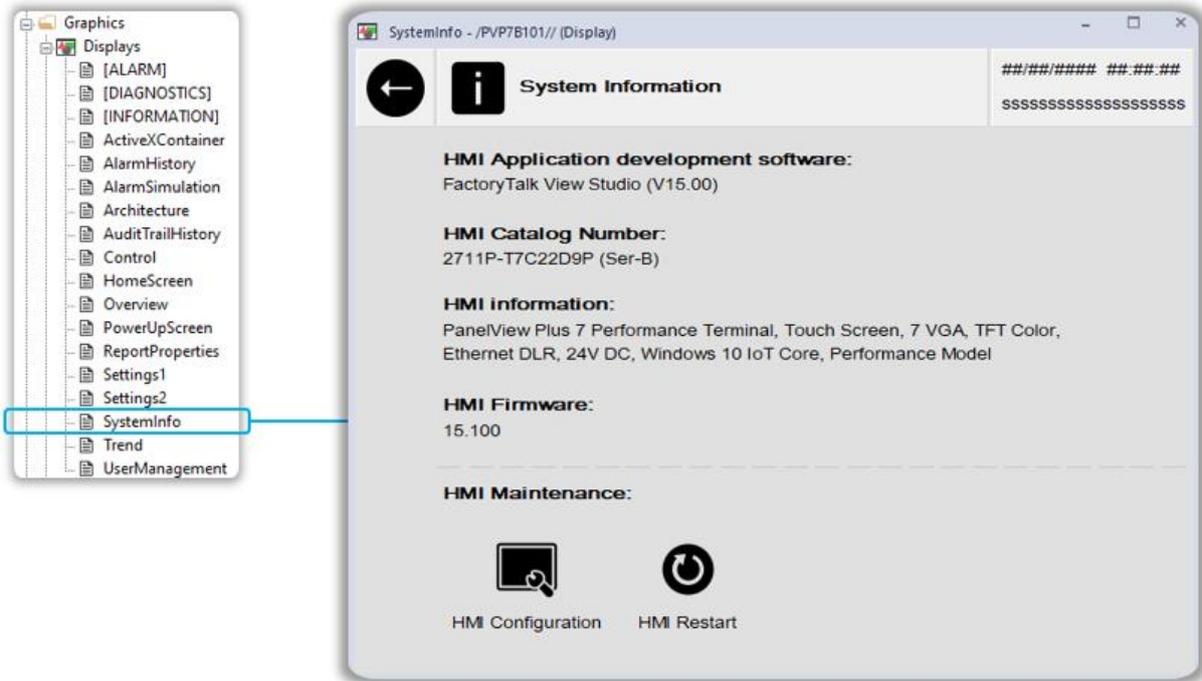
'ReportProperties' display is designed to understand the data flow diagram.

You can place the database management button on any secured screen 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 data clear execution or database management like 'Backup', 'Clear', 'Post Data Clear' etc.

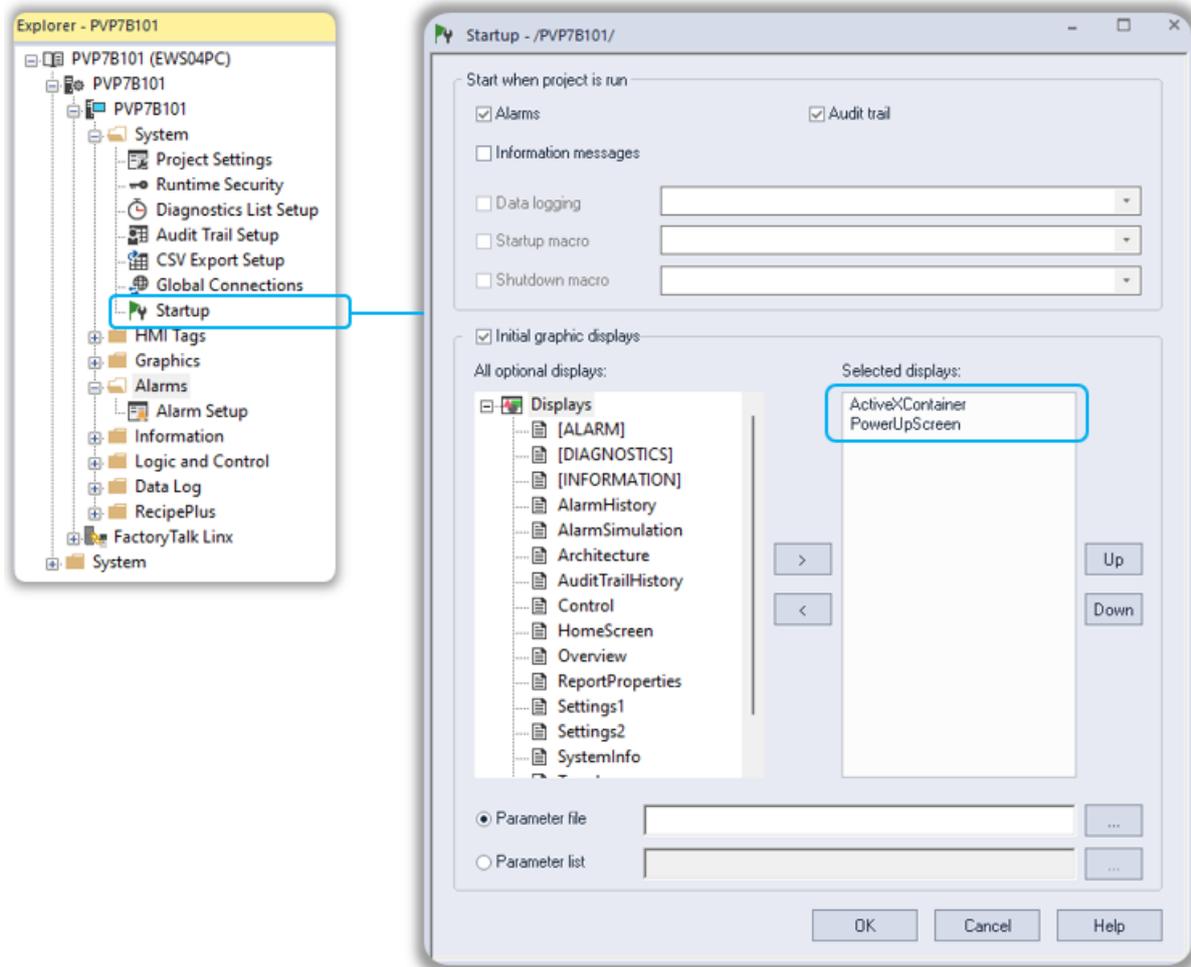


'SystemInfo' display is designed to indicate hardware & software details used for this application. You can configure 'Go To Configuration' & 'HMI Restart' buttons on this display, which will be useful during HMI Terminal Settings access/troubleshooting.



Configuration-Startup

Configure the Startup option under HMI Server → System → Startup



Important: 'ActiveXContainer' display must be first and then 'PowerUpScreen' at

Initial graphic displays → Selected displays

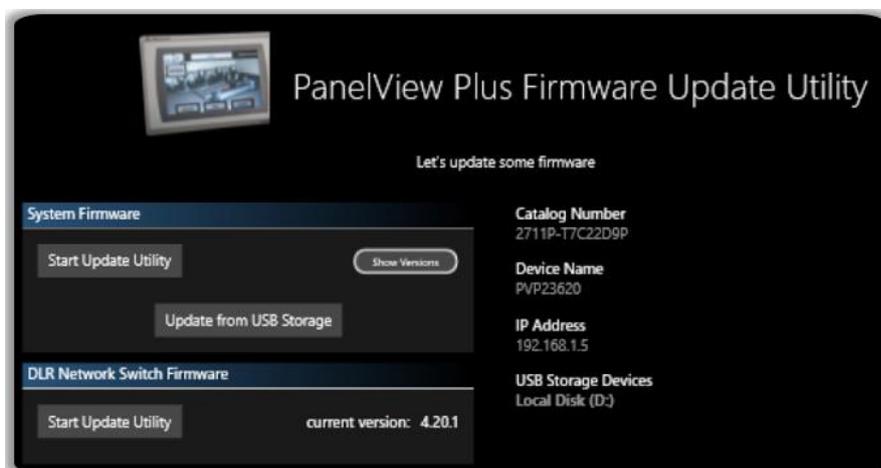
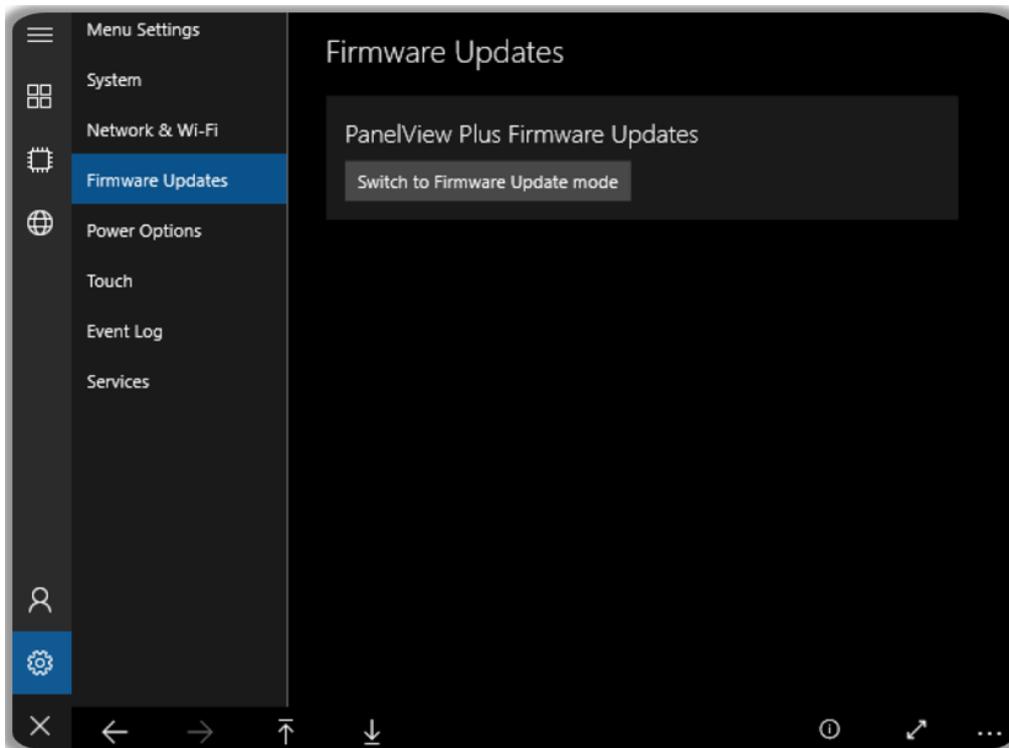
Section2: Configuration of HMI

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

HMI Configuration-Windows 10 IoT Core Dashboard

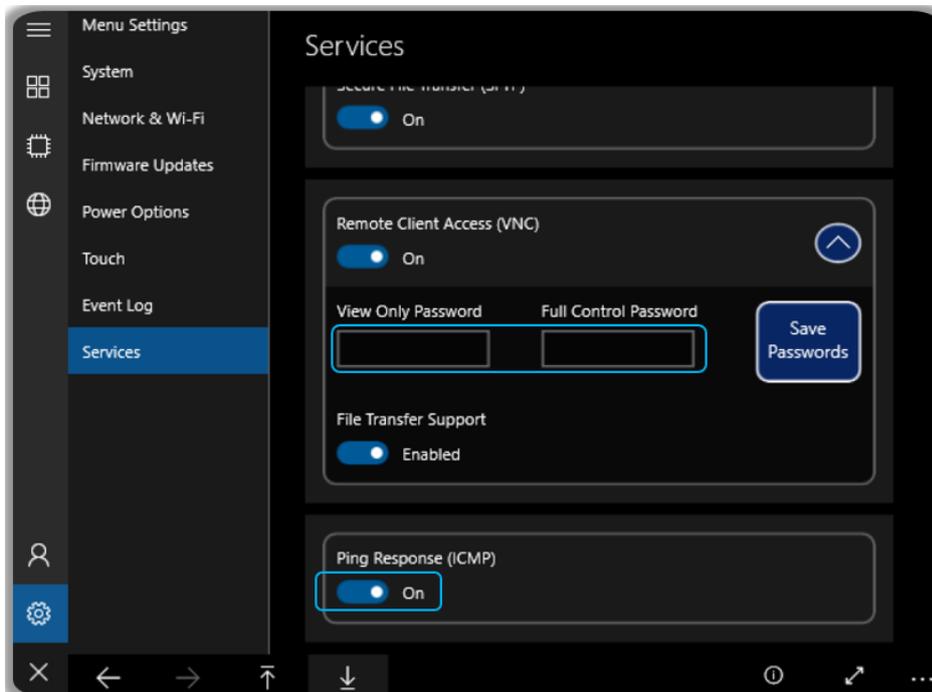
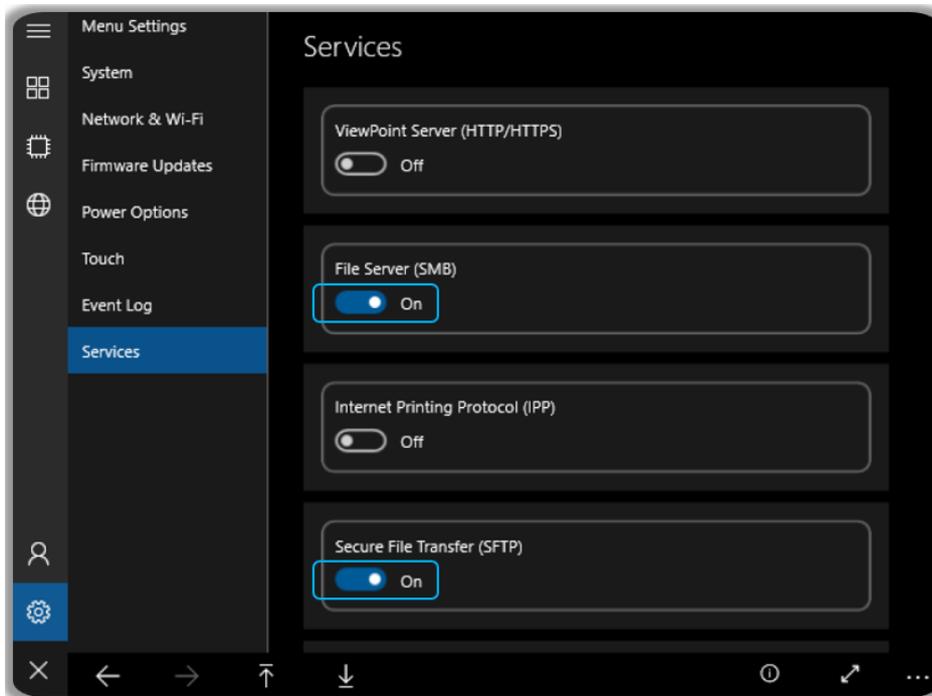
HMI Firmware Update

Understand the system requirement mentioned in the 'Prerequisite' section in this manual, and download and update the firmware of the HMI terminal.



Enable Services

After successfully upgrading the required firmware, enable the services on HMI, as shown in the snapshot below.



Enable 'File Server' service to access the HMI internal storage from the PC using File Explorer.

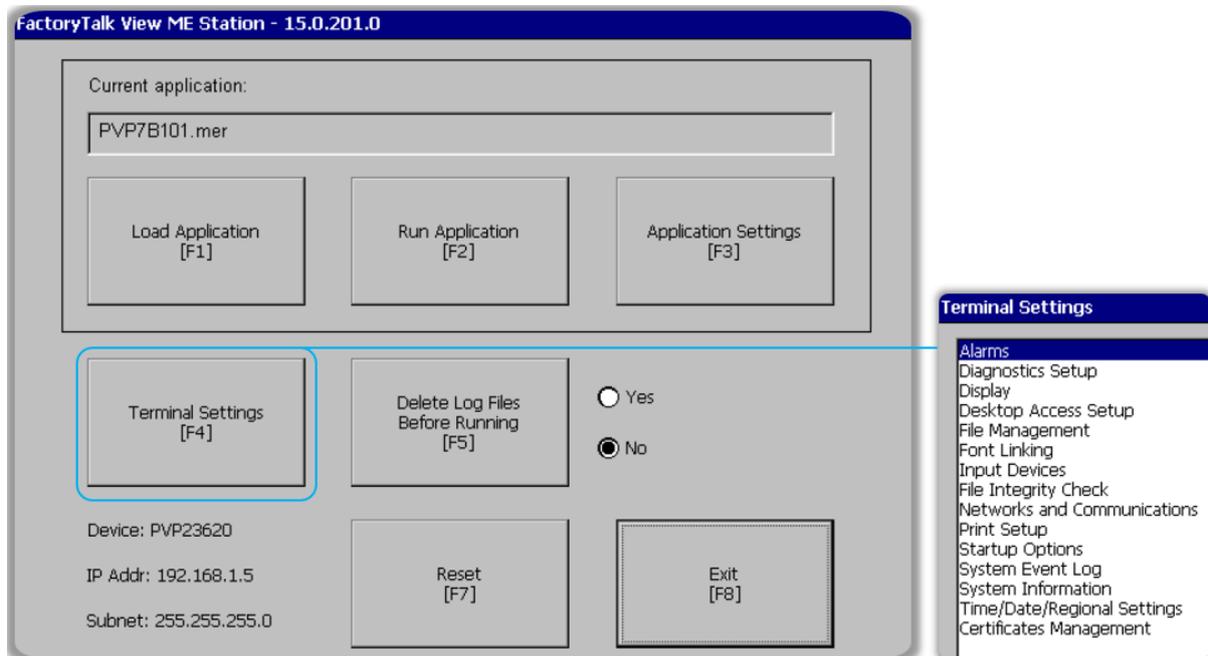
Enable 'Secure File Transfer' service, if you have planned to access HMI internal storage files on FTP.

Enable 'Remote Client Access' service to control the HMI remotely, i.e., from a PC using a VNC viewer.

Enable 'Ping Response' service to get the IP address ping response from HMI at the PC

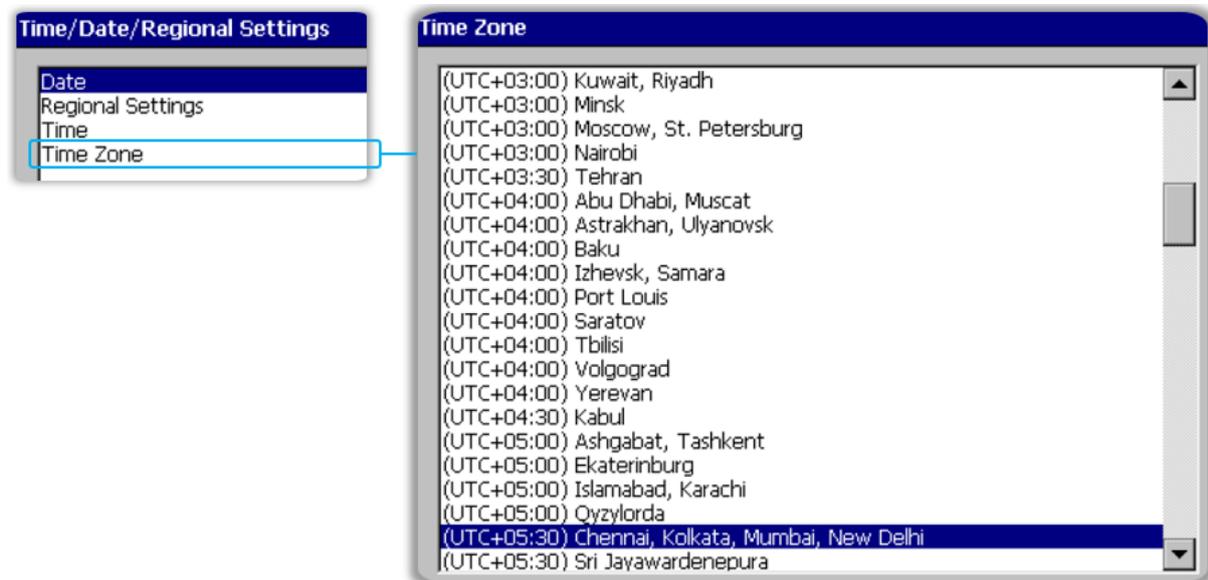
HMI Configuration-Terminal Settings

Now, set the basic settings of the HMI terminal using the 'Terminal Settings' option.



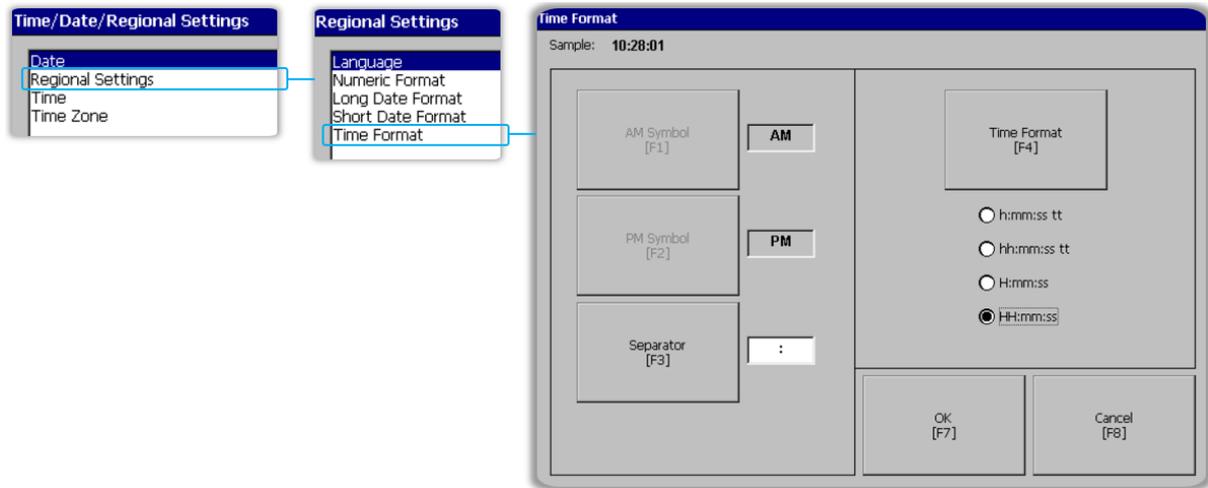
Time/Date/Regional Settings-Time Zone

Set the proper time zone as per the final installation location of HMI.



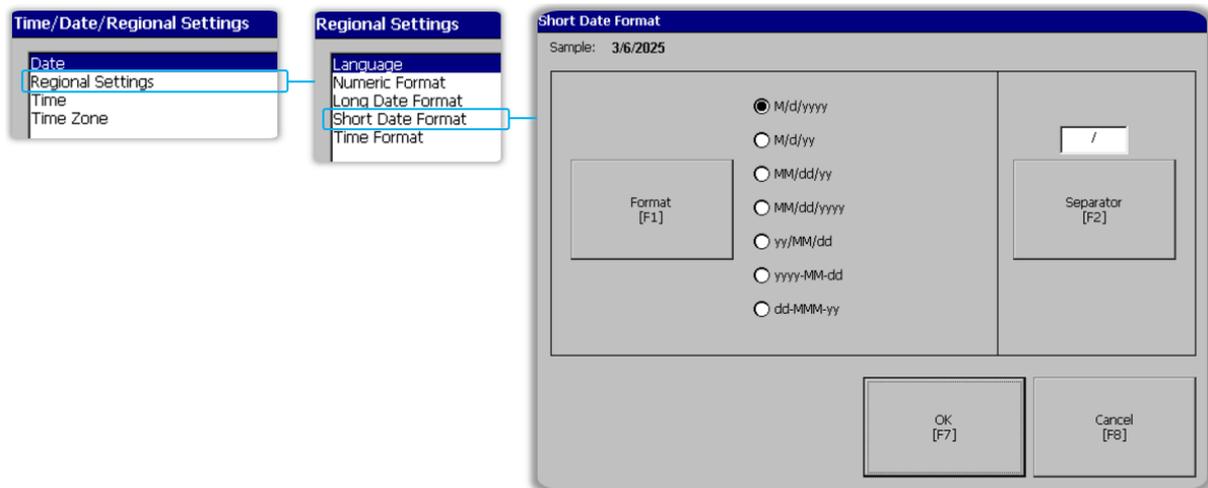
Time/Date/Regional Settings-Time Format

Set the time format to 'HH:mm:ss' to get the 24-hour time display on the HMI runtime application.



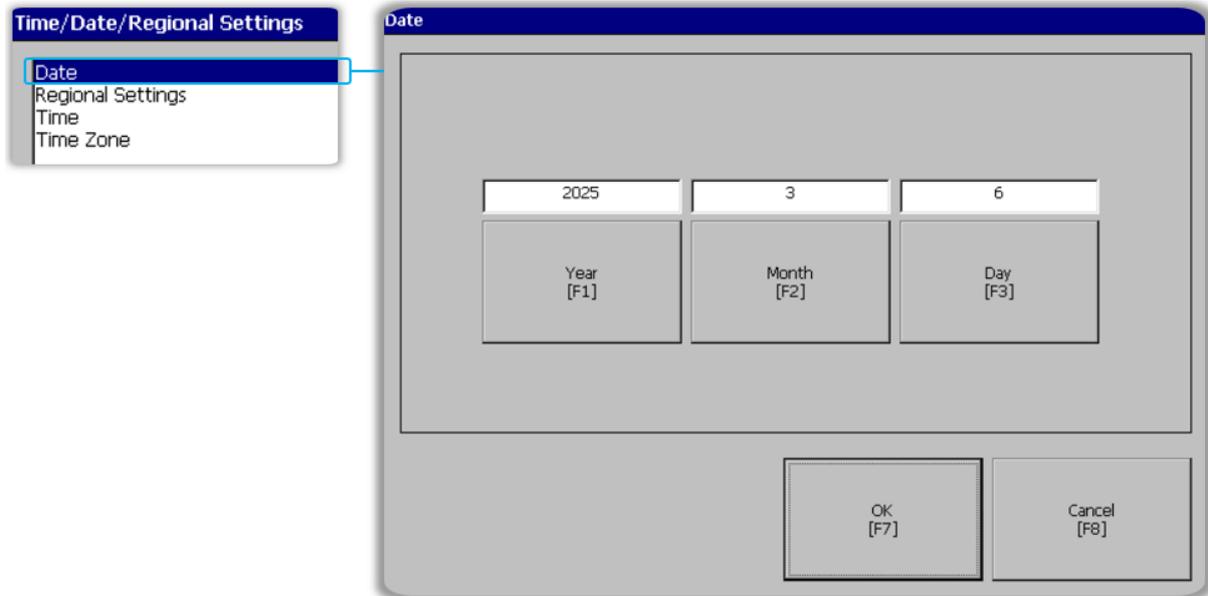
Time/Date/Regional Settings-Short Date Format

Keep the short date format 'M/d/yyyy' and separator '/' as they are.



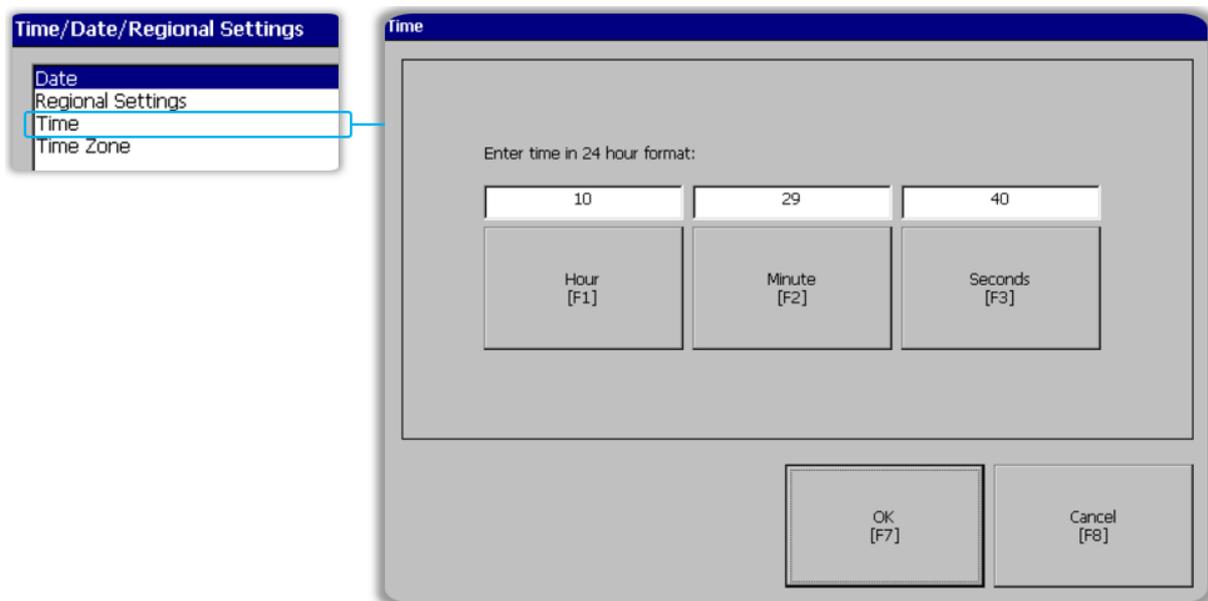
Time/Date/Regional Settings-Date

Set the current date with respect to your standard Date & Time reference.



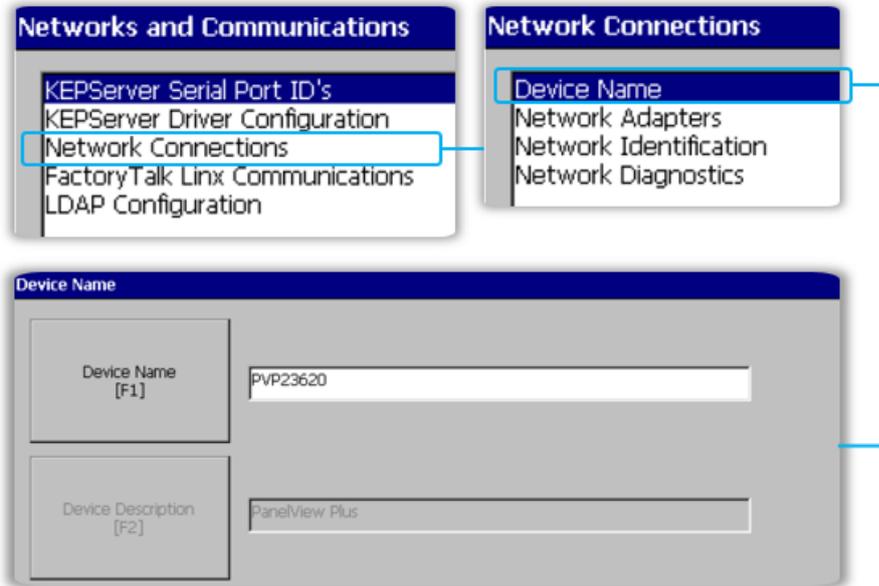
Time/Date/Regional Settings-Time

Set the current time with respect to your standard Date & Time reference.



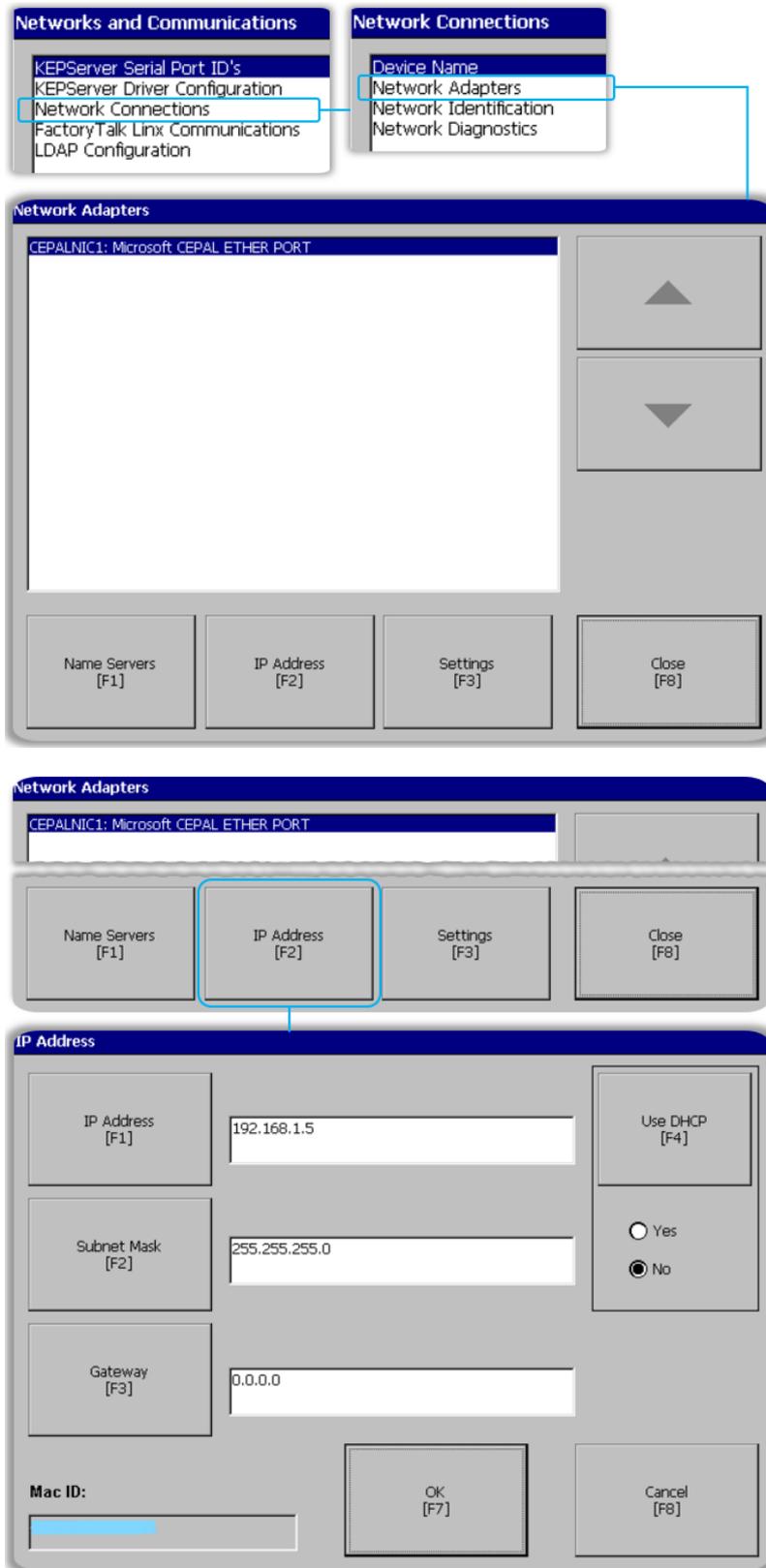
Networks and Communications-Device Name

Set the meaningful device name with reference to Machine/Process ID since it will reflect in the audit trails.



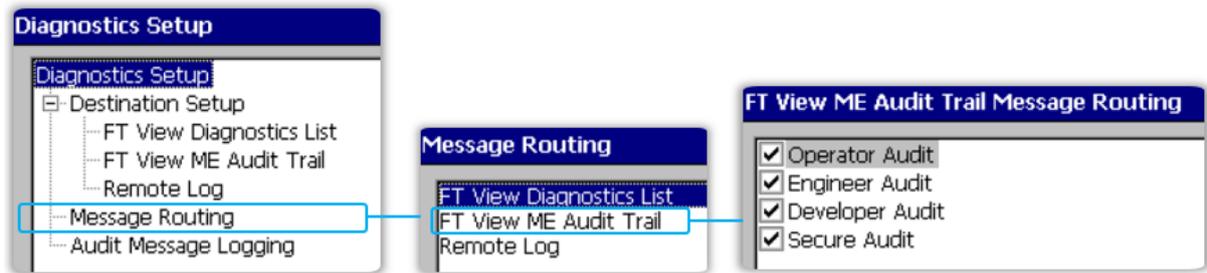
Networks and Communications-IP Address

Set the required IP address for the HMI terminal.



Diagnostics Setup-Audit Trail Message Routing

Enable required message routing options only since it affects the size of the audit trail log. Please use the help of HMI development software to understand those routing options.



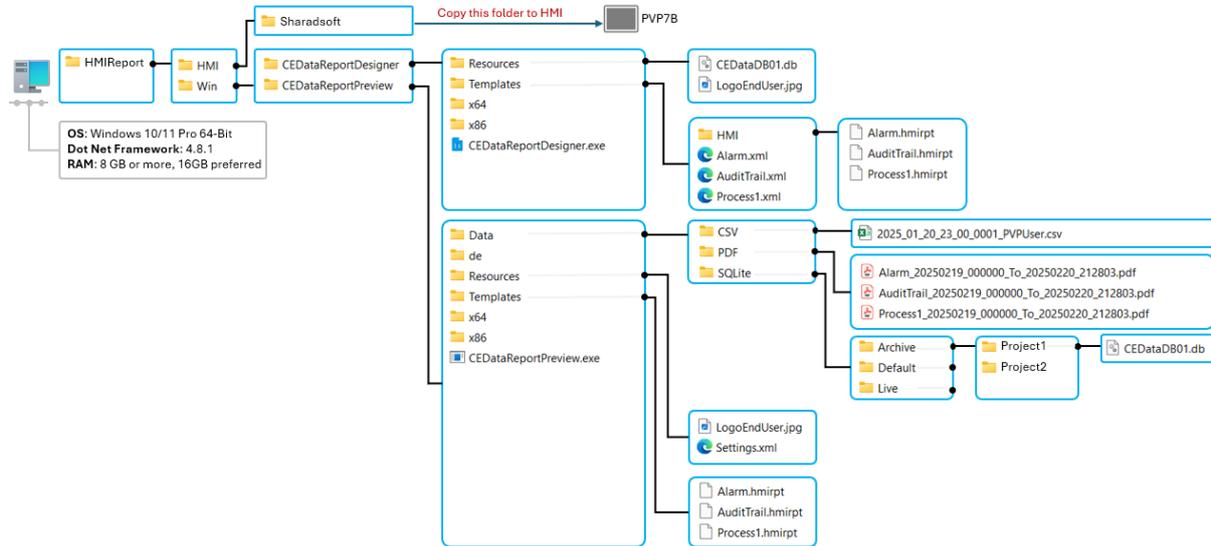
Now, power cycle the terminal before further use.

Section3: Configuration of Report-PC Level

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

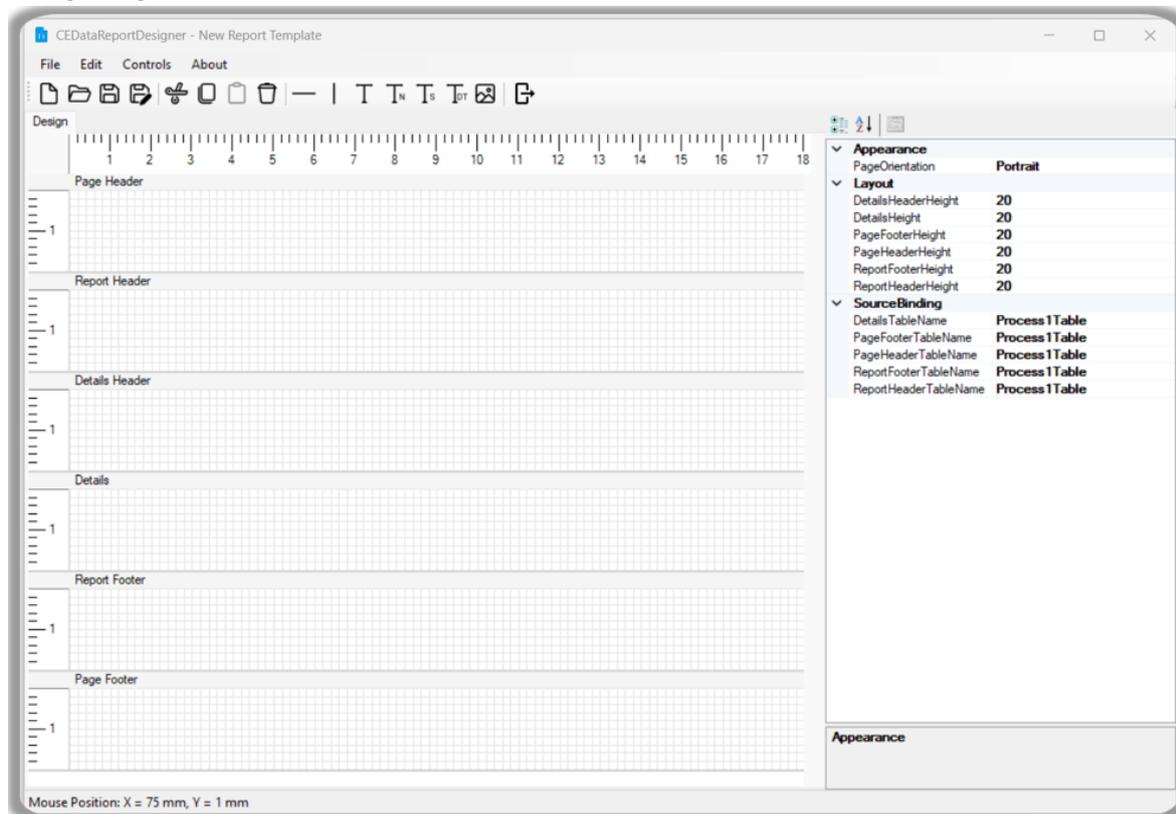
Insight-PC Level-Folder & File Structure

Please go through the folder & file structure before proceeding to report template design.



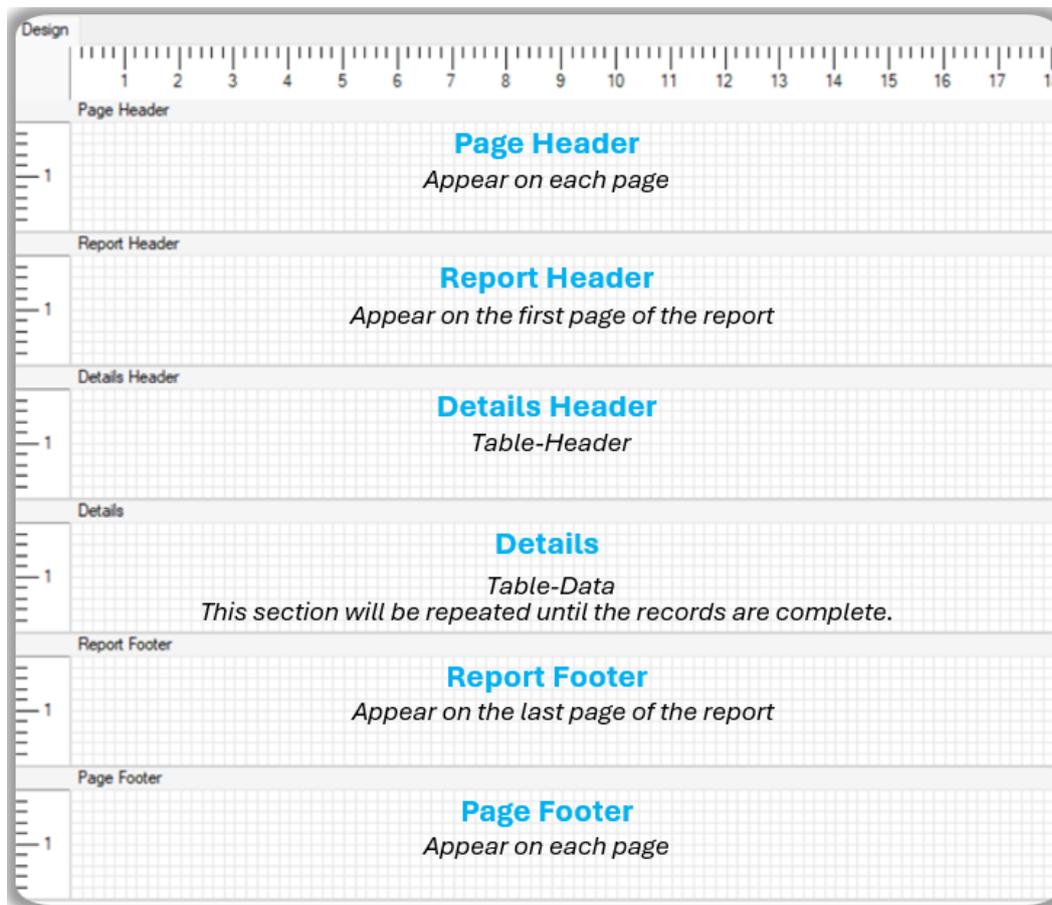
CEDataReportDesigner

Design Page First Look



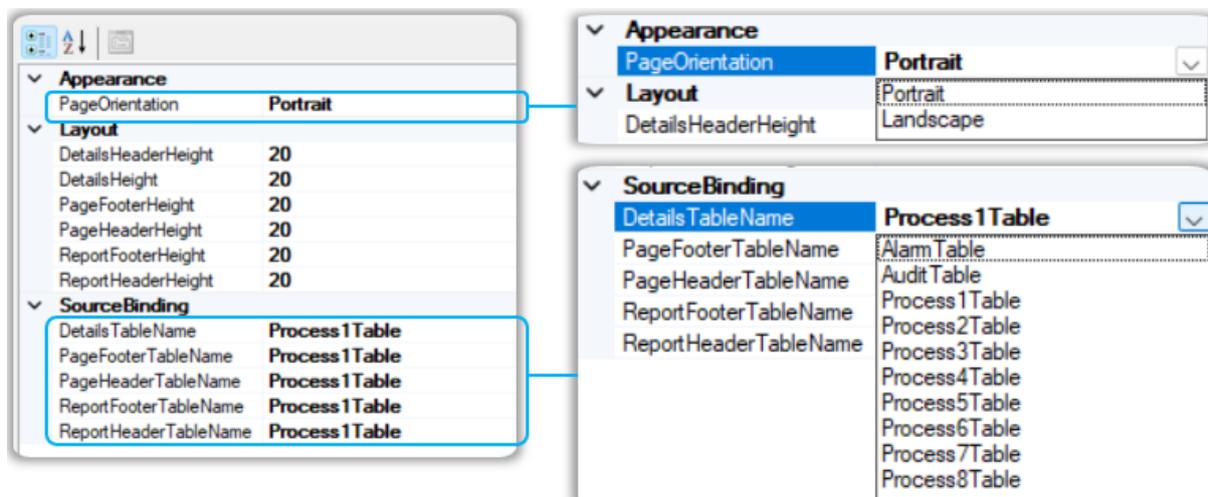
Design Page Sections

Understand the sections of design page.



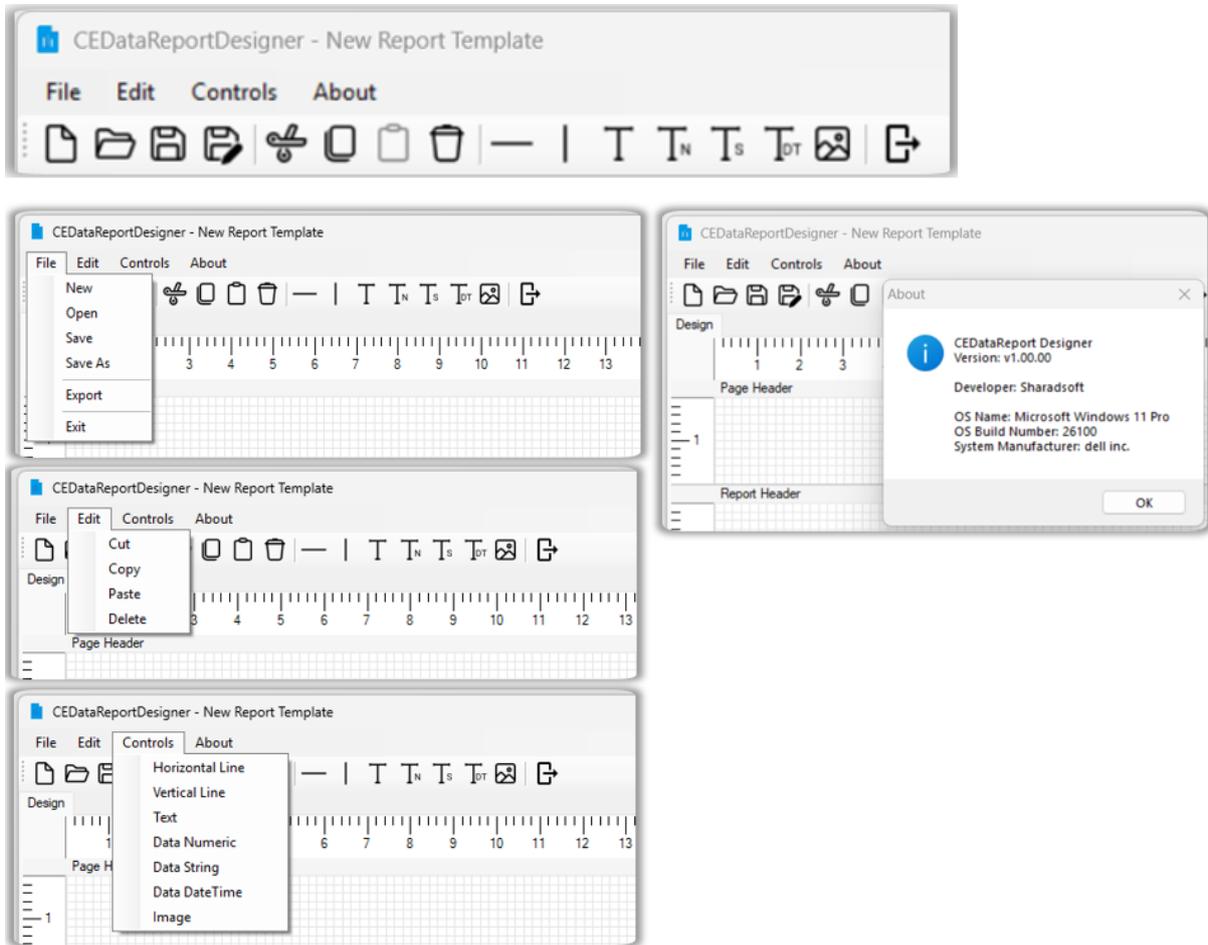
Page Orientation & Source Binding

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 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
	Text	NA
	Data Numeric	Database Filter Built-in
	Data String	Database Filter Built-in
	Data DateTime	Database Filter Built-in
	Image	NA

HMI Database

HMI Report Utility

HMI Report-Page Footer

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

Control Properties-Horizontal Line

Appearance

LineColor: **Black**

LineSize: **1**

Layout

EndPoint: **20, 10**

X: **20**

Y: **10**

StartPoint: **10, 10**

X: **10**

Y: **10**

Line Color

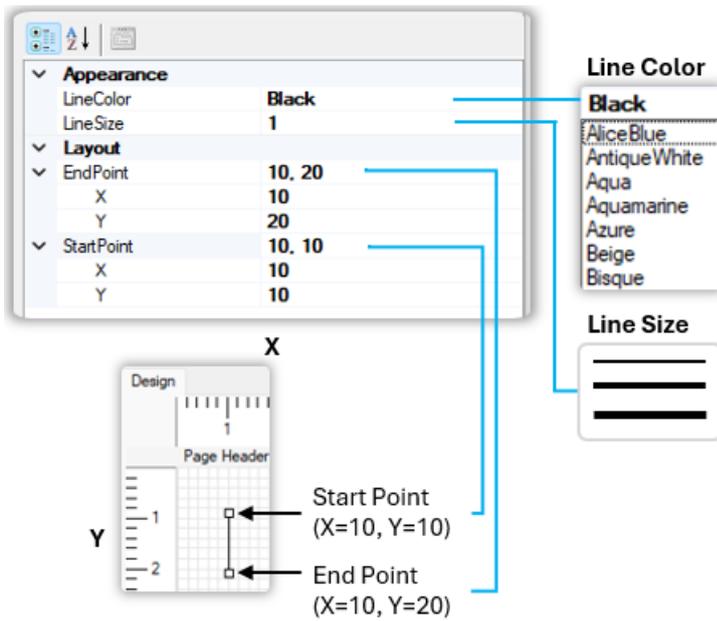
- Black
- AliceBlue
- AntiqueWhite
- Aqua
- Aquamarine
- Azure
- Beige
- Bisque

Line Size

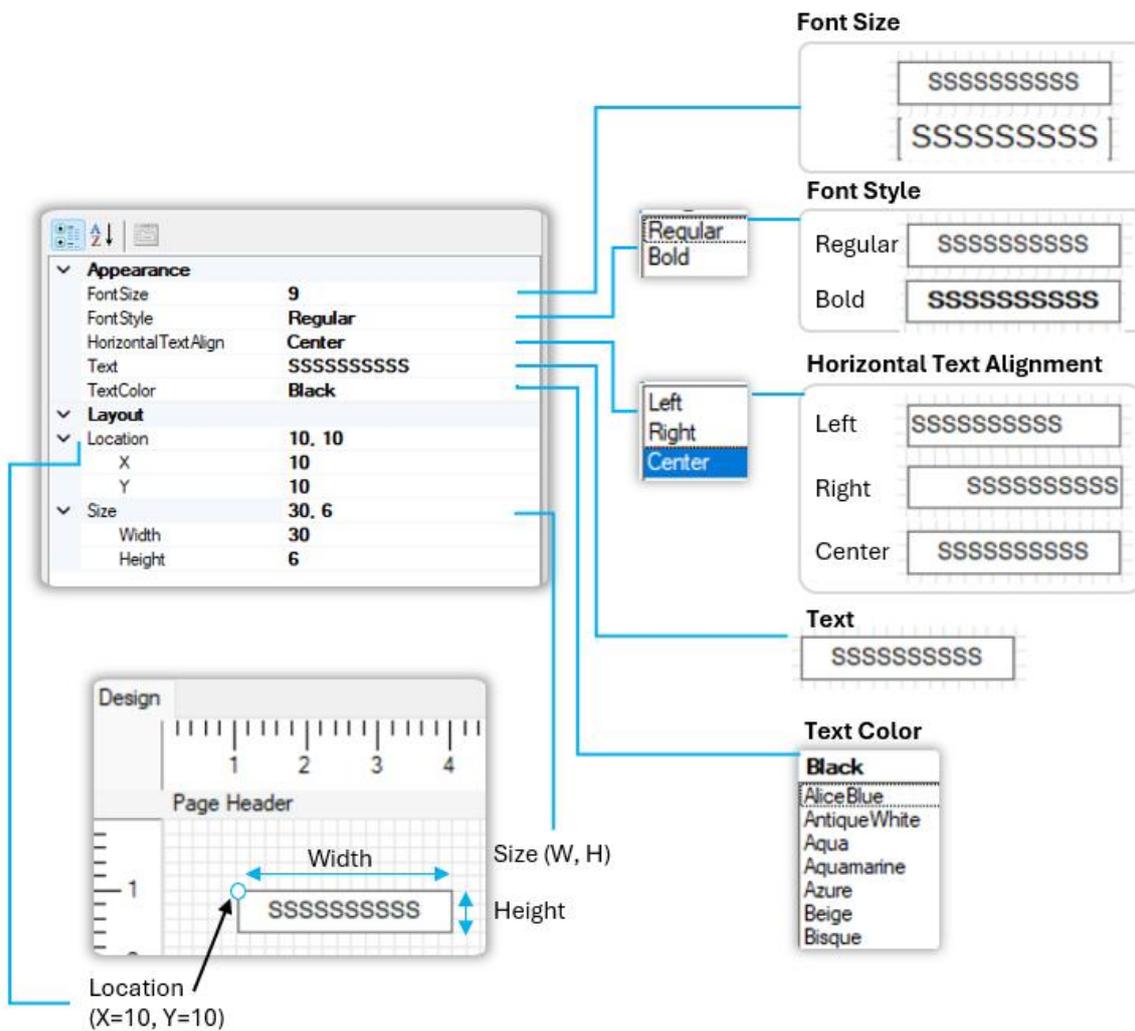
X

Start Point (X=10, Y=10) End Point (X=20, Y=10)

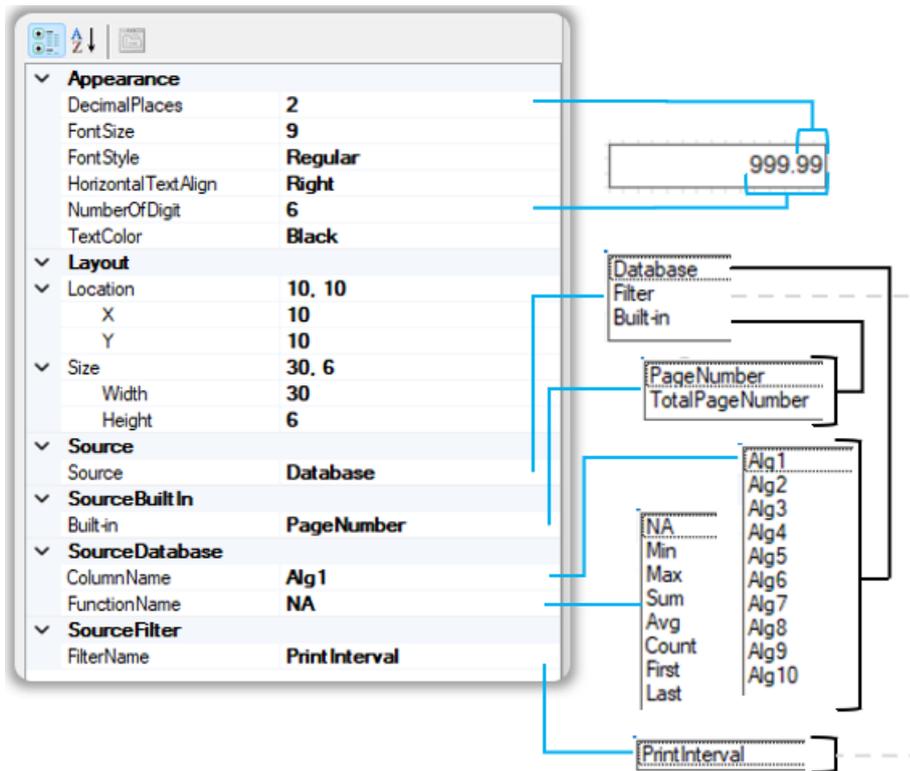
Control Properties-Vertical Line



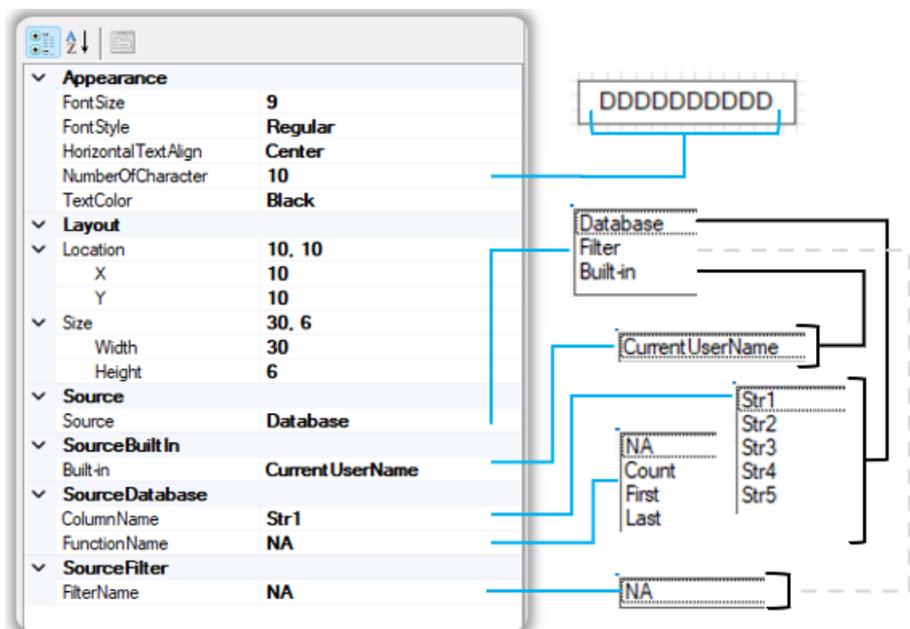
Control Properties-Text



Control Properties-Data Numeric

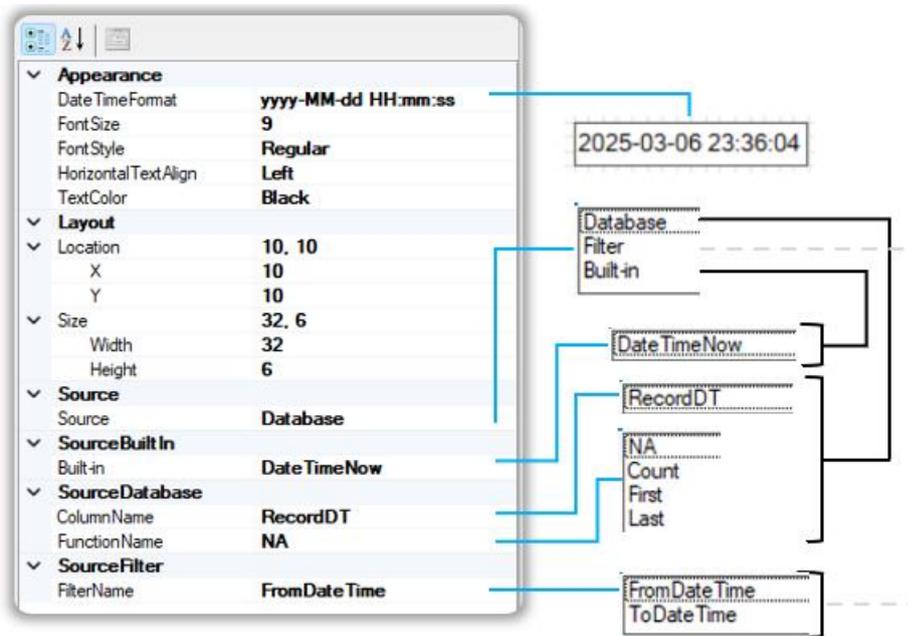


Control Properties-Data String



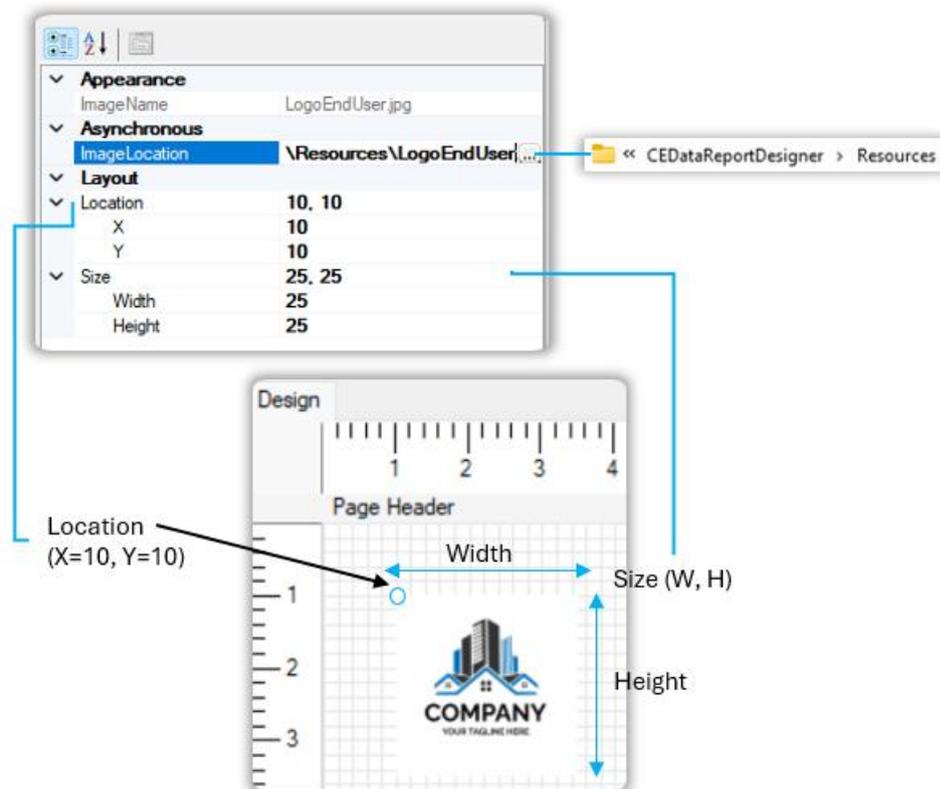
Control Properties-Date Time

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



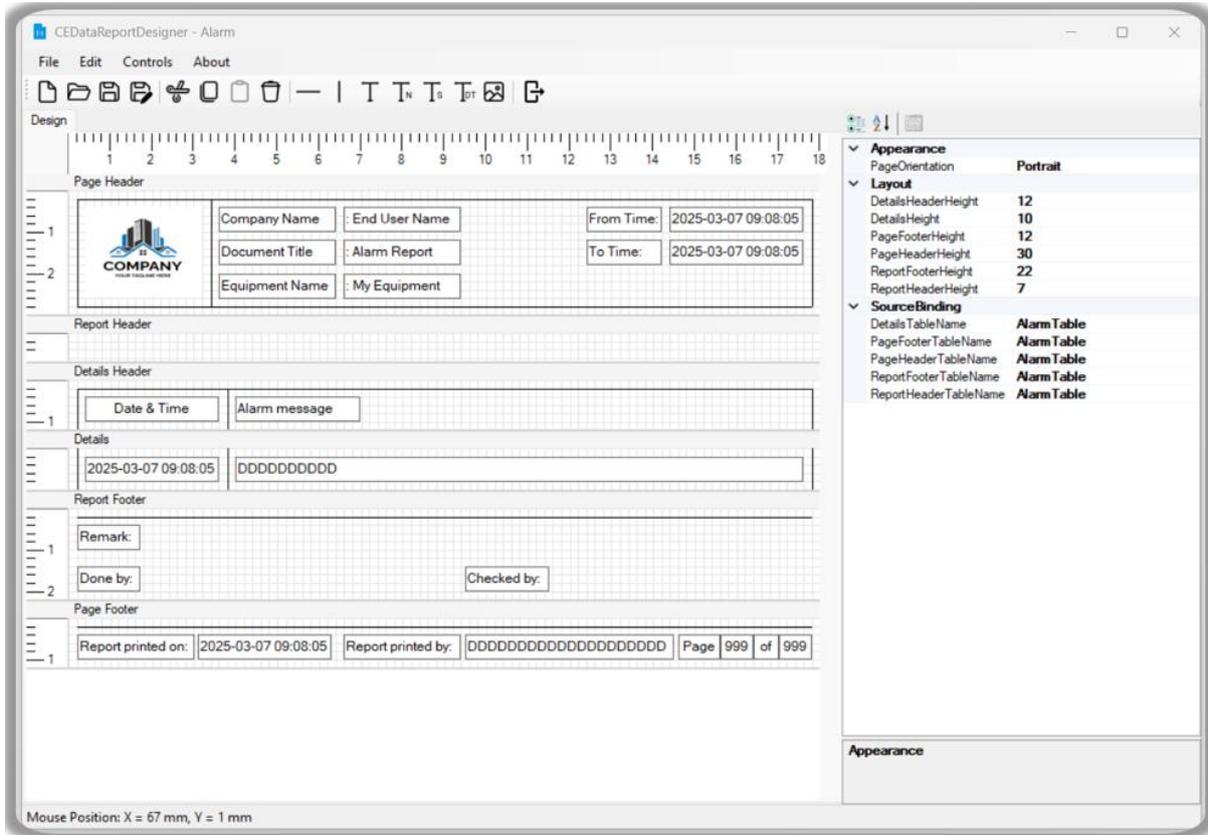
Control Properties-Image

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



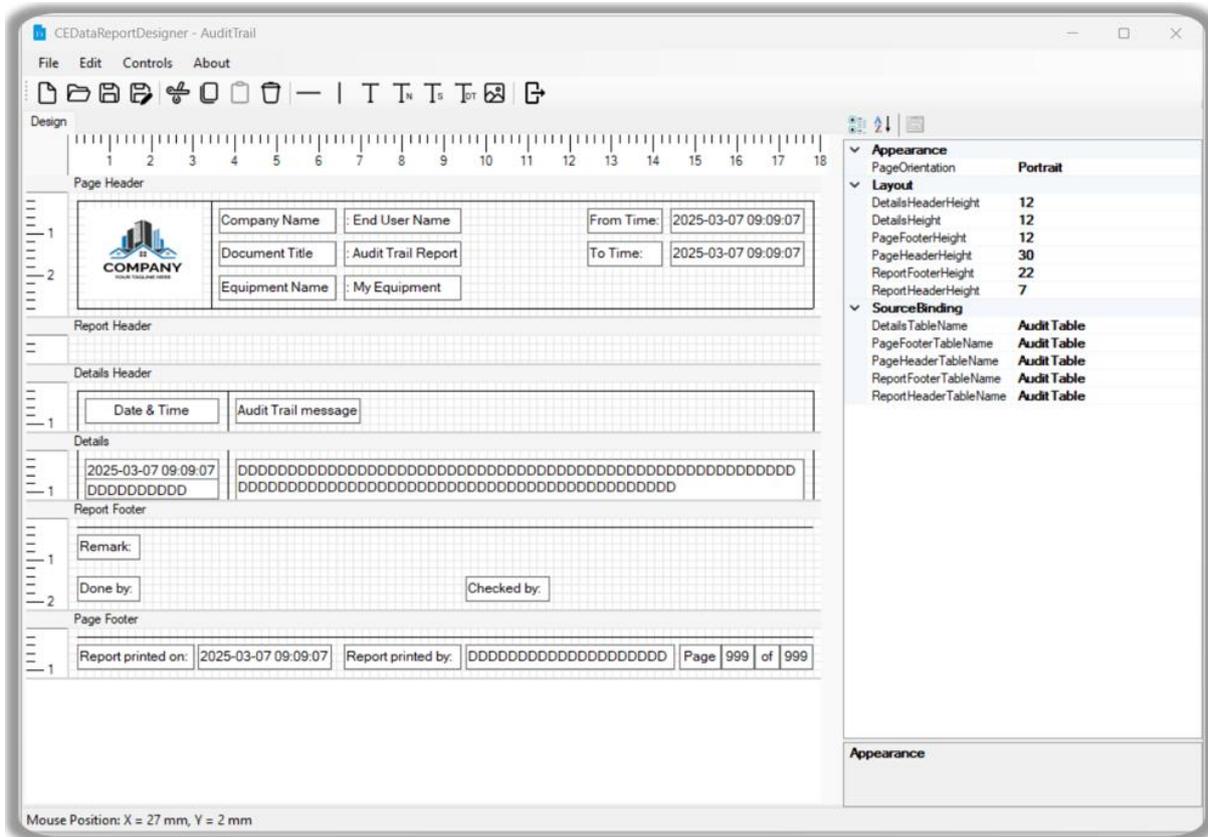
Sample Template-Alarm

We have designed an alarm report template sample as follows:



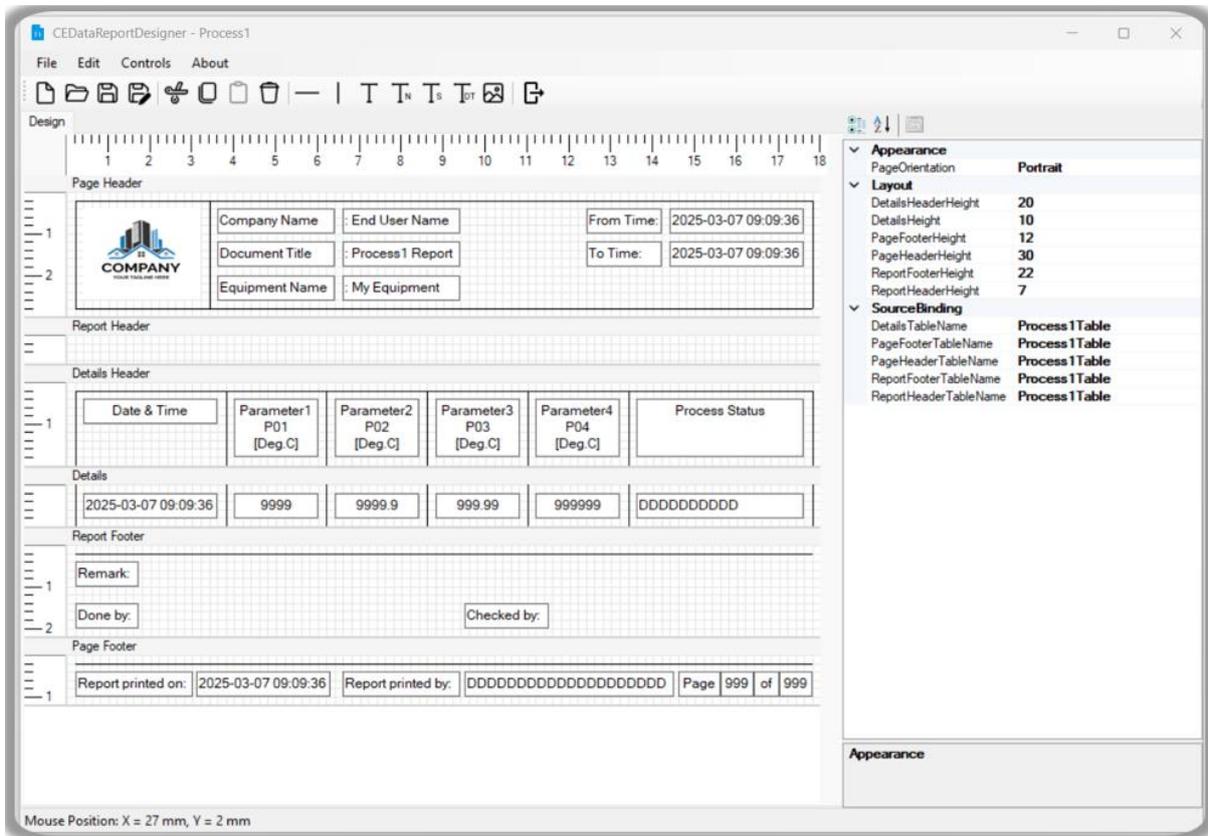
Sample Template-Audit Trail

We have designed an audit trail report template sample as follows:



Sample Template-Process

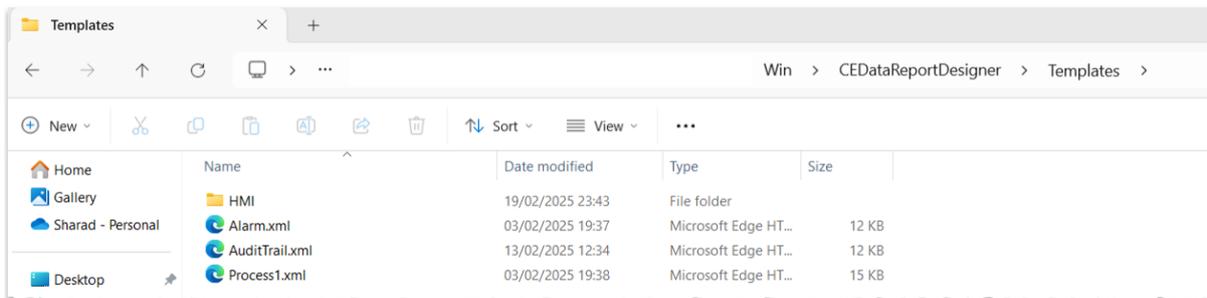
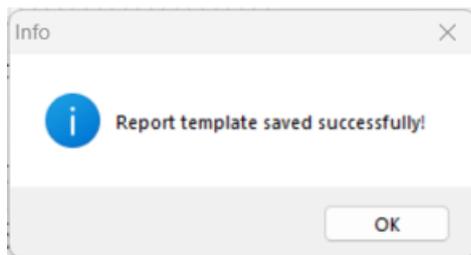
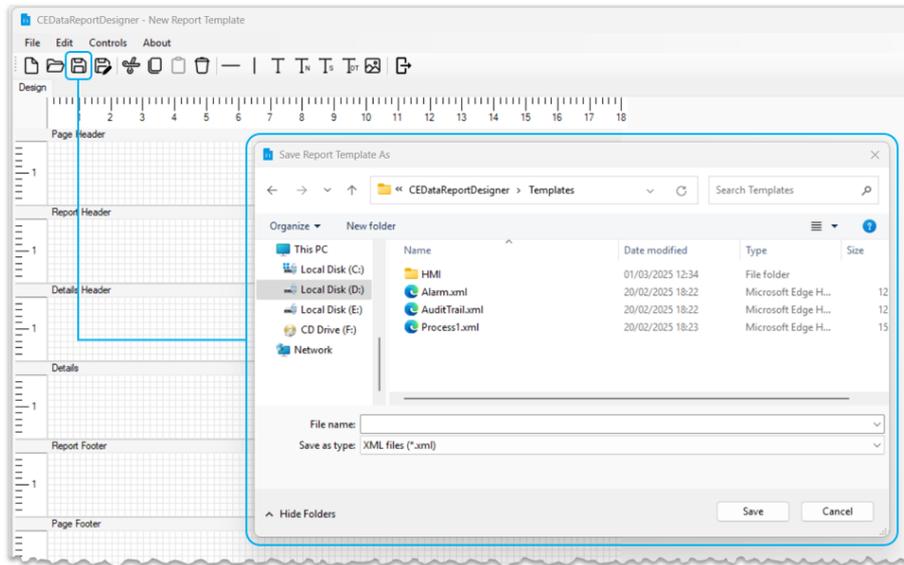
We have designed a process report template sample as follows:



Template Save

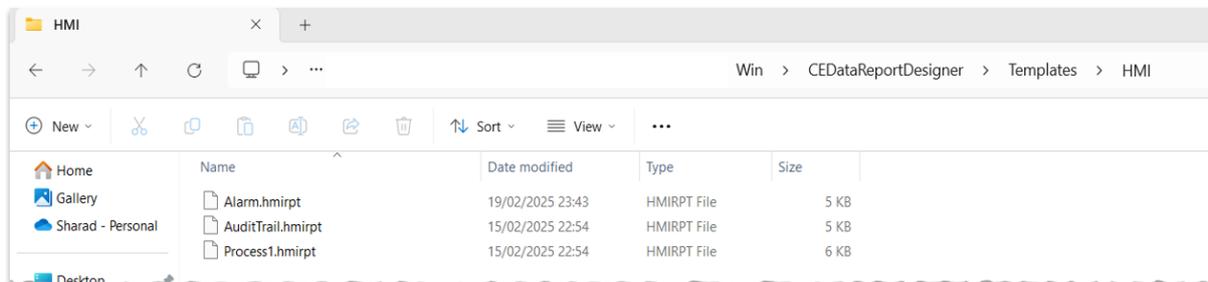
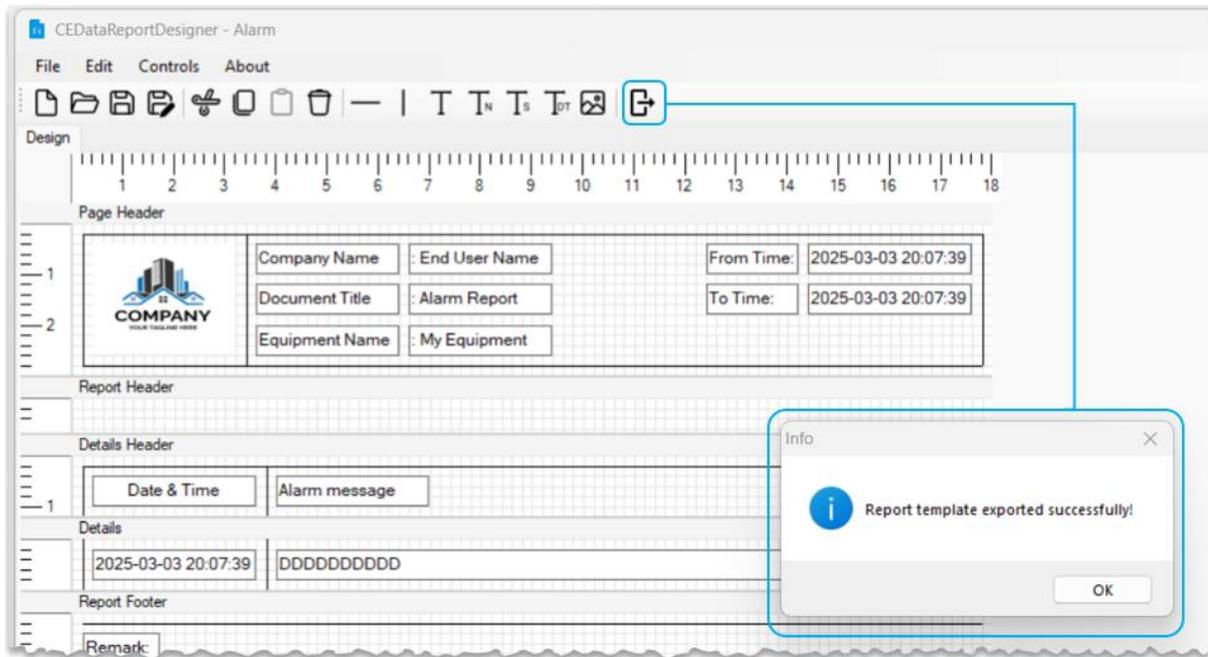
The report template will be saved with an XML extension.

We recommend using 'CEDataReportDesigner\Template' path during template save.

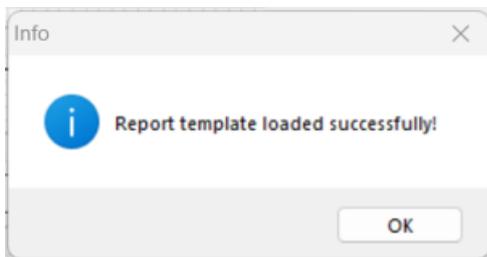
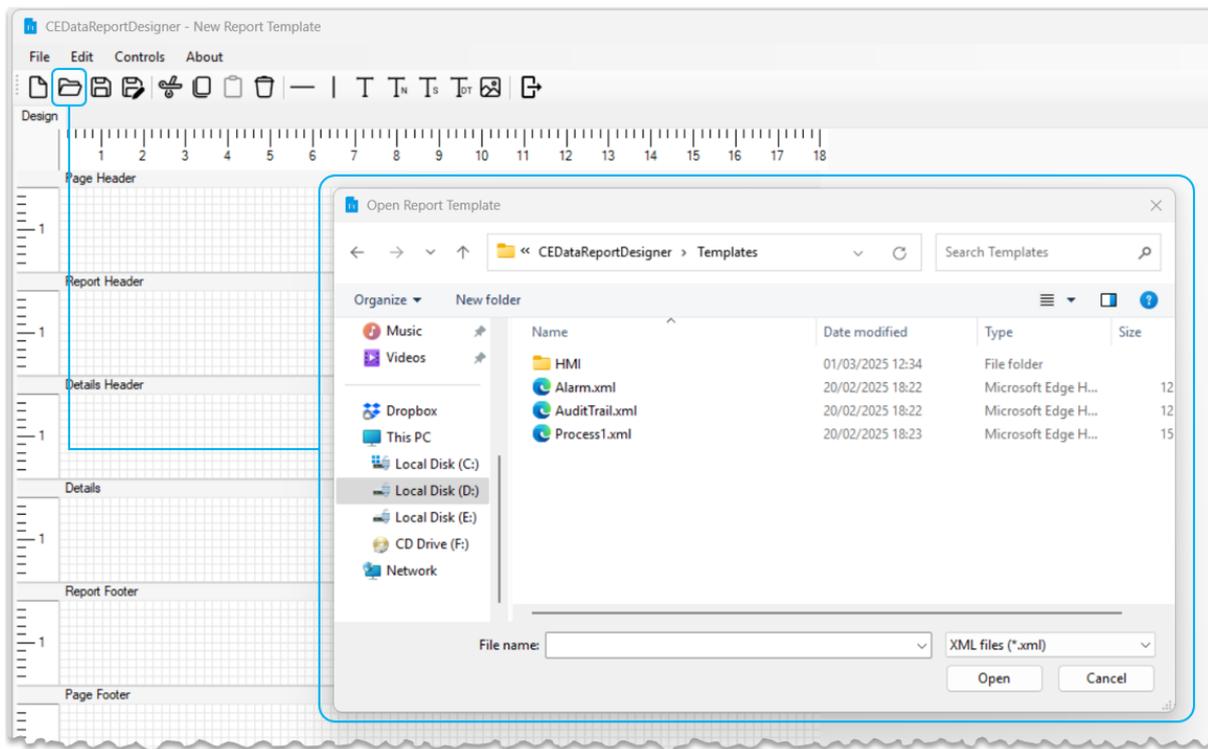


Template Export for HMI

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

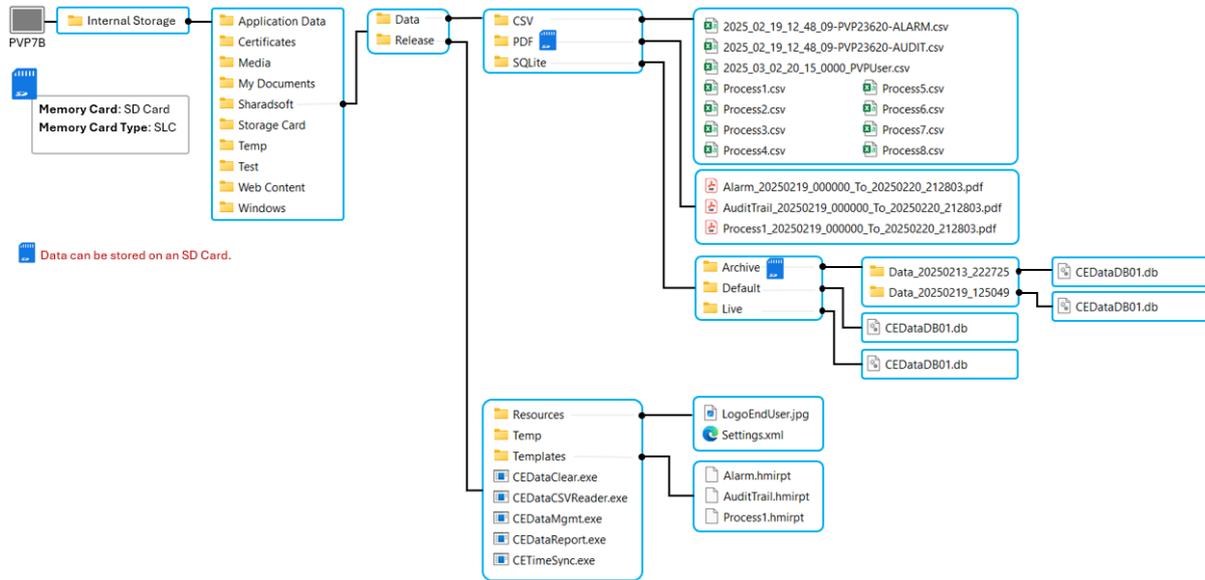


Section4: Configuration of Report-HMI Level

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

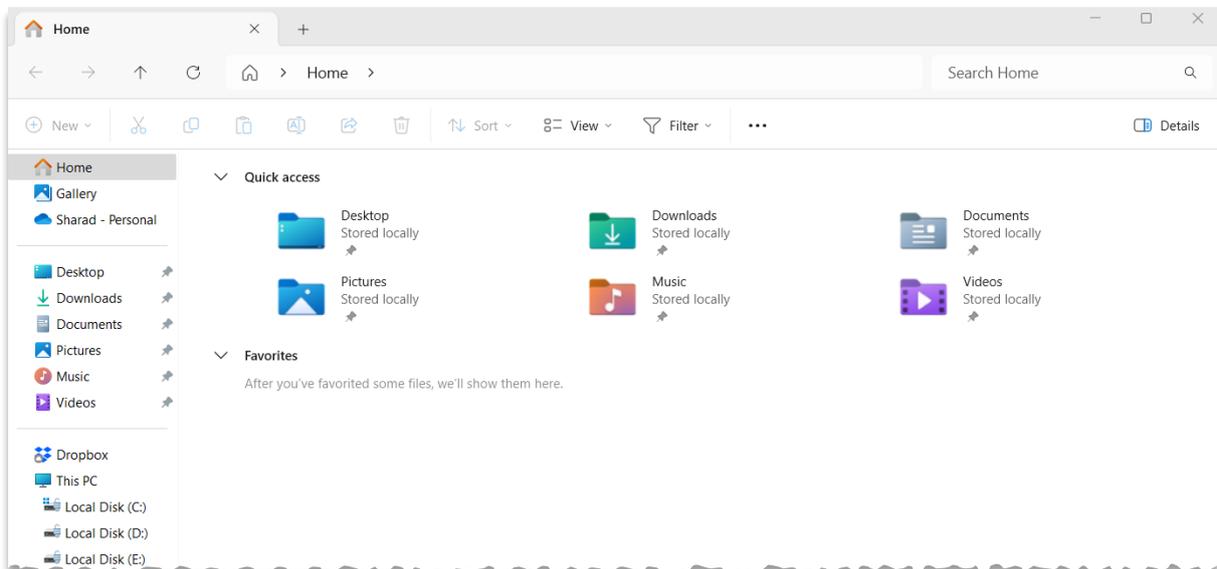
Insight-HMI Level-Folder & File Structure

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

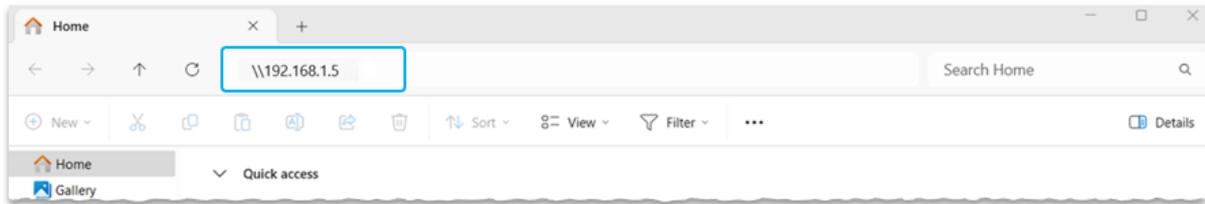


Access HMI Internal Storage from PC

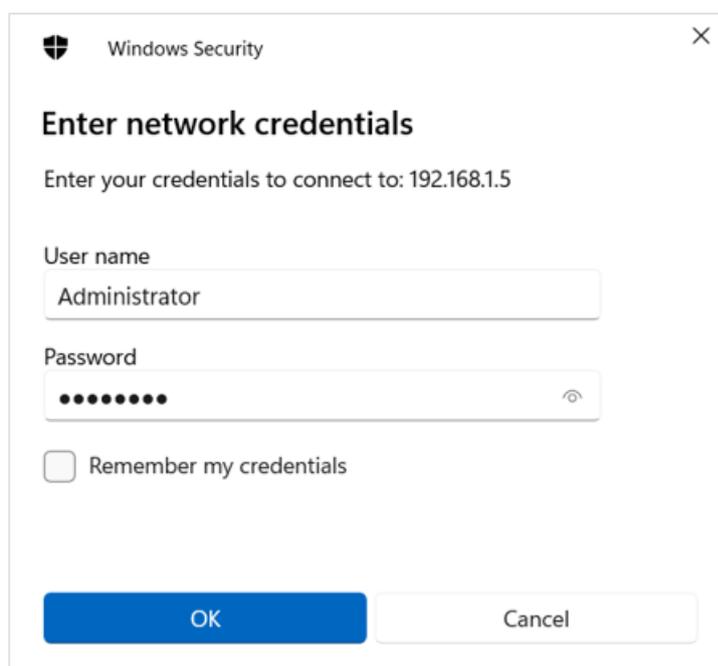
Use file explorer on your PC to access the HMI's internal storage.



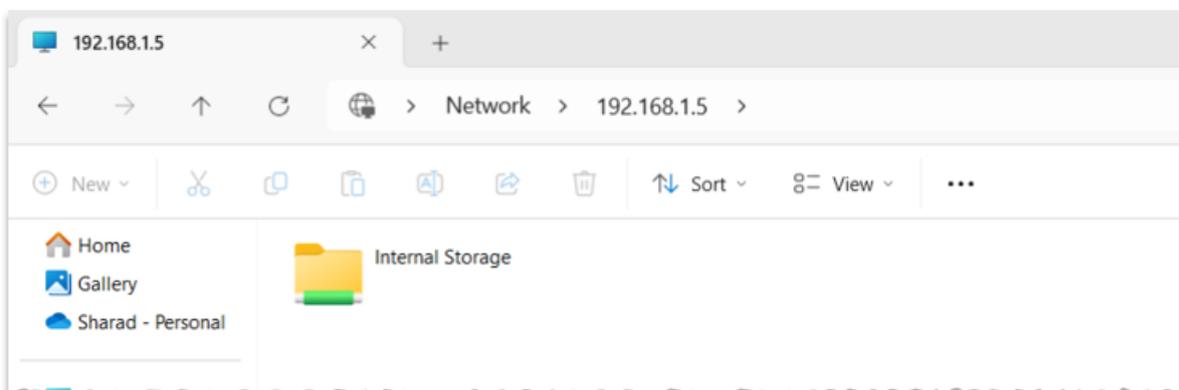
Type the HMI IP address with the syntax “\\HMI IP Address” at the file explorer address bar and press enter.



Provide valid credentials to access the HMI internal storage.

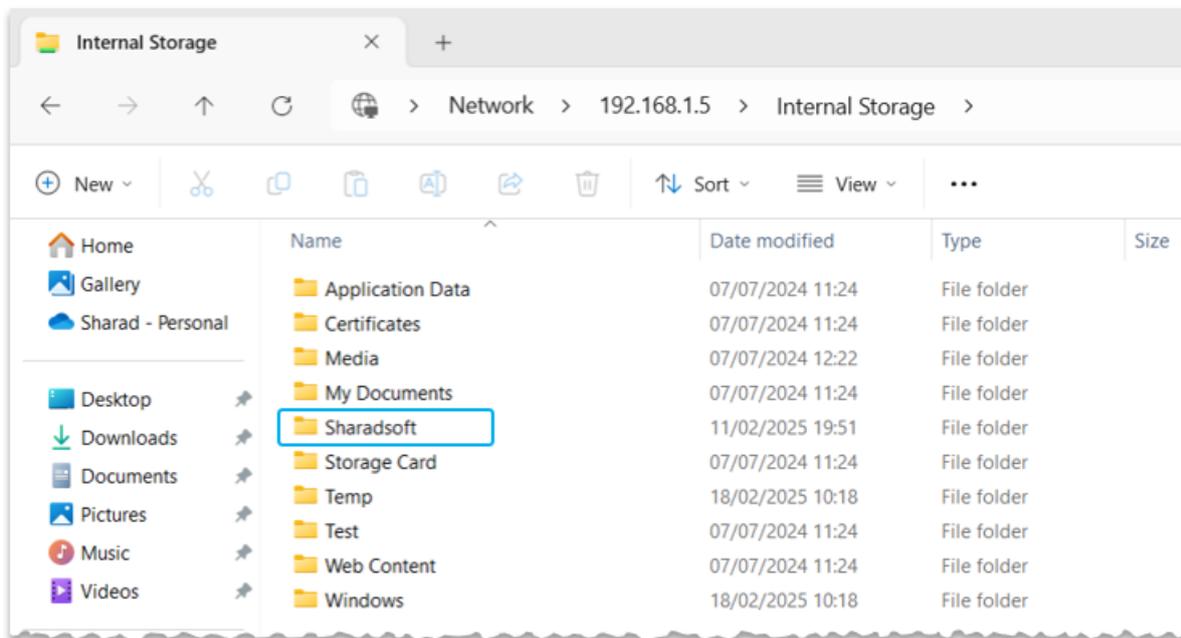


Now you can see the 'Internal Storage' folder of the HMI as shown below:



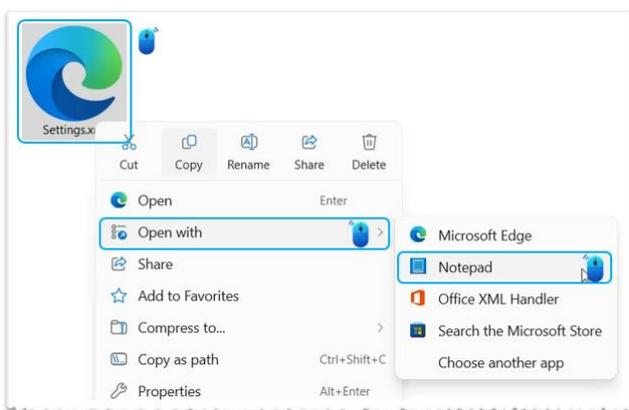
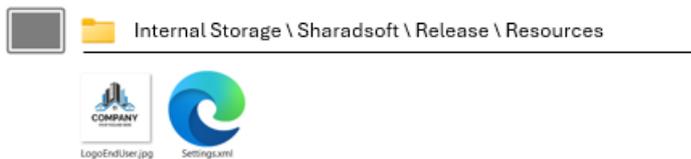
Copy Folder to HMI Internal Storage

Copy 'Sharadsoft' folder from the 'HMI Report\HMI' to the HMI internal storage at path 'Internal Storage\.'

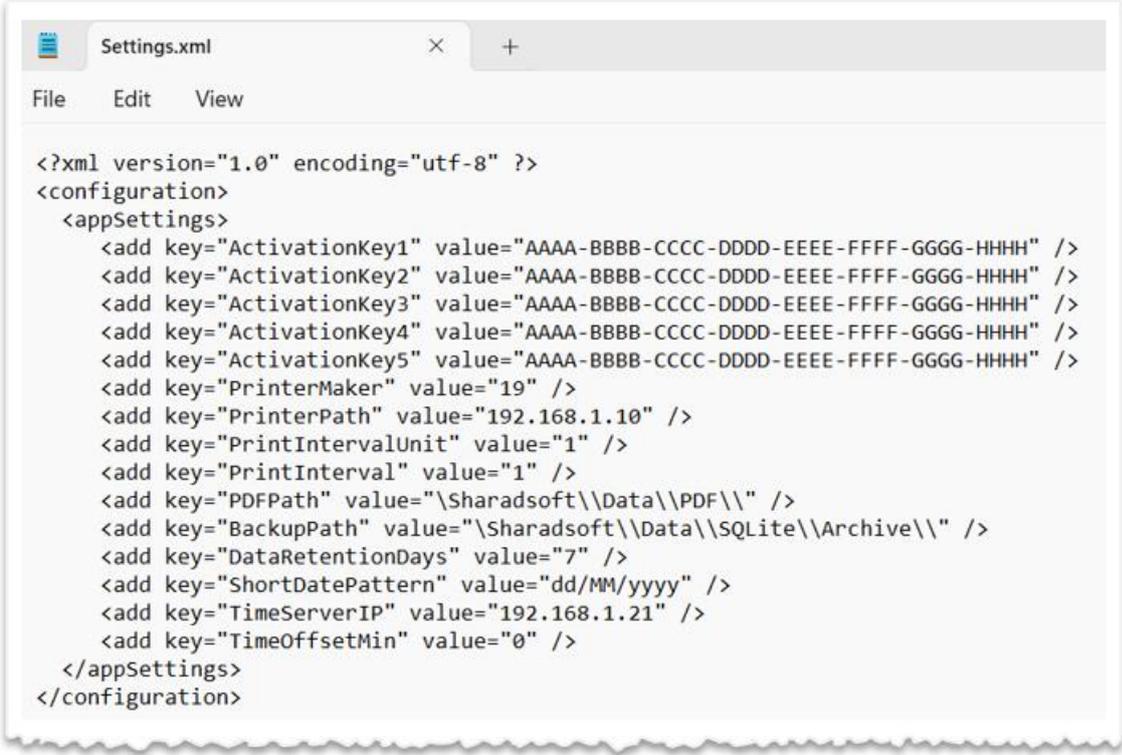


Settings file update

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



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

A screenshot of a text editor window titled 'Settings.xml'. The window has a menu bar with 'File', 'Edit', and 'View'. The main area contains XML code for configuration. The code defines an 'appSettings' section with various keys and values, including activation keys, printer settings, and file paths.

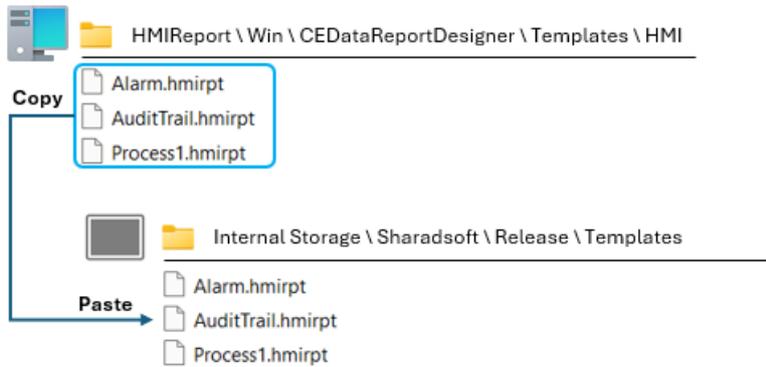
```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <appSettings>
    <add key="ActivationKey1" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
    <add key="ActivationKey2" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
    <add key="ActivationKey3" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
    <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="\Sharadsoft\Data\PDF\" />
    <add key="BackupPath" value="\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
PrintInterval	1	Default print interval. 1 Sec/1 Minute
PDFPath	\Sharadsoft\Data\PDF\	PDF storage path when the user uses the 'Save' button from 'CEDataReport' utility
BackupPath	\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 HMI internal storage at 'Internal Storage\Sharadsoft\Release\Templates' path.



Copy Logo Image to HMI

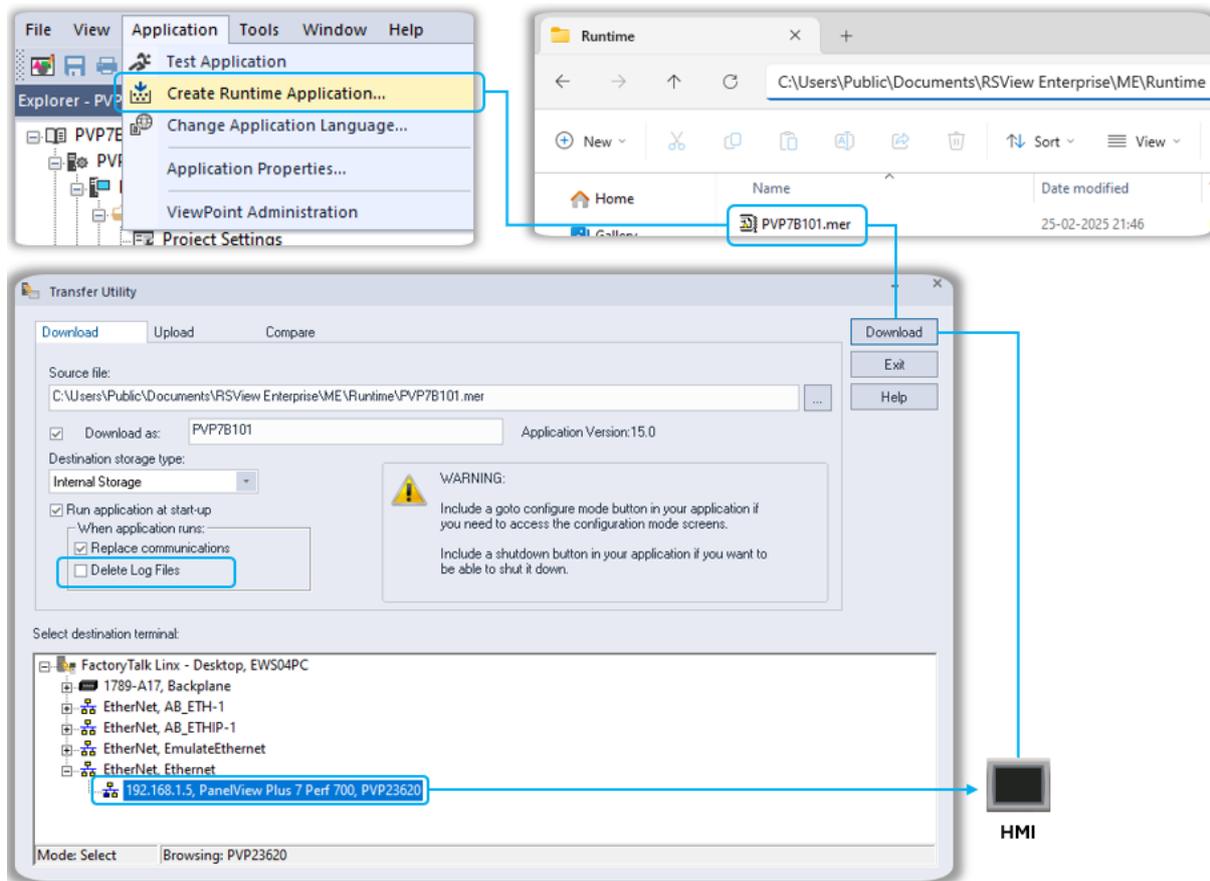
Copy the logo to the HMI internal storage at 'Internal Storage\Sharadsoft\Release\Resources' path



Section5: Transfer Runtime to HMI

Create Runtime & Download to HMI

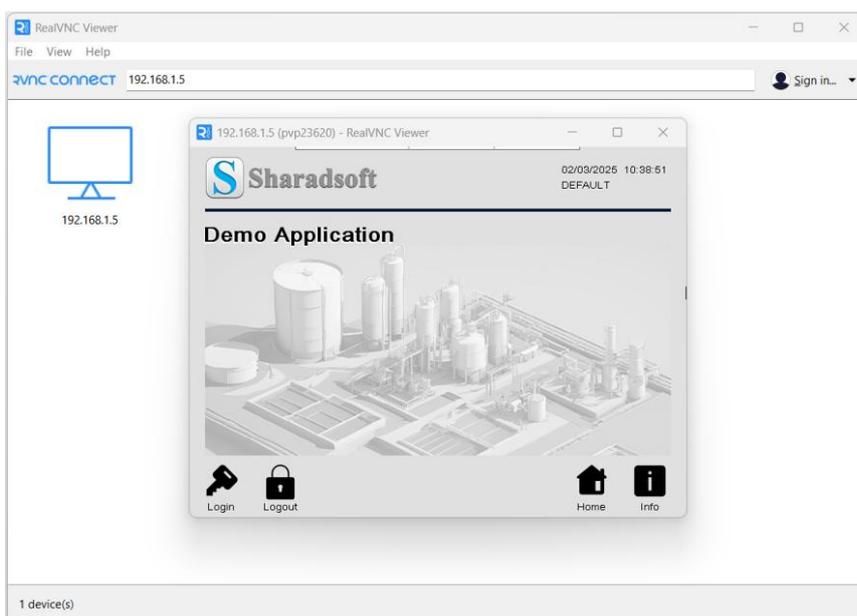
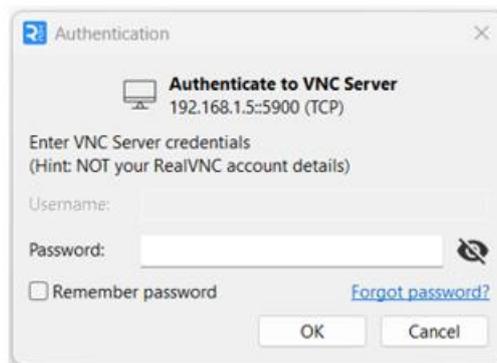
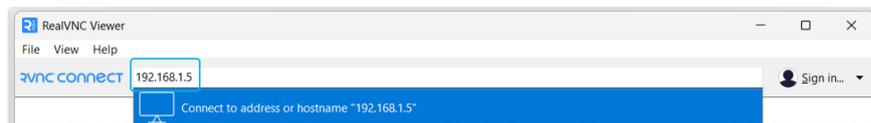
Create the runtime of the HMI application and download it to the HMI terminal.



Important: Uncheck the 'Delete Log Files' option during the runtime download 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.

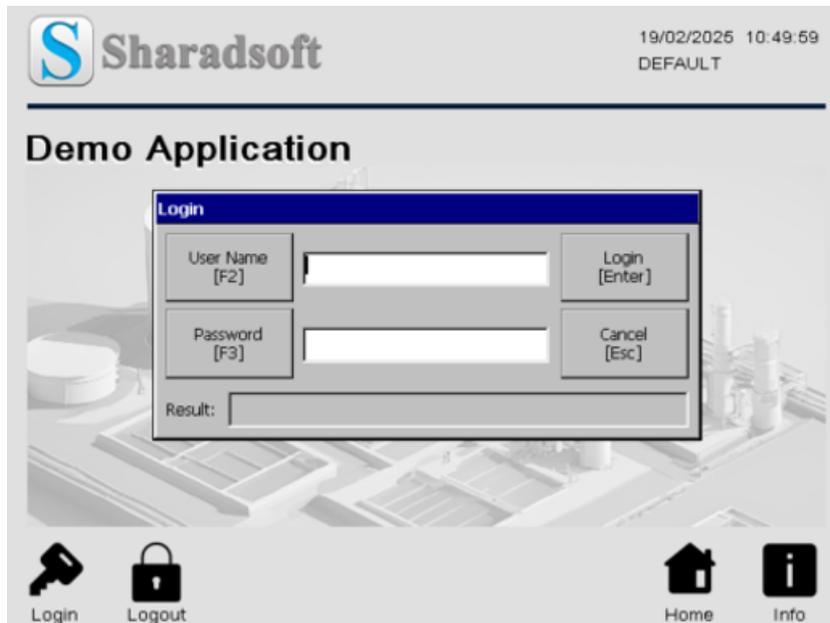


Section6: Demo Application

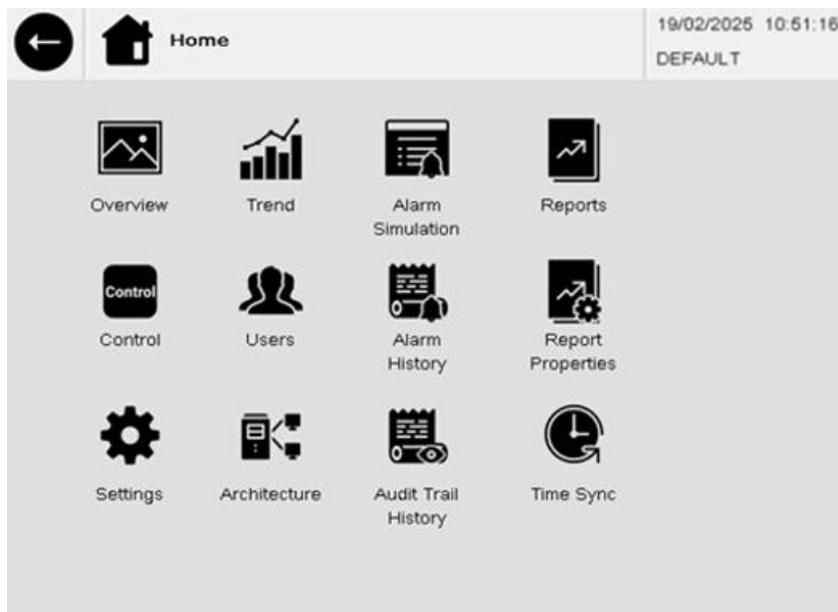
In this section, we have attached the HMI Terminal snapshot taken during the demo application testing for your reference. You can follow the same for demo application testing.

Login with User

Login with username (Op1/Su1/Qa1/En1/Ad1) and password ('1234' for all users).

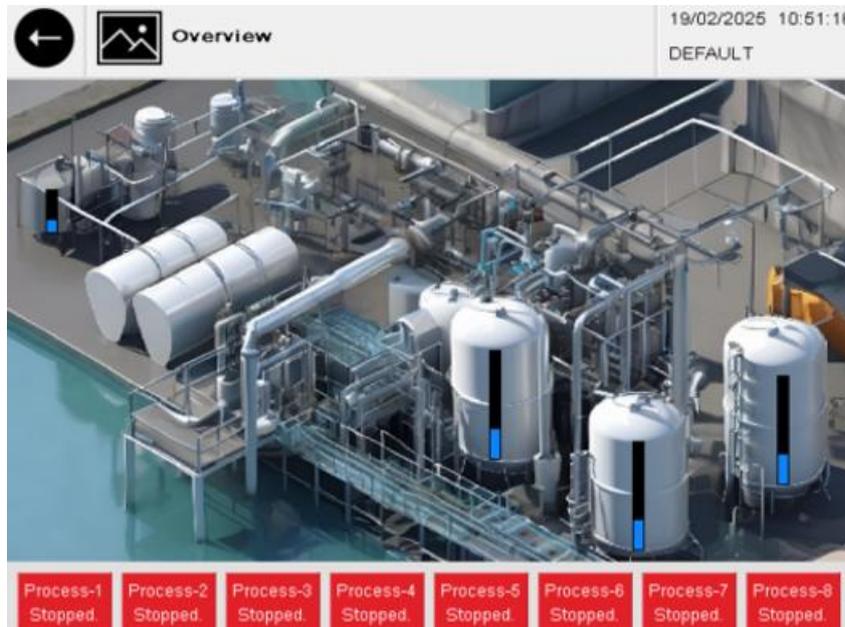


Navigate to the 'Home' screen.



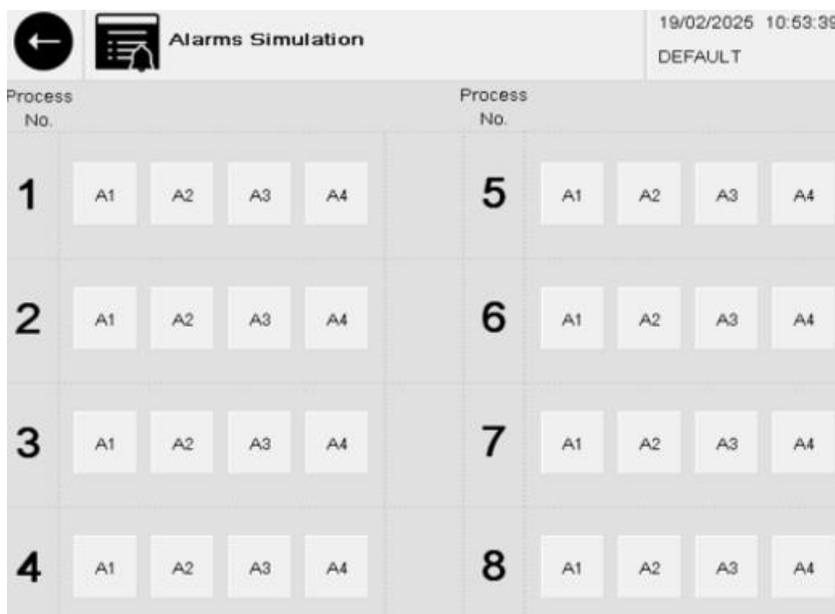
Process Start

Start the process using the button at the bottom of the 'Overview' screen. Keep the process running for at least 30 minutes (if the data log interval is set to 60 seconds) or 5 minutes (if the data log interval is set to 1 second).



Trigger Alarms

Trigger the alarms during the process running for simulation purposes.



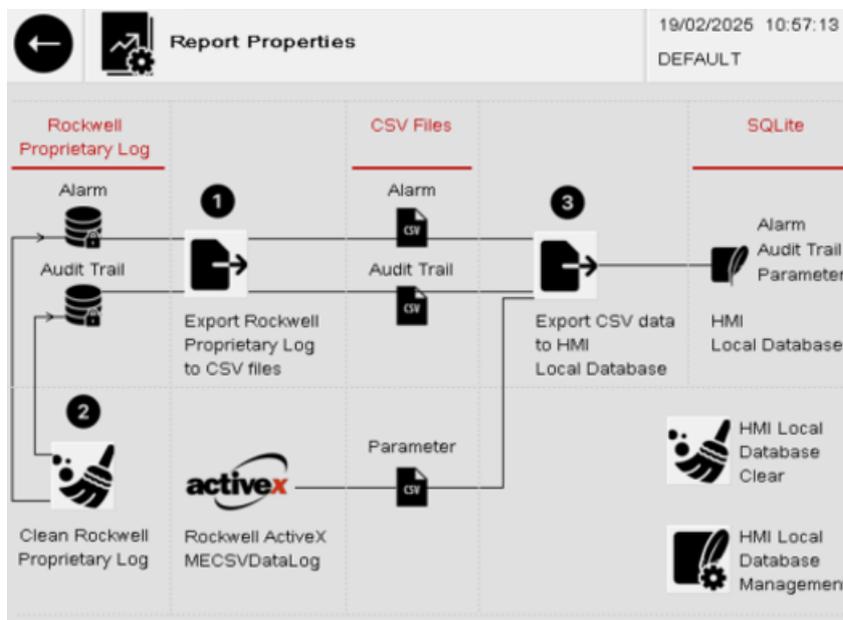
Change Settings

You can alter any setting during the process running to check the audit trail log functionality.

	Without E-Sign		With E-Sign Blank comment allow		With E-Sign Blank comment not allow	
Process 1	Alg1	1011	Alg2	1012.0	Alg3	1003.0
	Str2	P1Str2	Str3	P1Str3	Str4	P1Str4
Process 2	Alg1	2001	Alg2	2002.0	Alg3	2003.0
	Str2	P2Str2	Str3	P2Str3	Str4	P2Str4
Process 3	Alg1	3001	Alg2	3002.0	Alg3	3003.0
	Str2	P3Str2	Str3	P3Str3	Str4	P3Str4
Process 4	Alg1	4001	Alg2	4002.0	Alg3	4003.0
	Str2	P4Str2	Str3	P4Str3	Str4	P4Str4

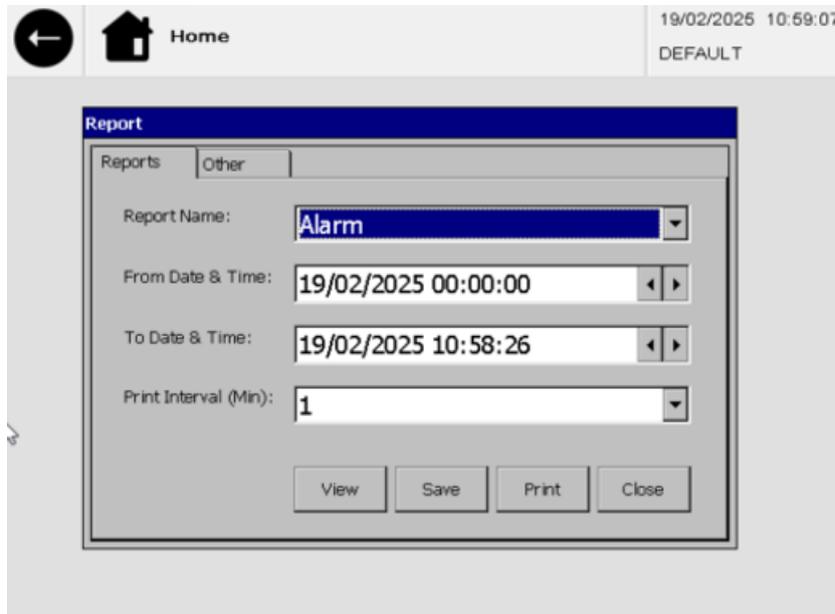
Data update sequence

After completing the process, first trigger the CSV export, clear the internal log, and then export 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.

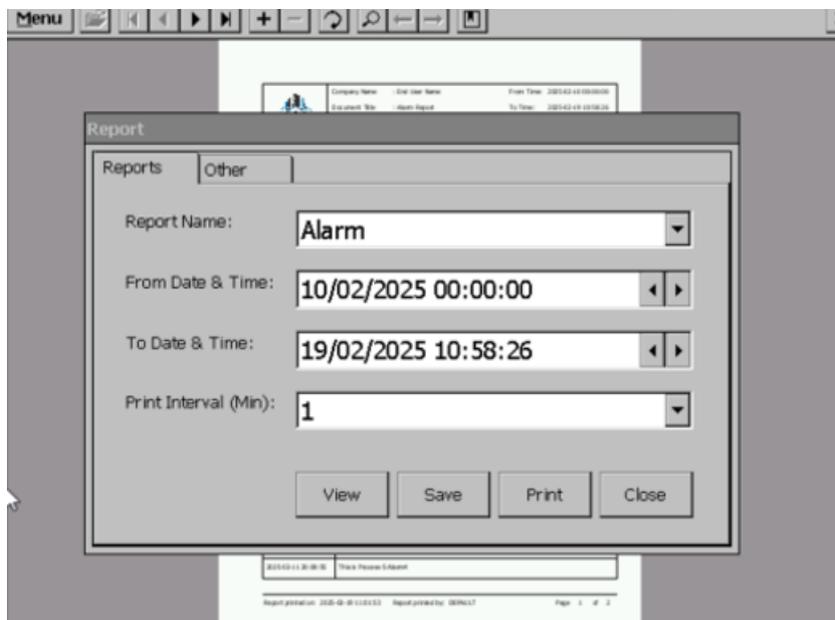


Report View, Save & Print

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



If you execute the 'View' button, the report will be open in utility background as shown in the snapshot below. Close the utility.



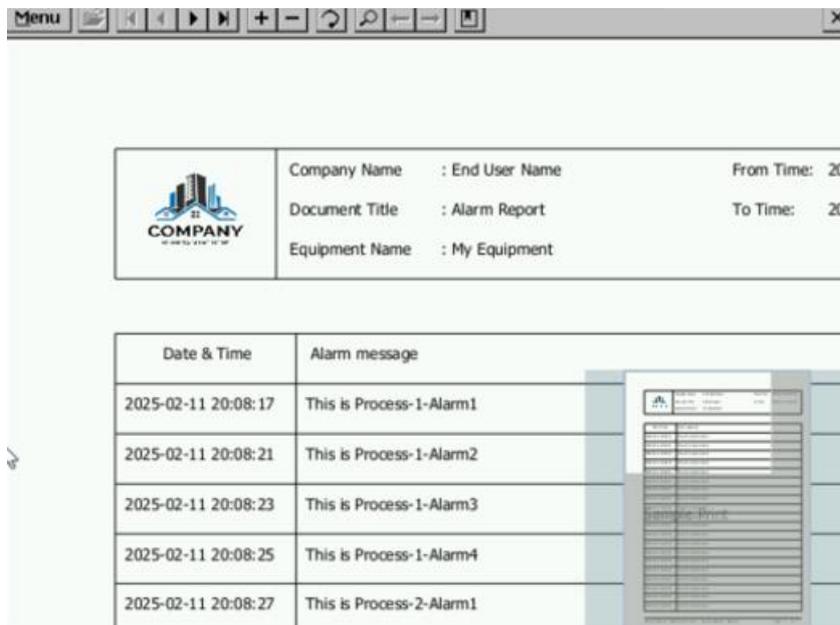
'Save' button will save the report in pdf format at 'Internal Storage\Sharadsoft\Data\PDF'

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

You can now view the report in pdf format.

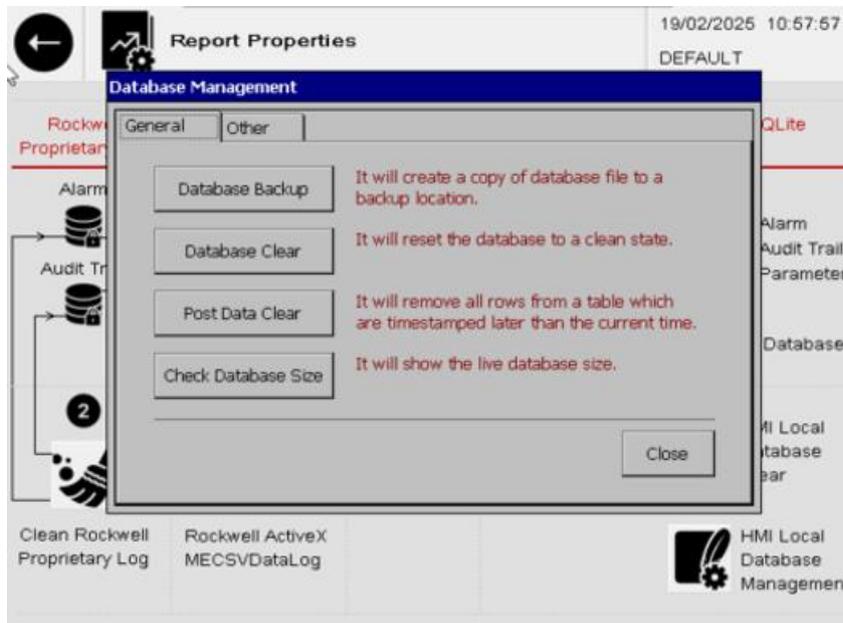


You can zoom/scroll the report using the finger tap on the HMI screen. Close the pdf file using the 'Menu→Exit' option available at the pdf viewer menu bar.

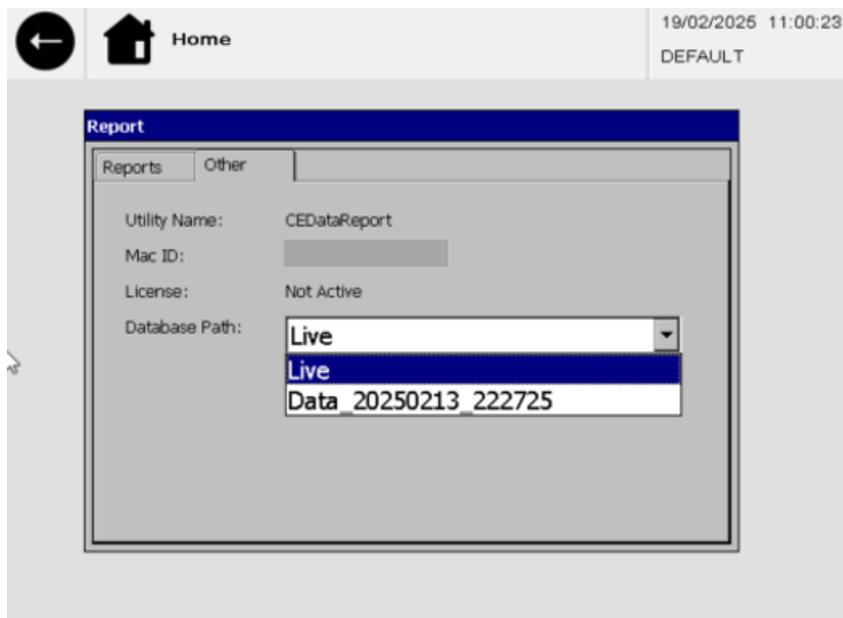


Database Management

You can use 'CEDDataMgmt' utility to manage the HMI local database. Follow the on-screen button to perform the database-related task.

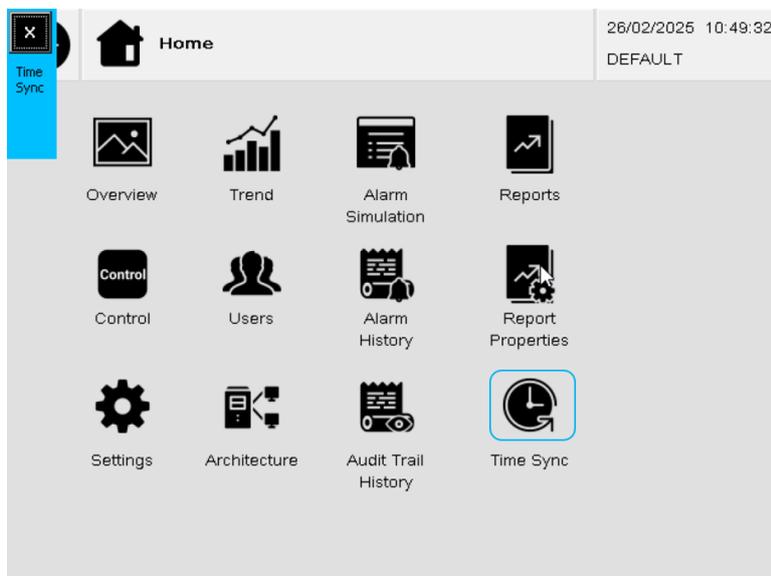
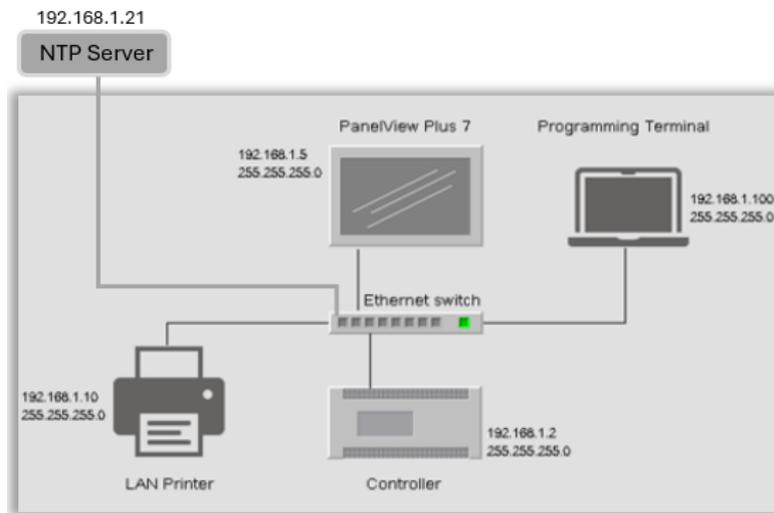


If you want to view/print the report from the archived database, select the archived database path from the drop-down list available at 'Other' tab in the reporting utility, then configure the required filter at 'Reports' tab and execute the view/print button.

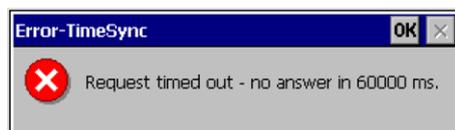


HMI Time Sync

HMI terminal time sync with reference to the NTP time server available at your premises is an optional utility. 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.

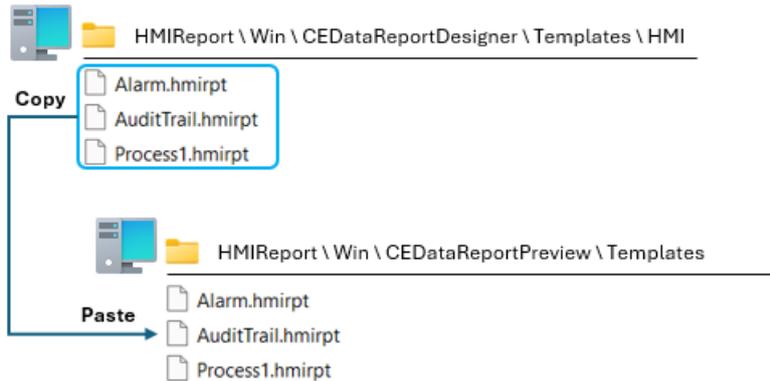


Section7: Report Format Testing at PC

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 aims to test the report format without an HMI terminal.

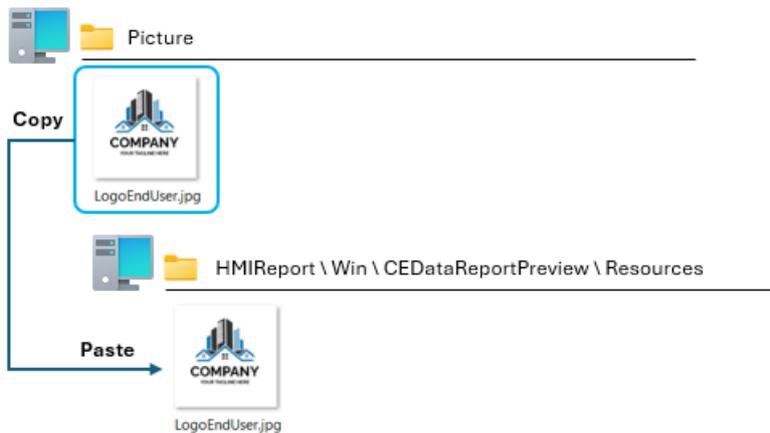
Copy Report Templates

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



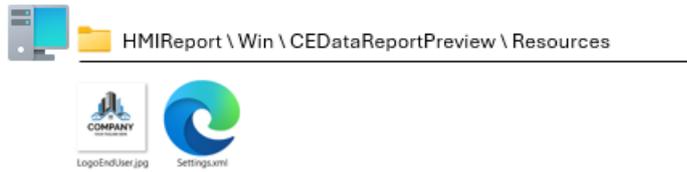
Copy Logo Image

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



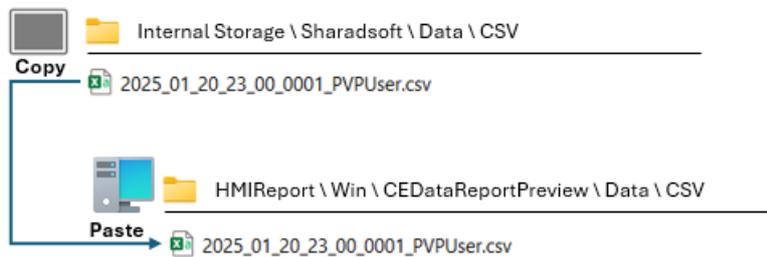
Settings File Update

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



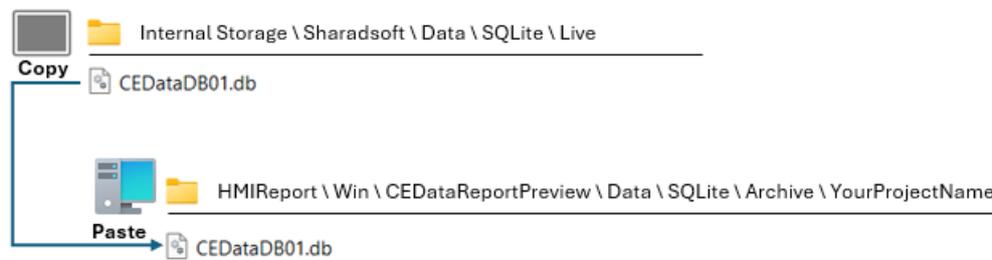
Copy CSV File

Copy the existing CSV file used to log the current user on the HMI terminal.



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:

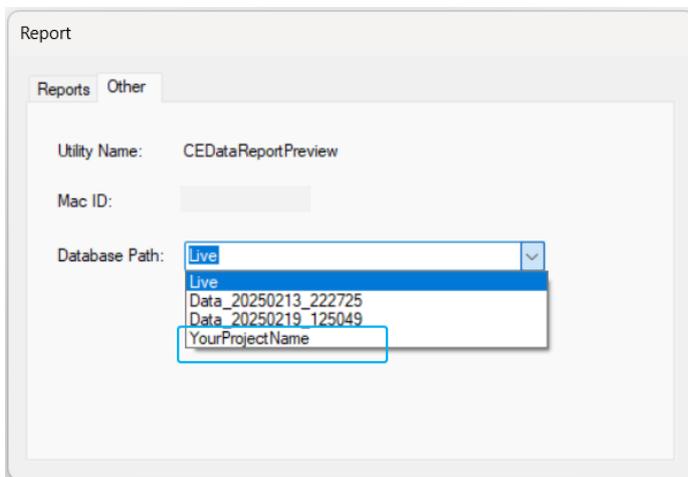


CEDataReportPreview

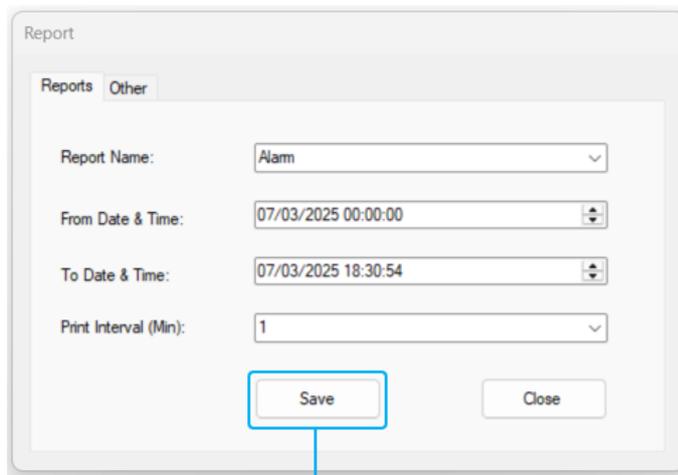
Run the 'CEDataReportPreview' application on PC.



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 Name : End User Name	From Time: 2025-02-16 00:00:00
	Document Title : Alarm Report	To Time: 2025-02-20 12:06:13
	Equipment Name : My Equipment	

Date & Time	Alarm message
2025-02-19 12:45:22	This is Process-1-Alarm1
2025-02-19 12:45:27	This is Process-1-Alarm2
2025-02-19 12:45:32	This is Process-1-Alarm3
2025-02-19 12:45:36	This is Process-1-Alarm4
2025-02-19 12:45:40	This is Process-2-Alarm1
2025-02-19 12:45:44	This is Process-2-Alarm2
2025-02-19 12:45:48	This is Process-2-Alarm3
2025-02-19 12:45:52	This is Process-2-Alarm4
2025-02-19 12:45:57	This is Process-3-Alarm1
2025-02-19 12:46:01	This is Process-3-Alarm2
2025-02-19 12:46:05	This is Process-3-Alarm3
2025-02-19 12:46:09	This is Process-3-Alarm4
2025-02-19 12:46:13	This is Process-4-Alarm1
2025-02-19 12:46:17	This is Process-4-Alarm2
2025-02-19 12:46:22	This is Process-4-Alarm3
2025-02-19 12:46:25	This is Process-4-Alarm4

Sample Print

This report has been generated through PC.

Remark:

Done by: _____ Checked by: _____

Report printed on: 2025-03-07 12:09:03 Report printed by: User6 Page 1 of 1

Audit Trail Report

	Company Name : End User Name	From Time: 2025-02-15 00:00:00
	Document Title : Audit Trail Report	To Time: 2025-02-20 12:06:13
	Equipment Name : My Equipment	

Date & Time	Audit Trail message
2025-02-19 10:16:27 DEFAULT	"Write 'Tuesday, February 11, 2025 8:14:31 PM' to 'system\AlarmResetDateAndTimeString'."
2025-02-19 10:48:28 DEFAULT	"Write 'Tuesday, February 11, 2025 8:14:31 PM' to 'system\AlarmResetDateAndTimeString'."
2025-02-19 10:57:41 DEFAULT	Write '1' to 'Report\Transaction\CEDataMgmtTrigger'. Previous value was 'False'.
2025-02-19 10:57:44 DEFAULT	Write '0' to 'Report\Transaction\CEDataMgmtTrigger'. Previous value was 'True'.
2025-02-19 10:58:25 DEFAULT	Write '1' to 'Report\Transaction\CEDataReportTrigger'. Previous value was 'False'.
2025-02-19 10:58:28 DEFAULT	Write '0' to 'Report\Transaction\CEDataReportTrigger'. Previous value was 'True'.
2025-02-19 11:19:16 Op1	Successful login of user [Op1] on directory [Local]
2025-02-19 11:19:16 Op1	Write 'Op1' to 'System\User'. Previous value was 'DEFAULT'.
2025-02-19 11:19:16 Op1	Successful login of user 'Op1'.
2025-02-19 11:25:44 Op1	Write 'DEFAULT' to 'System\User'. Previous value was 'Op1'.
2025-02-19 11:25:46 DEFAULT	Write 'DEFAULT' to 'System\User'. Previous value was 'DEFAULT'.
2025-02-19 12:34:07 DEFAULT	"Write 'Tuesday, February 11, 2025 8:14:31 PM' to 'system\AlarmResetDateAndTimeString'."
2025-02-19 12:43:37 Op1	Successful login of user [Op1] on directory [Local]
2025-02-19 12:43:38 Op1	Write 'Op1' to 'System\User'. Previous value was 'DEFAULT'.
2025-02-19 12:43:38 Op1	Successful login of user 'Op1'.
2025-02-19 12:44:57 Op1	Write '1' to 'Report\Data\Process1\Trigger'. Previous value was 'False'.
2025-02-19 12:44:59 Op1	Write '1' to 'Report\Data\Process2\Trigger'. Previous value was 'False'.

Report printed on: 2025-03-07 12:10:49 Report printed by: User6 Page 1 of 6

Process Report

	Company Name : End User Name	From Time: 2025-02-15 00:00:00
	Document Title : Process1 Report	To Time: 2025-02-20 12:06:13
	Equipment Name : My Equipment	

Date & Time	Parameter1 P01 [Deg.C]	Parameter2 P02 [Deg.C]	Parameter3 P03 [Deg.C]	Parameter4 P04 [Deg.C]	Process Status
2025-02-19 12:44:57	1011	1012.0	1003.00	1004	P1Str2
2025-02-19 12:45:57	1011	1012.0	1003.00	1004	P1Str2
2025-02-19 12:46:57	1012	1012.0	1003.00	1004	P1Str2

Sample Print

This report has been generated through PC.

Remark:

Done by: _____ Checked by: _____

Report printed on: 2025-03-07 12:10:53 Report printed by: User6 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.

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