5. System Parameter Settings

This chapter introduces the system parameter settings.

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.   Local HMI Configuration
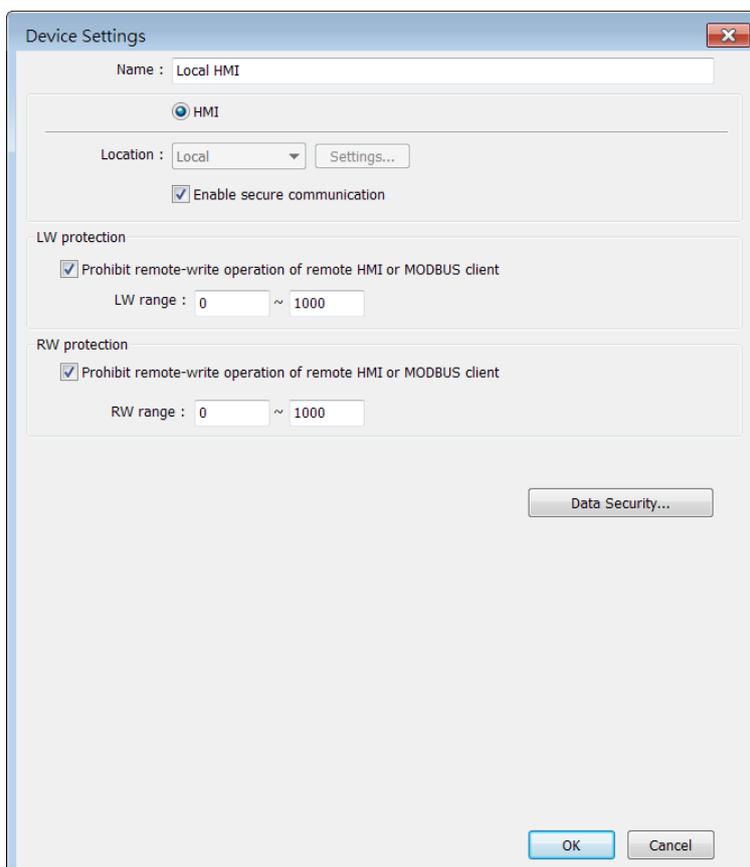
Setting	Description
Enable secure communication	With this option selected, the HMI encrypts the communication to ensure the security of data transmission. This feature is supported only on cMT X Series HMIs, and it can only communicate with other

devices that also support secure communication.

LW protection, **RW protection,** **Data Security**	For specific instructions on data protection settings, see "Chapter 39 Data Security" in this manual.

5.2.2. 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:
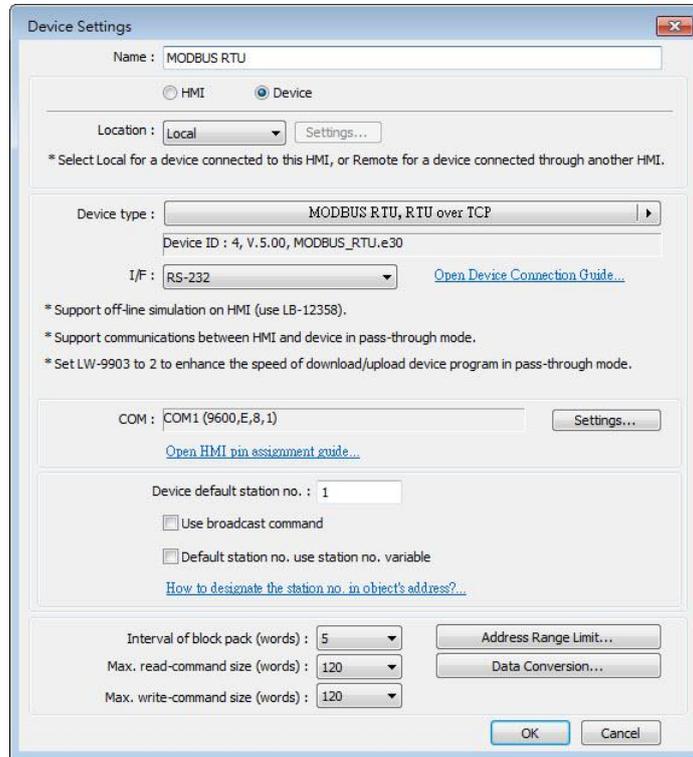
Setting	Description
Name	The name of the device.
HMI / Device	In this example a device is used, so select [Device].
Location	Select [Local] or [Remote]. In this example the device is connected to the Local HMI, so select [Local].
Device type	Select the type of the device.
I/F	The available interface: [RS-232], [RS-485 2W], [RS-485 4W], [Ethernet], [USB], and [CAN Bus]. ● 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.
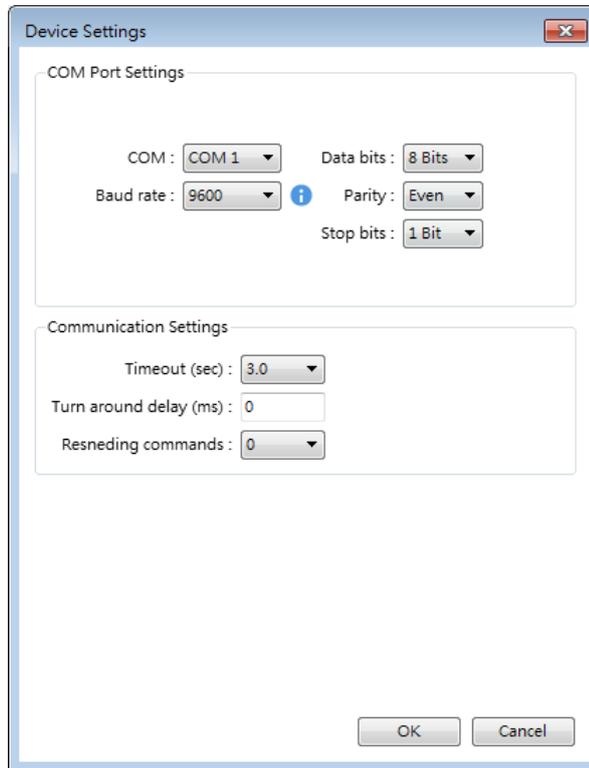
Timeout

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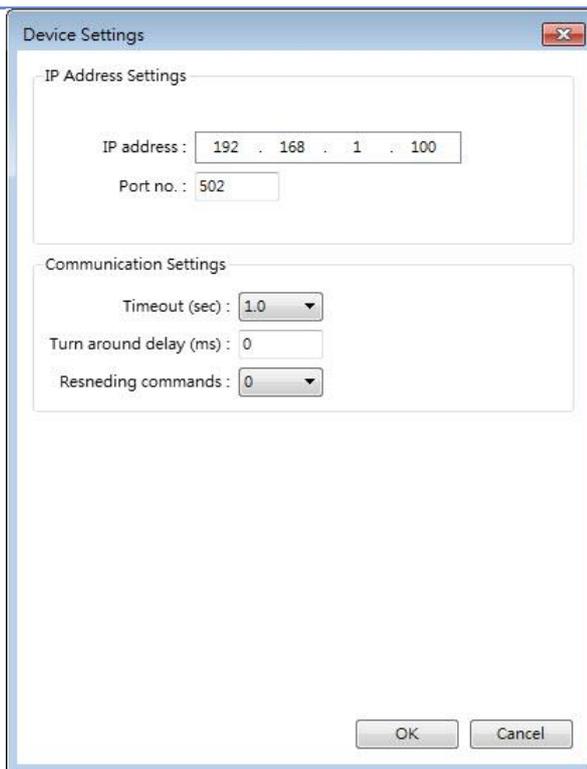
- If the interface is [USB], no further setting is required. Please check the settings in [Device Properties].
- If the interface is [CAN (Controller Area Network) Bus], please see "Device Connection Guide" for "CANopen" and import the .eds device file.

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.
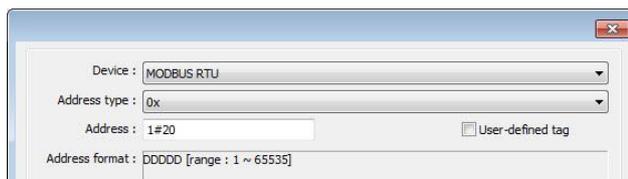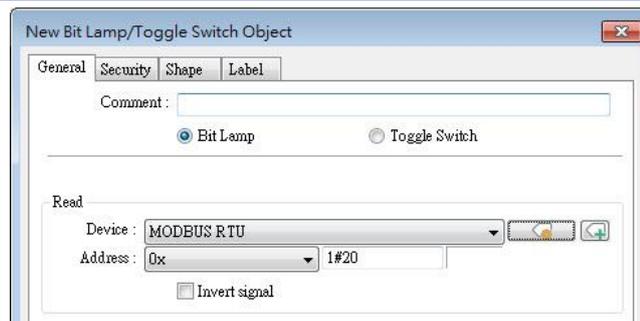
Default station no. use station no. variable	Use the station number variables as the default device station number. Select one from LW-10000 to LW-10015 (var0 to var15) as the station number variables. If the station no. is not specified in device address, the station number will be determined by the 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	When [Use broadcast command] check box is selected, please fill in [Broadcast station no.] according to the
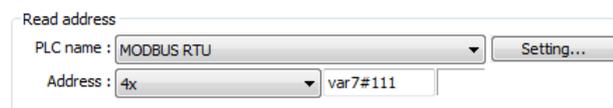
command	broadcast station number defined by the device. When HMI sends a broadcast command to the station number set here, the device will only receive the command and not reply to HMI.
	As shown in the following figure:
	When HMI sends a command to address 255#200, all the devices will receive this 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 Device 1" is added to the [Device list].
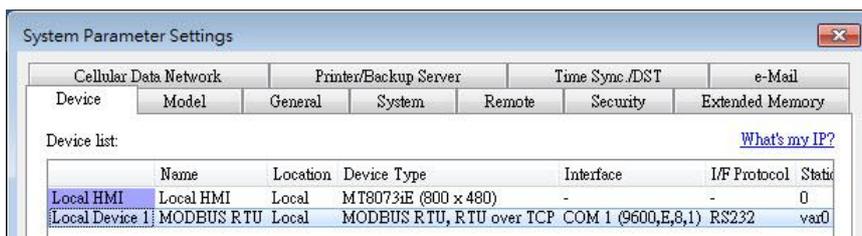
Note

- When using a cMT / cMT X Series model, select "Local HMI" in [System Parameter Settings] dialog box and then click [New Device] to add a "Local Device 1" under "Local HMI".
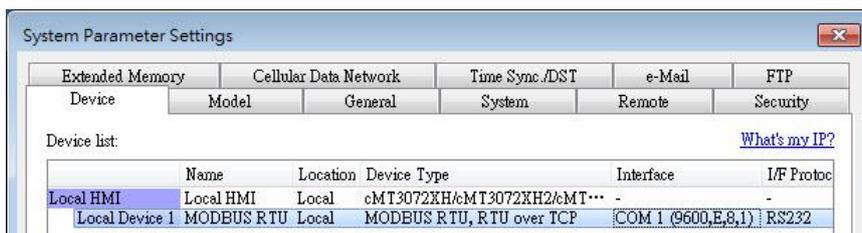
▶ Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.

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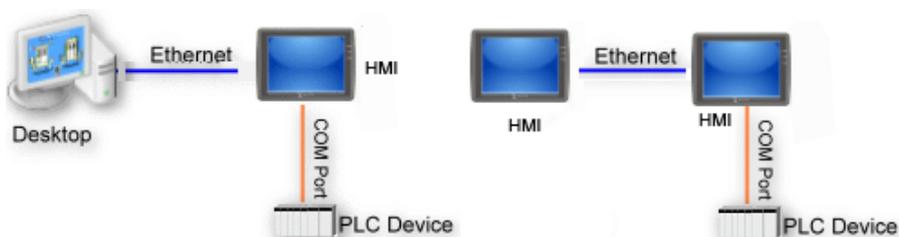
"Remote Device" is a device being connected to a remote HMI. To control a remote device, add this type of device first. Please click [System Parameters] » [New] to open [Device Properties] dialog box. For example, use MODBUS RTU as the Remote Device:

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].
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].
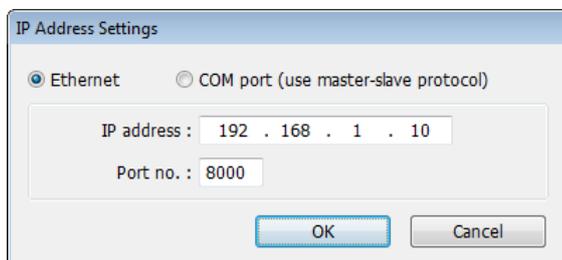
COM	Set the correct COM port used by the Remote Device.
Device default station no.	Set the station number of Remote Device.

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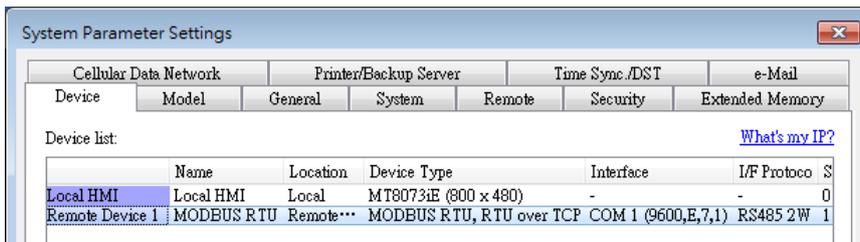
Note

■ When using a cMT / cMT X 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".
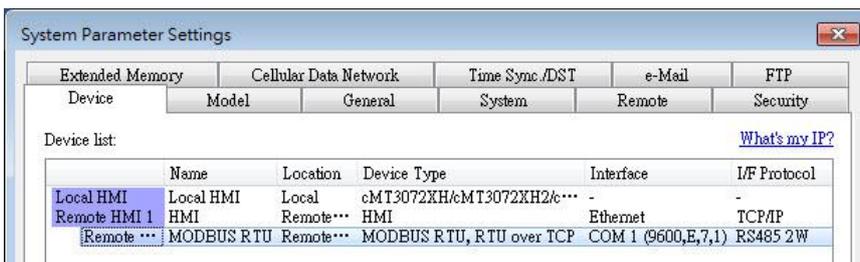
Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.

5.2.4.   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].
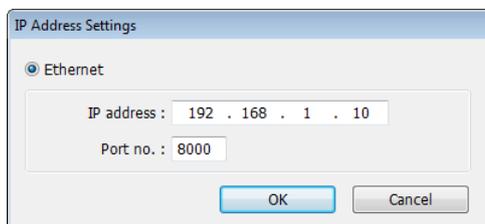
After all settings are completed, a new device named "Remote HMI 1" is added to the [Device list].
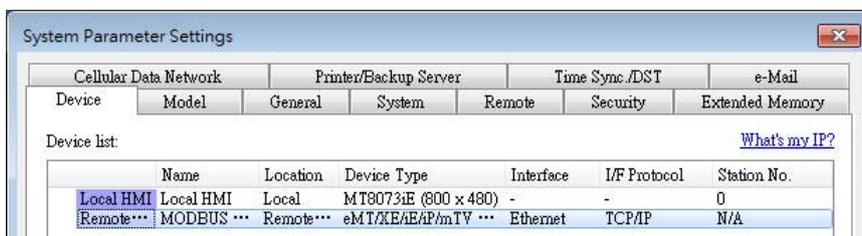
📝 Note

■ When using a cMT / cMT X Series model, in [Device list] click [New HMI] to add a "Remote HMI 1".
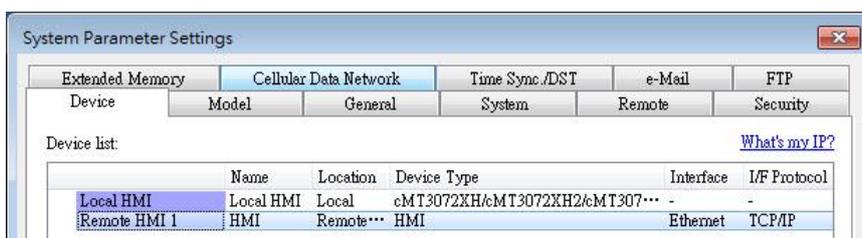
▶ Click the icon to watch the demonstration film. Please confirm your internet connection before playing the film.

5.3. Model

Configure the [HMI model], [Timer], [Printer] and [Scroll bar] settings, and more.
eMT, iE, XE, mTV Series

cMT, cMT X Series

Setting	Description
HMI model	Select an HMI model.
	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.
	Landscape/Portrait
	Change the orientation of the project.

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 / cMT X Series models. cMT / cMT X Series project file should use the same communication port.
Printer (eMT, iE, XE, mTV Series)	**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, cMT X 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.
Pass through (Virtual COM port)	Set the port number for Pass-through communication.

5.4. General

Configure the properties related to screen display.

eMT, iE, XE, mTV Series

cMT, cMT X Series

Setting	Description
Options	**Fast display mode**
	In this mode, selected objects will cache the most recently read data and display it quickly after window is changed, achieving a faster display speed.
	Controllable objects: Objects that allow variable input, such as Toggle Switch, Numeric Input.
	Uncontrollable objects: Objects that only display states, such as Bit Lamp, Word Lamp.
	The objects that support the fast display mode include: Bit Lamp, Word Lamp, ASCII, Numeric, Function Key, Option List, Direct / Indirect Window, Bar Graph, Meter Display, Animation, Moving / Rotating Shape, PDF Reader, Picture View, Energy Demand Display.
	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.
	Trigger release action anyway if touch moves out of the button. (cMT / cMT X 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.

Set value when leaving focus (cMT / cMT X Series)
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.

🖉**Note**

1. Values will not be retained after pressing the ESC key to leave.
2. When the system keyboard is used, values will be directly written after closing the keyboard.
3. With [Input order] enabled, the sequential input is performed after leaving the object by pressing the ENTER key. The sequential input will be stopped if another object is touched during the input process.

CSV delimiter (cMT / cMT X Series)
Save the CSV file generated from Backup or Import/Export with Comma (,) or Semicolon (;) delimiter.

Windows	**Startup window no.** Designate the window shown when start up HMI. **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. **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. **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.

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].
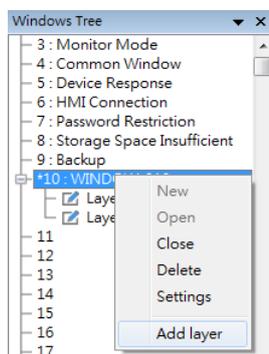
The following is an example of creating a layered window:

Place a Bit Lamp object in Layer 1 and a Numeric object in layer 2.
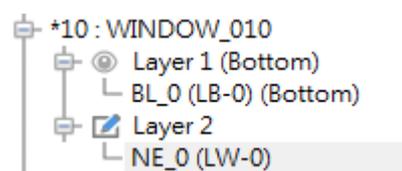
Selecting Layer 1 shows only the Bit Lamp object in the editing window.
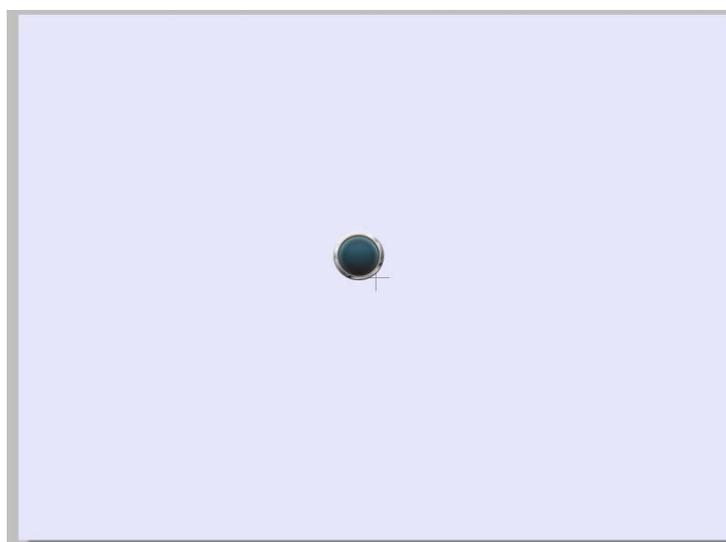
Selecting Layer 2 shows only the Numeric object in the editing window.
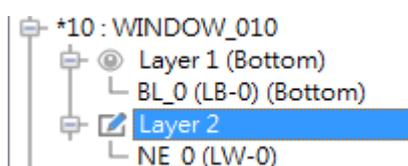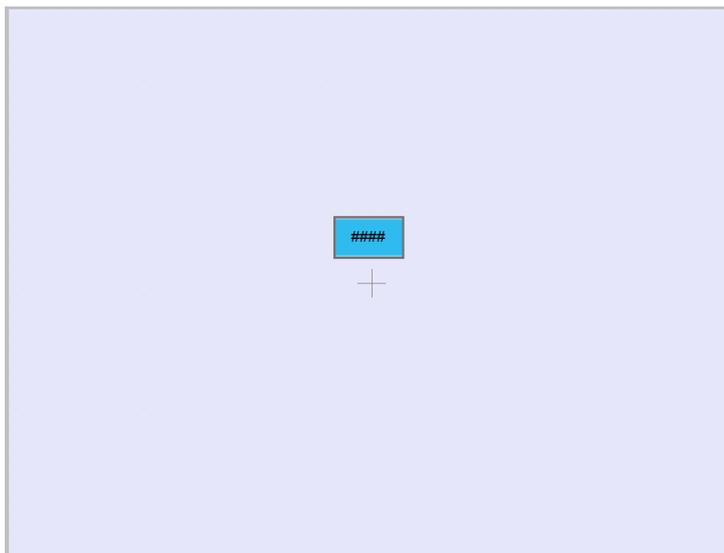
Selecting window 10 shows all objects.

- *10 : WINDOW_010
  - Layer 1 (Bottom)
    - BL_0 (LB-0) (Bottom)
  - Layer 2
    - NE_0 (LW-0)
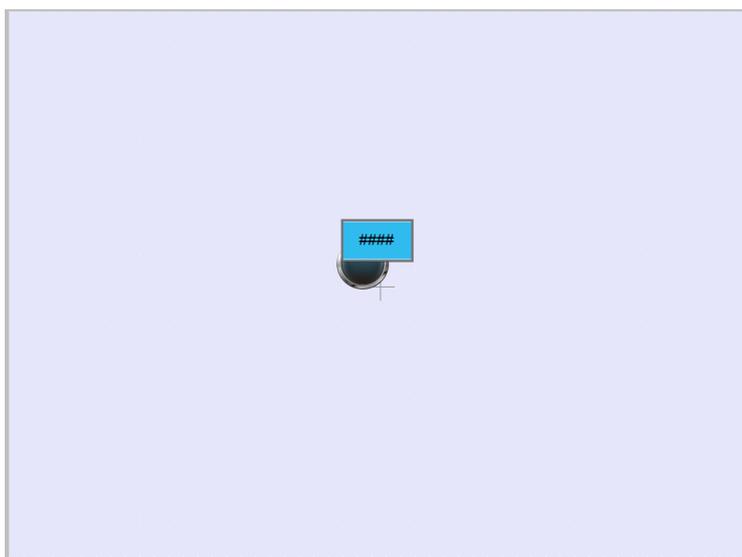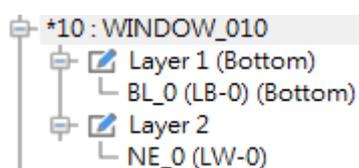
Screen saver	**Back light saver**
	If the screen is left untouched and reaches the time limit set here, the back light will be turned off. The setting unit is minute. Back light will be on again once the screen is touched. If [none] is set, the back light will always be on.
	Screen saver
	If the screen 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.

Saver window no.

Specify a window to be displayed when HMI goes to screen saver mode.

Note: In a saver window, the [Return to previous window] option of a Function Key can be used to wake up HMI from screen saver mode; therefore, please avoid editing the project in the way shown as the example below, to prevent the HMI from going to screen saver mode repeatedly.

Example: A Function Key used to "Return to previous window" is placed in Window no. 11, and the HMI goes into screen saver mode when Window no. 11 is displayed. In this case, the HMI can wake up from screen saver mode when any point on its screen is touched, and Window no. 11 will be displayed again. At this moment, if the Function Key in Window no. 11 is touched, the HMI goes into screen saver mode again.

Solution: 1. When a Function Key with "Return to previous window" selected is placed in the saver window, please use "Change full-screen window" for all other windows.

2. When "Change full-screen window" is used for the saver window to change to a specific window (e.g., home page), please make sure that "Return to previous window" is not used in this destination window. The "Return to previous window" option can still be used for other windows.

Fast selection buttons	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.

Attribute

Enable or disable fast selection window. Select [Enable] and click [Settings] to set the attributes, including color and text of the button.

Position

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.

Settings

Set the shape and label font of the Fast Selection Button.

Hide button when HMI starts

The Fast Selection Button will be hidden, calling it out requires system registers LB-9013~LB-9015.

Monitor Mode	This setting is applicable for cMT / cMT X Series. Window no. 3 in the project is monitored in this mode in cMT Viewer. The user can select up to 50 cMT / cMT X Series HMIs to monitor in cMT Viewer, and in 3x3 or 5x4 tile view.
Event	**Use LW9450~9455 as time tags of event logs** When this option is selected, Event Log will use the following time tags to show the time that the event is triggered. LW-9450: time tag of event log – second (range: 0~59) LW-9451: time tag of event log – minute (range: 0~59) LW-9452: time tag of event log – hour (range: 0~23) LW-9453: time tag of event log – day (range: 1~31) LW-9454: time tag of event log – month (range: 1~12) LW-9455: time tag of event log – year (range: 1970~2037) Please note that the system will not be able to use these time tags when one of them exceeds acceptable range. 📥 Click the icon to download the demo project. Please confirm your internet connection before downloading the demo project.
Keyboard	The window number in which the keyboard is placed. When using Numeric Input or ASCII Input objects, the type of keyboards can be selected. Up to 32 keyboards can be 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, AZERTY, and Cyrillic. 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".
Update startup screen on HMI	This setting is only available on cMT / cMT X Series. **Default** If an image is already used as startup screen on the HMI, the image will be cleared when this mode is selected.

Customized
A .bmp file can be selected as startup screen.

5.5. System Setting

[System Setting] is used to configure different features of EasyBuilder Pro.
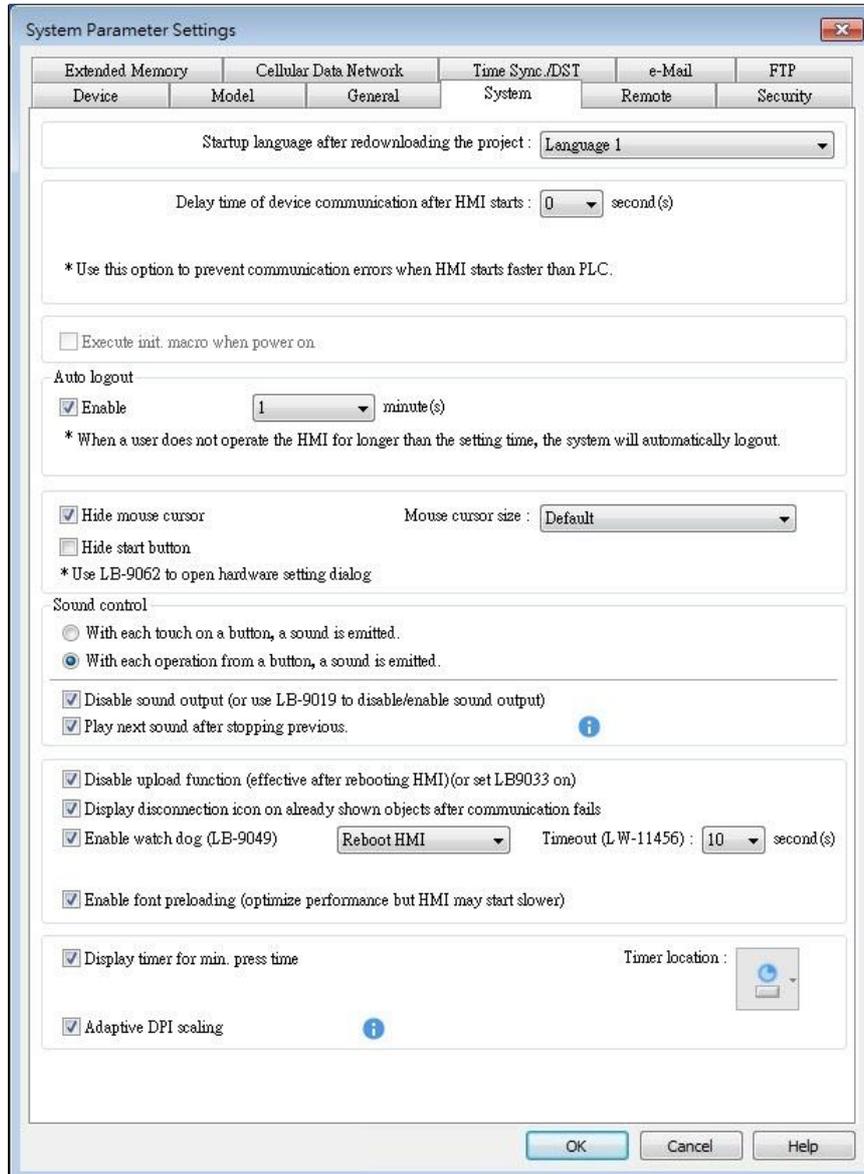
Some features are duplicated from system registers, such as, [Hide system setting bar (LB-9020)], [Hide mouse cursor (LB-9018)], [Disable buzzer (LB-9019)], and [Disable upload function (LB-9033)]. Users can also set these features via system tag.

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 / Start Button	Hide the system setting bar from 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:** With sound enabled in object settings, a sound is emitted when the object is touched. **With Each operation from a button, a sound is emitted:** When sound is enabled in object settings and 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.) **Play next sound after stopping previous:**

	(cMT / cMT X Series only) When the next sound is triggered at the time the current sound is playing, the current sound will stop, and the next sound will start.
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	If selected, a disconnection icon is displayed on relevant objects when failing to communicate with the device. This icon will be shown in the lower right corner of the object. This icon will only show for disconnection after successful connection.
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)	(cMT / cMT X Series only) 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.
Display timer for min. press time	(cMT / cMT X Series only) With this option selected, a countdown timer is shown when an object with min. press time set is being pressed.
Adaptive DPI scaling	With this option selected, the system will automatically adjust text size, position, and the spacing between Y axes based on the screen DPI of the connected device. This setting is applicable to Trend Display, Circular Trend Display, Mail Contact Editor, Option List, Media Player, Alarm Display, and Event Display. If this option is disabled, certain length-based configurations may not accurately reflect on different screens.

5.6. Remote

Parameters in this tab configure remote connections. Certain functions can be carried out using system registers.
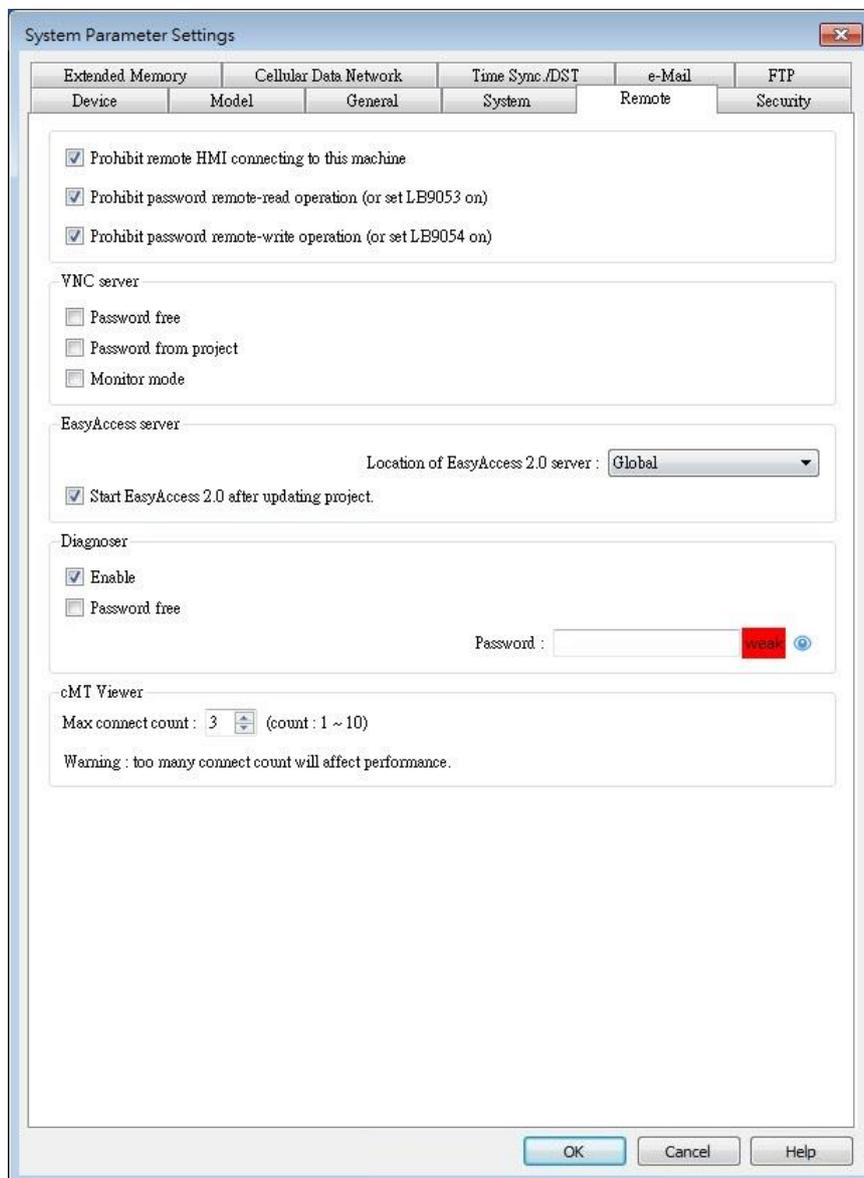
Setting	Description
Prohibit remote HMI connecting to this machine	Prohibit the connection with a remote HMI or cMT Viewer. The remote HMI will not be able to control the local HMI.
Prohibit password remote-read operation (or set LB9053 ON)	Prohibit Remote HMI to read Local HMI's project password and 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	If **[Password free]** check box is selected, the client can connect with HMI via VNC without entering the password. If **[Monitor mode]** check box is selected, the HMI connected via VNC can only be monitored but not controlled. If **[Password from project]** check box is selected, set the password for VNC login.
Easy Access server	**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.
Diagnoser	**Enable** When selected, cMT Viewer will allow diagnostic operations when connecting to a cMT / cMT X model. System register LB-12656 can also be used to control Diagnoser. **Password free** Enabling Disgnoser will not require password login. System Register LB-12657 can also be used to set whether a password is required. **Password** Enter the password for logging in Diagnoser. System register LW-11756 (4 words) can also be used to set this password.
cMT Viewer	**Max connect count** Allows specifying the allowable number of cMT Viewer connections for a local cMT / cMT X HMI.

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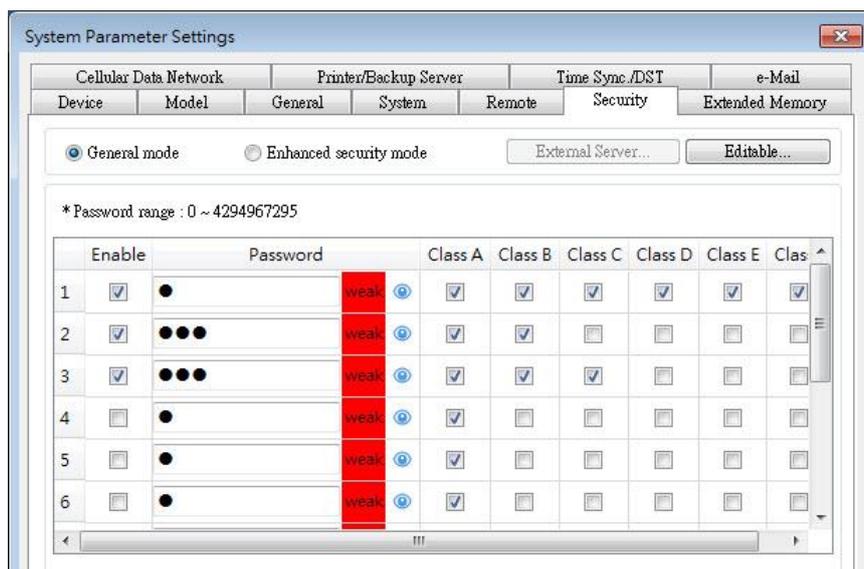
Up to 12 sets of user and password are available. Password should be one non-negative integer. Once the password is entered, the objects that the user can operate are classified. There are six security classes available: A to F.

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.
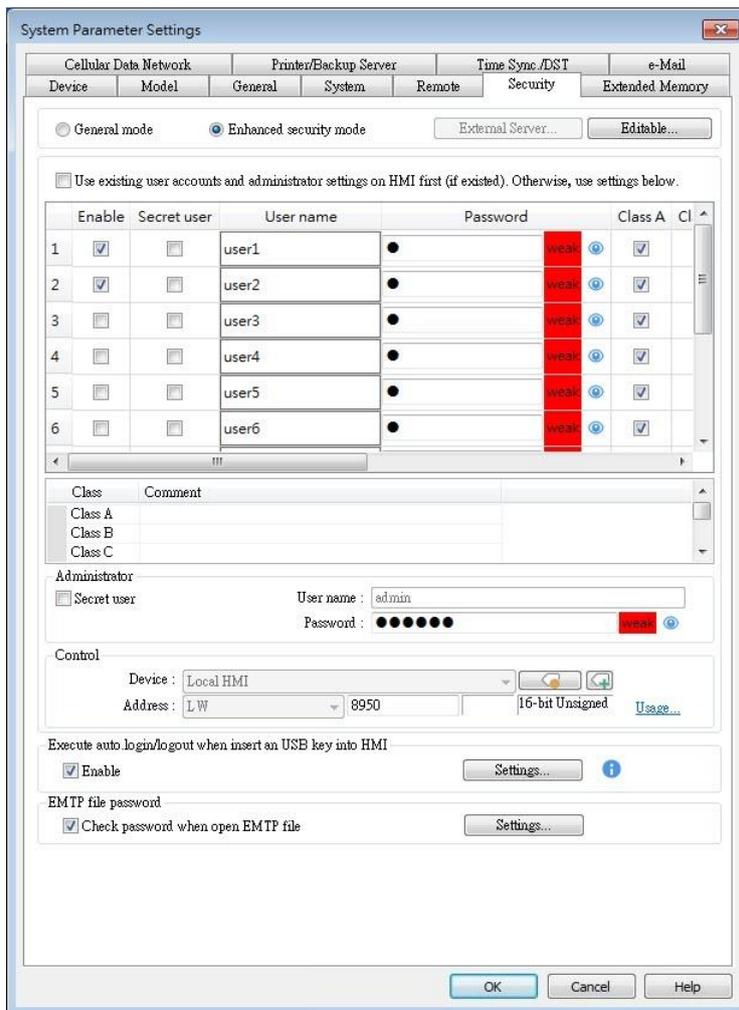
Setting	Description
Editable	Determines whether other users can change the password settings or see passwords.
	Enable read-only
	Under this mode, the settings can be viewed but not changed.
	Mask password
	Passwords are masked by asterisks (*).
Select operable classes for each user	When [Use existing 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.

Extended Memory is numbered from EM0 to EM15. It works in a way similar to other device types (i.e. LW or RW address). Users can simply select from EM0 to EM15 in the [Address] setting while creating a new object. Maximum allowable data size for each Extended Memory is 2G words.
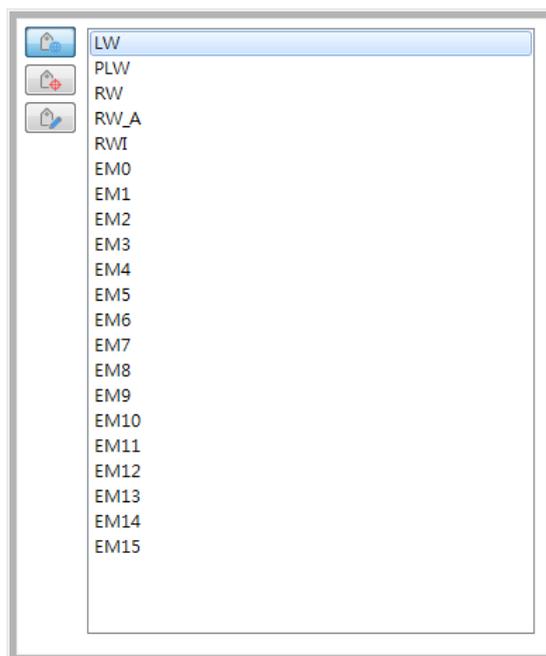
Data in the extended memory is saved as a file into [SD card] or [USB disk]. By default, the files in [EM0] to [EM15] are with the file names "em0.emi" to "em15.emi" respectively, although users are free to change the file names. To open these files and edit the data in the extended memory, RecipeEditor.exe 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.

Setting	Description
Enable dynamic file name	With this option selected, the file names of EM0~EM15 can be changed dynamically. Select "EM file name index (0~15)", enter "EM file name", set "Control" to 1, and then see the "Result". After successfully changing the file name, the new file name will immediately be the data source of EM address. Please note that after changing the EM file name dynamically, the new file name is retained after rebooting HMI, which may be different from the file name specified in the project file.
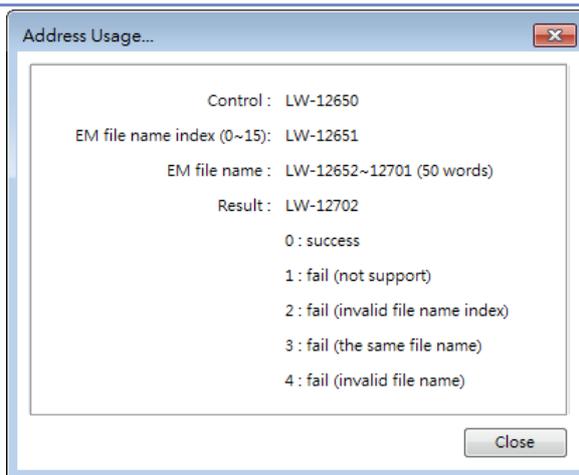
Address Usage...

Control : LW-12650
EM file name index (0~15): LW-12651
EM file name : LW-12652~12701 (50 words)
Result : LW-12702
0 : success
1 : fail (not support)
2 : fail (invalid file name index)
3 : fail (the same file name)
4 : fail (invalid file name)

Close

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. This feature is not supported on cMT / cMT X Series HMI.

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.

WEINTEK   EasyBuilder Pro V6.10.01

5.10. Time Sync./DST

Configure HMI time synchronization and daylight saving time.

Setting	Description
HMI time zone	Select HMI time zone.
Enable time synchronization with the external device when HMI starts	Automatically synchronizes HMI time with the designated source address when HMI starts. As shown in the settings above, the time source is set to D address of the device Mitsubishi FX5U, so 6 consecutive word addresses starting from D-0 will be the source addresses and each of them should contain time information as follows:
	D-0 → Second (range: 0~59)

	D-1 →	Minute (range: 0~59)
	D-2 →	Hour (range: 0~23)
	D-3 →	Day (range: 1~31)
	D-4 →	Month (range: 1~12)
	D-5 →	Year (range: 1970~2037)
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 5th or 6th week depending on the selected month. **Daylight bias** Set the time zone's offset during DST.	

🖉Note

■ When the Network Time Server is configured with a static IP address, write/control operations can be performed using addresses LW-11278 to LW-11293. However, if the Network Time Server is configured with a domain name, modifying the IP address of the Network Time Server via addresses LW-11278 to LW-11293 is not supported.

■ 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.

Setting	Description
SMTP Settings	**Server:** Set SMTP Server.
	Port: Set communication port.
	User name: Set e-mail address.
	Password: Set e-mail password.
	Confirm Password: Confirm e-mail password.
	SMTP server requires authentication:
	Decide whether Secure Password Authentication is needed when log in e-mail.
	Use the following type of encrypted connection:
	Decide whether an encrypted connection (TLS, SSL) is required when sending e-mails. Please note that TLS support is limited to TLS 1.0.
Sender Information	**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).
	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 X Series models

cMT-SVR (OS ver. 20151127 or later)

cMT3071/cMT3072/cMT3090/cMT3103/cMT3151 (OS ver. 20180723 or later)

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

MT8051iP/MT8071iP/MT8102iP (OS ver. 20201007 or later)

iE Series models (OS ver. 20231215 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.

5.13.   FTP
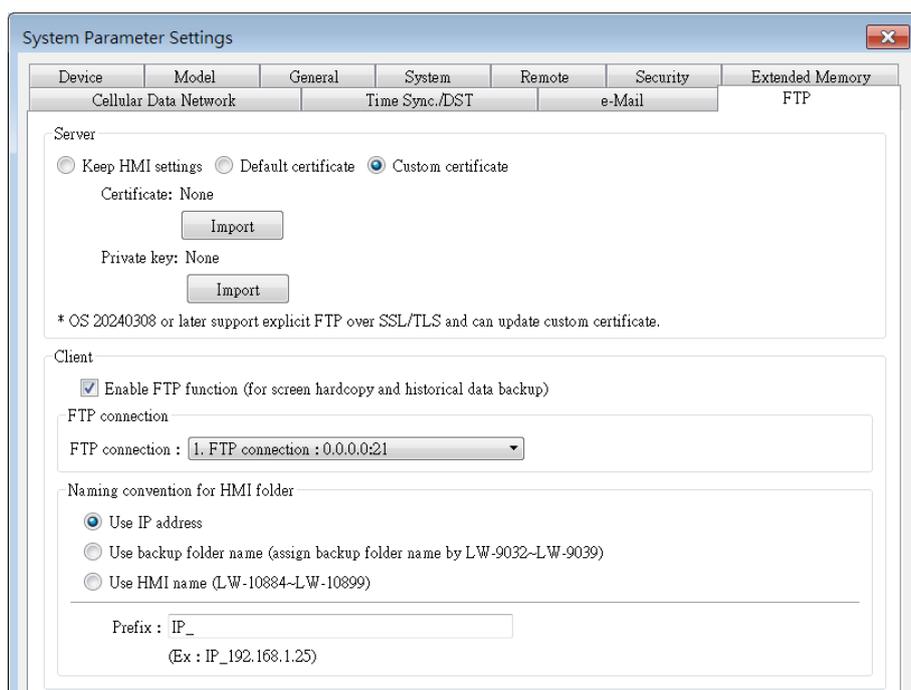
5.13.1. FTP Server

Starting from OS version 20240308, the cMT/cMT X series HMIs support explicit FTPS. Users can configure the HMI FTP server certificate with the following options:

1. Keep HMI settings: Continue using the current certificate settings on the HMI.
2. Default certificate: Use the system-provided default certificate.
3. Custom certificate: Users can import their own certificate and private key to meet specific security requirements.

5.13.2. FTP Client

The FTP client function enables users to back up screen hardcopies and historical data. Once enabled, users can backup files from the HMI to the FTP server. This feature is similar to the eMT/iE/XE/mTV series, which uses EasyPrinter for historical data backup.
Please note that this feature is only supported on the cMT/cMT X series.

Setting	Description
Enable FTP Function	With this option selected, backup files (screen hardcopy or historical data) can be transferred to FTP server.
FTP Connection	FTP server's information.
Naming Convention for HMI Folder	Use IP address, backup folder name, or HMI name to name the HMI folder. **Prefix:** Add a prefix to the beginning of the folder name.

Note

■ When the FTP function is enabled without any configured FTP connections, the system will direct users to the [Data/History] » [FTP Connection] settings to configure FTP server connection parameters.