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. Local HMI Configuration

News to Lung	
Name : Local HM1	
MMI	
Location : Local	
Enable secure communication	
LW protection	
Prohibit remote-write operation of remote HMI or MODBUS client	
LW range : 0 ~ 1000	
RW protection	
✓ Prohibit remote-write operation of remote HMI or MODBUS client	
RW range: 0 ~ 1000	
	Data Coqurity
	Data Security
	OK Cancel

Setting	Description
Enable secure	With this option selected, the HMI encrypts the
communication	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,	For specific instructions on data protection settings, see
RW protection,	"Chapter 20 Data Socurity" in this manual
Data Security	Chapter 59 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:

Name :	MODBUS RTU			
	HMI Oevice			
Location :	Local 🔹	Settings		
* Select Local for a	device connected to this H	HMI, or Remote fo	r a device connected through anothe	r HMI.
Device type :		MODBUS RTU, R	TU over TCP	•
	Device ID : 4, V.5.00, MC	DBUS_RTU.e30		
I/F:	RS-232	•	Open Device Connection Guide	
Support off-line si	mulation on HMI (use LB-1	2358).		
Support communic	ations between HMI and c	levice in pass-thro	ugh mode.	
Support communic	to enhance the speed of o	levice in pass-thro lownload/upload c	ugh mode. levice program in pass-through mode	
* Set LW-9903 to 2 COM :	cations between HMI and c to enhance the speed of c COM1 (9600,E,8,1)	levice in pass-thro download/upload c	ugh mode. levice program in pass-through mode	
Support communic Set LW-9903 to 2 COM :	ations between HMI and c to enhance the speed of c COM1 (9600,E,8,1) Open HMI pin assignmen	levice in pass-thro lownload/upload o	ugh mode. levice program in pass-through mode	
" Support communic " Set LW-9903 to 2 COM : E	ations between HMI and c to enhance the speed of c COM1 (9600,E,8,1) <u>Open HMI pin essignmen</u> Pevice default station no. :	levice in pass-thro download/upload o t <u>evide</u>	ugh mode. levice program in pass-through mode	
* Support communic * Set LW-9903 to 2 COM : E	ations between HMI and c to enhance the speed of c COM1 (9600,E,8,1) <u>Open HMI pin essignmen</u> bevice default station no. :	levice in pass-thro lownload/upload o t <u>suide</u> 1	ugh mode. levice program in pass-through mode	
* Support communic * Set LW-9903 to 2 COM : E	ations between HMI and c to enhance the speed of c COM1 (9600,E,8,1) Open HMI pin essignmen bevice default station no. : Use broadcast comma	levice in pass-thro lownload/upload o t <u>cruide</u> 1 nd e station no, varia	ugh mode. levice program in pass-through mode	
* Support communic * Set LW-9903 to 2 COM :	ations between HMI and c to enhance the speed of c COM1 (9600,E,8,1) Open HMI pin assignmen bevice default station no. : Use broadcast comma Default station no. use	levice in pass-thro fownload/upload of t <u>exide</u> 1 nd e station no. varia	ugh mode. levice program in pass-through mode	
* Support communic * Set LW-9903 to 2 COM :	ations between HMI and c to enhance the speed of c COM1 (9600,E,8,1) Open HMI pin essignmen bevice default station no. : Use broadcast comma Default station no. use How to designate the stati	levice in pass-thro lownload/upload of t <u>evide</u> 1 nd e station no. varia on no. in object's a	ugh mode. levice program in pass-through mode Settings. ble	
* Support communic * Set LW-9903 to 2 COM : 	ations between HMI and of to enhance the speed of of COM1 (9600,E,8,1) Open HMI pin assignmen bevice default station no. : Use broadcast comman Default station no. use <u>How to designate the stati</u> val of block pack (words) :	levice in pass-thro lownload/upload of t <u>evide</u> 1 1 e station no. varia on no. in object's a 5	ugh mode. levice program in pass-through mode Settings. ble ddress? Address Range Limit	
* Support communic * Set LW-9903 to 2 COM : COM : Loten Inter Max. rea	ations between HMI and of to enhance the speed of of COM1 (9600,E,8,1) Open HMI pin assignmen bevice default station no. : Use broadcast comman Default station no. use <u>How to designate the stati</u> val of block pack (words) : d-command size (words) :	levice in pass-thro lownload/upload of t <u>suide</u> 1 1 e station no. varia on no. in object's s 5 120	ugh mode. levice program in pass-through mode Settings. ble ddress? Address Range Limit Data Conversion	

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.

Device Settings	×
COM Port Settings	
COM : COM 1 Data bits : 8 Bits Baud rate : 9600 Parity : Even Stop bits : 1 Bit	
Communication Settings Timeout (sec) : 3.0 Turn around delay (ms) : 0 Resneding commands : 0	
OK Canc	el

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.

	Device Settings	
	IP Address Settings	
	IP address: 192 168 1 100	
	Port no. : 502	
	Communication Settings	
	Timeout (sec) : 1.0 🔻	
	Turn around delay (ms): 0	
	OK Cancel	
	 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	Set the default station number for device address if the	_
default	device station number is not included in the address.	
station no.	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.	
	Device : MODBUS RTU	
	Address type : 0x Address : 1#20 User-defined tag	
	Address format : DDDDD [range : 1 ~ 65535]	



Jeneral Sec	curity S	Shape	Label		
Co	omment :				
		 Bit 	Lamp	0	Toggle Sw
Read					
Devic	ce : MC	DBOZ	RTU		
	(o] 1#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 device station number is "5".



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

-Read address			
PLC name :	MODBUS RTU	•	Setting
Address :	4x •	var7#111	

 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).

Read address			
PLC name :	MODBUS RTU		Setting
Address :	4x 🔻	111	

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

Use	When [Use broadcast command] check box is selected,
broadcast	please fill in [Broadcast station no.] according to the



commandbroadcast station number defined by the device. WhenHMI sends a broadcast command to the station numberset here, the device will only receive the command andnot reply to HMI.

PLC default station no. :	0	
Default station no. use	e station no. variable	
Vse broadcast comman	and Broadcast station no. : 255	•

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 If the interval between read addresses of different block pack commands is less than this value, the commands can be (words) 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].



Cellular Da	ta Network	Pri	nter/Backup Server		Time Sync./DST	e-Mai	1
Device	Model	General	System	Remote	Security	Extended Mer	nory
Device list:						What's n	ny IP
Device list:	Name	Location	Device Tyme		Interface	What's r	ny IP Stati
Device list: Local HMI	Name Local HMI	Location Local	Device Type MT8073iE (800 x	480)	Interface	What's r I/F Protocol	ny IP Stati O

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".

Extended Mem	ory Cellu	ılar Data Network	Time Sync./DST	e-Mail	FTP
Device	Model	General	System	Remote	Security
Device list:					What's my IP?
Device list:	Name	Location Device	Туре	Interface	What's my IP? I/F Protoc
Device list: Local HMI	Name Local HMI	Location Device Local cMT30	Туре 72XH/cMT3072XH2/cM	Interface T	What's my IP? I/F Protoc

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:



Name :	MODBUS RTU
	HMI O Device
Location :	Remote Settings IP: 0.0.0.0 (Port = 8000)
* Select Local for a HMI.	device connected to this HMI, or Remote for a device connected through another
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
C	Device default station no. : 1
	Default station no. use station no. variable
	How to designate the station no. in object's address?
Inter	val of block pack (words) : 5
Max. rea	id-command size (words) : 120 💌

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].
	IP Address Settings
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





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

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

Cellular I	Data Network		Printer	/Backup Server	۲ I	Tim	ne Sync./DST		e-Mail
Device	Model	Ge	neral	System	Ren	note	Security	Exte	nded Memor
Device list:			T	T T.			T. L. C		<u>What's my I</u>
Device list:	Name		Location	Device Type			Interface		<u>What's my I</u> I/F Protoco
Device list: Local HMI	Name Local HM	I	Location Local	Device Type MT8073iE (8	00 x 48	0)	Interface -		<u>What's my I</u> I/F Protoco -

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".

Extended Mem	ory Cel	lular Data N	etwork	Time Sync./DS	f e-Mail	FTP
Device	Model	G	eneral	System	Remote	Security
evice list:						What's my IF
evice list:	Name	Location	Device Tyr	De	Interface	What's my IF
levice list: Local HMI	Name Local HMI	Location Local	Device Tyj cMT3072X	oe :H/cMT3072XH2/c∙	Interface	What's my II I/F Protocol
levice list: Local HMI Remote HMI 1	Name Local HMI HMI	Location Local Remote…	Device Tyj cMT3072X HMI	ре :H/cMT3072XH2/c	Interface Ethernet	What's my IF I/F Protocol - TCP/IP

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:



Device S	Settings
	Name : Remote HMI 1
	Device
* Sele	Location : Remote
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 numbe
	of the Remote HMI by clicking [Device Properties] »
	[Location] » [Settings].
	IP Address Settings
	Ethernet
	IP address: 192 . 168 . 1 . 10
	Port no. : 8000
	OK Cancel

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

D			membackap berver		lime	e Sync./DST	e-Mail
Device	Model	General	System	Remo	te	Security	Extended Memory
	Name	Location	Device Type	In	terface	I/F Protocol	Station No.

Note

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

Device N					Contraction of the second s	1
	Model	Genera	al System	Remot	e	Security
	Name	Location	Device Type		Interface	I/E Protoco
	1 OTTG	Location	Device Type		imenace	WF 1101000
T and I TT AT	T a set I III III	the second se		12. B B (11. 2011) 2		

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

2.14	ar Data Network	Prin	ter/Backup Server		Time Sync./DS	T I	e-Mail
Device	Model	General	System	Remote	Security	Exte	nded Memor
	HMI model :	iE S	Series - MT8073i8	E (800 x 480)	J	Landscap	e 🗸
н	MI station no : 0					annot	•
	Port no : 900	10					
		Support cMT/cl	MT X communicat	tion protocol			
	Port no. : 80:	10					
	-						
	Туре : <u>Мо</u>	ne			•		
Scroll bar	1уре : <u>No</u>	<u>ne</u>			•		
Scroll ber	1 ype : <u>No</u> Default Style				•		
Scroll bar	1 ype : <u>No</u> Default Style Width				•		•
Scroll ber	1 ype : <u>No</u> Default Style Width @ Small	ne	 ddle 💿 La	129	•		
Scroll bar	1ype : <u>No</u> Default Style Width @ Small ngh (Virtual COM p	ne ▼ ▲ ⊘ Mis ort)] ddle 🔘 La	129	•		
Scroll bar	Default Style Width @ Small ngh (Virtual COM p Port no. : 200	Misort) 00 (2] ddle 💿 La 0002100)	rge Enable :	• RSLinx broadca:	st response	
Scroll bar	Default Style Width @ Small ngh (Virtual COM p Port no. : 200	■ Mi ort) 00 (2] ddle 💿 La 000-2100)	rge Eneble :	• RSLinx broadcar	st response	



cMT, cMT X Series

minimum rithingi	Cellular	Data Network	Time Sync./DST	e-Mail	FTP
Device	Model	General	System	Remote	Security
HMI mode HMI station no Port no	1: CMT × Ser	ies - Advanced -	cMT3072XH/cMT3072)	(H2 Landsca	pe
Port no	Support T	KAPAE/XE/eMT/m (used as b	TV communication prote IODBUS server's port no	col and EasyWatcl .)	h
Printer Type	:	HP Business Inkiet	2230 -	Statucion	- foot
Paper Size	: 🗛	•			
Paper Size V Use printer o Interface	: A4 m HMI first (if e:	 cisted). Otherwise, : © USB 	install the printer with the	settings.	
Paper Size	: A4 m HMI first (if en Ethernet	 Content of the second se	install the printer with the	settings.	()
Paper Size	 ∴ <u>A4</u> m HMI first (if e: ○ Ethemet COM port) ∴ 2000 	 disted). Otherwise, i O USB (2000-2100) 	install the printer with the	settings.	(1)

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 por "8000".	rt number of current HMI. The default value is				
Support cMT	Supports c	ommunication with cMT / cMT X Series models.				
protocol	cMT / cMT X Series project file should use the same					
	communic	ation port.				
Printer (eMT.	Type					
iE. XE. mTV	A printer c	an be connected with the HMI. The HP PCL Series				
Series)	nrinter is o	onnected through USB interface while other				
Jenesy	printer is c	rough a COM port				
	Sor me	ore information, see "23 HMI Supported				
	Printers".					
	If the print	If the printer is connected through [COM], configure the				
	parameters	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 p	orint data.				
Printer (cMT,	The printer	r driver can be installed on HMI.				
cMT X Series)						
,	Select printer type					
	Status address					
	Shows prin	iter status.				
	LW-n	Status				
	0	Printer driver is not installed yet.				
	1	Installing printer driver.				
	2	Printer is ready.				
	3	Printer is printing.				
	4 \\\/_n+1	Frint job is canceled.				
	0	None				
	1	Printer is not found.				
	2	Unknown error.				
	Control ad	dress				
	Updates pr	inter connection parameters.				
	LW-n	Command				
	0	None				
	1	Update connection parameters.				

Restart printer driver.



2

	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	e that using only the ppd file for a printer may		
	not be able	to run the printer since the corresponding		
	driver is ab	sent. Using tested models is recommended.		
Scroll bar	Set the wid	th of Scroll Bar, when the size of the object is too		
	small to dis	play the contents, a scroll bar is displayed in the		
	object. This	s feature can be applied to objects that allow		
	scrolling, su	uch as Alarm Display, Event Display, History Data		
	Display, and	d Option List.		
Pass through				
(Virtual COM	Set the port number for Pass-through communication.			
port)		-		



5.4. General

Configure the properties related to screen display. eMT, iE, XE, mTV Series

eivit, ie, xe, mitv Series

Cellular Data Network	Prin	ter/Backup Se	erver	Time Sync.	/DST	e-Mail
Device Model	General	System	Remote	Secur	ity	Extended Memor
Options						
📰 Enable fast display mod	e when chang	ge window		📝 R 🖗	'_A enab	led
Windows						
Startun window no		UNI 010				
Common window :	Abaua haa	mindam		Object lay	out: No	
Eachle window leave /	This on here		• • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • •	our. Ins	
CURDE ANNOA BALLY (rins can be fi	sea in ni Santa	eranownane op)	5C16)		U
acreen saver Back light	20		vojoute (o)			
Datk fight saver .	[20]	•	nmicus (5)			
	Enable ba	ack light when	n alarm occurs			
Screen saver :	25	•	minute (s)			
Saver window no. :	80. Screen S	Saver				
Fast selection button						
Attribute :	Enable	•	Settings			
Position :	Left	- -	Hide button	when HMI sta	rts	
P I			—			
Блеш	🔽 Use L W9	450~9455 as	time tags of eve	nt logs		
Time tag format :	BCD	•				
Keyboard	(====					
50. Keypad 1 - Integer			External keybo	ard layout (L)	V-9199)	
51. Keypad 2 - Integer 52. Keypad 3 - Integer				Type : Q	WERTY	(0) •
 Keypad 4 - Integer Keypad 5 - Integer 		-	Ca	ret color : 🗍		
(144)	Dolot		Select	on color : 🔲		
Auu	Detete					•
Project key	Pn	niect kev : 🦷			me	dium @
M Enable	11	(n	ance : 0 ~ 42940	01750)	in the	
		11				
					-	



cMT, cMT X Series

Cellular Dat	a Network	802.1X (WiFi)	WiFi Hotspot	Time Syn	ic./DST	e-Mail	FTP
Device	Model	General	System	Remote	Security	Exte	nded Memory
Options							
RW_	A enabled				Fa	ist display m	ode
Trigg	er release actions	anyway if touch mov	es out of the button				
Set va	due when leaving	focus					
	CSV delimite	er : Comma (,)	• 0				
Windows							
S	tartup window no	.: 10. WINDOW_C	10				•
	Common window	w : Above base wind	.ow	•			
Enabl	e window layers	(This can be used to c	rganize/show/hide <	objects)			0
Screen saver							
	Back light save	er: 30	▼ minute(s	3)			
		📝 Enable back li	ght when alarm occ	urs			
	Screen save	r : 25	▼ minute(s	3)			
	Saver window no	. : 80. Screen Saver					•
Monitor mod	9	<u></u>					
Ena	ble	0					
Event							
		Use LW9450-	9455 as time tags o	f event logs			
Keyboard			E.		d 311 0 100)		
59. Keyp	ad 10 - Integer(tr U Middle(translu	anslucent)	Externa.	i keyboard layout	(LW-9199)	201	
56. Keyp 57. Keyp 83. Syste	ad 7 - HEX ad 8 - Floating m Standard ASC	II		Type	e: Qwerii(0)	
	Add	Delete					
Project key							

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
	 Values will not be retained after pressing the ESC key to leave.
	When the system keyboard is used, values will be directly written after closing the keyboard.
	 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
	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.



Screen saverBack light saverIf the screen is left untouched and reaches the time limitset here, the back light will be turned off. The setting unit isminute. 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]
	ontion of a Eurotion Key can be used to wake un HMI from
	screen saver mode: therefore, please avoid editing the
	screen saver mode, mereiore, please avoid editing the
	project in the way shown as the example below, to prevent
	the Hivii 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" ontion can still be used for other windows
East	This setting is applicable for eMT iF XF mTV and iP Series
	Setting the attributes for fast selection button for Window
selection	No. 3. To use the fast selection button, create Window No.
buttons	3 first
	Attribute
	Enable or disable fact selection window. Select [Enable] and
	click [Sottings] to sot the attributes, including color and text
	of the button
	Desition
	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	This setting is applicable for cMT / cMT X Series.
Mode	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 OWERTY. 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	Projects can be restricted to be executed by a specific HMI.
protection	See "30 Project Protection".
Update	This setting is only available on cMT / cMT X Series.
startup	Default
screen on	If an image is already used as startup screen on the HMI,
НМІ	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.

Extended Mer	mory Cell	ılar Data Network	Time Sync./DST	e-Mail	FTP
Device	Model	General	System	Remote	Security
	Startup langu	uage after redownloadin	g the project : Lang	uage 1	
			00 509 500 Name	<u></u>	
	Delay time of dev	vice communication aft	er HMI starts : [0	▼ second(s)	
* II se this opti	ion to prevent comm	unication errors when I	HMI starts faster than 1	PLC	
000 000 090	on to provent comm		1141 0040 10001 2001.		
Execute ini	t. macro when powe	ron			
uto logout					
🗸 Enable	1	▼ minute(s)		
* When a user	; does not operate th	e HMI for longer than t	he setting time, the sys	stem will automatically	y logout.
🔽 Hide mouse	e cursor	Mous	æ cursor size : Defau	ılt	•
📃 Hide start b	utton		<u>.</u>		
*U∞ LB-9062	2 to open hardware s	ætting dialog			
ound control					
🔘 With each	touch on a button, a	sound is emitted.			
With each	operation from a bu	tton, a sound is emitted.	8		
🔽 Disable sou	und output (or use L	B-9019 to disable/enab	le sound output)		
📝 Play next s	ound after stopping	previous.		0	
🔽 Disable un	load function (effect	ive after rehooting HM	Difor set L'B9033 on)		
Display dis	connection icon on	already shown objects a	fter communication fa	ails	
V Enable waf	ch dog (LB-9049)	Reboot HMI	▼ Timeo	ut (L.W-11456) : 10	second (s
📝 Enable fon	t preloading (optimi	ze performance but HM	fI may start slower)		
Display tin	er for min prace tin			Timer location	
M Dispiny	let for him. proce	16			<u>o</u> -
	NDT 1	0			- Linned
	PI scaing	0			
🔽 Adaptive I					
📝 Adaptive I					

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 Execute init. MACRO when power on	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. 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.)

Disable upload function (effective after rebooting HMI) (or set LB9033 ON)	(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 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	(cMT / cMT X Series only)
(optimize performance	With this option selected, the speed of
but HMI may start	changing windows that contain more texts is
slower)	optimized. Please note that using this feature may slow down HMI boot time.
Display timer for min.	(cMT / cMT X Series only)
press time	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.

Extended Memory	Cellul	ar Data Network	Time Sync./DST	e-Mail	FTP
Device	Model	General	System	Remote	Security
 Prohibit remote Prohibit passwoi Prohibit passwoi 	HMI connectin rd remote-read rd remote-write	g to this machine operation (or set LB9 operation (or set LB9	053 on) 9054 on)		
VNC server		N 10	2		
The correct					
Password free	it				
Monitor mode	project				
EasyAccess server —					
		Location o	f EasyAccess 2.0 server	: Global	•
📝 Start EasyAcces	s 2.0 after upda	ting project.			
Diagnoser					
📝 Enable					
🔲 Password free					
			Password :		weak @
cMT Viewer					
Max connect count :	3 🌲 (cou	nt : 1 ~ 10)			
Warning : too many	connect count	will affect performan	ce.		
100 B		1			

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	Prohibit Remote HMI to write to Local HMI's
remote-write operation	project password and user password.
(or set LB9054 ON)	
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

C	ellular Da	ata Network	Print	er/Baa	kup	Server		Time Sync	/DST	e	Mail
Dev:	ice	Model	General	S	ysten	n]	Remote	Secu	rity	Extended	Memory
0	General r	node	Enhanced se	curity	mod	e	[Ext	emal Serve	er][Editab	le
* Pe	assword re	ange : 0 ~ 429	94967295								
	Enable		Password	_		Class A	Class B	Class C	Class D	Class E	Clas ^
1	1	•		weak	۲	V	V	V	1	V	V
2	1	•••		weak	۲	V	V	- Free Provide State			E
3		•••		weak	۲		V		1		_
4		•		weák	0						
5		•		weak	0	V			1977		
6		•		weak	0	V		1000			

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.



Device Model General System Remote Security Extended Mea © General mode © Enhanced security mode External Server Editable Use existing user accounts and administrator settings on HMI first (if existed). Otherwise, use settings below. Enable Enable Secret user User name Password Class A 1 Image: Secret user User name Password Class A 2 Image: Secret user User 3 Image: Secret 0 Image: Secret 0 3 Image: User 3 Image: Secret 0 Image: Secret 0 Image: Secret 0 4 Image: User 5 Image: Secret 0 Image: Secret 0 Image: Secret 0 5 Image: User name : Image: Secret 0 Image: Secret 0 Image: Secret 0 Class A Class A Image: Secret 0 Image: Secret 0 Class C Image: Secret 0 Image: Secret 0 Image: Secret 0 Control Device : Local HMI Image: Secret 0 Image: Secret 0 Device : Local HMI Image: Secret 0 Image: Secret 0 Image: Secret 0 Control Device : Local HMI Image: Secret 0 Image: Secret 0 Image: Secret 0 Device : Local HMI Secret 0 Secret 0 Image: Secret 0	0	Cellular Da	ta Network	Print	er/Backup Serv	er	Time Sync./DST	: 4	e-M	ail
General mode	Dev	/ice	Model	General	System	Remote	Security	E	extended M	lemory
Use existing user accounts and administrator settings on HMI first (if existed). Otherwise, use settings below. Enable Secret user User name Password Class A User1 Password Class A User2 Password Pass	0	General n	iode 🤇	Enhanced se	curity mode	E	xternal Server)	Editable.	
Enable Secret user User name Password Class A 1 I User1 Image: Class A	0	Use existi	ng user account	s and administ	rator settings on	HMI first (if e	xisted). Otherwise,	use se	ttings belov	V.
1 ✓ user1 ● ● ✓ 2 ✓ user2 ● ✓ Ø ✓ 3 ● user3 ● ✓ Ø ✓ 4 ● user4 ● ✓ Ø ✓ 5 ● user5 ● ✓ Ø ✓ 6 □ user6 ✓ Ø ✓ Ø ✓ 6 □ user6 ✓ Ø Ø ✓ Ø Ø Ø ✓ Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø<		Enable	Secret user	User	name	ļ	Password		Class A	CI ^
2 Image: second sec	1			user1		•	wear	•	V	
3 user3 4 user4 5 user5 6 user6 0 0 <td>2</td> <td>V</td> <td></td> <td>user2</td> <td></td> <td>•</td> <td>weat</td> <td>۲</td> <td></td> <td>=</td>	2	V		user2		•	weat	۲		=
4 □ user4 • • • • • • • • • • • • • • • • • • •	3			user3		•	weat	0	V	
5 user5 user6 user6 6 user6 user6 Class Comment Class A Class A Class A Class C Class C Administrator Secret user Secret user User name : admin Password : ••••••• Device : Local HMI Address : LW B950 I6-bit Unsigned Usere 1	4			user4		•	weal	۲		
6 User6 Comment Class Comment Class A Class B Class C Administrator Secret user User name : admin Password : •••••• Control Device : Local HMI Address : LW 8950 I6-bit Unsigned Usere Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Execute auto login/logout when insert an USB key into HMI Case C Case C Case C Case C Case C Case C	5			user5		•	weal	0	V	
tit Class Comment Class A Class A Class C Class C Administrator Secret user User name : admin Password : ●●●●●● ●●●●●● ●●●●●● Control Device : Local HMI Address : LW ● 8950 If6-bit Unsigned User Image: Iffe the settings Image: Im	6			user6		•	weat	۲		
Class Comment Class A Class B Class B Class C Administrator Secret user User name : admin Password : ●●●●●● Control Device : Local HMI Address : LW ♥ 8950 16-bit Unsigned User ① Execute auto login/logout when insert an USB key into HMI © Enable Settings ① EMTP file password @ Check password when open EMTP file Settings	€.		1	n.			-			
Class A Class B Class C Administrator Secret user User name : admin Password : ••••••• Control Device : Local HMI Address : LW • 8950 [16-bit Unsigned User • Execute auto login/logout when insert an USB key into HMI Enable Settings • EMTP file password Market Settings •	3	Class	Comment							
Administrator Secret user User name : admin Password : •••••• Control Device : Local HMI Address : LW • 8950 16-bit Unsigned User and User Address Execute auto login/logout when insert an USE key into HMI Enable Settings 1 EMITP file password EMITP file password Check password when open EMITP file Settings		Class A Class B Class C								ļ
Secret user User name : admin Password : Pa	Ad	lministrato	0							
Control Device : Local HMI Address : LW 8950 I6-bit Unsigned User. Execute auto login/logout when insert an USB key into HMI C Enable EMTP file password Check password when open EMTP file Settings] Secret use	r		User name : ac Password : •	lmin		_	weak	
Device : Local HMI Address : LW 8950 [16-bit Unsigned User Execute auto login/logout when insert an USB key into HMI Execute auto login/logout when insert an USB key into HMI Execute auto login/logout when insert an USB key into HMI Execute auto login/logout when insert an USB key into HMI EMTP file password Check password when open EMTP file Settings	Co	ontrol							100 1002	
Address : LW			Device : Loca	I HMI]	
Execute auto.login/logout when insert an USB key into HMI Enable Settings EMTP file password Check password when open EMTP file Settings		A	ddress : LW		- 8950		16-bit Uns	igned	Usage	
Image: Check password Image: Check password when open EMTP file Settings	Exe	cute auto.l	ogin/logout wh	en insert an US	B key into HMI	0				
EMTP file password Check password when open EMTP file Settings	3	🖉 Enable				[Settings		Ð	
Check password when open EMTP file	EM	TP file pas	sword							
25 25 25 25 25 25 25 25 25 25 25 25 25 2		🖊 Check p	assword when o	open EMTP file		(Settings			

Setting

Editable

Description

Determines whether other users can change the

password settings or see passwords.

Read-only Settin	ngs		×
	Enable read-only		
Password :	•••••	medium	0
	(1 ~ 4294967295)		
	Mask password		
		ОК	Cancel

Enable read-only

Under this mode, the settings can be viewed but not changed.

Mask password

Passwords are masked by asterisks (*).

Select operable	When [Use existing user accounts on HMI] check box is
classes for each	selected, the user accounts existing on HMI will not be
user	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
	Success, UXIO. LOGOULIAIIS.

5.8. Extended Memory

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



Device	Model	General	System	Remote	Security
Extended Me	mory	Cellular Data Network	Tim	ie Sync./DST	e-Mail
FMO	5.				51011
File name :	emO	.emi	0	🖲 USB disk 1	🔘 USB disk 2
EM1					
File name :	em1	.emi	10	🖲 USB disk 1	🔘 USB disk 2
EM2					
File name :	em2	.emi	0	🧿 USB disk 1	🔘 USB disk 2
EM3					
File name :	em3	.emi	5	🧿 USB disk 1	🔘 USB disk 2
EM4					
File name :	em4	.emi		🗿 USB disk 1	🔘 USB disk 2
EM5					
File name :	em5	.emi	1	🧿 USB disk 1	🔘 USB disk 2
EM6					
File name :	етб	.emi		OSB disk 1	🔘 USB disk 2
EM7					
File name :	em7	.emi	53	🧿 USB disk 1	🔘 USB disk 2
EM8					
File name :	em8	.emi	0	🧿 USB disk 1	🔘 USB disk 2
EM9					
File name :	em9	.emi	9	🧿 USB disk 1	🔘 USB disk 2
FM10					
File name :	em10	.emi	5	💿 USB disk 1	🔘 USB disk 2
EX(11					
File name :	em11	.emi		O USB disk 1	🔘 USB disk 2
EV (10					
File name :	em12	.emi	()	🧿 USB disk 1	🔘 USB disk 2
EM13					
File name :	em13	.emi		🧿 USB disk 1	🔘 USB disk 2
FM14					
File name :	em14	.emi	50	🧿 USB disk 1	🔘 USB disk 2
EM15					
File name :	em15	.emi	0	🧿 USB disk 1	🔘 USB disk 2
🖉 Enable dynami	ic file name (not i	ncluding filename extension	Ú)		<u>Usage</u>

Extended Memory is numbered from EMO to EM15. It works in a way similar to other device types (i.e. LW or RW address). Users can simply select from EMO 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	With this option selected, the file names of
file name	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.



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)

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.

Device	Model	General	System	Remote	Security	Extended Memory
Cellular	Data Network	Print	ter/Backup Server	I	ime Sync./DST	e-Mail
Dutput setti Ori Pri	ngs ientation :	nizontal A riginal size	Vertical Fit to prin mm mm	I mm	mm	
Communic	ation settings	s e 5%.				
TT	address : 192	· 168 · 1	· 100			
11						
IF	Port no. : 8005					

Setting	Description
Output	Orientation
settings	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	IP address
settings	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

Device	Model	General	System	Remote	Security	Extended Memo
Cellular	Data Network	Print	ter/Backup Serve	r	Time Sync./DS	ST e-Mail
* [HMI	HM: ime zone] settin	I time zone : (U g will also be use	TC+08:00) d for timestamps	of OPC UA	and MQTT.	•
V	Enable time syn	chronization with	1 the external dev	ice when HI	4I starts	
	Device : Loc	al HMI			-	
	Address : LW		• 0	1	16-bit U	nsigned
	(4.0					050
V	Enable time syn	chronization via	NTP (Network T:	ime Protocol) server	
	Execute time sur	nchronization wh	en HMI starts			
1000	Server response	time has been ad	iusted in accorda	nce with DS	Т	
		fine	TC:00.00) (1) / T			
	Server re:	sponse mne : (0	IC+00:00) GM I	. Standard 1	me	•
	Network ti	me server 1 : 0.1	pool.ntp.org	0	e.g. wwv.nist.gov	or 24.56.178.140)
	Network ti	me server 2 : 1.p	pool.ntp.org	0		
	Network ti	me server 3 : 2.1	ool.ntp.org	-		
	Network to	me server 4 · 3 r	ool ntn org			
п		0 064003 . 10	00			
0	haare miervar (r	0~00400). [18		seconas		
∗Use L1	₩-11273 ~ 1129	94 to modify setti	ngs on HMI.			
* If faile	d to execute tim	e synchronization	i, the status of LE	8-12055 is se	t to ON.	
1970	1 2 2020	15 122122 12	8 1100023			
V	Automatically s	et daylight saving	(time (DST)			
	Start : Marc	h ·	- Second	▼ Sund	ay 🔹	02:00 上午 💲
	End : Nove	ember ·	- First	▼ Sund	ay 🔹	03:00 上午 💲
		Daylight bia	s: 01:00 🗘 🤇	00:30 ~ 12:0	0)	
*HMLe	n TZC atmin	eriod when LB-1	2355 (read only)	is ON		
*Use L1	W-11260~1127	2 to modify setti	ngs on HMI.			
* DST is	not supported in	n on-line simulati	on.			

Configure HMI time synchronization and daylight saving time.

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



	D-1 \rightarrow Minute (range: 0~59)
	D-2 \rightarrow Hour (range: 0~23)
	D-3 → Day (range: 1~31)
	D-4 \rightarrow Month (range: 1~12)
	D-5 → Year (range: 1970~2037)
Enable time	Execute time synchronization when HMI starts
synchronization	Automatically synchronizes HMI time with the designated
via NTP (Network	NTP server when HMI starts.
Time Protocol)	Server response time
server	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	Start / End
daylight saving	Set the start/end of Daylight Saving Time.
time (DST)	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 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



- 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.

		General	System	Remo	te	Security	Extended Memor
Cellular Data Network	2	Printe	er/Backup Server		Ti	ime Sync./DST	e-Mail
 Enable e-Mail function Use existing contact s * Set the right [HMI time 	n etting : zone	s on HMI firs] to have cor	t (if existed). Othe rect email sending	erwise, u time.	se settio	ngs below.	
SMTP settings						nuuru	0
Server						FOR n	o.: U
User name	:						
Password	:				۲		
Confirm Password	:				۲		
		SMTP serve:	r requires authenti	cation			
	100	Use the follo	wing type of encr	ypted co	nnectio	on	
	T	LS	*				
Sender information							
Name	: 0	se local HMI	name in "Device l	ist"	-		
	L	ocal HMI			- D		
Mail address	: [- 6		
Error message							
* Failed step and error or	ude ar	Enable	₩-11444~11445				
. Lanen sieh ann error ce	Jue ai	e sloted to L					
From polification)N when faile	d to send an e-Ma	al.			
Error notification * LB-12053 or LB-1205	4 18 0		or 10 00110 001 0 1.10				
Error notification * LB-12053 or LB-1205 Im Turn OFF LB-12053	or LH	3-12054 befo	re sending an e-M	ail.			
Error notification *LB-12053 or LB-1205 Turn OFF LB-12053 Recipient	or LI	3-12054 befo	re sending an e-M	lail.		Test S	MTP Settings
Error notification * LB-12053 or LB-1205 Turn OFF LB-12053 Recipient	or LI	3-12054 befo	re sending an e-M	ail.		Test S	MTP Settings
Error notification * LB-12053 or LB-1205 Tum OFF LB-12053 Recipient	or LI	3-12054 befo	re sending an e-M	ail.		Test S	MTP Settings
Error notification *LB-12053 or LB-1205 Turn OFF LB-12053 Recipient	or LI	3-12054 befo	re sending an e-M	lail.		Test S	MTP Settings
Error notification * LB-12053 or LB-1205 Turn OFF LB-12053 Recipient	or LI	3-12054 befo	re sending an e-M	ail.		Test S	MTP Settings
Error notification * LB-12053 or LB-1205 Turn OFF LB-12053 Recipient	or LI	3-12054 befo	re sending an e-M	ail.		Test S	MTP Settings
Error notification * LB-12053 or LB-1205 Tum OFF LB-12053 Recipient	or LI	3-12054 befo	re sending an e-M	ail.		Test S	M TP Settings



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	Name:
Information	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	Turn OFF LB-12053 or LB-12054 before send an e-Mail
notification	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	Verify SMTP settings in advance by sending a test email to
Settings	the specified e-mail address.

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



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ntacts list			Group information	No. of groups : 1
Contact Name	Mail Address		Contact Name	Mail Address
NewContact	NewContact@domain.com		NewContact	NewContact@domain.com
		>>		
		<<		
			Current gr	roup : Group A
	Remove		Comm	ent:

	Setting	Description
	Contact list	Add or remove contacts from the list.
	Group	Group up contacts.
	Information	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.
J	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)



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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.

Device	Model	General	System	Remote	Security
Extended Memory	y Cellula	r Data Network	Time Sync./DST	e-Mail	FTP
3G/4G Dongle	3G/4G D	ongle settings on HMI	USB cabl	leTethering	a ngles
3G/4G Dongle PIN code	JG/4G DO	ongle settings on HMI @	USB cabl	le Tethering Supported 3G/4G do: internet	ngles
3G/4G Dongle PIN code Username	Use existing Use existing Use existing	ongle settings on HMI @	USB cabl	le Tethering Supported 3G/4G do: internet password	n ngles

Setting	Description
Use existing contact	If this check box is selected, the cellular data currently
settings on HMI	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)

Lick the icon to download the demo project. Please confirm your internet connection

before downloading the demo project.

5.13. FTP

Device	Model	General	System	Remote	Security	Extended Memory
Cellular Data Network T		ime Sync./DST		e-Mail	FTP	
Server						
🔘 Keep HM	1I settings 🔘 Def	ault certificate 🧕	Oustom certification	ate		
Certif	icate: None					
	Import					
Privat	e key: None					
	Import					
* OS 202403	08 or later support	explicit FTP over	SSL/TLS and can	update custom (certificate.	
Client						
Enabl	e FTP function (fo	r screen hardconv	and historical data	backup)		
FTP conne	tion					
FTP conne	ction : 1. FTP con	nection : 0.0.0.0:	21	•		
-Naming cor	nvention for HMI f	older				
🔘 Use :	IP address					
🔘 Use I	oackup folder name	(assign backup fo	older name by LW	-9032~LW-9039))	
🔘 Use I	HMI name (LW-10	884~LW-10899)				
Pref	ix: IP_					





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



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.



