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User Manual

Utility Manager- cMT Series

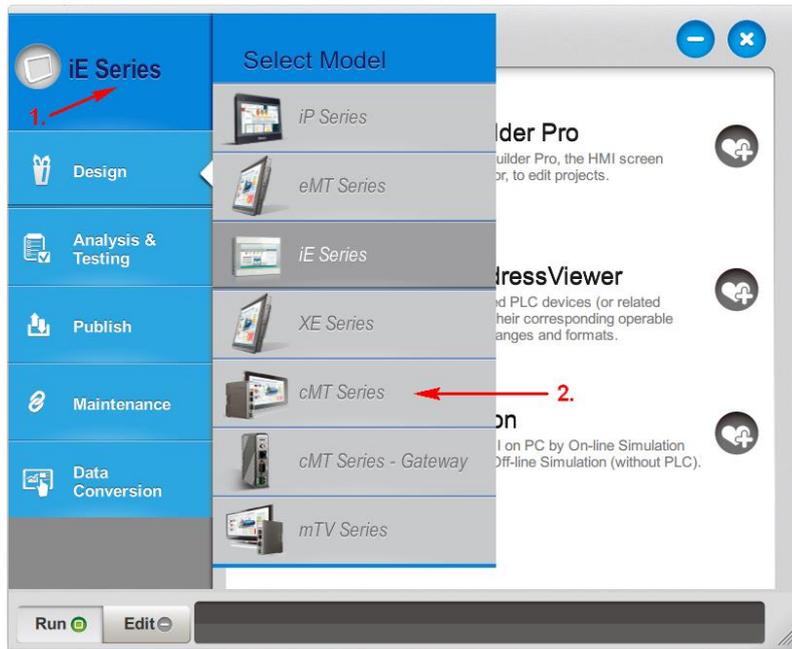
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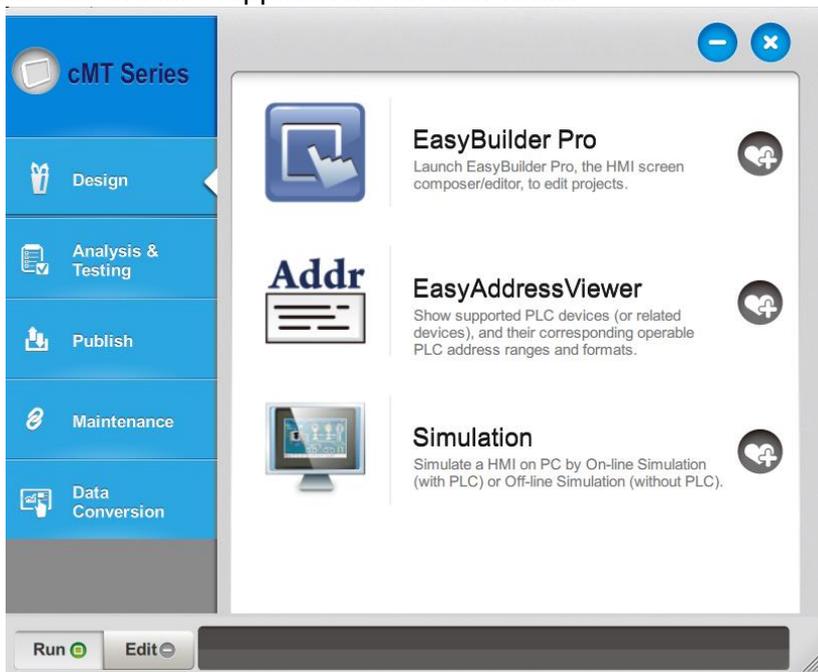
1. Overview

The Utility Manager is an application that is used to launch or HMI programming software **Easybuilder pro** and other useful applications. This document introduces applications that are available with cMT HMIs.

1. Launch Utility Manager.
2. **Select Model menu.** Click on the upper left corner of Utility Manager, select [cMT Series] menu.



3. Utility Manager will list the available applications for cMT HMIs.



Design menu-

- Easybuilder pro: This is the HMI programming software. Open this application to create or edit projects for cMT HMIs.
- EasyAddressViewer: This application lists the supported addresses for the PLCs and controllers. Programmers can refer to the lists and determine if the desired addresses are supported in this version of Easybuilder pro. It recommends that programmers understand what the address format looks like before beginning projects.
- Simulation: This application can simulate an HMI project on a PC with real testing (Online-simulation) or non-real testing (Offline-simulation). This way, users don't need to load the project to cMT HMI.

Analysis & Testing menu-

- EasyWatch: This application allows users to create a table that monitors data in cMT HMIs and PLCs that are connected to the HMI via Ethernet connection.
- cMT Diagnoser: This application can be used to troubleshoot communication issues.
- Reboot: This application can restart a HMI via Ethernet or USB connection.
- Serial pass-through: This application allows the PC application to communicate to the PLC through the cMT HMI. In this case, the HMI acts as an adapter.
- Ethernet pass-through: This application allows the PC application to communicate to the PLC through the cMT HMI. In this case, the HMI acts as an ethernet adapter.

Publish menu-

- Download: This application can load a project, runtime, recipe, and startup screen image to a cMT HMI via Ethernet or USB connection.
- Upload: This application can retrieve the project of a cMT HMI and historical data stored in the cMT HMI.

Maintenance menu-

- Administrator Tool: This application can build data for [User Account], [USB Security Key], [SMTP Server Setting], and [e-Mail Contacts] to a USB drive.
- cMT-Viewer: This application can connect to a cMT HMI to view and control the HMI.
- cMT-iV5/ iV6 OS Upgrade: This application can update the OS of cMT-iV5 and cMT-iV6.
- cMT-Server OS Upgrade: This application can update the OS of cMT-SVR-100 and cMT-SVR-200
- Codesys Firmware Upgrade: This application can update the firmware of Codesys HMI.

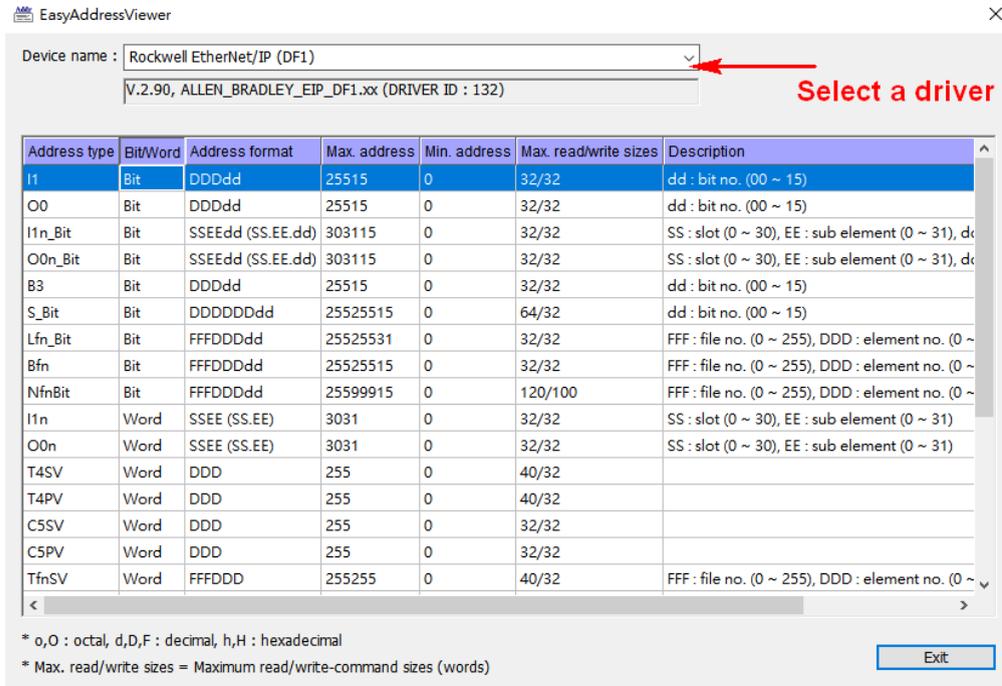
Data Conversion menu-

- Recipe Database Editor: This application allows users to edit a recipe database (*.db file) without modifying the cMT HMI project itself.
- EasyConverter: This application can convert data log files (*.db) and event log files (*.db) to CSV format files (*.csv).
- Recipe Editor: This application can allow users to edit recipe data stored in **RW** and **RW_A** retentive memory, as well as data stored in **EM** extended memory.

Utilities	Non-cMT Models	cMT Models	cMT Gateway (cMT-Gxx, cMT-CTRL01)
Easybuilder pro	√	√	√
EasyAddressViewer	√	√	√
Simulation	√	√	√
EasyWatch	√	√	√
cMT Diagnoser		√	√
Reboot	√	√	√
Serial pass-through	√	√	√
Ethernet pass-through		√	√
Download	√	√	√
Upload	√	√	√
EasyPrinter	√		
Administrator Tool	√	√	√
cMT-Viewer		√	
cMT-iV5/ iV6 OS Upgrade		√	
cMT-Server OS Upgrade		√	
Codesys Firmware Upgrade		√	√
Recipe Database Editor	√	√	√
EasyConverter	√	√	√
Recipe Editor	√	√	√
EasySystemSetting	√	√	

2. Easy Address Viewer

1. Launch Easy Address Viewer
2. Select a communication driver from the drop-down list.
3. View address type, memory format, and memory range.

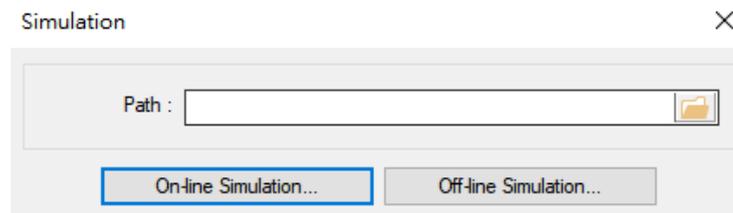


Note:

1. Memory range may vary based on the controller models.
2. The Easy Address Viewer doesn't display free-tag based PLCs, please refer to the connection guide to get the information.

3. Simulation

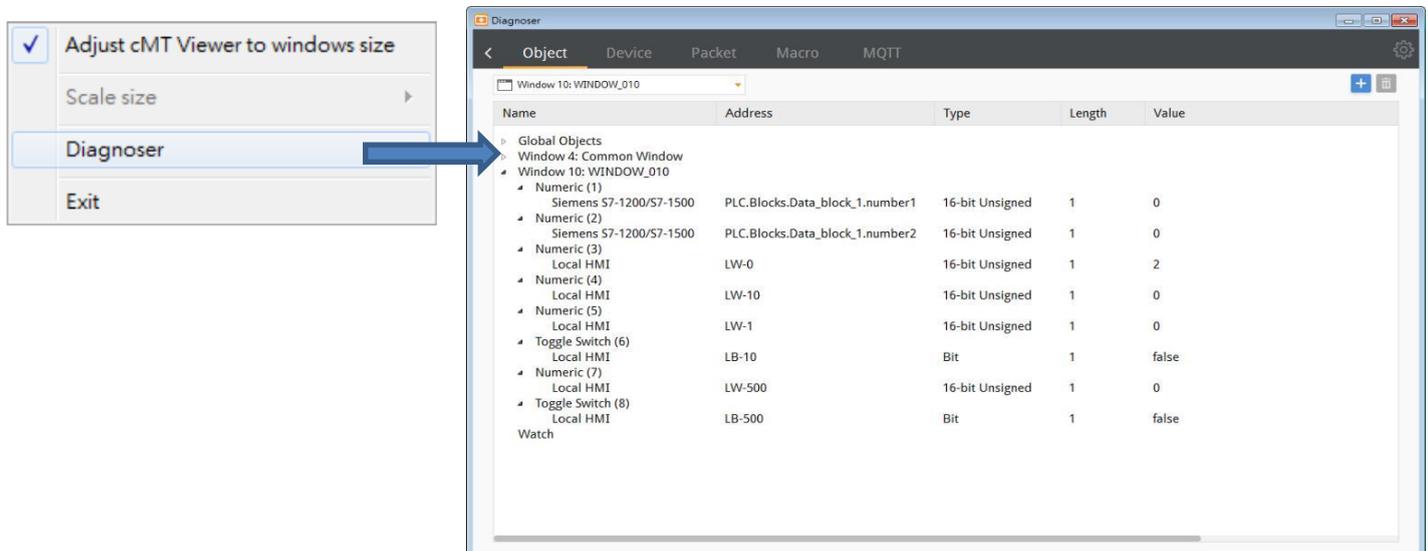
1. Launch Simulation.
2. Click on the “folder” icon and open a compile project (*.cxob)
3. Click on-line simulation or off-line simulation to start simulator. Before starting on-line simulation, make sure the controller already connects to the PC via Ethernet or serial connection.



4. cMT-Viewer (simulator) will pop up to simulate the project.

Note:

1. The on-line simulation lasts 10 minutes to simulate the communication between PC and PLCs. Once the time is up, the simulator stops communicating to the PLC.
2. In on-line/off-line simulation, the diagnostic tool “cMT Diagnoser” can be opened via clicking the right mouse button. For more information, please refer to **cMT Diagnoser User Manual**.



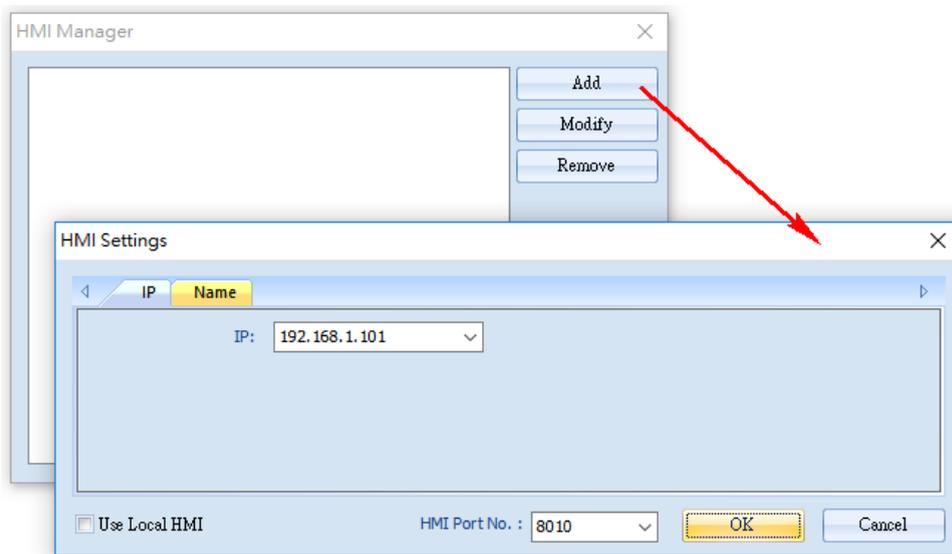
4. EasyWatch

EasyWatch allows users to monitor data in the HMI or the PLC via Ethernet from the PC.

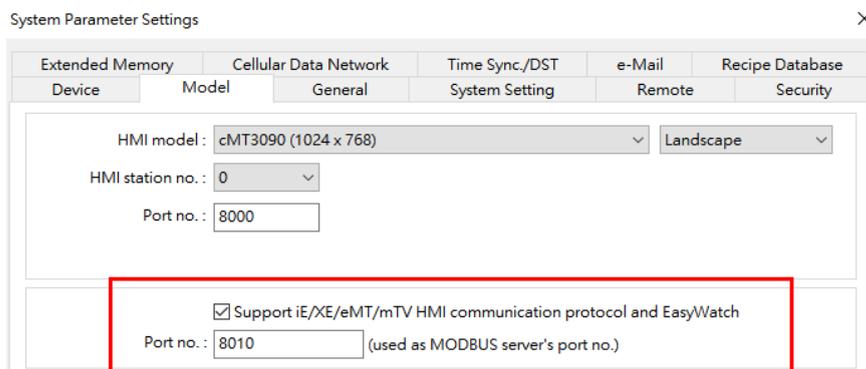
1. Launch EasyWatch.
2. Click on [object] tab» [HMI monitor] or the shortcut button to open HMI Manager.



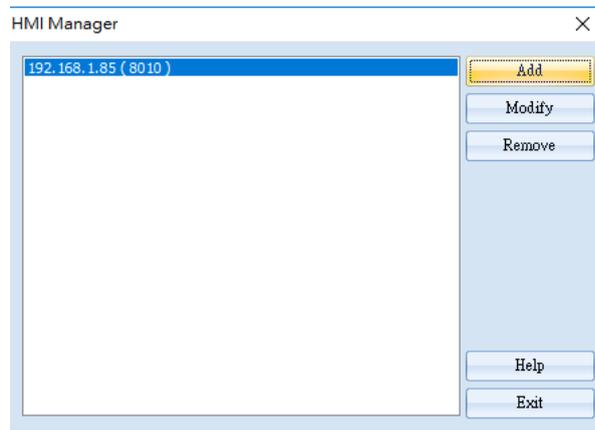
3. Click on the Add button to add an existing cMT HMI. Enter its IP address and port number.



Note: The port number is configured in EasyBuilder pro» System setting » [Model] tab. Checking “Support... EasyWatch” and configuring a port number to the box are required.



4. After clicking OK button, the HMI will be listed in HMI Manger. Repeat the step 3 to add multiple cMT HMIs. Click Exit button to close the window.



5. Click on [objects] tab» [Add object] » [Add Monitor] or the shortcut button to open Monitor settings.



6. Configure Monitor Settings, as shown below.

Name: Give a name.

HMI: Select the HMI.

Device: Select the communication driver. Enter its IP address for Ethernet connection or com parameters for serial connection.

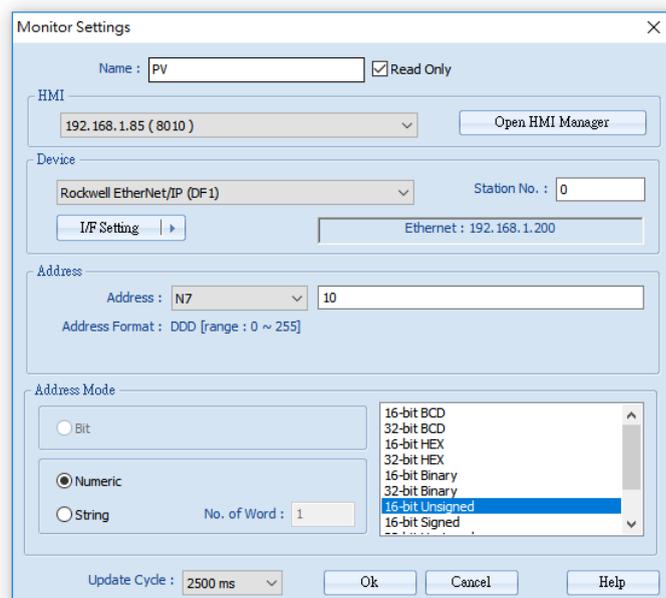
Address: Enter the address to monitor.

Address Mode: Select the data type of the address.

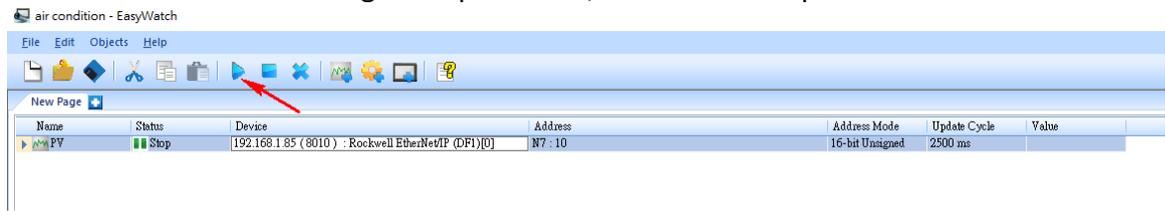
Update cycle: Select the update rate of the data.

Click OK button to confirm.

Repeat this step for each register or bit data you want to monitor.



7. Select the data from the below list and then click on the Run button to start monitor. The data will be displayed on Value column. If needing to stop monitor, click on the Stop button.



8. To save this EasyWatch project, Click on [File] » [Save as].

Note:

1. When the system register [LB-9044 (disable remote control)] or [System Parameter Settings] » [System Setting] » [Prohibit remote HMI connecting to this machine] is enabled, the feature of monitoring in EasyWatch will be unavailable.

5. Reboot

It can reboot cMT HMIs without unplugging. After reboot, cMT HMIs return to the initial state.

1. Launch Reboot.
2. Select Ethernet connection or USB connection. Some cMT models are not equipped with USB client port, so the USB connection is not available in these models.
3. On [HMI Name] tab, click on Select All button. This application will scan cMT HMIs existing in this local network.
4. Select the HMI you want to reboot and then click Reboot button.

The screenshot shows a software window titled "Reboot" with a close button (X) in the top right corner. The window is divided into several sections:

- Connection:** Two radio buttons are present: "Ethernet" (selected) and "USB cable".
- Search Area:** A tabbed interface with two tabs: "IP" and "HMI Name". The "HMI Name" tab is active. It contains a dropdown menu labeled "HMI:" with "cMT-10D1" selected. Below it are three buttons: "Search", "Search All" (highlighted in blue), and "Search and Change IP". To the right of these buttons is a list box containing one entry: "192.168.1.100 (cMT-10D1)", which is also highlighted in blue.
- Password Field:** A text input field labeled "Password:" containing "111111". To its right is a checkbox labeled "Mask" which is currently unchecked.
- Reboot Button:** A button labeled "Reboot" is located at the bottom right of the window.

6. Pass-through

The pass-through function allows the PC to communicate to the PLC through the HMI, without disconnecting the PLC from the HMI. In this case, the HMI acts as an adapter.

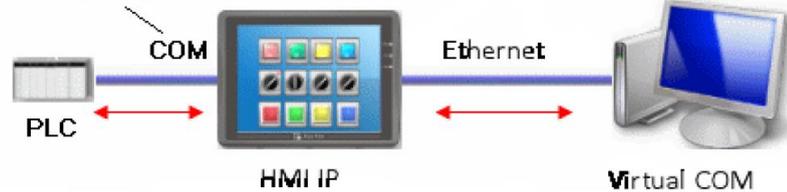


6.1. Serial Pass-Through

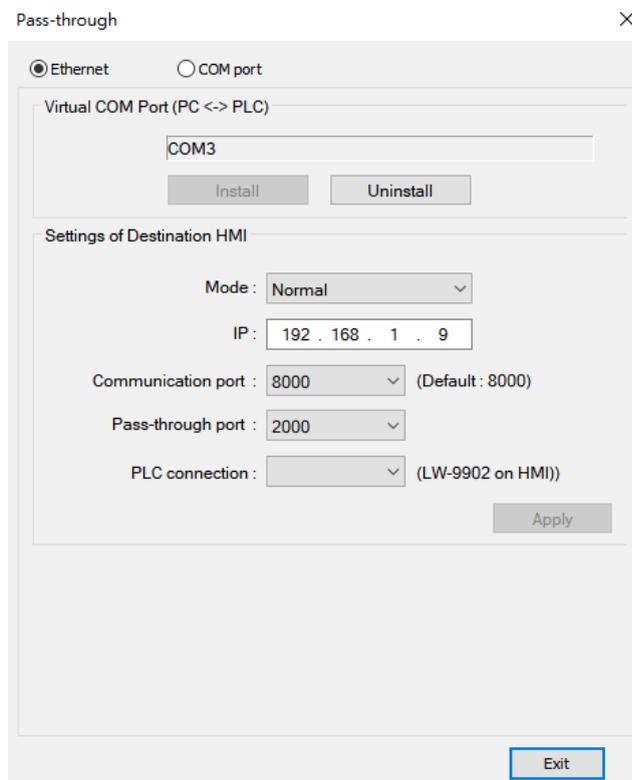
The pass-through function provides two modes when using the Ethernet connection or serial connection from the PC to the HMI.

- Using the Ethernet pass-through (virtual com used by PC) mode:

Destination COM Port



1. Launch **Serial Pass-through**.
2. Select [Ethernet].



3. When using the Ethernet connection, the virtual serial port driver, which acts as Ethernet-to-Serial bridge, is required to be installed. Click on Install button and follow the pop-up window to install. The Virtual COM port (PC <-> PLC) indicates the virtual COM port used on the PC. The virtual COM port can be changed to another one via the COM ports section of Device Manger on the PC.

4. Settings of Destination HMI.

Mode: Set the mode to Normal for most PLCs. MPI ISOTPC is used for Siemens MPI connection.

IP: Enter the IP address of the HMI.

Communication port: Select the TCP Port. This parameter is configured in Easybuilder pro» [System Parameters] » [Model] tab.

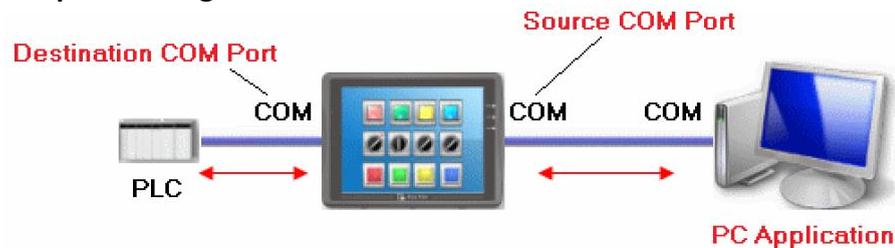
Pass-through port: Default port number is 2000.

PLC connection: Set the COM port on the HMI that is connected to the PLC. (COM1, COM2, or COM3)

5. Click Apply button to confirm the setting and begin the pass-through mode.

6. Launch the PLC programming software to go online.

- **Using the serial pass-through mode:**

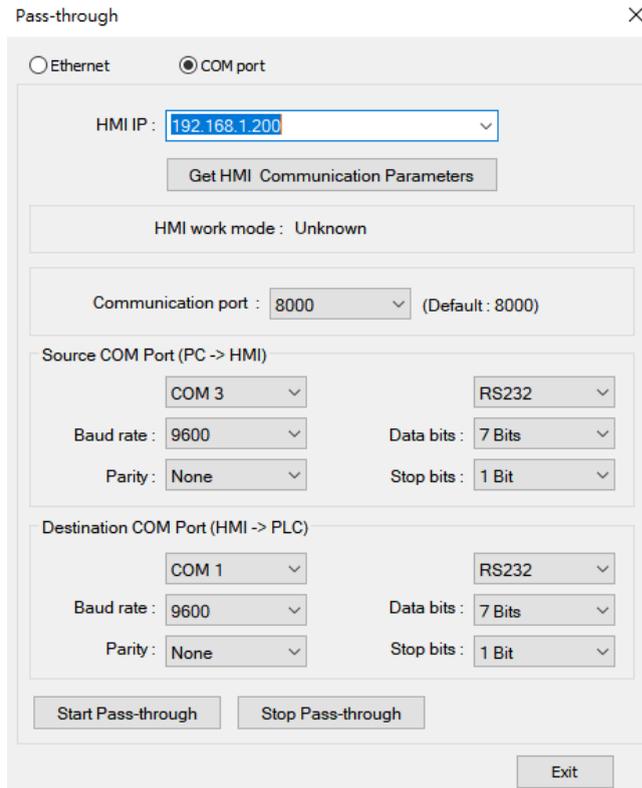


[Source COM Port] is the port that connects HMI to PC.

[Destination COM Port] is the port that connects HMI to PLC.

1. Launch **Serial Pass-through**.

2. Select [COM port].



3. HMI IP: Enter the IP address of the HMI.

Get HMI communication Parameters: Click this button to read the current communication settings of Source and Destination COM port.

Communication port: Select the TCP Port. This parameter is configured in Easybuilder pro» [System Parameters] » [Model] tab.

The parameters of Source COM port and Destination COM port can be configured manually.

Source COM port (PC -> HMI): Set the COM parameters for the HMI port that is connected to the PC.

Destination COM port (HMI-> PLC): Set the COM parameters for the HMI port that is connected to the PLC.

4. Click Start Pass-through button to begin pass-through mode. HMI work mode indicates the current mode of the HMI.

Unknown: The mode is displayed before reading the communication settings of the HMI.

Normal: The HMI is set to communicate with PLC and ready to pass through.

Pass-through: The HMI is on pass-through mode.

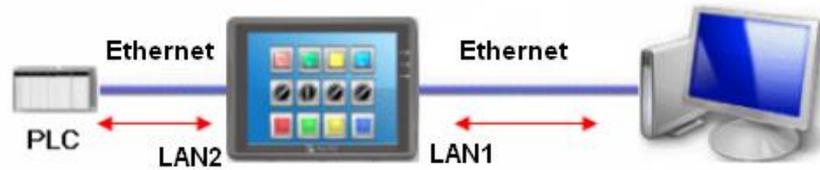
5. Launch the PLC programming software to go online.

6.2. Ethernet Pass-Through

This application allows the PC to communicate to the PLC that is on the different subnet.

For example,

PC's IP is 10.1.10.5. LAN1 of the CMT HMI is 10.1.10.19. LAN2 of the CMT HMI is 192.168.1.100. PLC's IP is 192.168.1.112. In this way, PC can program the PLC via this application.



1. Launch **Ethernet Pass-through**.



Ethernet Pass-through
Connect to a network device on another Ethernet port of HMI



2. HMI IP: Enter the LAN1 IP address of the HMI or click on [...] button to scan the CMT HMI.
HMI port number: Default port number is 8000.
Passthrough IP: Enter the IP address of the PLC.

The screenshot shows the 'Ethernet Pass-through' dialog box. It contains the following fields and buttons:

- HMI IP : 10 . 1 . 10 . 19 [...]
- HMI port no. : 8000 (Default : 8000)
- Passthrough IP : 192 . 168 . 1 . 112
- Status : Disconnected
- Connect button

3. Once clicking [Connect], the communication will be established. The success message as below indicates that you are ready to do pass-through.

The screenshot shows the 'Ethernet Pass-through' dialog box after a successful connection. The status is now 'Connected' and a message box is displayed at the bottom:

Connecting to HMI...
Creating Ethernet pass-through...
Successfully created Ethernet pass-through.
Keep Utility Manager open for Ethernet Pass-through. You may use other Utility Manager tools now.

4. Launch the PLC programming software to go online.

7. Download

This application is used to transfer a compiled project file (*.cxob) to a cMT HMI.

1. Launch Download.

2. Select Ethernet connection or USB connection. Some cMT models are not equipped with USB client port, so the USB connection is not available in these models.

- To download the project file, select the Project checkbox. If this is the first project download to the HMI, the **Runtime (Firmware)** checkbox must be selected. Click on the “Folder” button to the right of the Project checkbox. Navigate to where the *.cxob file is located.

- To download the RW, RW_A, Recipe database, Startup screen, or System settings files, navigate to where the corresponding file is located.

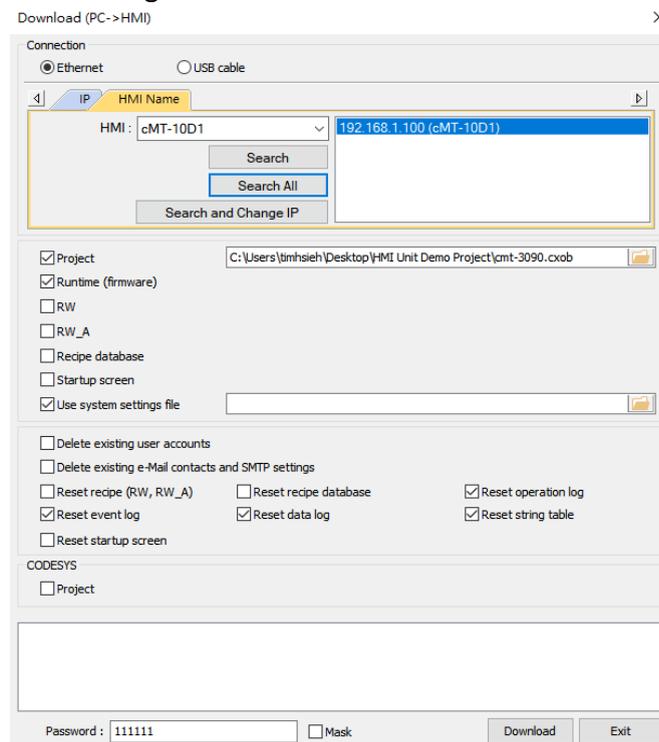
File extension of RW: *.rcp
File extension of RW_A: *.rcp
File extension of Recipe database: *.db
File extension of Startup screen: *.bmp
File extension of System settings: *.conf

Click on Search All button to scan your HMI. Select the HMI you want to load the project file.

Enter the password to the Password box. The default password is 111111.

To erase the files stored in the HMI, select the checkboxes you want to erase.

Click on Download button to begin.



8. Upload

This application is used to retrieve a compiled project file (*.cxob) stored in a cMT HMI.

1. Launch Upload.

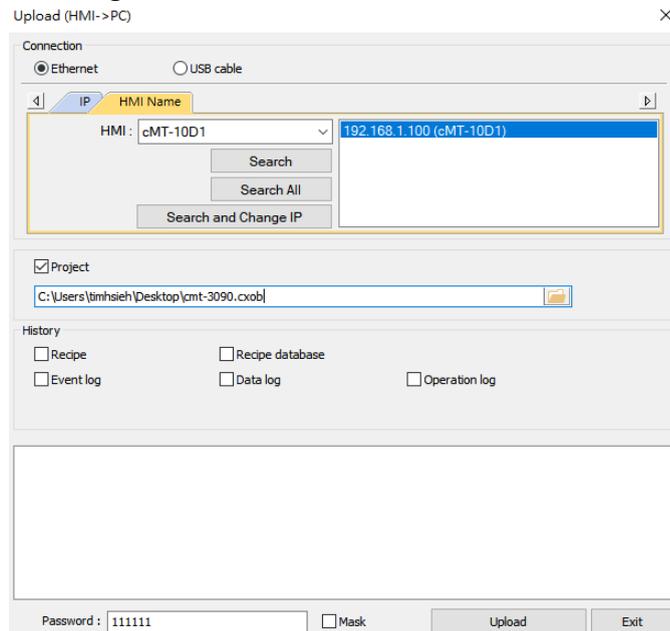
2. Select Ethernet connection or USB connection. Some cMT models are not equipped with USB client port, so the USB connection is not available in these models.

- To upload the project file, select the Project checkbox and click on the “Folder” button to the right of the Project checkbox. Navigate to where the *.cxob file will be saved. Specify the name of the project file and add the file extension **.cxob**.

Click on Search All button to scan for your HMI. You will need to select an HMI in order to retrieve the project file.

Enter the password to the Password box. The default password is 111111.

Click on Upload button to begin.



Note:

1 .The cxob file is a compiled project file. To modify the project, use the Decompile tool to extract. (Easybuilder pro» [File] menu » Decompile)

2. If “disable upload function” is enabled within the project, the cxob file won’t be allowed to retrieve and will show the message “error: uploading project.”

(This option can be found on Easybuilder pro» System Parameters » [System Setting] tab)

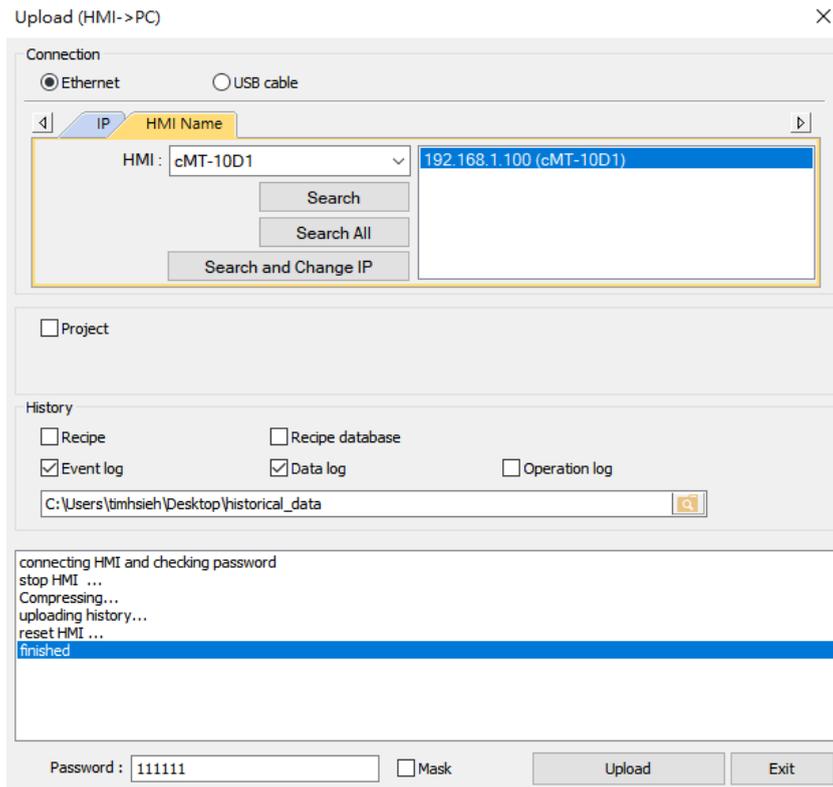


- To retrieve historical data or recipe files stored in a cMT HMI, select the boxes within **History** and click on the “Folder” button. Navigate to where the files will be saved. The folder will contain all of the selected files.

Click on Search All button to scan your HMI. You will need to select an HMI in order to retrieve the files.

Enter the password to the Password box. The default password is 111111.

Click on Upload button to begin.



9. Administrator Tools

The administrator Tools is a utility that allows you to store data to a USB drive for **User Accounts**, **USB Security Key**, **e-Mail SMTP Server Settings**, and **e-Mail Contacts**. It is a convenient tool to update the data stored in a HMI during runtime. The data built in the USB drive can be loaded into a HMI via Function key object or the cMT web interface.

Launch Administrator Tools.

9.1. User Accounts

The User Accounts is used to update user accounts stored in Enhance Security during runtime.

Configuration

1. Select [User Accounts] checkbox.
2. Use the Add button to create new user accounts. Up to 127 user accounts can be added. Click Remove button to erase the selected account.
3. Enter a desired user name and a password. Select security classes that the user are accessible.
4. The **Restrict the using terms** is optional. If selected, the data can only be loaded in the effective time interval.

Administrator Tools

Save Contents of the USB data

- User Accounts
- USB Security Key
- e-Mail SMTP Server Settings
- e-Mail Contacts

User Account Settings

No.	Secret	User name	Password	Class A	Class B	Class C	Class D	Class E	Class F	Class
1	<input type="checkbox"/>	WeintekUSA	111111	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
2	<input type="checkbox"/>	002002	002002	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	<input type="checkbox"/>	003003	003003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	<input type="checkbox"/>	004004	004004	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Add Remove Import... Export...

Effective Time

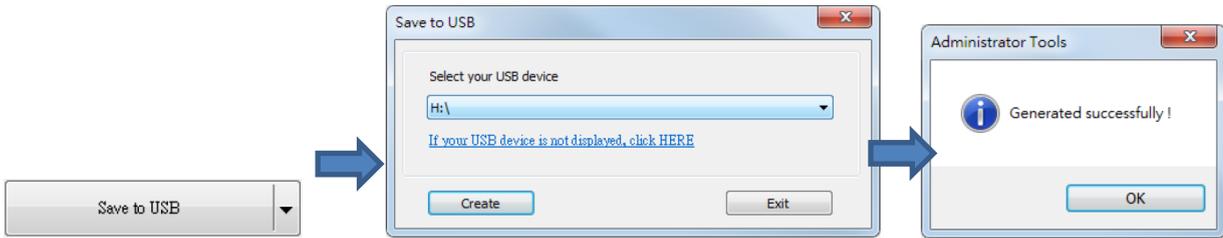
Restrict the using terms

Feb/14/2019 15:01 ~ Feb/14/2019 15:01

Save to USB

[Help Topics](#)

5. Click on [Save to USB] and navigate to the USB drive.

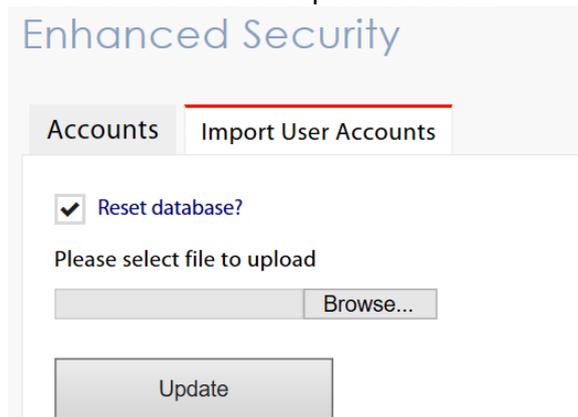


The file also can be stored on a PC via selecting “Folder” from the drop-down list.



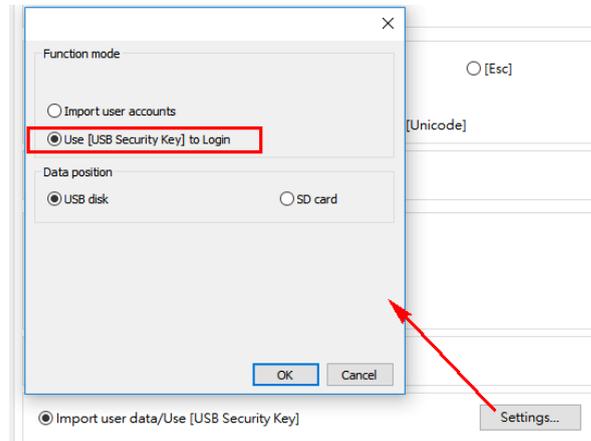
Steps to load **User Accounts** to cMT HMI

1. Login to the cMT web interface.
2. Go to [Enhanced Security] menu » [Import User Accounts] tab.
3. Navigate to the location of the file and click Update button.



9.2. USB Security Key

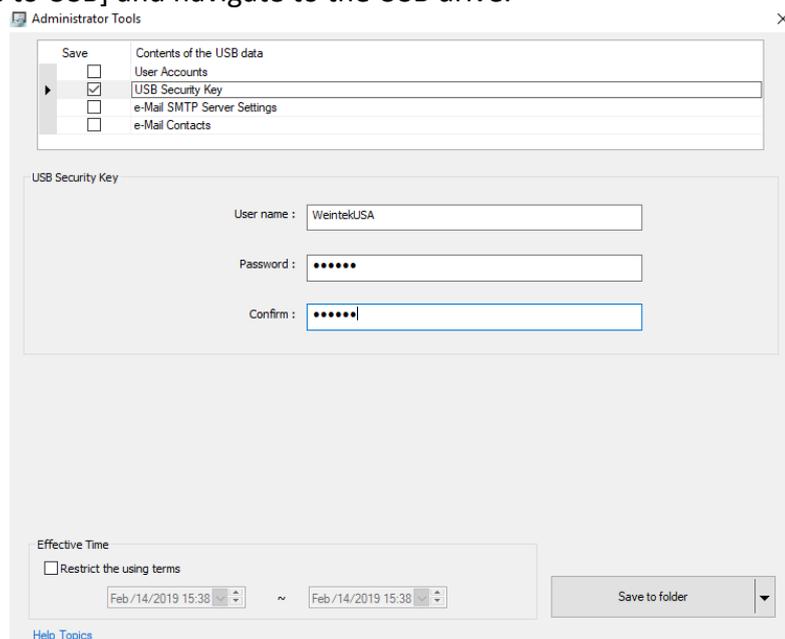
The USB security key is a way to login to cMT HMI without entering the user name and the password. To use this function, you will need to create a **Function Key** object that is configured to **Use [USB Security Key]**.



When the USB drive that contains the security key to the HMI is inserted and the Function key object is pressed, the HMI will check if the user name and password stored in the USB drive matches an existing account in the HMI.

Configuration

1. Select [USB security key] checkbox.
2. Enter the user name and the password that exists in the HMI.
3. The **Restrict the using terms** is optional. If selected, the security key is effective in the selected time interval.
4. Click on [Save to USB] and navigate to the USB drive.

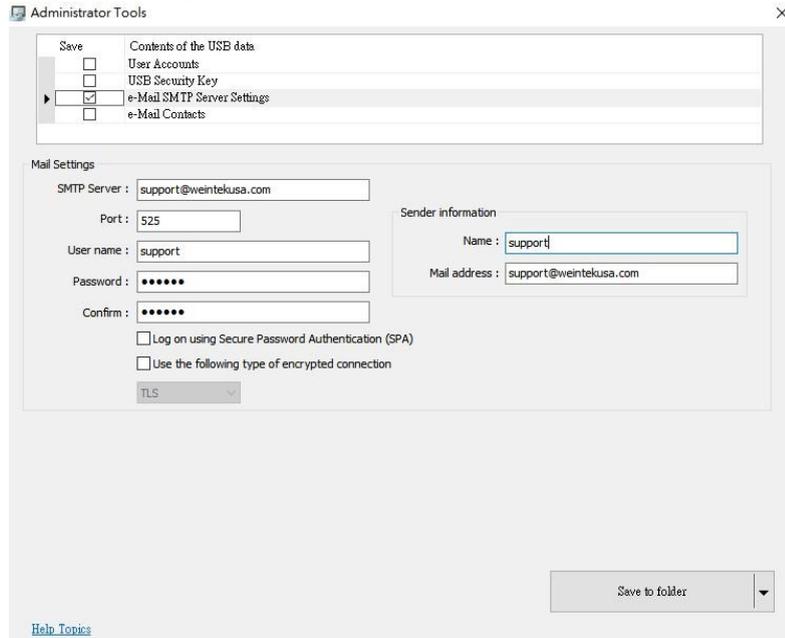


9.3. e-Mail SMTP Server Settings

It allows e-Mail Server Settings in the HMI to be updated during runtime. The HMI programmer must enable e-mail function in the HMI project. (Easybuilder pro » System Parameters » [Email] tab » Enable email function)

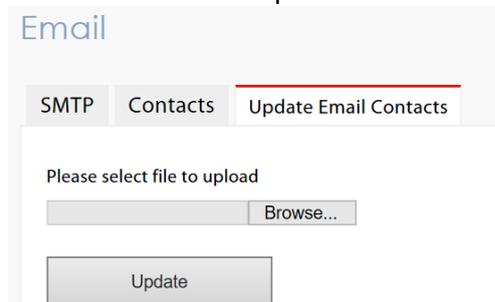
Configuration

1. Select [e-Mail SMTP Server Settings] checkbox.
2. Enter the valid SMTP Server settings.
3. Click on [Save to USB] and navigate to the USB drive.



Steps to load **e-Mail SMTP Server Settings** to Cmt HMI

1. Login the Cmt web interface.
2. Go to [Email] menu » [Import Email Accounts] tab.
3. Navigate to the location of the file and click Update button.

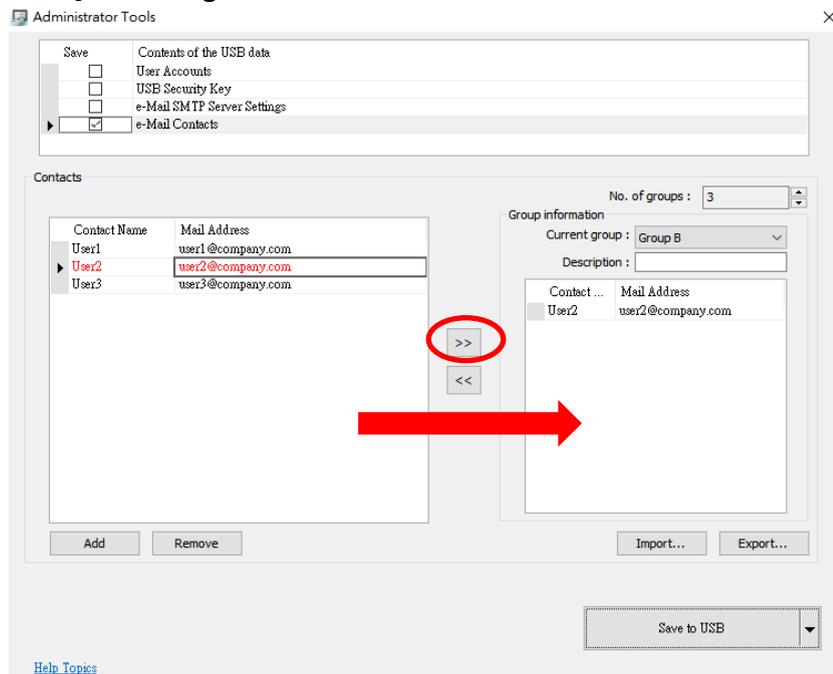


9.4. e-Mail Contacts

It allows e-mail contacts in the HMI to be updated during runtime. The HMI programmer must enable e-mail function in the HMI project. (Easybuilder pro » System Parameters » [Email] tab » Enable email function)

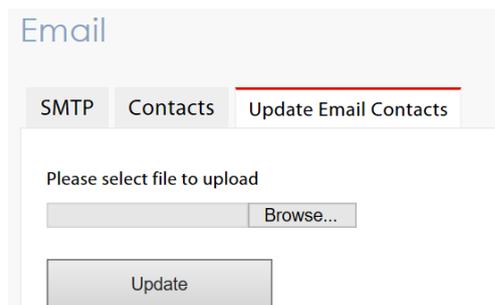
Configuration

1. Select [e-Mail Contacts] checkbox.
2. Click the Add button to create a new contact name and its mail address to the list of contacts. Up to 256 contacts can be created.
3. Create recipient groups from the No. of groups. Up to 16 groups can be created.
4. To add a contact to the selected group. Select a group under the **Current group**. Then select a contact under the list of contacts and click on the right-arrow button. Click on the left-arrow button to delete the selected contact from the group.
5. Click on [Save to USB] and navigate to the USB drive.



Steps to load e-Mail Contacts to cMT HMI

1. Login the cMT web interface.
2. Go to [Email] menu » [Import Email Accounts] tab.
3. Navigate to the location of the file and click Update button.



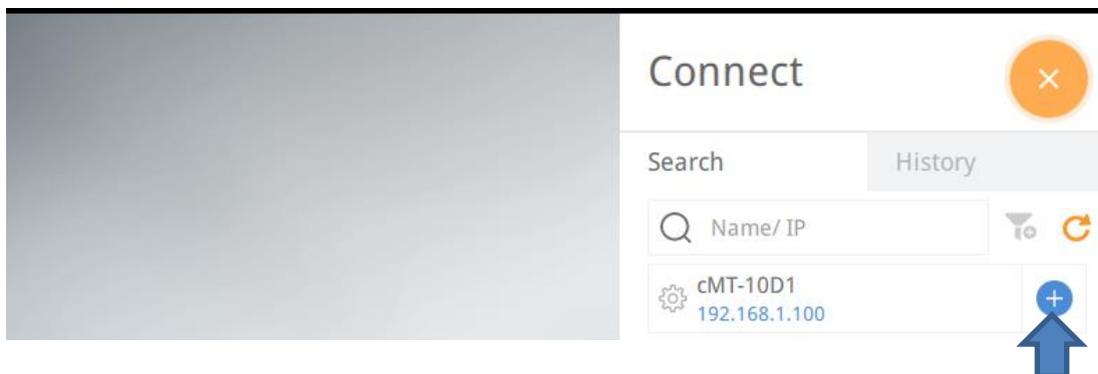
10. cMT-Viewer

cMT-Viewer is a client application, which allows users to remote access the screen of cMT HMI located on the LAN (Local Area Network) via wireless connection or Ethernet connection.

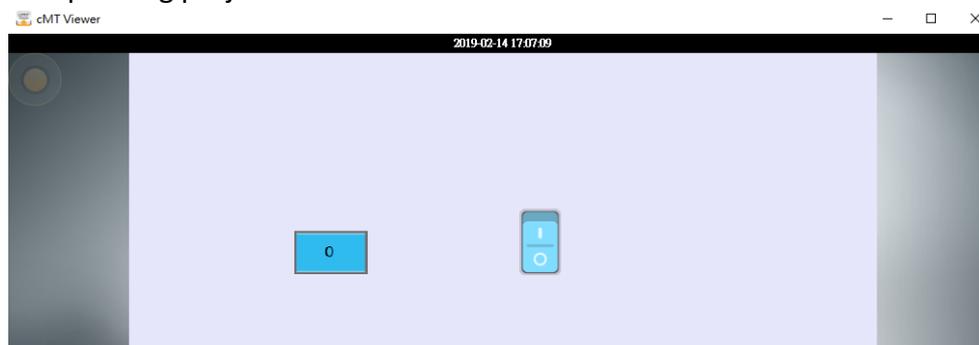
Click the button as shown below.



Search for cMT HMIs on [Search] tab. The available HMIs will be shown as below when existing on the local network. Tap an Add icon on the desired HMI, and it will bring up a window requiring you to enter the password.



After that, the corresponding project will be loaded.

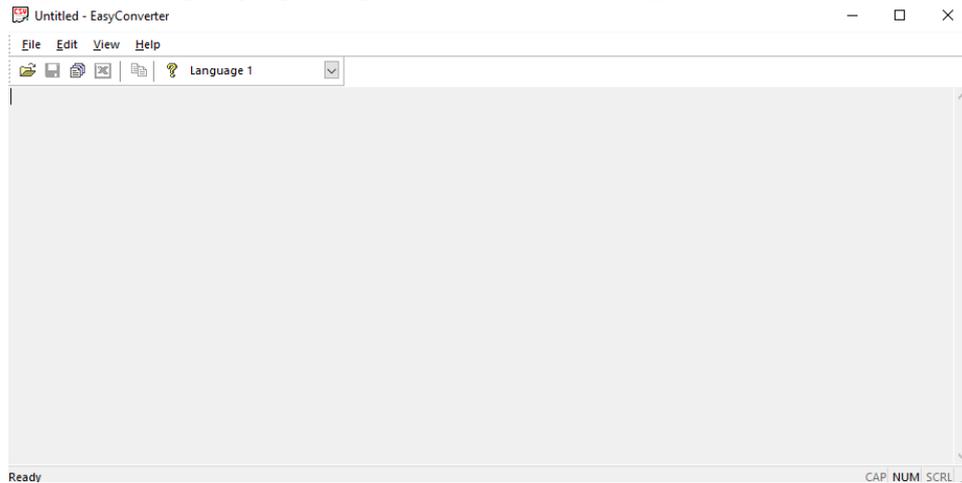


11. EasyConverter

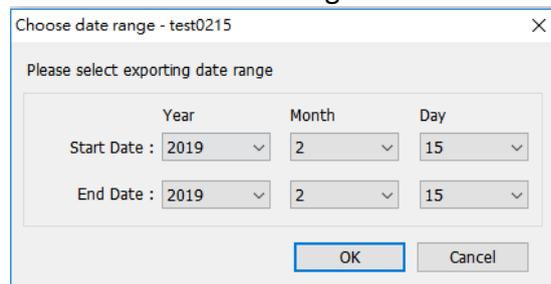
The Easy Converter is a tool used to view data log files (*.db) and event log files (*.db) that are generated by cMT HMI. It can convert db (database) file into CSV (comma separated values) file.

11.1. Viewing Data Log File

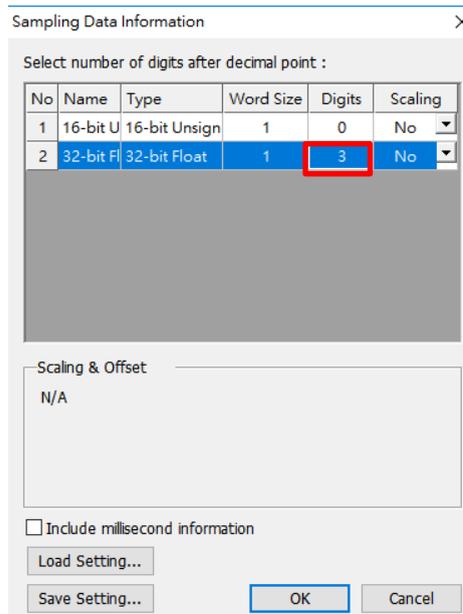
1. Launch EasyConverter.
2. To open a data log file, click [File] » [Open] and browse a data log file.



3. The popup window prompts you to select the date range.



4. The following popup window appears. The raw data collected for Data 1 and Data 2 can be adjusted as needed. For example, the Data 2 has three digits after the decimal point. You can change the digits field from 3 to 1 if you're only concerned with one decimal accuracy.



The Scaling column is a scaling option that offers linear scaling to data.

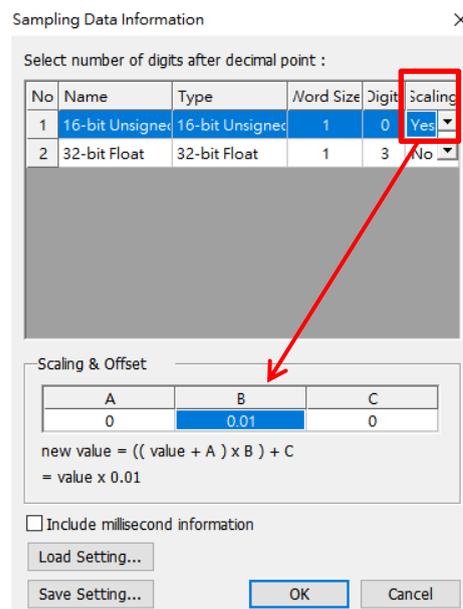
The equation of scaling new value = [(value + A) x B] + C

Set the values of A, B, and C.

A: Lower limit of the value;

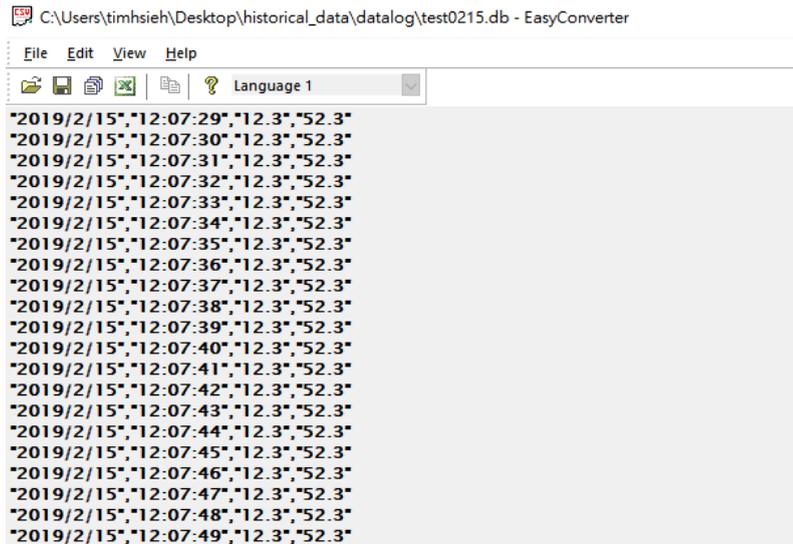
B: [(scaled max) - (scaled min) / (upper limit) - (lower limit)];

C: Scaled min.



You can click **Save setting** button for using these same changes on other files. The conversion file (*.lgs) created by **Save setting** button can be loaded by **Load setting** button, which applies the same changes on other files.

5. Click OK, the records in the data log file is displayed as below.



6. To save the file as XLS file, click [File] » [Save As] or the Save As icon.

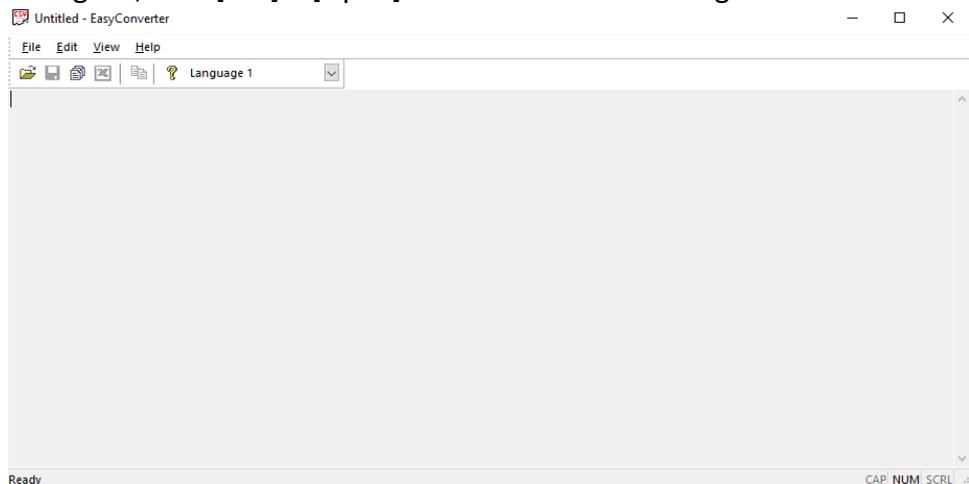
To save the file as CSV file, click [File] » [Export to Excel] or the Excel icon.

	A	B	C	D
1	Date	Time	16-bit Unsigned	32-bit Float
2	2019/2/15	15:37:24	14.3	58.59
3	2019/2/15	15:37:25	14.3	58.59
4	2019/2/15	15:37:26	14.3	58.59
5	2019/2/15	15:37:27	14.3	58.59
6	2019/2/15	15:37:28	14.3	58.59
7	2019/2/15	15:37:29	14.3	58.59
8	2019/2/15	15:37:30	14.3	58.59
9	2019/2/15	15:37:31	14.3	58.59
10	2019/2/15	15:37:32	14.3	58.59
11	2019/2/15	15:37:33	14.3	58.59
12	2019/2/15	15:37:34	14.3	58.59
13	2019/2/15	15:37:35	14.3	58.59
14	2019/2/15	15:37:36	14.3	58.59
15	2019/2/15	15:37:37	14.3	58.59
16	2019/2/15	15:37:38	14.3	58.59

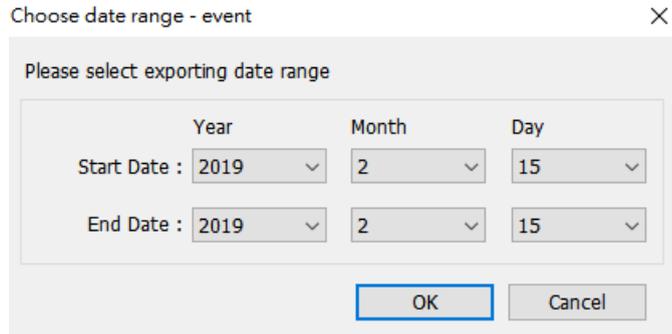
11.2. Viewing Event Log File

1. Launch EasyConverter.

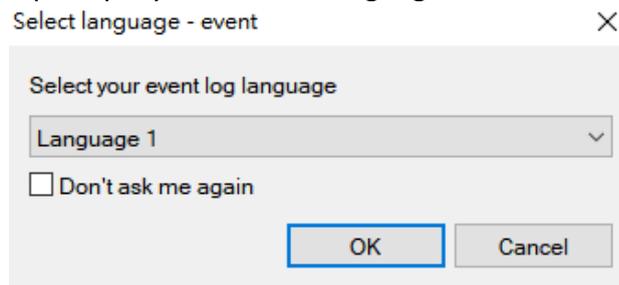
2. To open an event log file, click [File] » [Open] and browse an event log file.



3. The popup window prompts you to select the date range.



4. The following popup window prompts you to select language.



5. Click OK, the records in the data log file is displayed as below.

Event: This column indicates the following meanings.

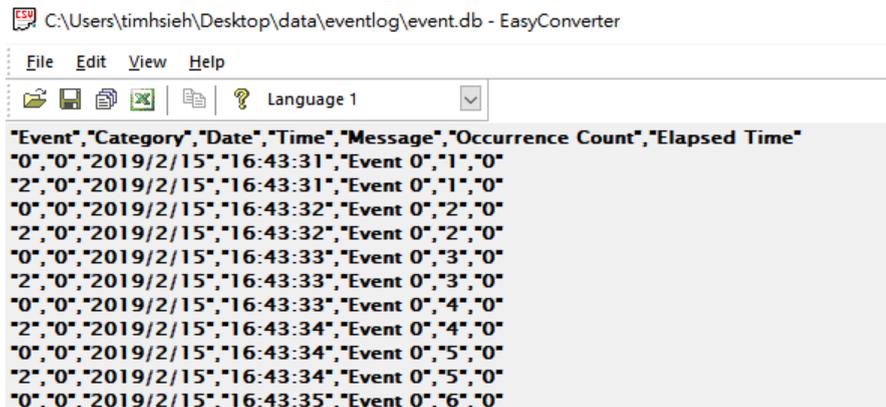
0=Event triggered

1=Event acknowledged

2=Event returns to normal

Category: This column indicates the event category.

Message: This column indicates the Alarm message.



6. To save the file as XLS file, click [File] » [Save As] or the Save As icon.

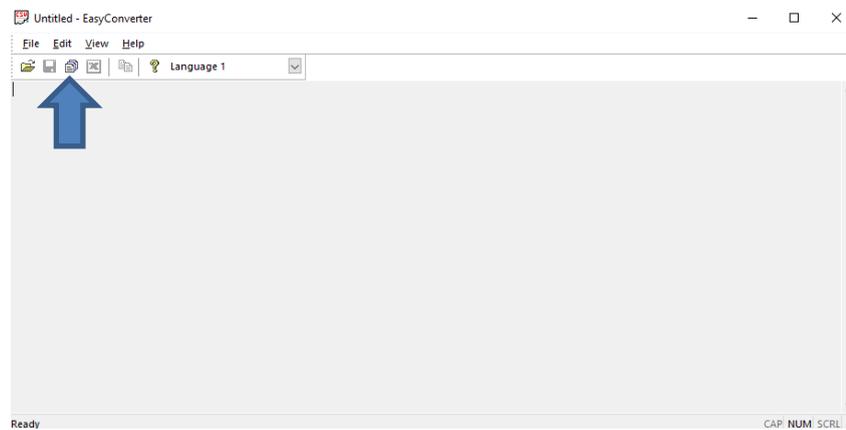
To save the file as CSV file, click [File] » [Export to Excel] or the Excel icon.

	A	B	C	D	E	F	G
1	Event	Category	Date	Time	Message	Occurrence Count	Elapsed Time
2	0	0	2019/2/15	16:43:31	Event 0	1	0
3	2	0	2019/2/15	16:43:31	Event 0	1	0
4	0	0	2019/2/15	16:43:32	Event 0	2	0
5	2	0	2019/2/15	16:43:32	Event 0	2	0
6	0	0	2019/2/15	16:43:33	Event 0	3	0
7	2	0	2019/2/15	16:43:33	Event 0	3	0
8	0	0	2019/2/15	16:43:33	Event 0	4	0
9	2	0	2019/2/15	16:43:34	Event 0	4	0
10	0	0	2019/2/15	16:43:34	Event 0	5	0
11	2	0	2019/2/15	16:43:34	Event 0	5	0
12	0	0	2019/2/15	16:43:35	Event 0	6	0
13							
14							

- Converting multiple files:

This tool allows you to select multiple data/event log files and save them to one CSV file.

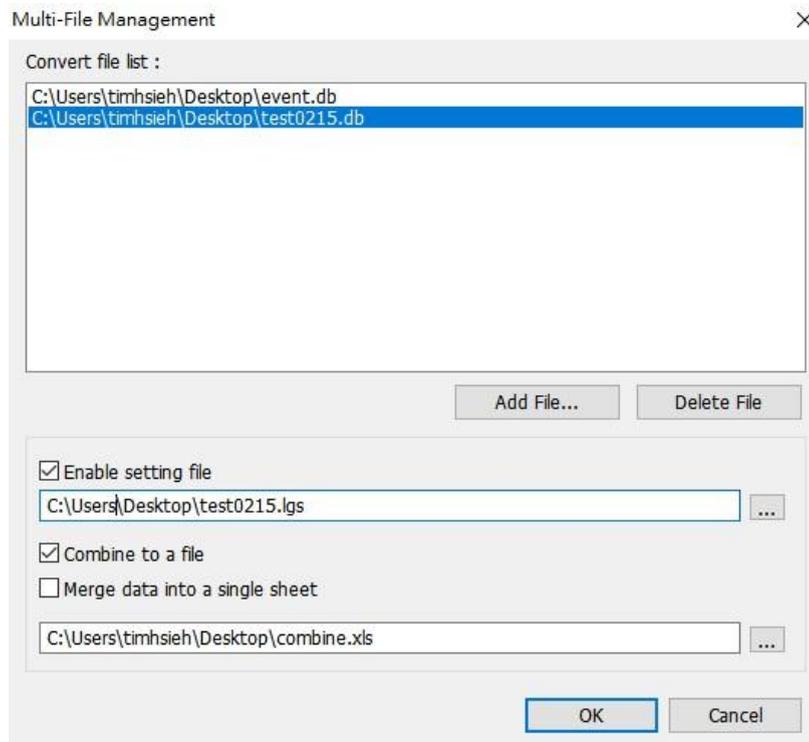
1. Launch EasyConverter.
2. Click Multiple files button to convert multiple files.



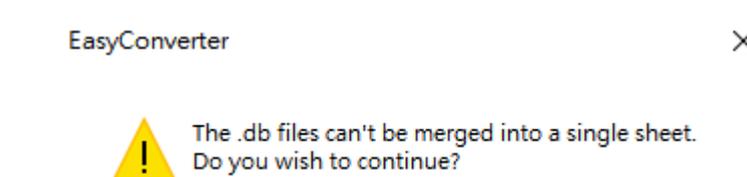
3. Click [Add File] and select the files.

Enable setting file: Check this box and browse a conversion file (*.lgs). The linear scaling conversion or decimal point conversion on the conversion file will be implemented to the selected data log files.

Combine to a file: Check this box to combine the selected files and save them into one CSV file.



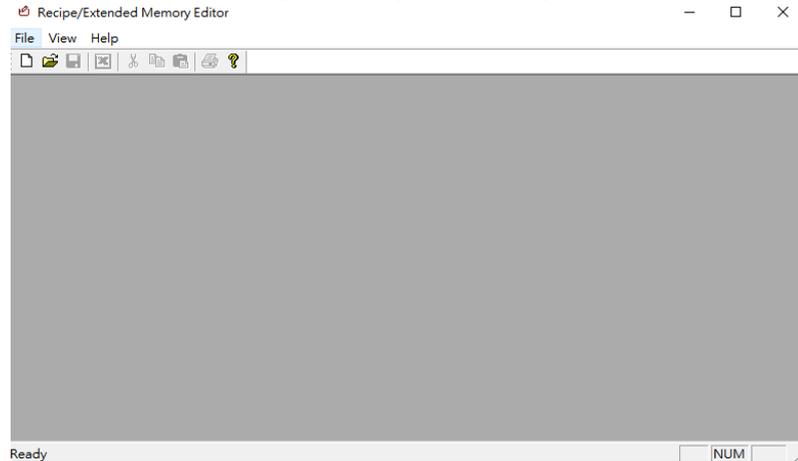
Note: [Merge data into a single sheet] is **not** available for data/event log files created by cMT HMI.



12. Recipe Editor

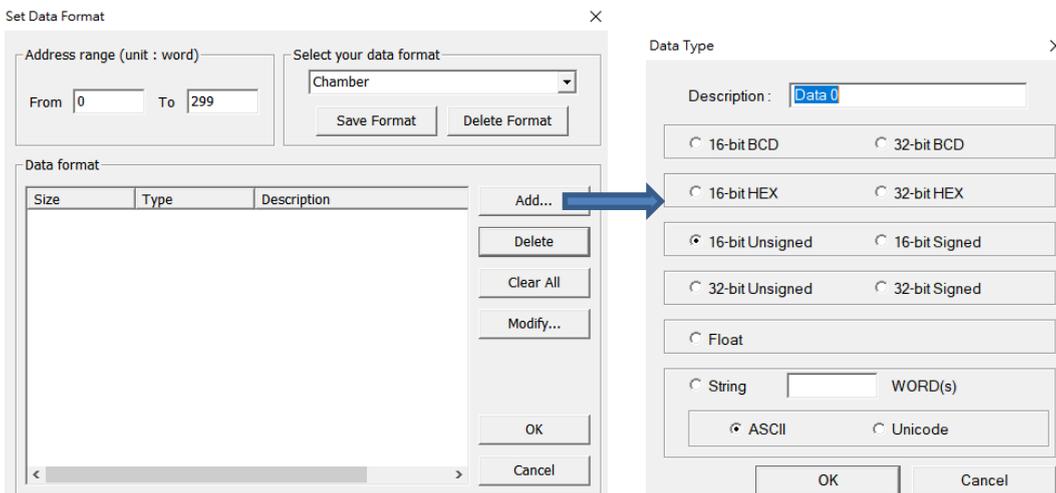
This application is a tool which allows users to modify recipe files (*.rcp) that can update data stored in **RW** and **RW_A** retentive memory, as well as Extended Memory files (*.emi) that can update data stored in **EM** extended memory.

1. Launch Recipe Editor.
2. Click on [File] menu » [Open] and browse your recipe file (*.rcp) or Extended Memory file (*.emi).



3. The following popup window appears.

Address range (unit: word): The number of registers that are used for this file. For example, an Extended Memory file uses the memory EM1_0 through EM1_299. Enter 0 to "From" box and enter 299 to "To" box.
Data format: Each data element has a format to be interpreted by the HMI. Click on the Add button to add a data format.



For example,

The first data element on the first row is the data in String format. Enter the comment to Description box, select String checkbox as well as enter how many words this string has.

The second data element on the first row is 16-bit unsigned integer format, so select "16 bit Unsigned."

You can click on Save Format button to save this data format for using this same data format on other files.

In the project file

Dat format dialog

4. After clicking OK, the below table of data elements appears.

ID: ID number for each row.

Address: Starting address for each row.

Edit the table according to the data format defined for each element.

ID	ADDRESS	Item name	calories	protein	fat	carbohydrate	sodium	fiber
0	0		0	0	0	0	0	0
1	11		0	0	0	0	0	0
2	22		0	0	0	0	0	0
3	33		0	0	0	0	0	0
4	44		0	0	0	0	0	0
5	55		0	0	0	0	0	0
6	66		0	0	0	0	0	0
7	77		0	0	0	0	0	0
8	88		0	0	0	0	0	0
9	99		0	0	0	0	0	0
10	110		0	0	0	0	0	0
11	121		0	0	0	0	0	0
12	132		0	0	0	0	0	0
13	143		0	0	0	0	0	0
14	154		0	0	0	0	0	0
15	165		0	0	0	0	0	0
16	176		0	0	0	0	0	0
17	187		0	0	0	0	0	0

5. Click on [File] menu » [Save]. If the file is used to update EM external memory, you must save the file name which corresponds to the Extended Memory name preconfigured in the cMT HMI (em0.emi, em1.emi, em2.emi, em3.emi, em4.emi, em5.emi, em6.emi, em7.emi, em8.emi, or em9.emi).

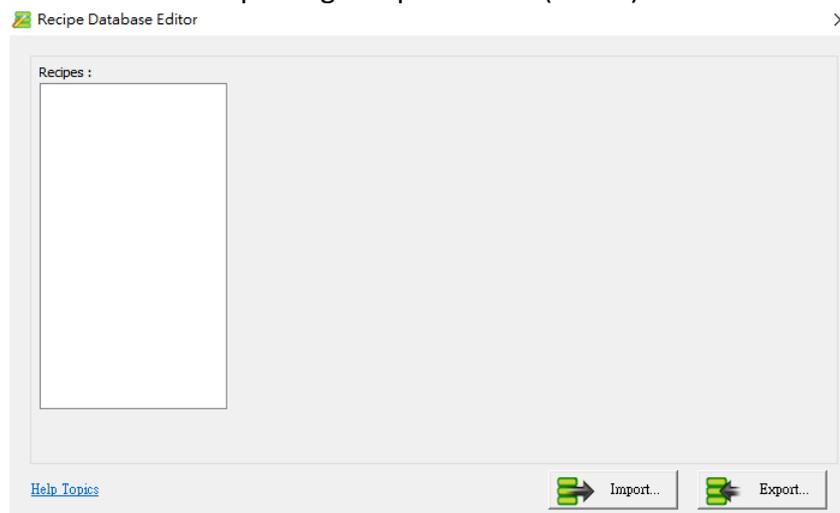
6. Once the file is saved, you can update the memory in the following ways:

- To update **RW** and **RW_A** retentive memory, use the **Download** application or USB drive download.
- To update **EM** external memory, copy the file to the external memory device or via FTP server to transfer.

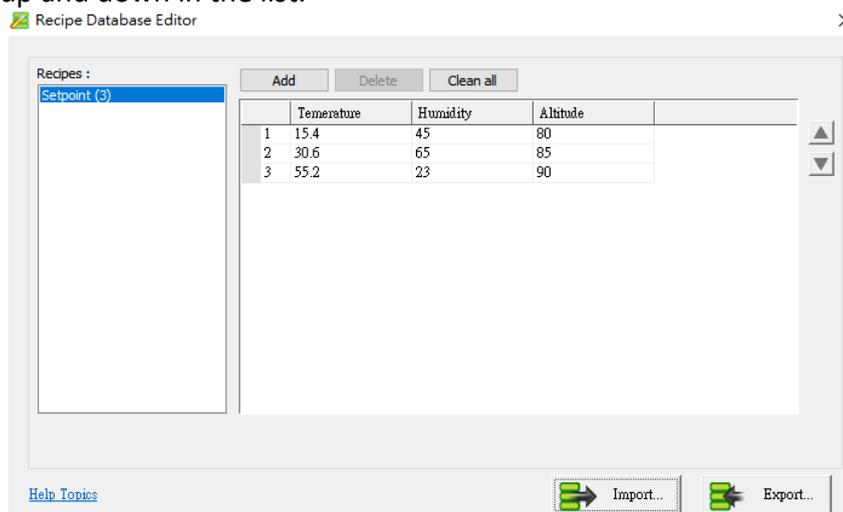
13. Recipe Database Editor

This application is a tool which allows users to create or modify a database file that can update Recipe Database stored in the .cxob project file.

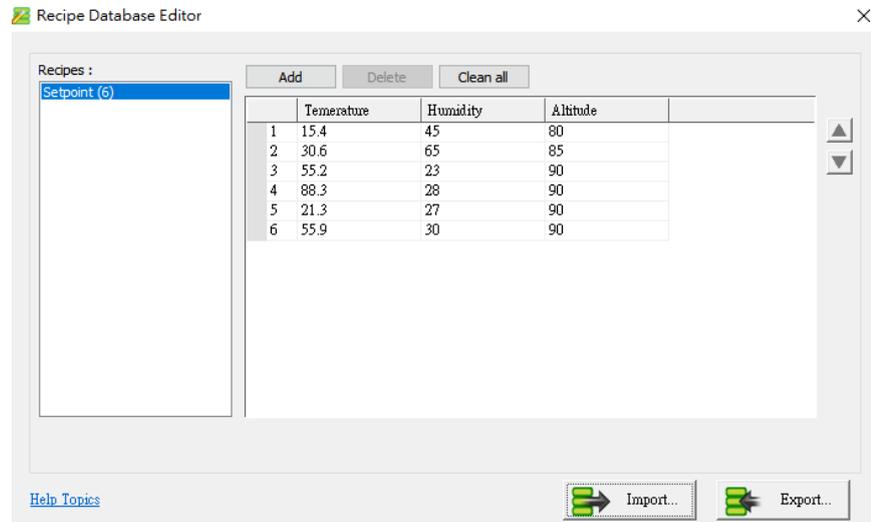
1. Launch Recipe Database Editor.
2. Click on the Import button and navigate to where the Recipe DEF file (*.rdef) or Database file (*.db) is located.
3.
 - Create a new database when importing Recipe DEF file (*.rdef).



Click the Add button to add a new row to the database. Enter the data element according to the data format predefined in the .cxob project file. The up and down arrow buttons is used to move the selected row up and down in the list.



- Modify a database file when importing Database file (*.db)
Edit the table according to the data format predefined in the .xjob project file. The up and down arrow buttons is used to move the selected row up and down in the list.

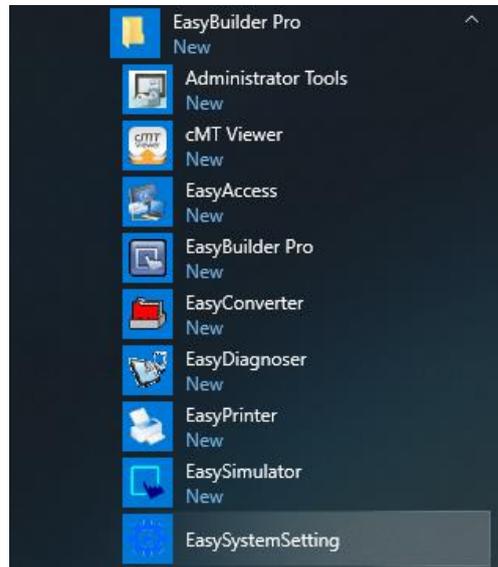


4. Click on Export button to save this database.
5. To update Recipe Database stored in the .xjob project file, use the **Download** application or USB drive download.

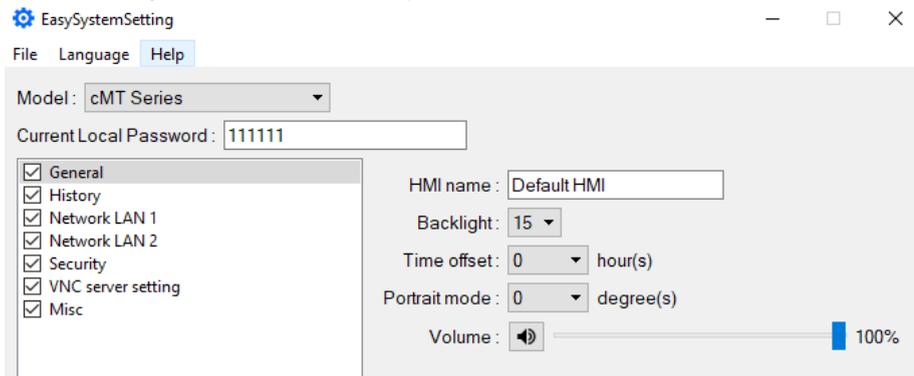
14. Easy System Setting

This application is a tool which allows you to configure hardware system settings on PC.

1. Launch **EasySystemSetting**.



2. Select [cMT Series] from the [Model] drop-down list. Enter the HMI's system password onto [Current Local Password]. (The default password is 111111)



3. Configure system settings if required. To know the information about the following options, please refer to the user manual of the CMT HMIs. The unchecked options won't update the specific settings.

General menu-

- HMI name
- Backlight (Brightness)
- Time offset (Time zone)
- Portrait mode
- Volume

History menu-

- Clear Recipe
- Clear Recipe Database
- Clear Operation Log
- Clear Event Log
- Clear Data Log

Network LAN1 menu-

- IP address
- Subnet mask
- Gateway
- DNS address

Note: If [DHCP] option is checked, above options will be grayed out.

Network LAN2 menu-

- IP address
- Subnet mask

Note: If [DHCP] option is checked, above options will be grayed out.

Security menu-

- Local (System setting) password
- Upload Project password
- Upload (History, FTP) password
- User password

VNC server setting menu-

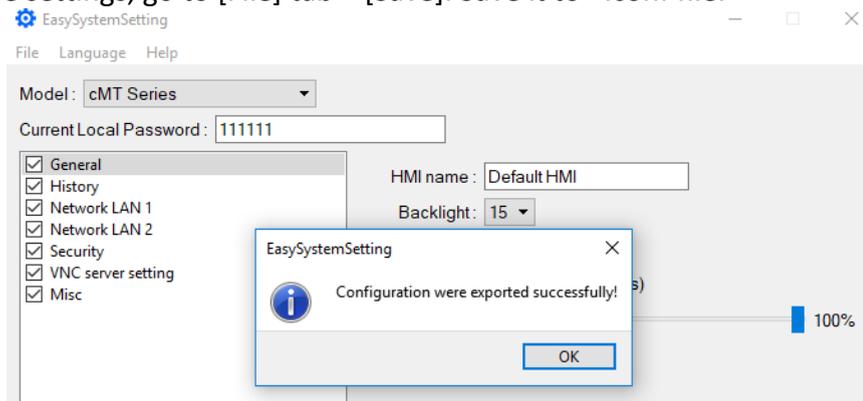
- Start VNC single-connection
- Start VNC multi-connection
- Stop
- VNC password

Note: If [Stop] option is chosen, [VNC password] option will be grayed out

Misc menu-

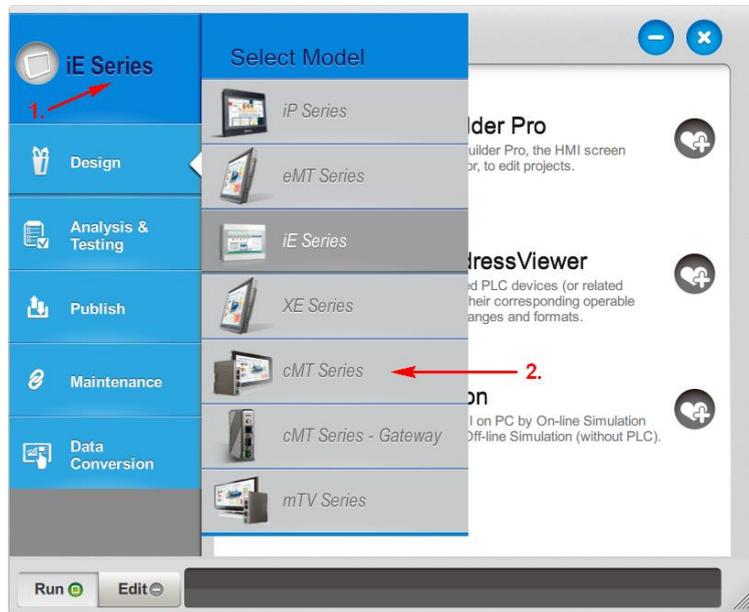
- Popup download window
- FTP client can modify USB/SD data

4. Once finishing the settings, go to [File] tab » [Save]. Save it to *.conf file.

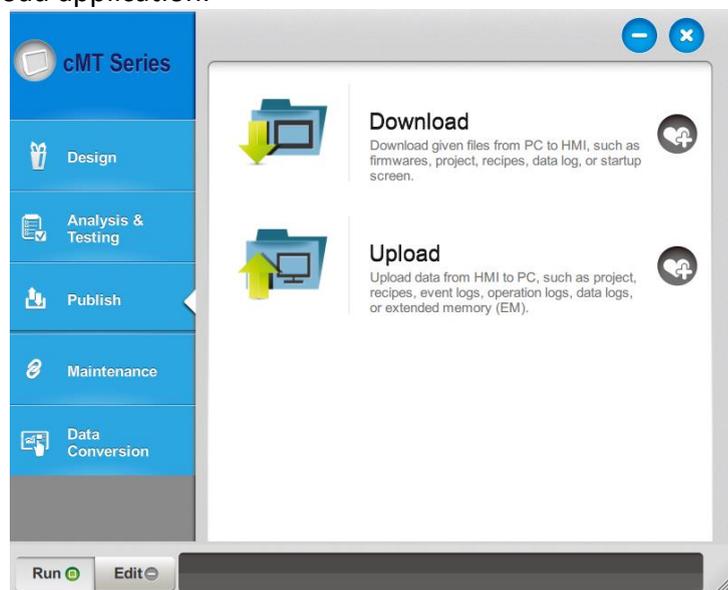


How to use this file

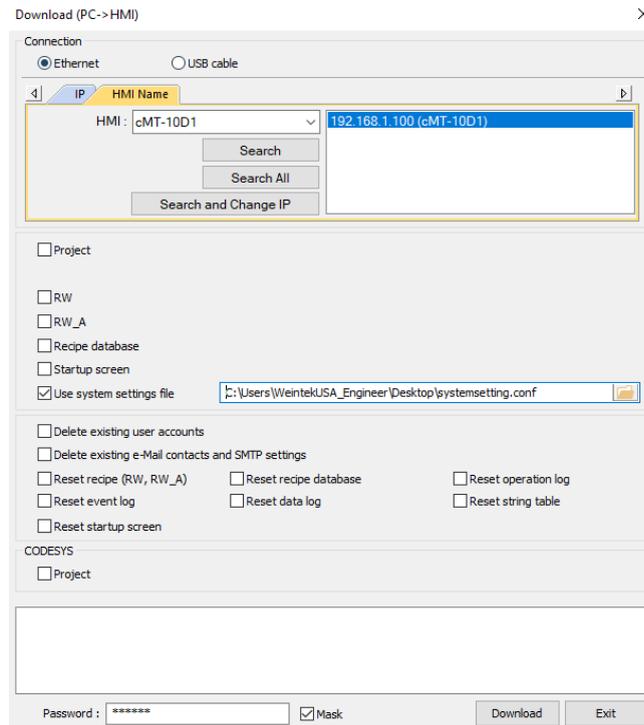
1. In the Utility Manager, make sure the [cMT Series] option is chosen in advance.



2. Launch the Download application.



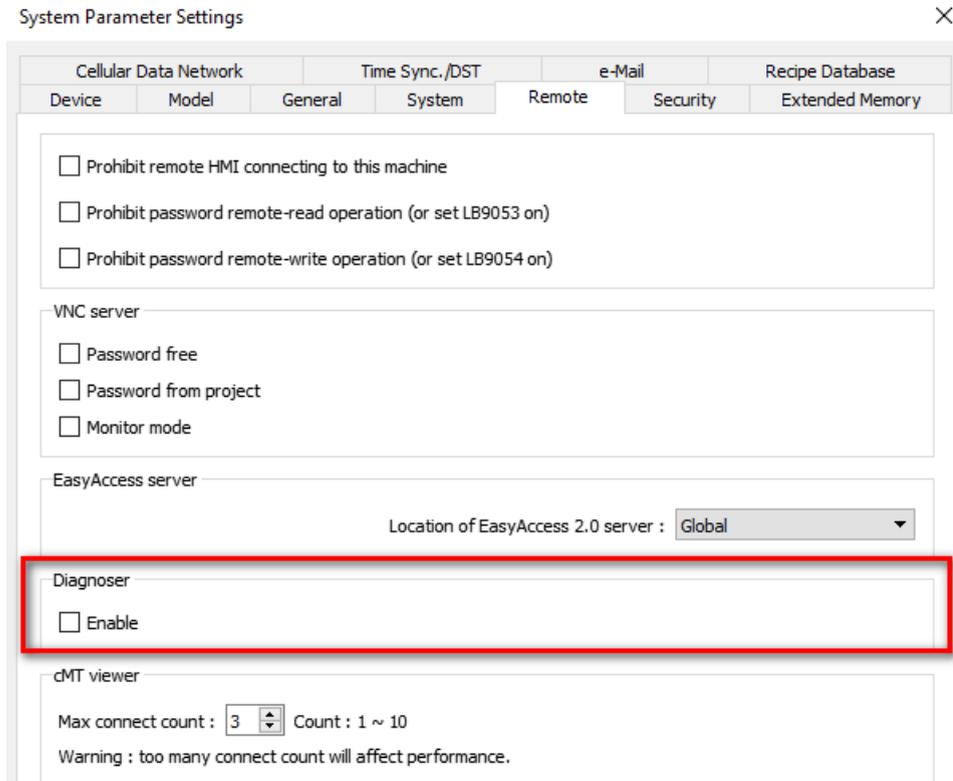
3. In the Download dialog, check [Use system settings file]. Navigate to the *.conf file. Click Download button.



15. cMT Diagnoser

This application is a tool that allows you to diagnose faults between devices.

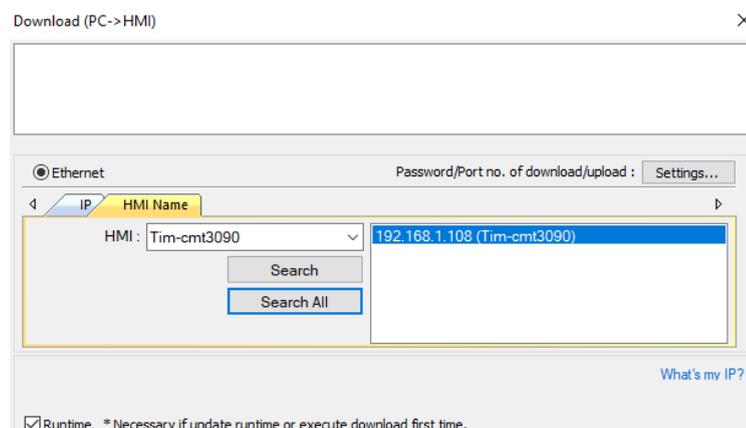
Before using this tool, the **Diagnoser** checkbox in your HMI project must be selected. This option can be found from [System Setting Parameters] » [Remote] tab.



You can set up a password to protect the tool from unauthorized users or select **Password free**.

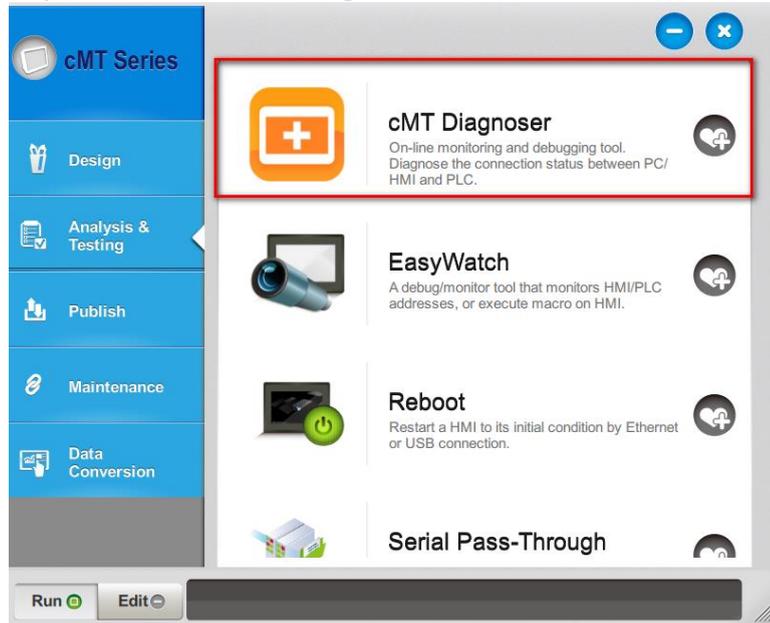


Load the project to your HMI.

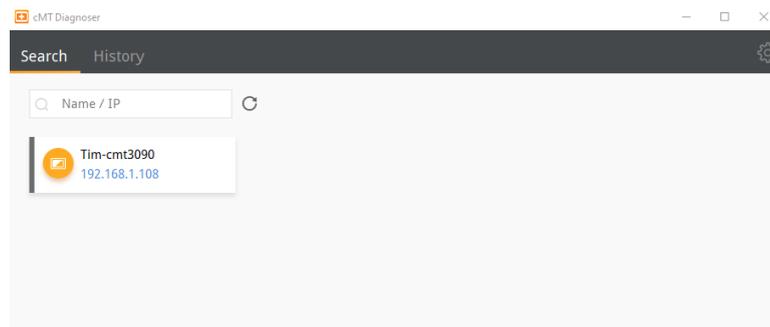


How to Use cMT Diagnoser

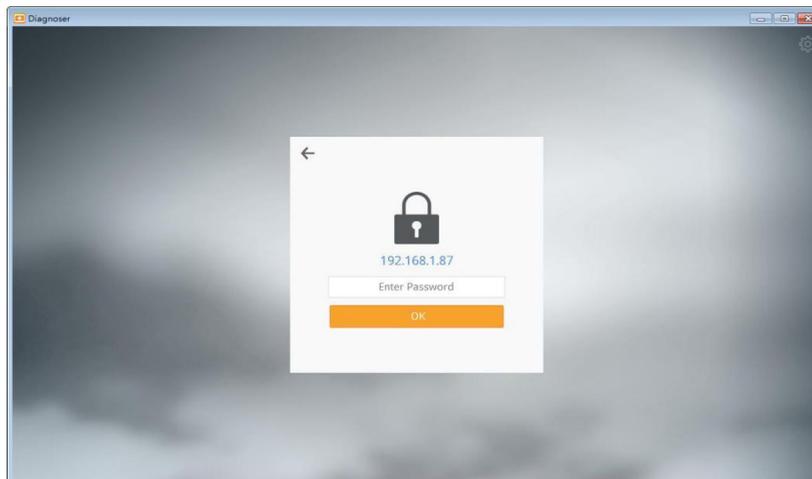
Launch Utility Manager on your PC. Click [cMT Diagnoser].



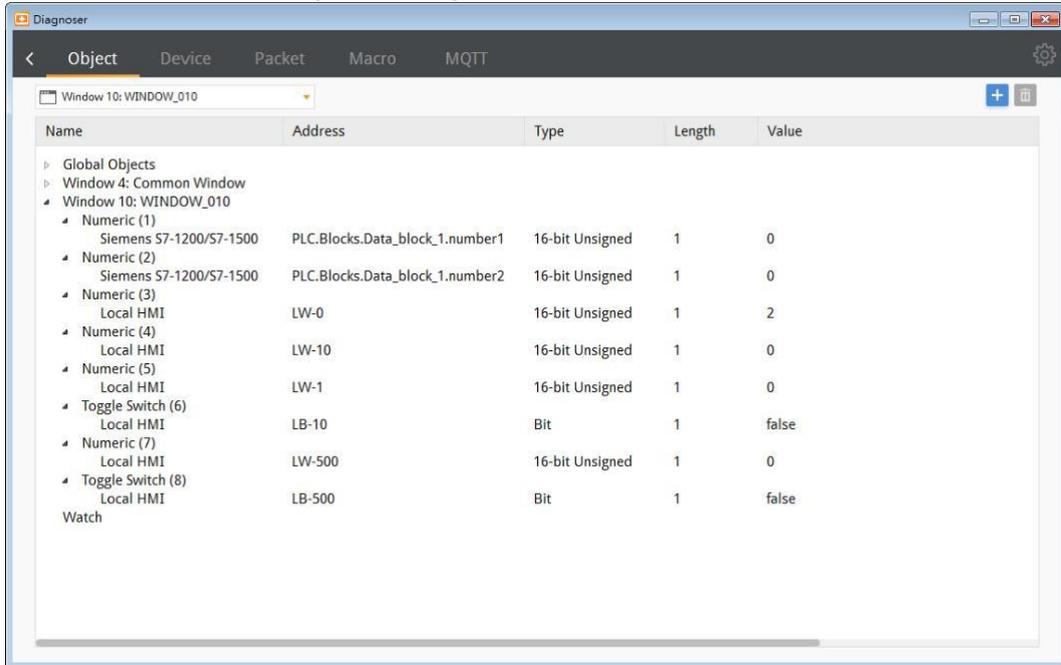
Click the HMI.



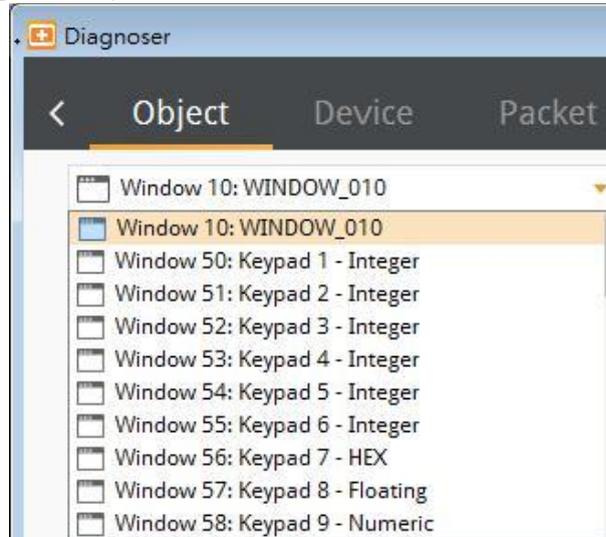
Enter the password to access the diagnostic tool. If [Password free] is selected in the HMI project, the password is NOT required.



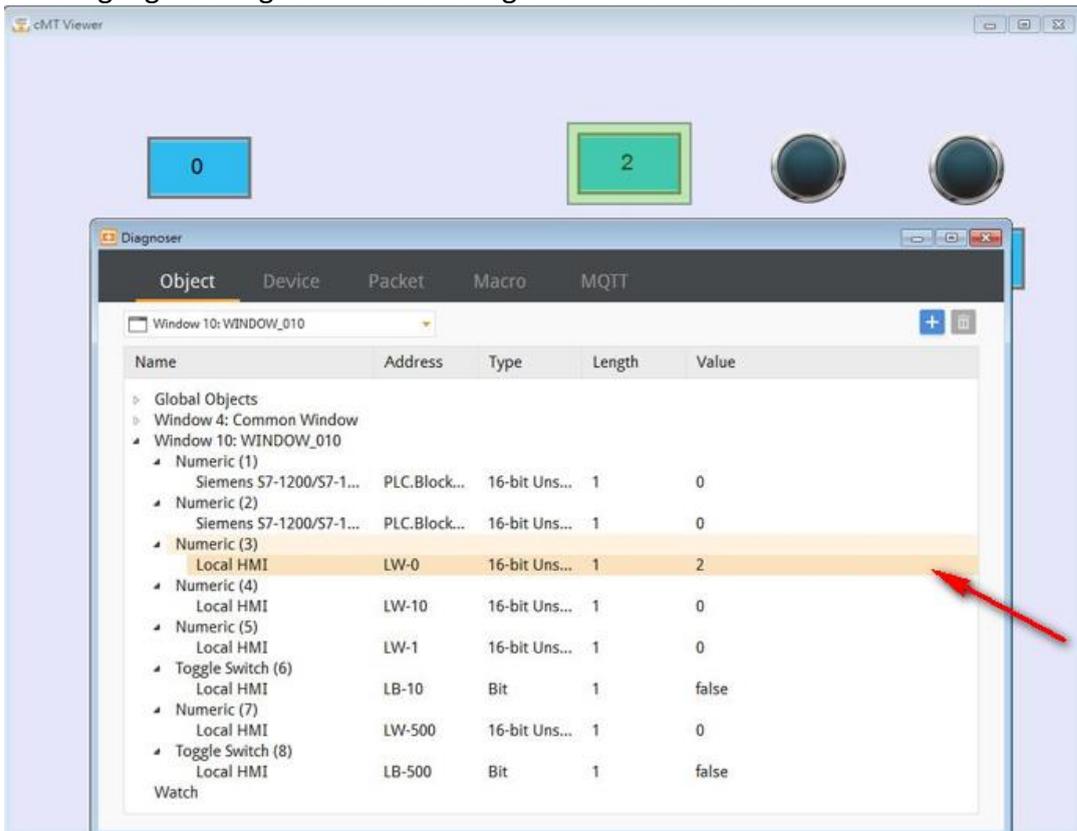
On the [Object] tab, the table shows you the objects used in this window.



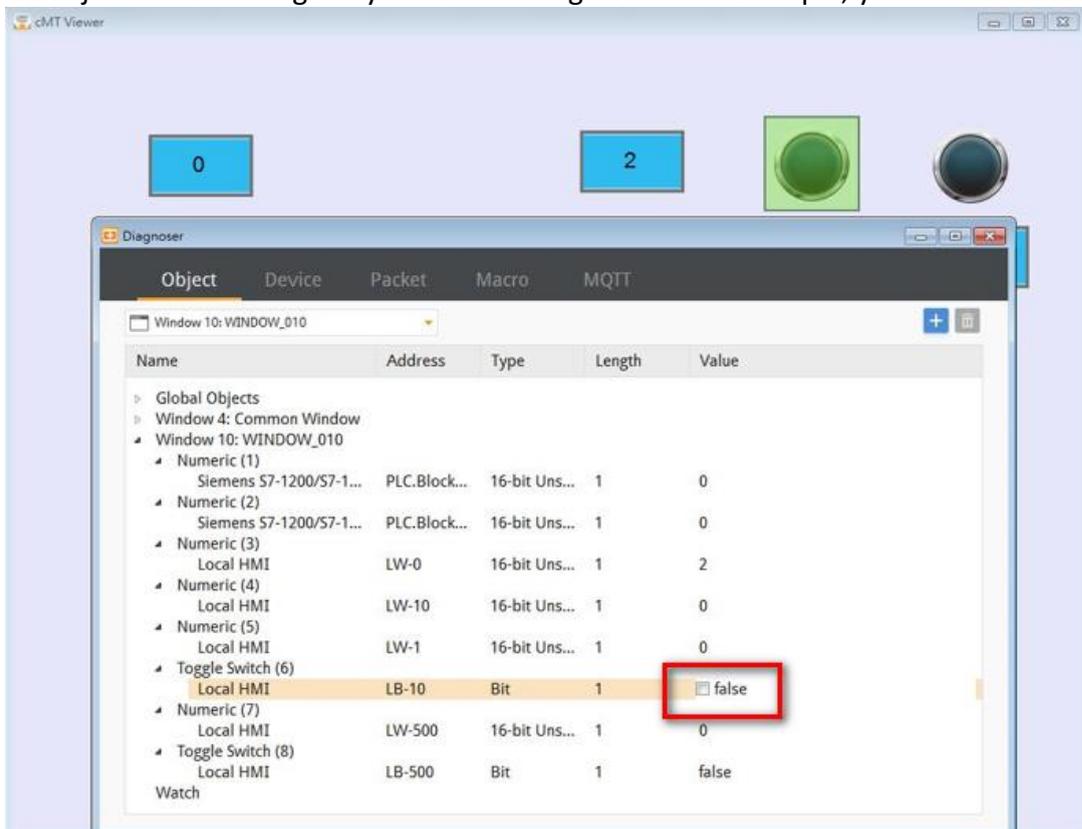
You can change windows using the drop-down list.



The object will be highlighted in green when clicking a row on the table.

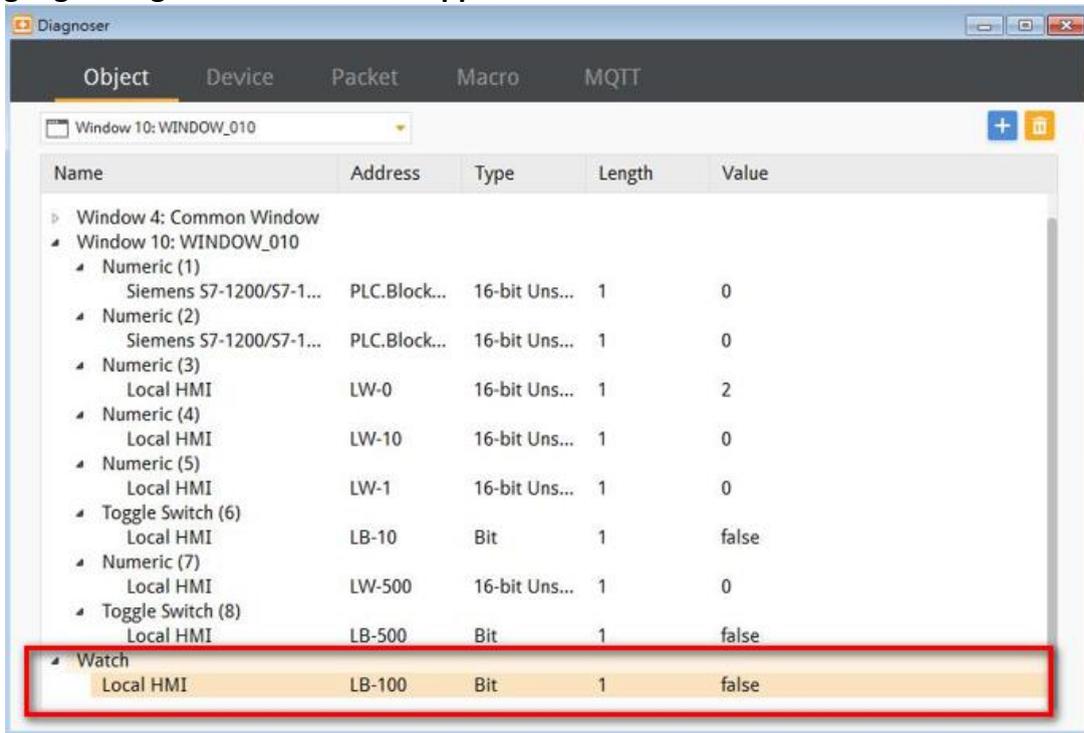


The value of an object can be changed by double-clicking a row. For example, you can turn ON a Bit Lamp.



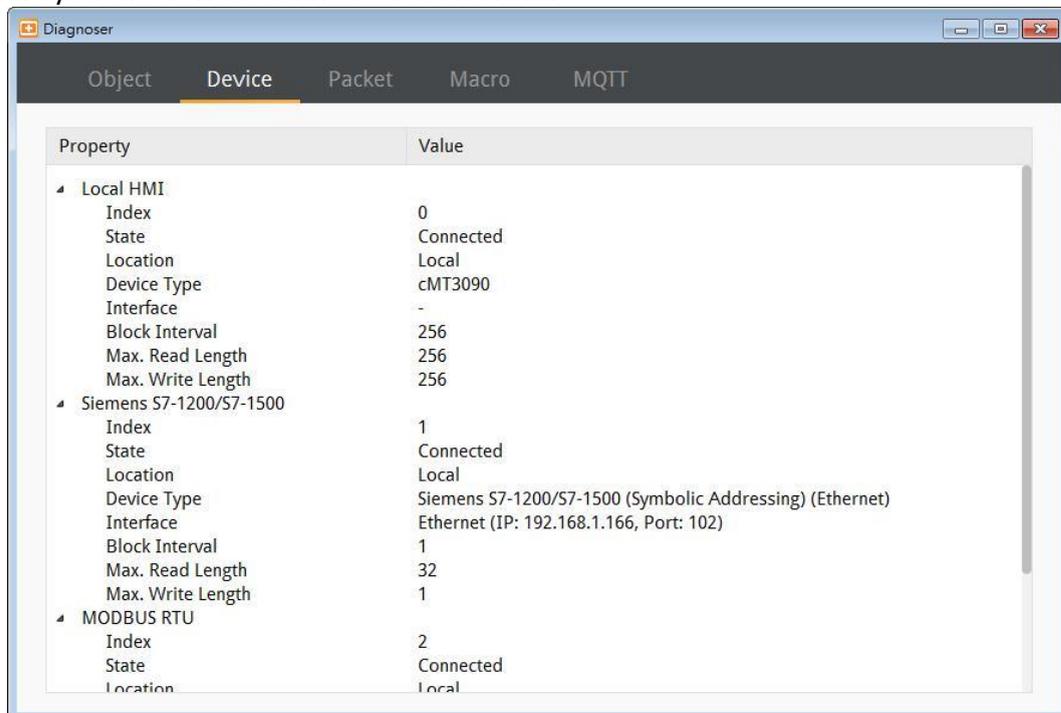
You can click “+” button to add a new address to monitor. To delete an address under **Watch**, select the address and then click on “trash bin” button.

Note: Adding tags of tag-based PLCs is not supported.



[Device] tab

This page shows you the devices connected to the HMI.



[Packet] tab » Activity

In this page, you can monitor a device using the **Device** drop-down list and then clicking the “signal” (orange) button or click the “signal” button to monitor all the devices.

The screenshot shows the 'Diagnoser' application window with the 'Packet' tab selected. Under the 'Activity' sub-tab, there are filters for 'Packet Type' (All), 'Device' (All), 'Address Type' (All), and 'Keyword'. An orange 'signal' button is visible on the right. Below the filters is a table with the following data:

No.	Type	PID	Device	Station	Address	Length	Index	Time	Result
99	P	200012	Local HMI	-	PLW-8950	1	-	0	Success
98	P	200011	Local HMI	-	LB-8999	1	-	112	Success
97	P	200017	Local HMI	-	LW-500	1	-	125	Success
96	P	200012	Local HMI	-	PLW-8950	1	-	0	Success
95	P	200016	Local HMI	-	LW-0	11	-	109	Success
94	P	200023	Local HMI	-	LB-100	1	-	128	Success
93	P	200012	Local HMI	-	PLW-8950	1	-	0	Success
92	P	200018	Siemens S7-12...	-	PLC.Blocks...	1	-	48	Success
91	P	200019	Siemens S7-12...	-	PLC.Blocks...	1	-	80	Success
90	P	200012	Local HMI	-	PLW-8950	1	-	0	Success
89	P	200015	Local HMI	-	LB-10	491	-	112	Success

[Packet] tab » Polling

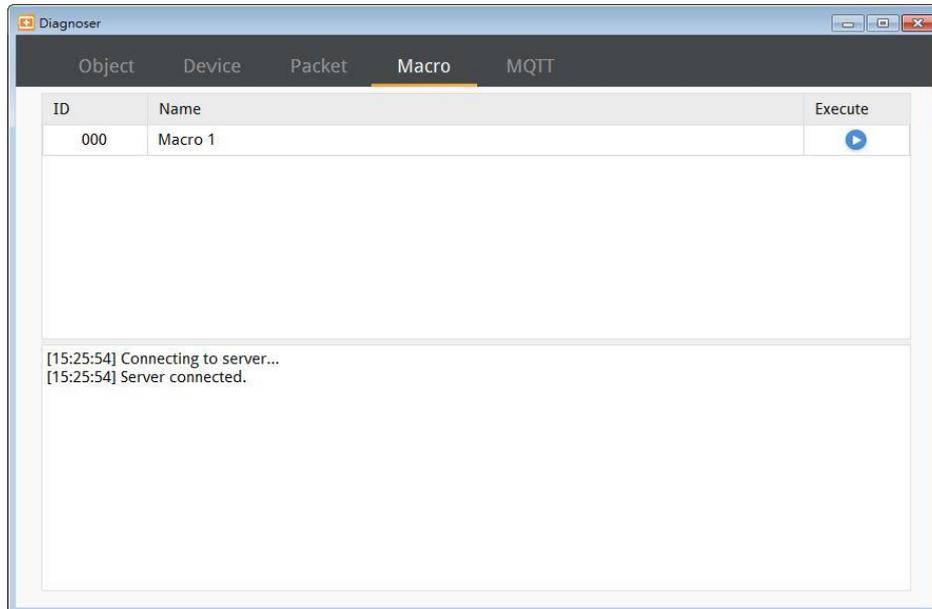
This page lists packets between devices and the HMI.

The screenshot shows the 'Diagnoser' application window with the 'Packet' tab selected. Under the 'Polling' sub-tab, there is a table with the following data:

Packet ID	Device	Station	Address	Length	Index
100358	Local HMI	-	LB-10	1	-
100359	Local HMI	-	LW-10	1	-
200011	Local HMI	-	LB-8999	1	-
200012	Local HMI	-	PLW-8950	1	-
200014	Local HMI	-	LB-9039	3322	-
200015	Local HMI	-	LB-10	491	-
200016	Local HMI	-	LW-0	11	-
200017	Local HMI	-	LW-500	1	-
200018	Siemens S7-1200/S7-1500	-	PLC.Blocks.D...	1	-
200019	Siemens S7-1200/S7-1500	-	PLC.Blocks.D...	1	-
200023	Local HMI	-	LB-100	1	-

[Macro] tab

In this page, you can run macros to validate the functions on the devices.

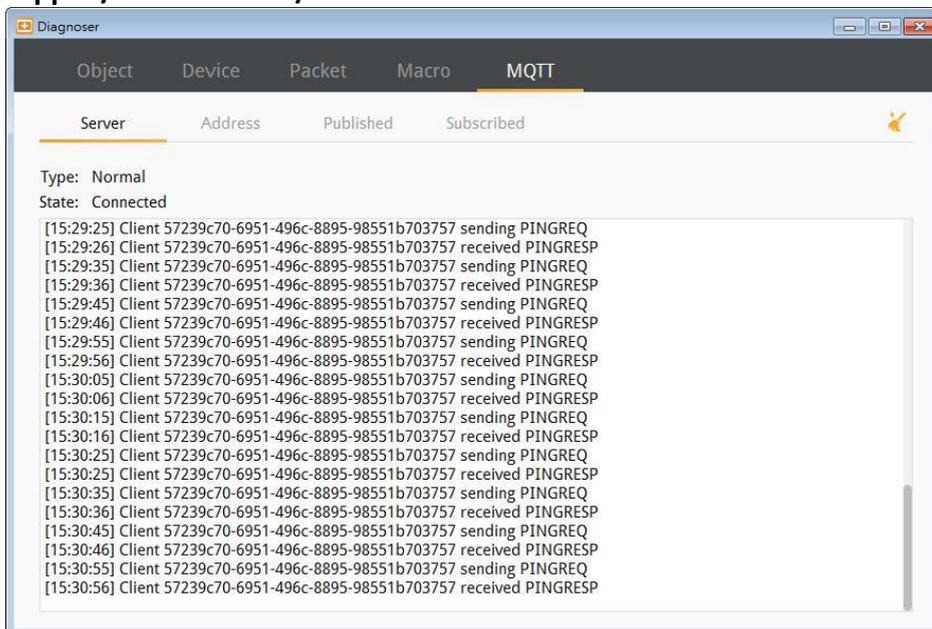


[MQTT] tab » Server

This page shows you the state of MQTT server connected to the HMI, as well as connection logs.

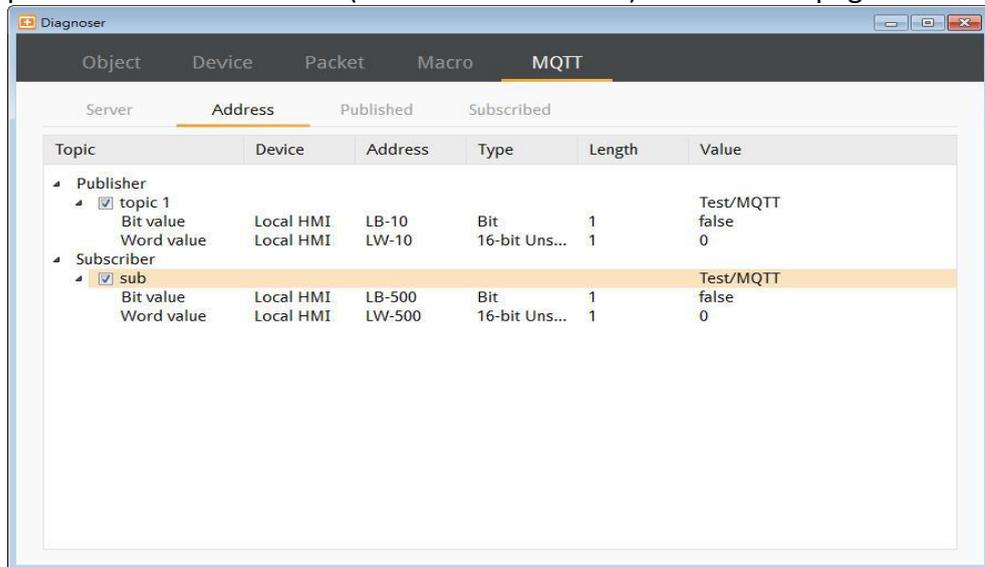
Type: The MQTT server used in this project, displaying **Normal / Azure IoT Hub / Sparkplug / Google Cloud IoT Core**.

State: It displays **Stopped/Disconnected/Connected**



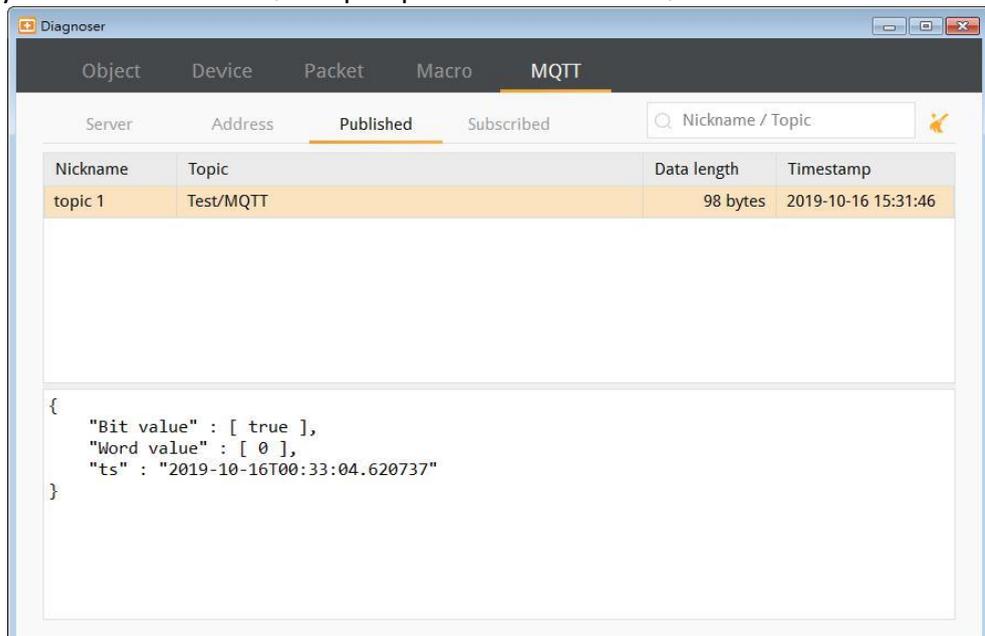
[MQTT] tab » Address

The MQTT topics published and subscribed by the HMI are displayed in this page. You can select the checkbox of a topic to monitor its content (JSON or RAW format) in **Published** page or **Subscribed** page.



[MQTT] tab » Published

This page displays the content of MQTT topics published to the MQTT server.



[MQTT] tab » Subscribed

This page displays the content of MQTT topics subscribed from the MQTT server.

Diagnoser

Object Device Packet Macro MQTT

Server Address Published Subscribed

Nickname / Topic

Nickname	Topic	Data length	Timestamp
sub	Test/MQTT	98 bytes	2019-10-16 15:31:46

```
{
  "Bit value" : [ true ],
  "Word value" : [ 0 ],
  "ts" : "2019-10-16T00:33:04.620737"
}
```

Appendix A- FTP Server

FTP (File Transfer Protocol) Server in cMT HMIs allows users to access data log files, event log files, operation log files, Recipe files (**RW**, **RW_A**), Recipe database files stored in the HMI internal flash memory or on an USB drive, as well as SD card.

How to log in the FTP server

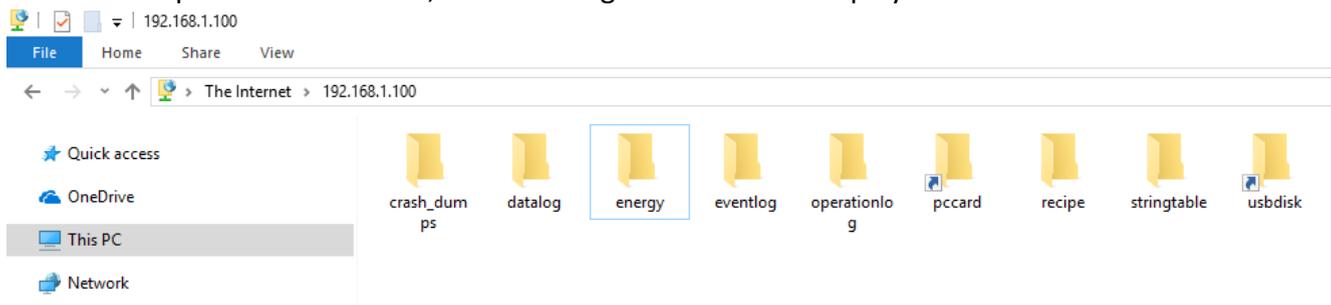
1. Find the IP address of the HMI. The IP address can be found on the cMT HMI or via cMT-Viewer. Make sure the PC and the HMI are on the same subnet.

2. On the PC, open the file explorer and enter the following address:
ftp://uploadhis: [FTP password]@[the IP Address of the HMI]

For instance, enter <ftp://uploadhis:111111@192.168.1.100> . 111111 is the default FTP password. 192.168.1.100 is the IP Address of the HMI.

3. Press “Enter” on your keyboard.

4. When the password is correct, the following folders will be displayed as shown.



- Steps to backup data log files
 1. Click “datalog” folder to view the files.
 2. Copy and paste the files to the PC.
- Steps to backup event log files
 1. Click “eventlog” folder to view the files.
 2. Copy and paste the files to the PC.

Reference Link:

Weintek Labs website: <http://www.weintek.com>

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