

5. System Parameter Settings

This chapter introduces the system parameter settings.

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5.1. Overview

Launch EasyBuilder Pro, in the main menu select [Home] » [System Parameters] to open the [System Parameter Settings] dialog box. System Parameter Settings are divided into several tabs, these tabs will be introduced respectively in this chapter.

5.2. Device

Parameters in this tab determine the attributes of each device connected with HMI. The device can be a Local / Remote HMI / PLC. A default device "Local HMI" exists when creating a new project. This device is the HMI that will be updated and programmed.

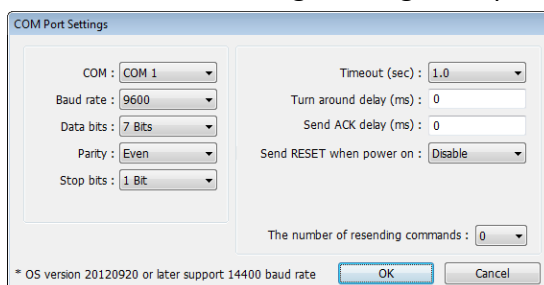
5.2.1. How to Control a Local PLC



“Local Device” is a device connected to the local HMI. To control/connect a Local Device, add this type of device first. Click [System Parameters] » [New] to open [Device Properties] dialog box. For example, when connecting MODBUS RTU as a Local Device:

The screenshot shows the 'Device Properties' dialog box for a 'MODBUS RTU' device. The 'Name' field is set to 'MODBUS RTU'. The 'Location' is set to 'Local'. The 'Device type' is 'MODBUS RTU, RTU over TCP'. The 'PLC ID' is '4, V.3.30, MODBUS_RTU.e30'. The 'I/F' is 'RS-485 2W'. The 'COM' is 'COM1 (9600,E,8,1)'. The 'Device default station no.' is '1'. The 'Interval of block pack (words)' is '5'. The 'Max. read-command size (words)' is '120'. The 'Max. write-command size (words)' is '120'. The 'Address Range Limit...' and 'Data Conversion...' buttons are visible. The 'OK' and 'Cancel' buttons are at the bottom.

Setting	Description
Name	The name of the device.
HMI / Device	In this example a device is used, so select [Device].
Location	Select [Local] or [Remote]. In this example the device is connected to the Local HMI, so select [Local].
Device type	Select the type of the device.
I/F	<p>The available interface: [RS-232], [RS-485 2W], [RS-485 4W], [Ethernet], [USB], and [CAN Bus].</p> <ul style="list-style-type: none"> ● If the interface used is [RS-232], [RS-485 2W], or [RS-485 4W], configure communication parameters by clicking [Device Properties] » [Settings] and then [Com Port Settings] dialog box opens.



Timeout

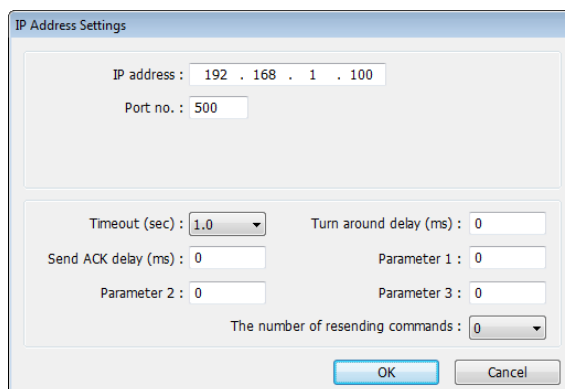
If the communication has been disconnected for more than preset time limit configured in [Timeout] (in sec), Window No. 5 will pop up and show “Device No Response” message.

Turn around delay

While sending the next command to the device, HMI will delay the sending according to the time interval set in [Turn around delay]. This may influence the efficiency of the communication between HMI and the device. Default value is “0”.

Note: If the device used is SIEMENS S7-200 Series, it is recommended to assign “5” to [Turn around delay] and “30” to [Send ACK delay].

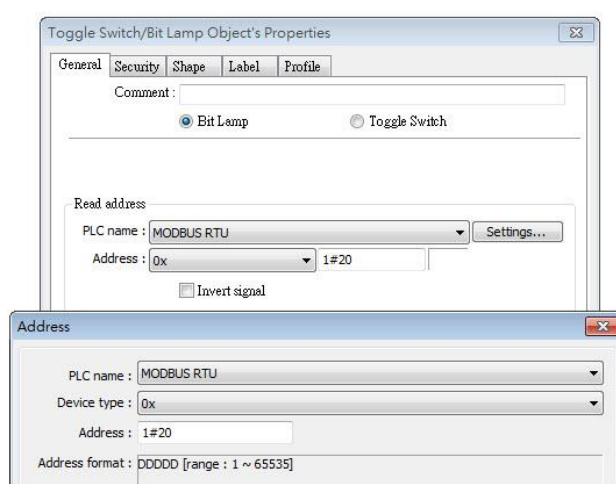
- If the interface used is [Ethernet], click [Device Properties] » [Settings] and the [IP Address Settings] dialog box opens. Please set correct device IP address and port number.



- If the interface is [USB], no further setting is required. Please check the settings in [Device Properties].
- If the interface is [CAN (Controller Area Network) Bus], please see “Device Connection Guide” for “CANopen” and import the .eds device file.

Device default station no.

Set the default station number for device address if the device station number is not included in the address. Device station no. can be set in its address. The address format: ABC#Addr
ABC stands for device station number and ranges from 0 to 255. Addr stands for device address. And the “#” sign separates the station number and the address. As shown in the following figure, the data is read from device station number 1, and address 0x-20.



Default station no. use station no. variable

Use the station number variables as the default device station number. Select one from LW-10000 to LW-10015 (var0 to var15) as the station number variables. If the


station no. is not specified in device address, the station number will be determined by the station no. variable.
For example, if var3 is set for default station no:

The followings demonstrate some examples:

- The device station number is “5”.

- The device station number is determined by var7 (LW-10007)

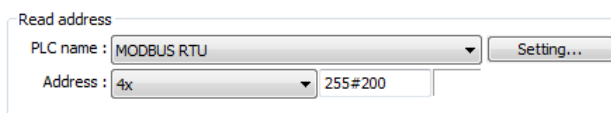
- Device address is set to “111”, since device station no. is not specified, and the default station no. is var3, the device station no. is determined by var3 (LW-10003).

 Click the icon to download the demo project. Please confirm your internet connection before downloading the demo project.

Use broadcast command

When [Use broadcast command] check box is selected, please fill in [Broadcast station no.] according to the broadcast station number defined by the device. When HMI sends a broadcast command to the station number set here, the device will only receive the command and not reply to HMI.

As shown in the following figure:



Read address

PLC name : MODBUS RTU [Setting...]

Address : 4x 255#200

When HMI sends a command to address 255#200, all the devices will receive this command and will not reply. Only devices that support broadcast command can use this feature.

Interval of block pack (words)

If the interval between read addresses of different commands is less than this value, the commands can be combined to one. The combining function is disabled if this value is set to "0".

For example, the interval value is set to "5", to read 1 word from LW-3 and 2 words from LW-6 respectively (read from LW-6 to LW-7), since the interval of addresses between LW-3 and LW-6 is less than 5, these two commands can be combined to one. The result is to read 5 consecutive words from LW-3 to LW-7.

Note: The maximum size of command combination data must be less than [Max. read-command size].

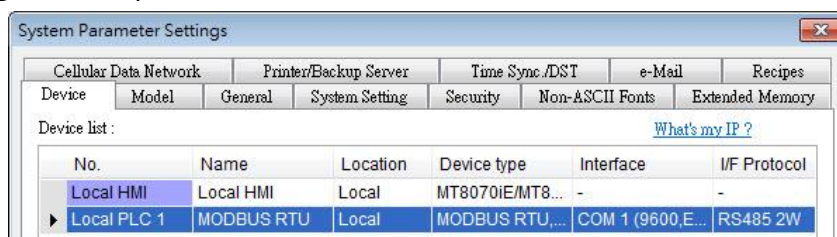
Max. read - command size (words)

The maximum data size to read from the device at one time. Unit: word

Max. write - command size (words)

The maximum data size to write to the device at one time. Unit: word.

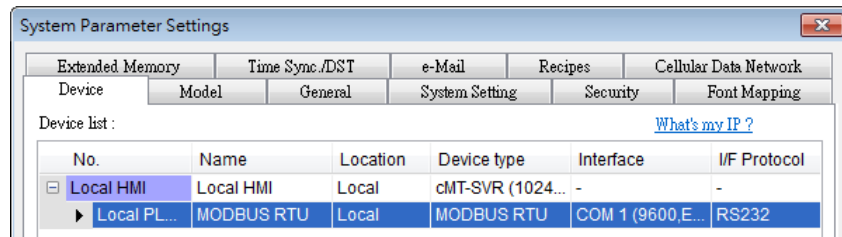
After all settings are completed, a new device named "Local PLC 1" is added to the [Device list].




System Parameter Settings						
Cellular Data Network		Printer/Backup Server		Time Sync./DST	e-Mail	Recipes
Device	Model	General	System Setting	Security	Non-ASCII Fonts	Extended Memory
Device list : What's my IP ?						
No.	Name	Location	Device type	Interface	I/F Protocol	
Local HMI	Local HMI	Local	MT8070IE/MT8...	-	-	
Local PLC 1	MODBUS RTU	Local	MODBUS RTU,...	COM 1 (9600,E...	RS485 2W	

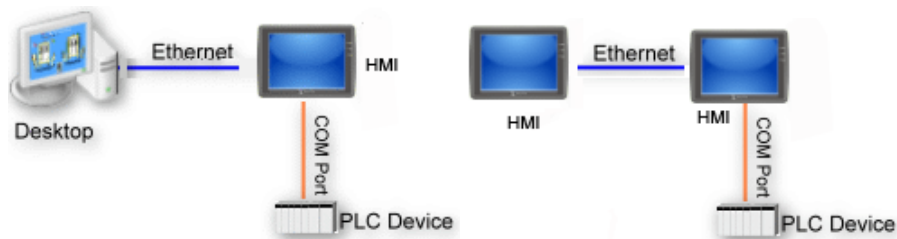
Note

- When using cMT, select "Local HMI" in [System Parameter Settings] dialog box and then click [New Device] to add a "Local PLC 1" under "Local HMI".



 Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.

5.2.2. How to Control a Remote Device



“Remote Device” is a device being connected to a remote HMI. To control a remote device, add this type of device first. Please click [System Parameters] » [New] to open [Device Properties] dialog box. For example, use MODBUS RTU as the Remote Device:

Name : MODBUS RTU

☐ HMI ☒ Device

Location : Remote Settings... IP : 0.0.0.0 (Port = 8000)

* Select Local for a device connected to this HMI, or Remote for a device connected through another HMI.

Device type : MODBUS RTU, RTU over TCP

PLC ID : 4, V.3.30, MODBUS_RTU.e30

I/F : RS-485 2W Open Device Connection Guide...

COM : COM1 Settings...

Device default station no. : 1

☐ Default station no. use station no. variable

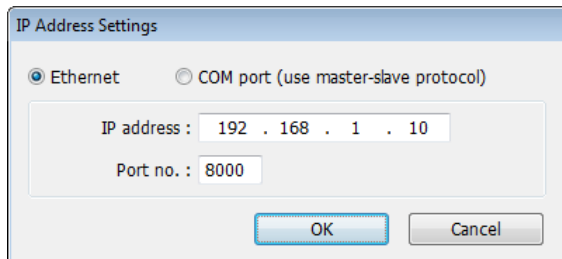
[How to designate the station no. in object's address?...](#)

Interval of block pack (words) : 5

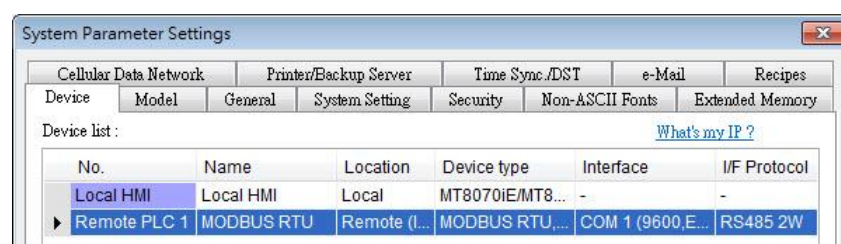
Max. read-command size (words) : 120

Max. write-command size (words) : 120

OK Cancel

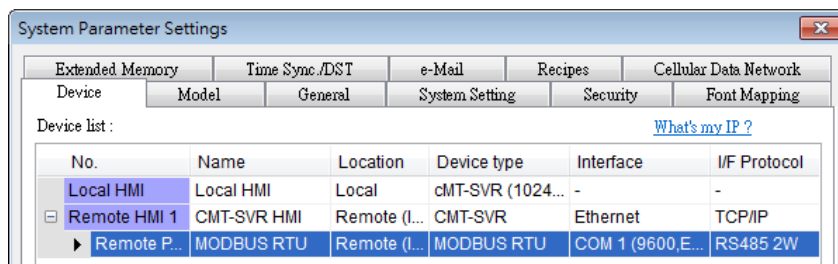
Setting	Description
HMI or Device	In this example, a device is used, so select [Device].
Location	Select [Local] or [Remote]. In this example the device is connected to Remote HMI, so select [Remote]. Set the IP address and port number of the Remote HMI by clicking [Settings] next to [Remote].
 <p>The IP Address Settings dialog box shows the 'Ethernet' radio button selected. The IP address is set to 192 . 168 . 1 . 10 and the Port no. is set to 8000. There are OK and Cancel buttons at the bottom.</p>	
Device Type	Select the type of the device.
I/F	The interface used for Remote Device. If the remote device uses a COM port, select [RS-232], [RS-485 2W], or [RS485 4W].
COM	Set the correct COM port used by the Remote Device.
Device default station no.	Set the station number of Remote Device.


After all settings are completed, a new device named “Remote PLC 1” is added to the [Device list].



Note

- When using a cMT Series model, select the defined “Remote HMI 1” in [System Parameters] dialog box and then click [New Device] to add a “Remote PLC 1” under “Remote HMI 1”.

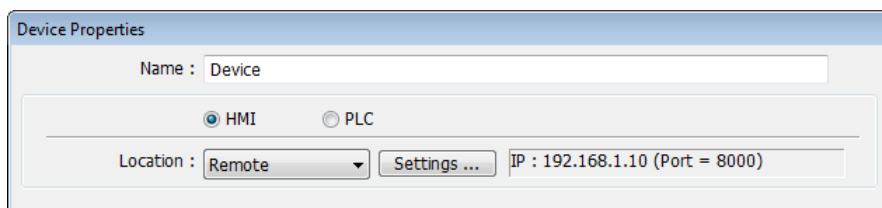


 Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.

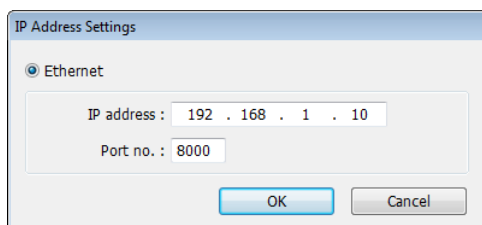
5.2.3. How to Control a Remote HMI



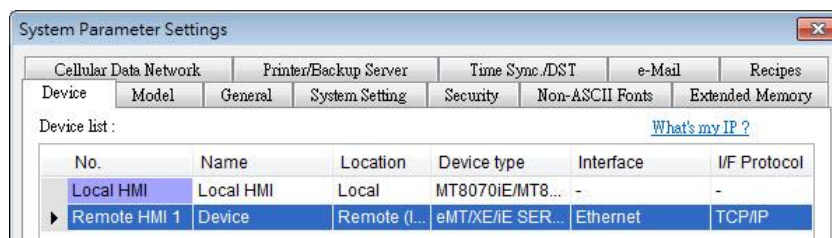
“Remote HMI” is the HMI other than “Local HMI”, and PC is also a “Remote HMI”. To control a Remote HMI, add this type of device first. Click [System Parameters] » [New] to open [Device Properties] dialog box as shown in the following figure:



Setting	Description
HMI or Device	In this example, the device used is a HMI, so select [HMI].
Location	Select [Local] or [Remote]. In this example Remote HMI is used, select [Remote]. Set the IP address and port number of the Remote HMI by clicking [Device Properties] » [Location] » [Settings].

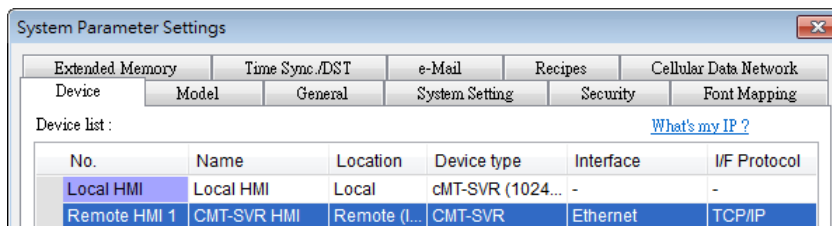


After all settings are completed, a new device named “Remote HMI 1” is added to the [Device list].



Note

- When using a cMT Series model, in [Device list] click [New HMI] to add a "Remote HMI 1".



- ▶ Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.

5.3. Model

Configure the [HMI model], [Timer], [Printer] and [Scroll bar] settings, and more.

eMT、iE、XE、mTV Series

System Parameter Settings

Cellular Data Network | Printer/Backup Server | Time Sync./DST | e-Mail | Recipes

Device | Model | General | System Setting | Security | Non-ASCII Fonts | Extended Memory

HMI model: MT8092XE (1024 x 768) Landscape

HMI station no.: 0

Port no.: 8000

☒ Support cMT communication protocol

Port no.: 8010

Timer

Clock source: External device

PLC: Local HMI Settings...

Address: LW 0 16-bit Unsigned

Printer

Type: SP-M, D, E, F

COM: COM 1 (RS-232)

Baud rate: 19200

Parity: None Data bits: 8 Bits Stop bits: 1 Bit

Pixels of width: 297 pixel(s) Screen hard copy scale: 100%

* 100 pixels (for 1610 type) or 220 pixels (for 2407, 4004 type)

Scroll bar

Default Style

Width

☒ Small ☐ Middle ☐ Large

Pass through (Virtual COM port)

Port no.: 2000 (2000~2100) ☐ Enable RSLinx broadcast response

OK Cancel Help

cMT Series

System Parameter Settings

Extended Memory | Cellular Data Network | Time Sync./DST | e-Mail | Recipes | Font Mapping

Device | Model | General | System Setting | Security | Non-ASCII Fonts

HMI model: cMT3090 (1024 x 768) Landscape

HMI station no.: 0

Port no.: 8000

☒ Support iE/XE/eMT/mTV HMI communication protocol and EasyWatch

Port no.: 8010 (used as MODBUS server's port no.)

Printer

Type: HP LaserJet cm1412fn Status/Control...

Paper Size: A4

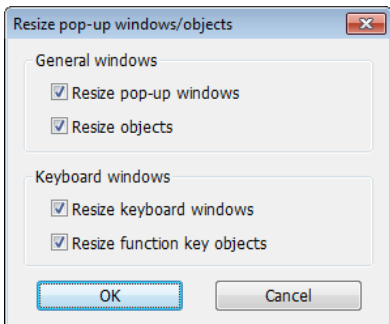
Interface

☐ Ethernet ☒ USB

Pass through (Virtual COM port)

Port no.: 2000 (2000~2100) ☐ Enable RSLinx broadcast response

OK Cancel Help

Setting	Description																
HMI model	<p>Select an HMI model.</p> <p>The [Resize pop-up windows / objects] dialog box will pop up when changing to a model with a different resolution. Select required adjustment and click [OK]. In most cases, select all options.</p> <div></div> <p>Landscape/Portrait</p> <p>Change the orientation of the project.</p>																
HMI station no.	Set the station number of current HMI. The default value is “0”.																
Port no.	Set the port number of current HMI. The default value is “8000”.																
Support cMT communication protocol	Supports communication with cMT Series models. cMT Series project file should use the same communication port.																
Timer	<p>Clock source</p> <p>Set the source device of the clock/time information. It is used by [Data Sampling], [Event Log], etc.</p> <ul style="list-style-type: none">● If [HMI RTC] is selected, the time information comes from the internal clock of the HMI.● If [External device] is selected, the time information comes from an external device. The address of the source device must set correctly. As shown below, the time information is from “TV” address type of the “Local PLC”. The addresses of “TV” start from 0 and contain 6 consecutive words and each of them store the following information: <table><tr><td>TV</td><td>0</td><td>→</td><td>Second (range: 0~59)</td></tr><tr><td>TV</td><td>1</td><td>→</td><td>Minute (range: 0~59)</td></tr><tr><td>TV</td><td>2</td><td>→</td><td>Hour (range: 0~23)</td></tr><tr><td>TV</td><td>3</td><td>→</td><td>Day (range: 1~31)</td></tr></table>	TV	0	→	Second (range: 0~59)	TV	1	→	Minute (range: 0~59)	TV	2	→	Hour (range: 0~23)	TV	3	→	Day (range: 1~31)
TV	0	→	Second (range: 0~59)														
TV	1	→	Minute (range: 0~59)														
TV	2	→	Hour (range: 0~23)														
TV	3	→	Day (range: 1~31)														

TV 4 → Month (range: 1~12)
 TV 5 → Year (range: 1970~2037)

Printer (eMT, iE, XE, mTV)

Type

A printer can be connected with the HMI. The HP PCL Series printer is connected through USB interface while other printers through a COM port.



For more information, see “23 HMI Supported Printers”.

If the printer is connected through [COM], configure the parameters correctly. If the printer type is [SP-M, D, E, F], the [pixels of width] has to be set accurately, i.e. the set pixel(s) cannot exceed printer's default setting, or the HMI will fail to print data.

Printer (cMT Series)

The printer driver can be installed on HMI.

Type

Select printer type.

Status address

Shows printer status.

LW-n	Status
0	Printer driver is not installed yet.
1	Installing printer driver.
2	Printer is ready.
3	Printer is printing.
4	Print job is canceled.
LW-n+1	Error
0	None
1	Printer is not found.
2	Unknown error.

Control address

Updates printer connection parameters.

LW-n	Command
0	None
1	Update connection parameters.
2	Restart printer driver.
LW-n+1	I/O
0	Ethernet
1	USB
LW-n+2	IP address (Total: 4 words)
LW-n+6	Port (Default port number: 9100)

Please note that using only the ppd file for a printer may not be able to run the printer since the corresponding driver is absent. Using tested models is recommended.

Scroll bar	Set the width of Scroll Bar, when the size of the object is too small to display the contents, a scroll bar is displayed in the object. This feature can be applied to objects that allow scrolling, such as Alarm Display, Event Display, History Data Display, and Option List.
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Pass through (Virtual COM port)	Set the port number for Pass-through communication.
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5.4. General

Configure the properties related to screen display.

eMT, iE, XE, mTV Series

System Parameter Settings

Cellular Data Network | Printer/Backup Server | Time Sync /DST | e-Mail | Recipes

Device | Model | General | System Setting | Security | Non-ASCII Fonts | Extended Memory

Options

☐ Enable fast display mode when change window ☒ RW_A enabled

Windows

Startup window no.: 10. WINDOW_010

Common window: Above base window Object layout: Nature

Screen saver

Back light saver: 30 minute(s)

☒ Enable back light when alarm occurs

Screen saver: 25 minute(s)

Saver window no.: 80. Screen Saver

Fast selection button

Attribute: Enable Settings...

Position: Left ☐ Hide button when HMI starts

Event

☒ Use LW9450-9455 as time tags of event logs

Time tag format: BCD

Keyboard

50. Keypad 11 - Integer

51. Keypad 12 - Integer

52. Keypad 3 - Integer

53. Keypad 4 - Integer

54. Keypad 5 - Integer

Add... Delete

External keyboard layout (LW-9199)

☒ QWERTY (0) ☐ AZERTY (1)

Caret color: [Color Picker]

Select color: [Color Picker]

Project protection

☒ Enable Project key: 111111 (range: 0 ~ 4294901750)

* If this key is different from HMI key, the project won't be executed normally.

* Use LW9046-9047 to change HMI key. LB9046 indicates check result (key error when status is on).

OK Cancel Help

cMT Series

System Parameter Settings

Cellular Data Network | Time Sync /DST | e-Mail | Recipe Database

Device | Model | General | System | Remote | Security | Extended Memory

Options

☐ Enable fast display mode when change window ☒ RW_A enabled

☐ Trigger release actions anyway if touch moves out of the button

☐ Set value when leaving focus

Windows

Startup window no.: 10. WINDOW_010

Common window: Above base window

☐ Enable window layers (This can be used to organize/show/hide objects)

Screen saver

Back light saver: 30 minute(s)

☒ Enable back light when alarm occurs

Screen saver: 25 minute(s)

Saver window no.: 80. Screen Saver

Monitor mode

☐ Enable

* When enabled, cMT Viewer uses window no. 3 to display brief information about the machine, and macro settings of window no. 3 will be cleared.

Event

☐ Use LW9450-9455 as time tags of event logs

Keyboard

59. Keypad 10 - Integer(translucent)

66. ASCII Middle(translucent)

83. System Standard ASCII

86. System Standard NumPad

87. System Flat ASCII

Add... Delete

External keyboard layout (LW-9199)

☒ QWERTY (0) ☐ AZERTY (1)

Project protection

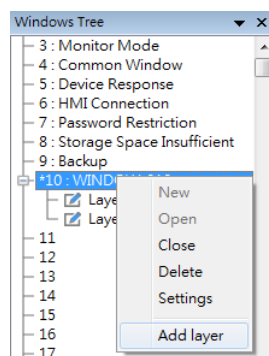
☐ Enable

OK Cancel Help

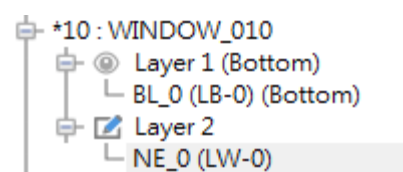
Setting	Description
Options	<p>Enable fast display mode when change window With this option selected, certain objects will cache the most recent value and display it after changing window, to achieve fast display. The objects are: Bit Lamp, Word Lamp, Numeric, ASCII, Bar Graph, Meter Display, Animation, and Moving Shape...etc.</p> <p>RW_A enabled Enable or disable recipe data RW_A. Enable this, the objects can then control RW_A .The size of RW_A is 64K.</p> <p>Trigger release action anyway if touch moves out of the button. (cMT Series) With this option selected, releasing the finger after touching the button and then sliding the finger out of the button area is still considered as button release; its release action(s) will be triggered.</p> <p>Set value when leaving focus With this option selected, values will be written upon leaving the input mode of an object (e.g. Numeric object), even if not by pressing the ENTER key. For example,data entry for the current numerical object is considered completed and value is written when one selects another object to enter value. An alert message shows when an invalid value is entered.</p>
Windows	<p>Startup window no. Designate the window shown when start up HMI.</p> <p>Common window The objects in the common window (Window No. 4) will be shown in each base window. This determines that the objects in common window are placed above or below the objects in the base window.</p> <p>Object layout If [Control] mode is selected, when operating HMI, [Animation] and [Moving Shape] objects will be displayed above other kinds of objects neglecting the sequence that the objects are created. If [Nature] mode is selected, the display will follow the sequence that the objects are created, the first created will be displayed first.</p> <p>Enable window layers (This can be used to organize/show/hide objects) With this option selected, layers within a window can be created in the window tree.</p>

At most 10 layers can be added to a window.

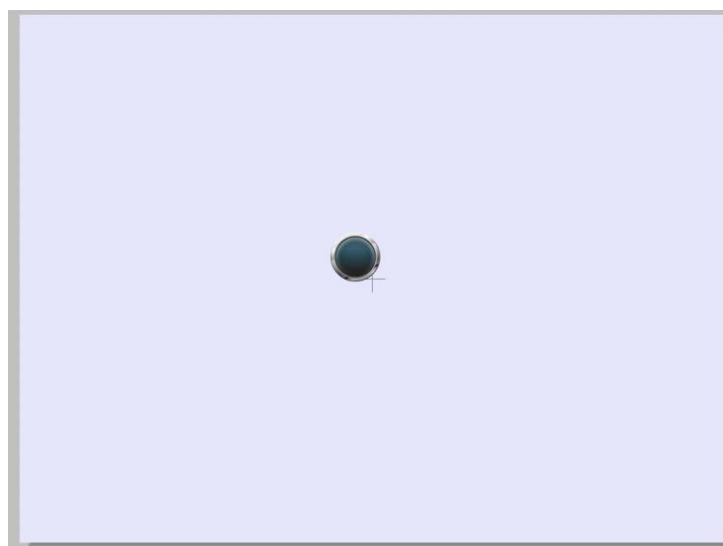
As shown in the following figure, right-click on a window number and then select [Add layer].



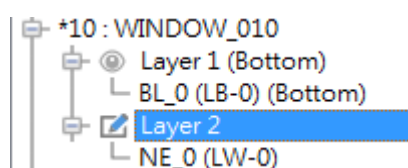
The following is an example of creating a layered window:
Place a Bit Lamp object in Layer 1 and a Numeric object in layer 2.

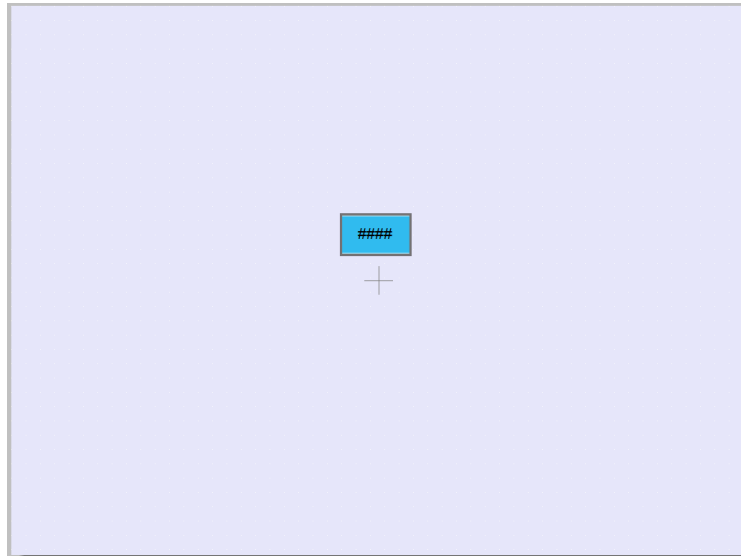


Selecting Layer 1 shows only the Bit Lamp object in the editing window.

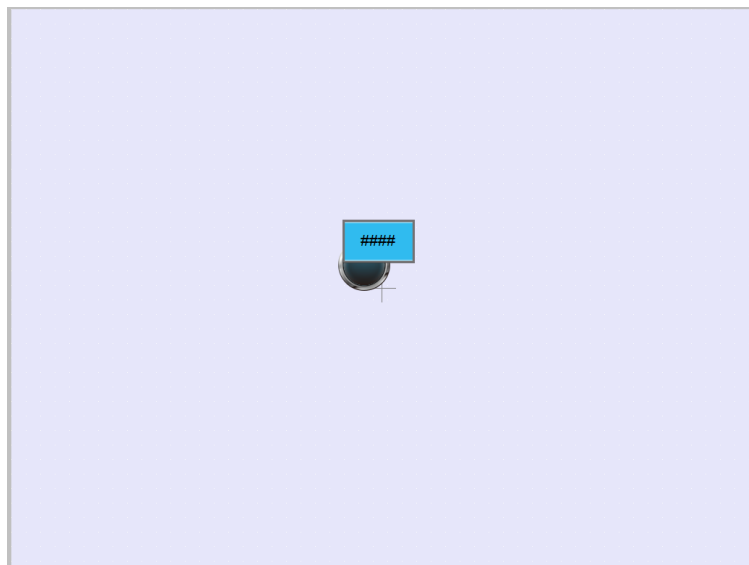
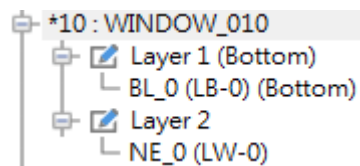


Selecting Layer 2 shows only the Numeric object in the editing window.





Selecting window 10 shows all objects.




Screen saver

Back light saver


If the screen is left untouched and reaches the time limit set here, the back light will be turned off. The unit is minute. Back light will be on again once the screen is touched. If [none] is set, the back light will always be on.

Screen saver

If the screen is left untouched and reaches the time limit set here. The current screen will automatically switch to a window assigned in [Saver window no.]. The setting unit is minute. If [none] is set, this feature is disabled.

	<p>Saver window no.</p> <p>To assign a window for screen saver.</p>
Fast selection buttons	<p>This setting is applicable for eMT, iE, XE, mTV, and iP Series. Setting the attributes for fast selection button for Window No. 3. To use the fast selection button, create Window No. 3 first.</p> <p>Attribute</p> <p>Enable or disable fast selection window. Select [Enable] and click [Settings] to set the attributes, including color and text of the button.</p> <p>Position</p> <p>Select the button position on the screen. If [Left] is chosen, the button will show at bottom left side of the screen; if [Right] is chosen, the button will show at the bottom right side of the screen.</p> <p>Settings</p> <p>Set the shape and label font of the Fast Selection Button.</p> <p>Hide button when HMI starts</p> <p>The Fast Selection Button will be hidden, calling it out requires system registers LB-9013~LB-9015.</p>
Monitor Mode	<p>This setting is applicable for cMT Series.</p> <p>Window no. 3 in the project is monitored in this mode in cMT Viewer. The user can select up to 50 cMT Series HMIs to monitor in cMT Viewer, and in 3x3 or 5x4 tile view.</p>
Event	<p>Use LW9450~9455 as time tags of event logs</p> <p>When this option is selected, Event Log will use the following time tags to show the time that the event is triggered.</p> <p>LW-9450: time tag of event log – second (range: 0~59)</p> <p>LW-9451: time tag of event log – minute (range: 0~59)</p> <p>LW-9452: time tag of event log – hour (range: 0~23)</p> <p>LW-9453: time tag of event log – day (range: 1~31)</p> <p>LW-9454: time tag of event log – month (range: 1~12)</p> <p>LW-9455: time tag of event log – year (range: 1970~2037)</p> <p>Please note that the system will not be able to use these time tags when one of them exceeds acceptable range.</p> <p> Click the icon to download the demo project. Please confirm your internet connection before downloading the demo project.</p>
Keyboard	<p>The window number in which the keyboard is placed.</p> <p>When using Numeric Input or ASCII Input objects, the type of keyboards can be selected. Up to 32 keyboards can be</p>

added. To design a keyboard, a window should be designated for creating it. Press [add] after creating, and add the window to the list.

 See “12 Keyboard Design and Usage”.

External keyboard layout

The available USB keyboard layouts are QWERTY and AZERTY. System register LW-9199 allows switching keyboard layouts on HMI.

Caret color / Select color

This setting is applicable for eMT, iE, XE, mTV, and iP Series. Set the color of caret that appears when entering data in Numeric Input and ASCII Input objects, or change the selection color.

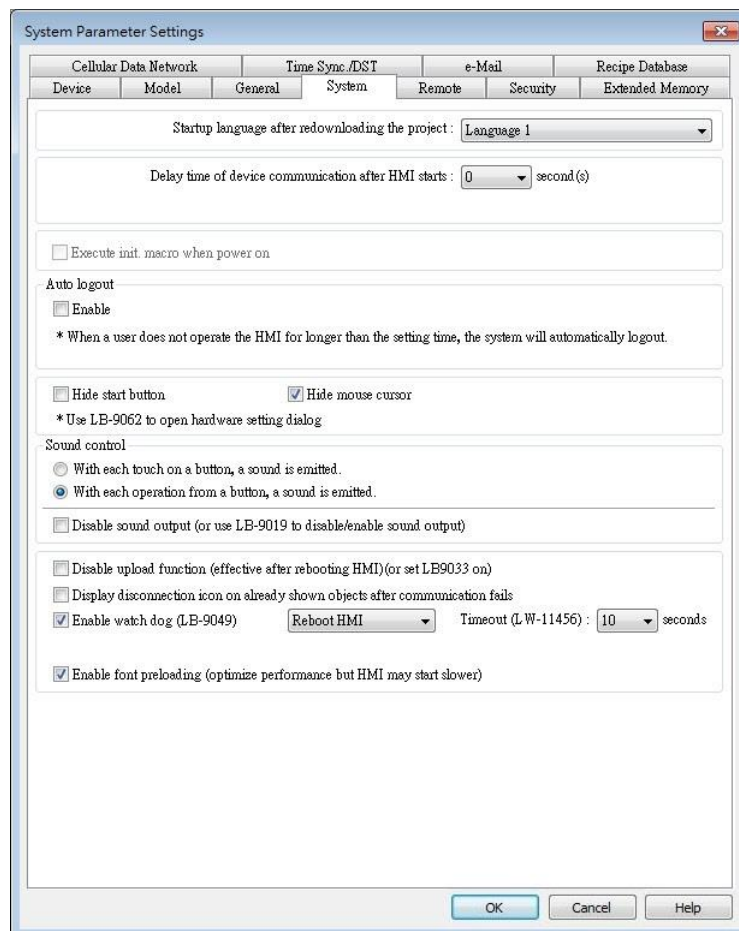
Project protection

Projects can be restricted to be executed by a specific HMI.

 See “30 Project Protection”.

5.5. System Setting

[System Setting] is used to configure different features of EasyBuilder Pro.



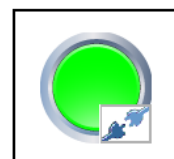
Some features are duplicated from system registers, such as, [Hide system setting bar (LB-9020)], [Hide mouse cursor (LB-9018)], [Disable buzzer (LB-9019)], and [Disable upload function (LB-9033)]. Users can also set these features via system tag.

To select a system tag, select [Address] » [System tag] check box when adding a new object and then select the [Address Type].

To browse all the system tags, Select [Project] » [Tag] » [System] from the main menu of EasyBuilder Pro.

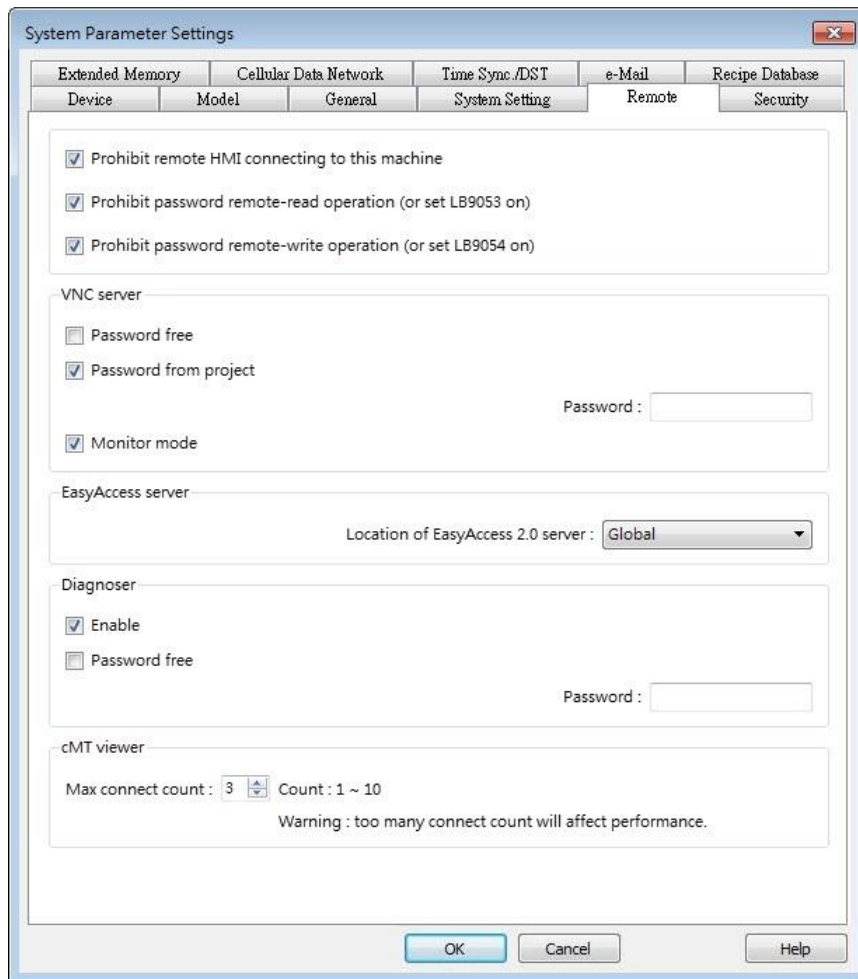
Setting	Description
Startup language after redownloading the project	Set the language to use when HMI starts after the project is re-downloaded.
Delay time of device communication after HMI starts	Certain PLC models need relatively longer startup time. In order to prevent communication error that occurs when HMI attempts to communicate with a PLC that has not yet started, a delay time can be set. Include delaying the execution of all init. Macros when HMI starts. With this option selected, the macros that have [Execute one time when HMI starts] enabled will also be delayed.
Execute init. MACRO when power on	Designate the macro to be executed when HMI power on.
Auto logout	If leaving HMI untouched for longer than the set time, the objects protected by security classes will not be able to operate. The user ID and password must be entered again to unlock it.
Hide system setting bar	Hide the system setting bar in the bottom right corner of the HMI screen.
Hide mouse cursor	Hide the mouse cursor in HMI screen.
Mouse cursor size	Set mouse cursor size.
Sound control	With each touch on a button, a sound is emitted: A sound is emitted when touching a button. With Each operation from a button, a sound is emitted: When the [Min. press time] is specified, there may be a time gap between touching the object and the action of the

	object. With this option selected, the sound is emitted when the object actions. Disable sound output: Mute HMI. (Not including the sound played when tapping system setting button on HMI.)
Disable upload function (effective after rebooting HMI) (or set LB9033 ON)	Disable HMI to upload project.
Use a disconnection icon or relative objects when device communication fails	<p>If selected, a disconnection icon is displayed on relevant objects when failing to communicate with the device.</p> <p>This icon will be shown in the lower right corner of the object.</p> <p>This icon will only show for disconnection after successful connection.</p>
Enable watch dog (LB-9049)	Watchdog automatically reboots the system after the HMI stops functioning for a specified period of time.
Enable font preloading (optimize performance but HMI may start slower)	<p>(cMT Series only)</p> <p>With this option selected, the speed of changing windows that contain more texts is optimized. Please note that using this feature may slow down HMI boot time.</p>




5.6. Remote

Parameters in this tab configure remote connections. Certain functions can be carried out using system registers.




Setting	Description
Prohibit remote HMI connecting to this machine	Prohibit the connection with a remote HMI. The remote HMI will not be able to control the local HMI.
Prohibit password remote-read operation (or set LB9053 ON)	Prohibit Remote HMI to read Local HMI's project password and user password.
Prohibit password remote-write operation (or set LB9054 ON)	Prohibit Remote HMI to write to Local HMI's project password and user password.
VNC Server	<p>If [Password free] check box is selected, the client can connect with HMI via VNC without entering the password.</p> <p>If [Monitor mode] check box is selected, the HMI connected via VNC can only be monitored but not controlled.</p>

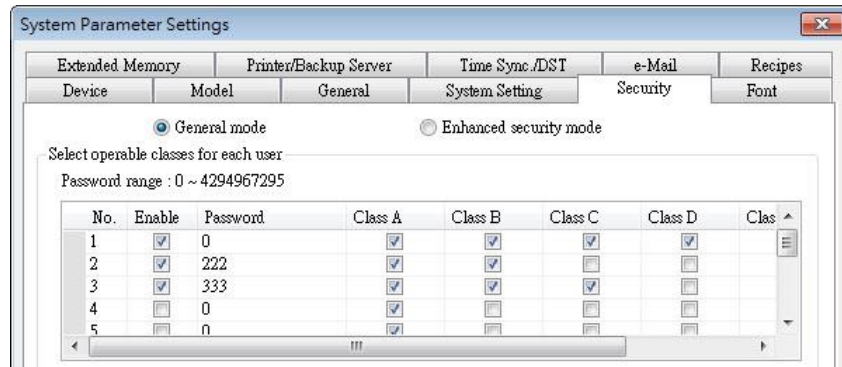
	If [Password from project] check box is selected, set the password for VNC login.
Easy Access server	<p>Login EasyAccess 1.0 server: Through this technology, users can easily access to any HMI connected to the internet and operate them on PC just like holding touch screen in hand. Easy Access does not transmit updated graphic images directly but only the real time data. This makes transmission really quick and efficient. Please refer to “EasyAccess Manual” for more information.</p> <p>Location of EasyAccess 2.0 server: Current location includes Global and China.  Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.</p>
Diagnoser	<p>Enable When selected, cMT Viewer will allow diagnostic operations when connecting to a cMT model. System register LB-12656 can also be used to control Diagnoser.</p> <p>Password free Enabling Disgnoser will not require password login. System Register LB-12657 can also be used to set whether a password is required.</p> <p>Password Enter the password for logging in Diagnoser. System register LW-11756 (4 words) can also be used to set this password.</p>
cMT Viewer	<p>Max connect count Allows specifying the allowable number of cMT Viewer connections for a local cMT HMI.</p>

5.7. Security

Parameters in this tab configure the user passwords and security classes. There are two authentication modes: General Mode and Enhanced Security Mode.

 For more information, see “10 Security”.

5.7.1. General Mode



Up to 12 sets of user and password are available. Password should be one non-negative integer. Once the password is entered, the objects that the user can operate are classified.

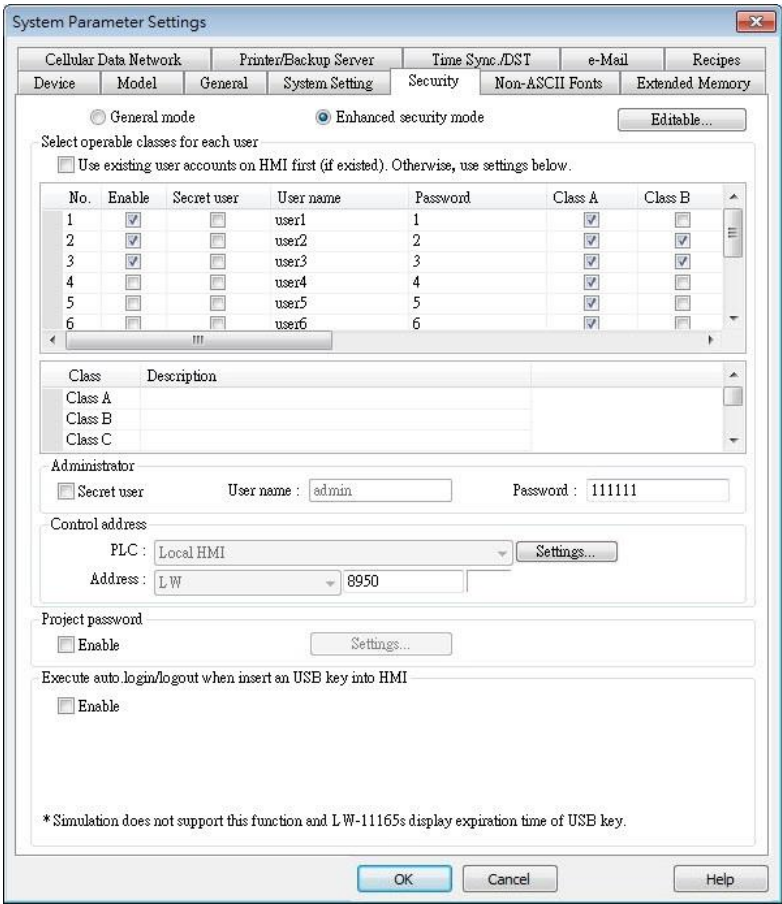
There are six security classes available: A to F.

If **[None]** is selected for an object, every user can access this object.

For example, when the security class of User No. 3 is set as the preceding figure, User No. 3 could only access objects of classes A, B, C and “none”.

5.7.2. Enhanced Security Mode

At most 11 users can be set here. An [Administrator] user is provided in this mode. An [Administrator] has all privileges and can operate all object classes. User passwords must be alphanumeric and each user can have up to 12 classes: A to L.



Setting	Description
Editable	Determines whether other users can change the password settings or see passwords.
	<div><div>Read-only Settings</div><div><div><input checked="" type="checkbox"/> Enable read-only</div><div>Password : 111111 (1 ~ 4294967295)</div><div><input checked="" type="checkbox"/> Mask password</div></div><div><div>OK</div><div>Cancel</div></div></div>
	<div><div>Enable read-only</div><div>Under this mode, the settings can be viewed but not changed.</div></div>
	<div><div>Mask password</div><div>Passwords are masked by asterisks (*).</div></div>
Select operable classes for each user	When [Use existing user accounts on HMI] check box is selected, the user accounts existing on HMI will not be erased after downloading the project file to HMI.
Administrator	Default administrator account, cannot be deleted, has all privileges, and cannot be changed. Enhanced Security Mode can be used with Option List object. It displays the account names and privileges. If [Secret

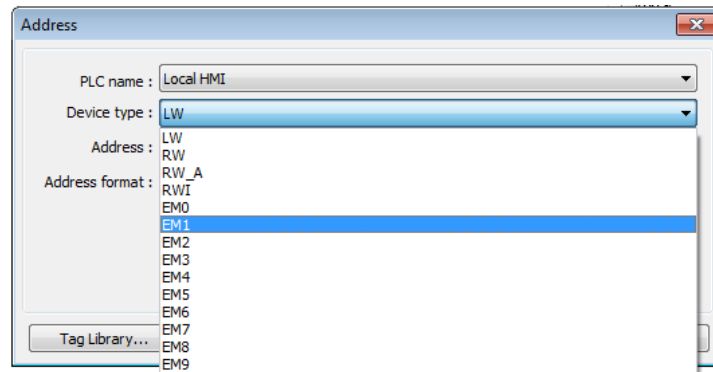
	user] is checked, the account names and privileges will be hidden in Option List.
Control address	An address for users to manage the accounts directly on HMI.
Project password	When this password is enabled, it has to be entered before editing the project file. Select [Enable] and then click [Settings] to set the password.
Execute auto. login/logout when insert an USB key into HMI	This feature allows automatic login / logout using an USB security key. The login / logout status will be written into a designated address. Insert the USB disk to HMI to log in, and remove the USB disk to log out. The result codes of login / logout: 0x00: No action, 0x01: Login succeeds, 0x04: Login fails, 0x08: Logout succeeds, 0x10: Logout fails.

5.8. Extended Memory

Parameters in this tab determine the location of the extended memory.

The screenshot shows the 'System Parameter Settings' dialog box with the 'Extended Memory' tab selected. The dialog has a title bar with 'System Parameter Settings' and a close button 'X'. Below the title bar are several tabs: 'Cellular Data Network', 'Time Sync./DST', 'e-Mail', 'Recipe Database', and 'Extended Memory'. The 'Extended Memory' tab is active, displaying a list of memory slots from EM0 to EM9. Each slot has a 'File name' field (e.g., 'em0', 'em1', etc.) and a radio button selection for 'USB disk'.

Extended Memory is numbered from EM0 to EM9. It works in a way similar to other device types (i.e. LW or RW address). Users can simply select from EM0 to EM9 in the [Device type] list while creating a new object. Maximum allowable data size for each Extended Memory is 2G words.



Data in the extended memory is saved as a file into [SD card] or [USB disk]. By default, the files in [EM0] to [EM9] are with the file names "em0.emi" to "em9.emi" respectively, although users are free to change the file names. To open these files and edit the data in the extended memory, RecipeEditor.exe may be used.

Data in the extended memory will not be erased when HMI power is cut, which means data in the extended memory remains the same as before power off when HMI is started again. This is a behavior similar to recipe data (RW, RW_A).

When the device used as extended memory does not exist, reading the data in the extended memory will get "0", and writing data to the extended memory will display "Device no response" message on HMI.

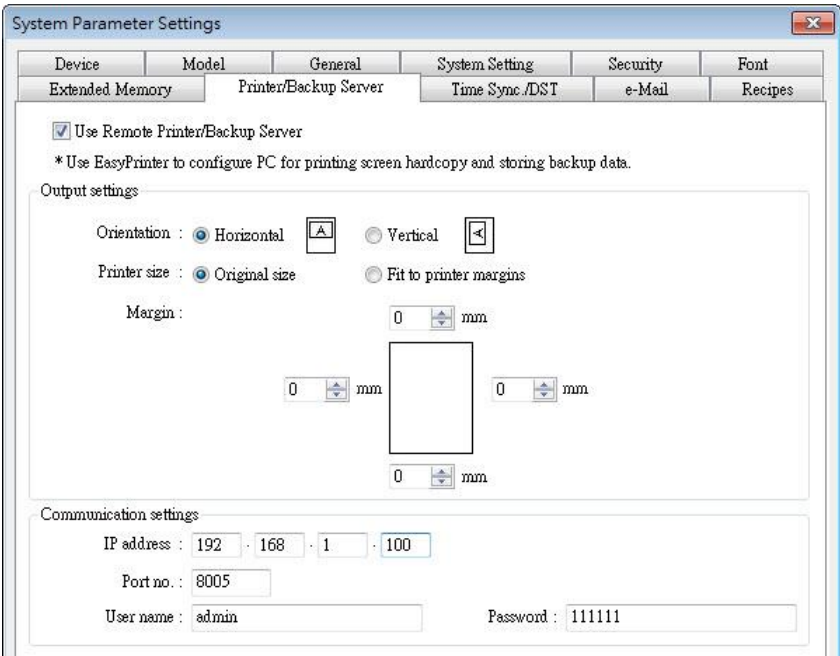
Cutting HMI power is not necessary for inserting or removing the external device to or from HMI, making it easy for users to immediately update or obtain data in the extended memory.



Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.

5.9. Printer / Backup Server

Configure remote printer / backup server.



Setting	Description
Output settings	Orientation Set how will words or pictures be printed out, [horizontal] or [vertical].
	Printer size Set to print out in [Original size] or to [Fit to printer margins].
	Margin Set the top, bottom, right and left margin width.
Communication settings	IP address Assign the IP address of the printer via network.
	[Port], [User name], [Password] Specify the data to log in server. Port can be set from 1 to 65535. Maximum length of user name or password is 12 characters.



For more information, see “26 EasyPrinter”.



Click the icon to download the demo project. Please confirm your internet connection before downloading the demo project.

5.10. Time Sync./DST

Synchronize HMI time with NTP server.

The screenshot shows the 'System Parameter Settings' dialog box with the 'Time Sync./DST' tab selected. The settings are as follows:

- HMI time zone:** (UTC+08:00)
- ☒ **Enable time synchronization via NTP (Network Time Protocol) server**
- ☒ **Execute time synchronization when HMI starts**
- ☐ **Server response time has been adjusted in accordance with DST**
- Server response time:** (UTC+00:00) GMT Standard Time
- Network time server 1:** 0.pool.ntp.org (e.g. www.nist.gov or 24.56.178.140)
- Network time server 2:** 1.pool.ntp.org
- Network time server 3:** 2.pool.ntp.org
- Network time server 4:** 3.pool.ntp.org
- Update interval (10 ~ 86400):** 1800 seconds
- ☒ **Automatically set daylight saving time (DST)**
- Start:** March, Second, Sunday, 02:00 上午
- End:** November, First, Sunday, 03:00 上午
- Daylight bias:** 01:00 (00:30 ~ 12:00)

Footnotes at the bottom of the dialog:


- * Use LW-11273 ~ 11294 to modify settings on HMI.
- * If failed to execute time synchronization, the status of LB-12055 is set to ON.
- * HMI enters into DST period when LB-12355 (read only) is ON.
- * Use LW-11260 ~ 11272 to modify settings on HMI.
- * DST is not supported in on-line simulation.

Setting	Description
HMI time zone	Select HMI time zone.
Enable time synchronization via NTP (Network Time Protocol) server	Execute time synchronization when HMI starts Automatically synchronizes HMI time with the designated NTP server when HMI starts.
Server response time	Select NTP server time zone.
Network time server	Provides four fields to fill in Network Time Servers for user's device. If the synchronization with server 1 fails, the system will try to synchronize with server 2, and so on. If HMI time cannot synchronize with any of the Network Time Servers, the system register LB-12055 will change to ON status.
Update interval	The frequency of synchronization, the range is from 10 to

	86400 seconds.
Automatically set daylight saving time (DST)	Start / End Set the start/end of Daylight Saving Time. The option [Last] may refer to the 5 th or 6 th week depending on the selected month. Daylight bias Set the time zone's offset during DST.

Note

- When DST ends, and the time falls back, the Trend Display object in Real-time mode will stop refreshing for the overlapping hour(s) when it just going back to standard time. However, historical data will not be affected.
- When DST ends, adjusting HMI time (manually or by network) back to the DST period will not be effective to the system. The system register LB-12355 stays OFF.
- When DST ends, and the time falls back, the system will not start DST for the overlapping hour(s). The system register LB-12355 stays OFF.
- Before DST starts, adjusting HMI time (manually or by network) into the DST period will start DST. The system register LB-12355 will be set ON. The HMI time will be the specified time without adding the offset.
- During DST, adjusting HMI time (manually or by network) to a time that is not within DST period will end DST. The system Register LB-12355 will be set OFF. The HMI time will be the specified time without subtracting the offset.
- This feature **does not yet support the DST in Southern Hemisphere**.

 For more information on system registers relevant to DST, see “22 System Registers”.


5.11. e-Mail

Select [Enable e-Mail function] check box to configure the parameters.

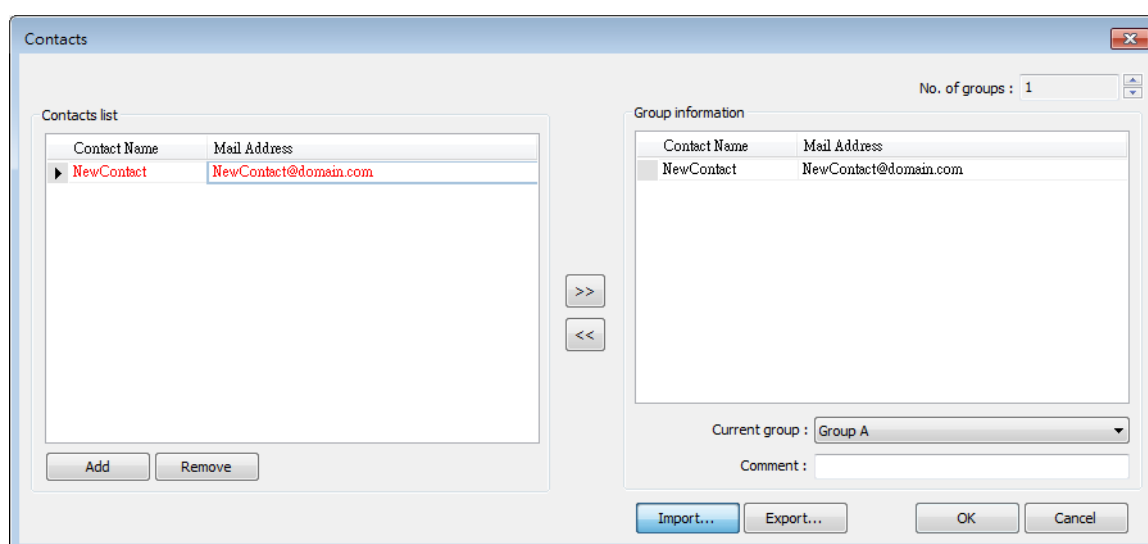
When [Use existing contact settings on HMI] check box is selected, the system will use the contact settings in HMI after downloading the project to HMI, or use the following settings when no contact is found in HMI.

The screenshot shows the 'System Parameter Settings' dialog box with the 'e-Mail' tab selected. The 'Enable e-Mail function' checkbox is checked. Below it, there is a note: 'Use existing contact settings on HMI first (if existed). Otherwise, use settings below.' The 'SMTP settings' section includes fields for 'Server', 'Port no.' (set to 0), 'User name', 'Password', and 'Confirm Password'. There are also checkboxes for 'SMTP server requires authentication' and 'Use the following type of encrypted connection' (set to TLS). The 'Sender information' section has a 'Name' dropdown (set to 'Customize') and a 'Mail address' field. The 'Error message' section has an 'Enable' checkbox checked, a 'Device' dropdown (set to 'Local HMI'), and an 'Address' dropdown (set to 'LW') with a 'Settings...' button. A note states: '* Failed step and error code are stored to LW-11444~11445'. The 'Error notification' section has a note: '* LB-12053 or LB-12054 is ON when failed to send an e-Mail' and a checkbox 'Turn OFF LB-12053 or LB-12054 before sending an e-Mail'. At the bottom, there are buttons for 'Recipient...', 'Test SMTP Settings...', 'OK', 'Cancel', and 'Help'.

Setting	Description
SMTP Settings	<p>Server: Set SMTP Server.</p> <p>Port: Set communication port.</p> <p>User name: Set e-mail address.</p> <p>Password: Set e-mail password.</p> <p>Confirm Password: Confirm e-mail password.</p> <p>SMTP server requires authentication: Decide whether Secure Password Authentication is needed when log in e-mail.</p> <p>Use the following type of encrypted connection: Decide whether the encrypted connection (TLS, SSL) is needed when sending e-mail.</p>
Sender Information	<p>Name: Enter the sender name or use the local HMI name in the device list, or the name specified using system register LW-10884 (HMI name).</p>

	Mail Address: Setting e-mail address.
Error message	When an error occurs in email delivery, the error message sent from SMTP server can be shown in the designated address.  For more information on system registers relevant to mail delivery, see "22 System Registers".
Error notification	Turn OFF LB-12053 or LB-12054 before send an e-Mail When enabled, system registers LB-12053 or LB-12054 will be turned off before sending e-mail, otherwise, when an error occurs in email delivery, the register remains ON.
Test SMTP Settings	Verify SMTP settings in advance by sending a test email to the specified e-mail address.

Click [Recipients] to open the following dialog to edit contacts:



Setting	Description
Contact list	Add or remove contacts from the list.
Group Information	Group up contacts. No. of groups: Set no. of contact groups, according to the number, the groups are named from A to P and up to 16 groups can be set. Current group: Displays the group that includes the contacts above. Comment: Enter a description for the current group.



For more information on sending Event Log, see “7 Event Log”.



For more information on e-mail related system registers, see “22.3.40 e-Mail”.



Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.



Click the icon to download the demo project. Please confirm your internet connection before downloading the demo project.

5.12. Cellular Data Network

This tab is for setting cellular data. Cellular data network settings may differ from one model to another.

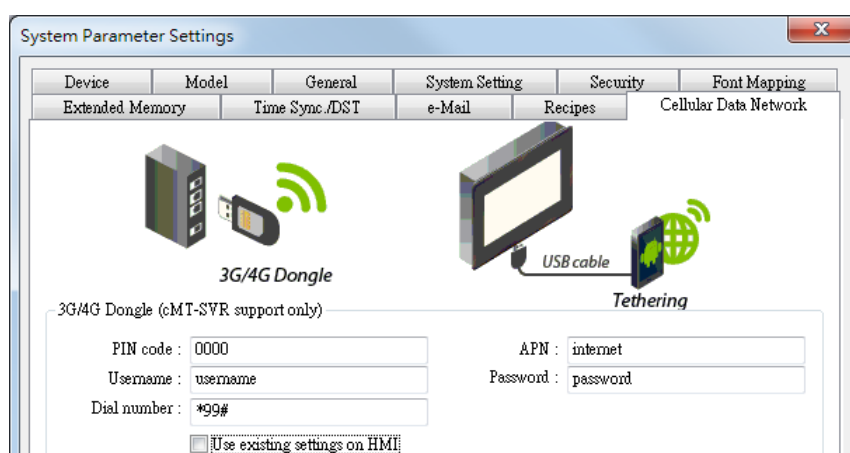
Applicable models:

cMT-SVR (OS ver. 20151127 or later)

cMT3072/cMT3090/cMT3103/cMT3151 (OS ver. 20180723 or later)

cMT-HDM/cMT-FHD (OS ver. 20190130 or later)

Attaching a 3G/4G USB dongle to the USB port enables the cMT-SVR to connect to 3G/4G networks.



Setting	Description
Use existing contact settings on HMI	If this check box is selected, the cellular data currently in HMI will be used. When no specific settings are required, generally, [PIN code] is “0000”, [APN] is “internet”, and [Username], [Password], [Dial number] are optional.

The relevant registers:

- LW-11297: (16 words) : PIN code of SIM card (cellular network)
- LW-11313: (16 words) : Access Point Name (cellular network)
- LW-11329: (16 words) : username (cellular network)

- LW-11345: (16 words) : password (cellular network)
- LW-11361: (16 words) : dial number (cellular network)
- LW-11377: (16bit) : stop (set 0)/start (set 1) connection (cellular network)
- LW-11378: (16bit) : last error code (0:success, 1:incorrect PIN code, 2:no SIM, 3:no device, 4:puk locked, 5:other) (cellular network)
- LW-11379: (16bit) : connection status (0:no device, 1:disconnect, 2:connecting, 3:connected) (cellular network)

USB Tethering

By connecting an Android® mobile phone with HMI using a micro USB cable, or any USB data cable that is compatible with the phone, the internet connection of the phone can be shared with HMI. On the Android mobile phone please enable USB Tethering.



When successfully connected, the following registers can be used to monitor and control the connection status.

- LW-11380: (16bit) : stop (set 0)/start (set 1) connection (USB tethering)
- LW-11381: (16bit) : connection status (0:no device, 1:disconnect, 2:connected, 3:fail, 4:OS not support, 5:HMI not support) (USB tethering)



Click the icon to download the demo project. Please confirm your internet connection before downloading the demo project.