# 4. Hardware Settings

This chapter explains HMI settings.

4.1.	Overview	4-2
4.2.	I/O Ports	4-2
4.3.	LED Indicators	4-2
4.4.	System Reset	4-3
4.5.	System Toolbar	4-4



# 4.1. Overview

This chapter discusses the HMI settings.

# **4.2. I/O Ports**

The I/O ports may vary between models; please see the datasheet for more information. The I/O Ports include:

- SD card slot: Allows downloading / uploading project file, including recipe data, event log, data log...etc. and also allows recording history data and data backup.
- COM Port: Connects PLC or other peripheral devices. The type of serial port include: RS-232, RS-485 2W, RS-485 4W, and CAN Bus.
- Ethernet: Allows downloading / uploading project file, including recipe data, event log, data log...etc. Connects to Ethernet devices, such as PLC, laptop.
- USB Host: Supports USB devices, such as mouse, keyboard, USB disk, printer, or barcode device.
- USB Client: Allows downloading / uploading project file, including recipe data, event log, data log...etc. and also allows recording history data and data backup.

For the first time operating HMI, please complete the following system settings. When finished, the project files designed using EasyBuilder Pro can be used on HMI.

# 4.3. LED Indicators

The LED indicators on the HMI indicate:

	0XE, MT8121iE, MT8150iE
LED	Description
PWR (Orange)	Indicates power status.
CPU (Green)	Blinks when read/write Flash Memory.
COM (Blue)	Indicates COM port communication status, blinks
	during communication. When communication is
	good, it may stay on. (Not including network
	communication)
ner Models:	
	Description

-	LED	Description
	PWR (Orange)	Indicates power status.
	CPU (Green)	Indicates CPU status. If it blinks or goes out, there



	may be a CPU error.	
COM (Blue/Red)	Indicates communication status, blinks during	
	communication. When communication is good, it	
	may stay on.	

# 4.4. System Reset

Certain HMI models are equipped with a reset button and a set of DIP switches. When using the DIP switches to change modes, the corresponding functions will be triggered. If system password is lost or forgotten, see the following steps to restore factory default.

- **1.** Flip DIP Switch 1 to ON and the rest to OFF, and then reboot HMI. HMI will switch to touch screen calibration mode.
- A "+" sign appears on the screen, touch the center of the sign, after all 5 signs are touched, "+" disappears and the touch screen parameters will be stored in HMI system.
- 3. After calibration, confirm to restore the default password, select [Yes].
- 4. Confirm to restore the default password again by typing [yes] and clicking [OK]. The project files and history records stored in HMI will all be removed. (The default Local Password is 111111. However, other passwords, such as Download/Upload passwords have to be reset.)

The following lists the DIP switch settings of different models. Please see the relevant installation instruction.

cMT /	′ cMT X /	′ eMT /	ίE
Dip Sv	vitch		

DN			
	Π	Π	
1	2	3	4

SW1	SW2	SW3	SW4	Mode
ON	OFF	OFF	OFF	Touch Screen Calibration Mode
OFF	ON	OFF	OFF	Hide HMI System Setting Bar
OFF	OFF	ON	OFF	Update OS
OFF	OFF	OFF	ON	Reserved
OFF	OFF	OFF	OFF	Normal

# Note

The state of DIP Switch 4 on each unit may be different. If it should be ON when out from factory, the Dip Switch 4 would be set ON and cut off. If it should be OFF, the Dip Switch 4 would be set OFF but the switch is not cut.

SW1	SW2	Mode
ON	ON	Restore factory default
ON	OFF	Hide system setting bar



mTV	OFF	ON	Update OS
Dip Switch	OFF	OFF	Normal mode



cMT-SVR Dip Switch

			ļ
3	Ļ	2	J.
	ÔΝ	1	

SW1	SW2	Mode
ON	ON	Restore factory default
ON	OFF	Restore Ethernet IP Settings
OFF	ON	Update OS
OFF	OFF	Normal mode

# 4.5. System Toolbar

After rebooting HMI, you can set the system with [System Toolbar] at the bottom of the screen. Normally, this bar is hidden automatically. Only by touching the arrow icon at the bottom-right corner of the screen will the System Toolbar pop up. From left to right the icons are: System Settings, System Information, Text Keyboard, and Number Keyboard.



How to hide HMI System Setting Toolbar:

- When [DIP Switch 2] is set ON, the system setting toolbar is disabled. When set OFF; the system setting toolbar is enabled. Please restart HMI to enable/disable the toolbar.
- For mTV Series, flip DIP Switch 1 to ON to hide system setting toolbar.
- System register [LB-9020] can also enable/disable system setting toolbar. When [LB-9020] is set ON, the toolbar is displayed, and set OFF to hide the toolbar.

# 4.5.1. System Setting

#### cMT/cMT X Series

Starting from OS version 20231201, the system settings interface of the cMT X Series has been revamped. This section demonstrates the different interfaces before and after this OS version. Password is required for configuration and modification of system parameters for security. The default password is 111111.

OS versions after 20231201: Setting O Setting O

**Themes** Light and dark themes available for



Setting 💶 🛛 EXIT 🖬	System	Properties
Log Out, 🔒	Model	cMT2078X
System Properties Model / HMI Name / O	HMI Name	cMT2078X-FAE-4892 >
CODESYS	OS Version	20240328
Activate CODESYS / Re	Hardware Key SJECK	QM-AAZFQ-JJGBQ-AAA >
Project     Clear History / Restart	LAN1 MAC Address	00:0c:26:25:48:92
- Naturali	LAN2 MAC Address	00:0c:26:25:58:32
Ethernet / Configure / I	Date	2024-05-23
Security Admin / Update Projec	Time	(11:23:22)

choice based on its intended surrounding. **System Properties** [Model] The HMI model. [HMI Name] Set the HMI name for easy identification when downloading/uploading project files. [OS Version] The current OS version. [Hardware Key] The hardware key of the HMI. [LAN1 MAC Address] The MAC address for LAN 1. [LAN2 MAC Address] The MAC address for LAN 2. [Date] Set the local date on the HMI. [Time] Set the local time on the HMI. [Brightness] Adjust the screen brightness. [Sound] Adjust the system volume. [Language] Select the system interface language. [Input Method] Select the input method for the system keyboard, multiple selections allowed. [Show Start Button] Enable to display the Start button. If not enabled, the button's position can be set, and it will appear by long-pressing for 1.5 seconds. [Show Download Popup Window] Enable or disable the download popup window.





Setting 💶 🛛 🛛 🗤 🖪	(	CODESYS
Log Out, 🔒	CODESYS	
System Properties	Activation Status	Activated (QA0000500) >
Model / HMI Name / O	CODESYS Status	start
CODESYS Activate CODESYS / Re	Application Status	start
Project	Login Status	logout
Clear History / Restart	Version	20240223
Network     Ethernet / Configure / I	Ethernet (LAN1)	
- Security	Configure	Automatic >
Admin / Update Projec	IP Address	169.254.0.1
	Cubmat Maale	255 255 0.0

[Show Mouse Cursor] Enable or disable the mouse cursor.

[System Keyboard Sound]

Enable or disable the system keyboard sound.

[Direction]

Select the display orientation, options

include 0 degrees, 90 degrees, 180

degrees, or 270 degrees.

[System Metrics]

View CPU, memory, eMMC, and network usage.

[Reset HMI to Default]

Reset the HMI to factory settings.

[OS Upgrade]

Select the OS file from SD card or USB drive to begin upgrading system firmware. During the upgrade, do not turn off the power. For detailed upgrade steps and precautions, please refer to the OS upgrade instructions for each model.

[Third-party Licenses]

View and manage third-party licenses.

# CODESYS

[Activation Status]

View the activation status of CODESYS.

[CODESYS Status]

View the status of CODESYS.

[Application Status]

View the running status of the

application.

[Login Status]

View the login status.

[Version]

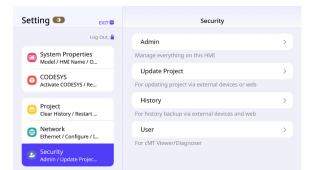
View the version number of CODESYS.

[Ethernet (LAN1)]

Set the IP Address, Subnet Mask, and



Setting 💶 🛛 🛛 🗤	Proje	ct
Log Out, 🔒	Clear History	>
System Properties Model / HMI Name / O	Restart EB Project	
CODESYS Activate CODESYS / Re		
Clear History / Restart		
Network Ethernet / Configure / I		
Security Admin / Update Projec		
Setting 💶 🛛 🛛 🗤	Netwo	rk
Setting  Exit  Log Out,	Netwo	rk
Log Out,		rk Automatic >
Log Out, a	Ethernet LAN2	
Log Out,	Ethernet LAN2 Configure	Automatic >
Log Out, System Properties Model / HMI Name / O., CODESYS Activate CODESYS / Re.,	Ethernet LAN2 Configure IP Address	Automatic > 192.168.2.211
Log Out, a System Properties Model / HMI Name / O CODESYS	Ethernet LAN2 Configure IP Address Subnet Mask	Automatic > 192.168.2.211 255.255.252.0
Log Out.  Comparison Code / HMI Name / O Code Sys Activate CODESYS / Re Project	Ethernet LAN2 Configure IP Address Subnet Mask Gateway	Automatic > 192.168.2.211 255.255.252.0 192.168.1.254



#### Gateway.

#### Project

[Clear History]

Clear the historical data related to

project files, such as recipes, event logs, data sampling, etc.

[Restart EB Project]

Restart the EasyBuilder Pro project file.

#### Network

To download project files to the HMI via Ethernet, the HMI's IP address needs to be correctly configured. Choose to automatically assign an IP address or enter it manually.

[Ethernet LAN1]

Typically used for external network connections, requiring the configuration of a gateway and Domain Name System (DNS).

[Ethernet LAN2]

Typically used for internal network connections, such as connecting to a PLC. To avoid network conflicts, LAN1 and LAN2 should be set in different subnets.

[Network Bridge]

For dual Ethernet port models, bridge mode can be enabled to allow LAN1 and LAN2 to be in the same network segment, achieving the function of a switch.

#### Security

Manage passwords for different users. [Admin]

Highest level of access, capable of operating all functions and settings, including file upload and download, historical data backup, and password



Setting 💶 🛛 🛛 🛛 🗤 🗈	EasyAcces	is 2.0
Ethernet / Configure / I	Version	2.16.12
Security		
Admin / Update Projec	Activation Status	Activated
EasyAccess 2.0 Version / Activation Sta	Region	Global >
👧 VNC	Connect	
Enable / Multiple Conn	State	2 (Connected)
Enable / FTP Port (defa	Error Code	0
Printer Printer Name / Printer	Domain	WEINTEK_FAE
Printer Name / Printer	Session ID	0
Setting 💶 🛛 🛛 🛛 🔊	VNC	
Security Admin / Update Project /		
	Enable	
EasyAccess 2.0 Version / Activation Statu	Multiple Connection	
CODESYS	Require Password	
Activate CODESYS / Resto	VNC Password	>
VNC Enable / Multiple Connec	VNC Interlock	
Enable / FTP Port (defaul	Enable	
	Timeout	30 sec >
Printer Printer Name / Printer Dr	Status Bar Style	Regular >

modification for all permission levels. [Update Project] This password is used for file upload and download and historical data backup. [History] This password is used for FTP Server login and historical data backup.

[User]

Used for logging into cMT

Viewer/Diagnoser. The passwords for the above three permission levels can also be used in cMT Viewer.

#### EasyAccess 2.0

Information page for EasyAccess 2.0. Click the icon to download the demo project. Please confirm your internet connection before downloading the demo project.

# VNC

[Enable]

When VNC function is enabled, VNC client devices can connect to the HMI. This allows remote users to view and operate the HMI.

[Multiple Connection]

Allows multiple VNC client devices to connect. Please note that the more VNC client devices connected simultaneously, the more it may impact the

communication speed of the HMI.

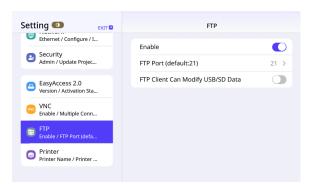
[Require Password]

To protect system security, a password can be set so that only VNC clients entering the correct password can connect to the HMI.

VNC Interlock: [Enable]







Setting 💶 🛛 🛛 🕅 🔊	Printer
Security Admin / Update Project /	Printer Name
EasyAccess 2.0	Name HP_LaserJet_Professional_P1606dn >
Version / Activation Statu	Printer Driver Version
ODESYS Activate CODESYS / Resto	Version 3.21.4
👷 VNC	URI hp:/net/HP_LaserJet_Professional_P1606d >
Enable / Multiple Connec	Print a Test Page
Enable / FTP Port (defaul	Backup PPD File
Printer Printer Name / Printer Dr	Install Printer >
Printer Name / Printer Dr	

Enable VNC interlock function to enhance system security and management.

[Timeout]

Set the timeout period for VNC interlock. If there is no operation within the set time, the session will be automatically disconnected.

[Status Bar Style]

Choose the display mode of the status bar, which can be adjusted as needed. **FTP** 

#### FIP

#### [Enable]

Enabling FTP service allows users to access files on the HMI via FTP clients over the network.

[FTP Port (default:21)]

Set the port number for FTP service. The default port number is 21.

[FTP Client Can Modify USB/SD Data] This option allows FTP clients to modify files on the USB drive or SD card connected to the HMI. When enabling this feature, ensure appropriate security measures are in place to prevent unauthorized access.

# Printer

[Name]

The name of the printer connected to the HMI.

[Version]

The current version of the printer driver. [URI]

The URI of the printer, used for locating the printer.

[Print a Test Page]

Clicking this option will print a test page to check if the printer is functioning

properly.

[Backup PPD File]





# OS versions before 20231201:



Setting	General	(((((()))))))))))))))))))))))))))))))))
System setting	Direction	
Information	Brightness	
CODESYS	Popup download window	
General	FTP Port (default: 21)	21 >
Network		21 7
• Time/Date	FTP client can modify USB/SD data	
	Show Start button	
HMI Name		
<b>—</b> ••• • •		

Back up the PPD (PostScript Printer Description) file, which describes the printer's capabilities. [Install Printer]

Configure the settings for the printer installation.See Chapter 23.3 in this user manual for more information on printer installation.

#### CODESYS

Enter the activation code to activate CODESYS.

#### General

General settings including FTP settings. [Direction] Select the display orientation, options include 0 degrees, 90 degrees, 180 degrees, or 270 degrees. [Brightness] Adjust screen brightness. [Popup download window] When enabled, the download window can pop up. [Show Start button] When enabled, the Start button is displayed. [Show mouse cursor] When enabled, the mouse cursor is displayed.



MAC address	00:0c:26:14:47:3
Obtain an IP address	automatically
IP address	
Subnet mask	
Gateway	192.168.1.254
DNS	
	IP address Subnet mask Gateway

Setting	Y	Time/Date
System setting	Date	2020-05-18 >
Information	Time	13:49:45 >
CODESYS		,
General		
Network		
() Time/Date		
🖉 HMI Name		



#### Network

To download project files to the HMI via Ethernet, the HMI's IP address needs to be correctly configured. Choose to automatically assign an IP address or enter it manually.

To use Email or EasyAccess 2.0, the DNS needs to be set correctly. For models with two Ethernet ports, associate two IP addresses with different domains to avoid network conflict.

[Enable Bridge Mode]

For dual Ethernet port models, bridge mode can be enabled to allow LAN1 and LAN2 to be in the same network segment, achieving the function of a switch.

#### Time/Date

Set the local date and time on the HMI.

#### HMI name

Set the HMI name for easy identification when downloading/uploading project files.





<b>Setting</b>	Clear History
System setting	Clean Recipe
Clear History	
Desired Management	Clean Recipe Database
Project Management	Clean Event Log
System Password	
Security	Clean Data Log
	Clean Operation Log
VNC Setting	
4 EasyAccess 2.0	
_	



Setting	System Password	
System setting	System setting	>
Clear History	Update project	,
🏷 Project Management		
System Password	History	>
S Enhanced Security	User	>
VNC Setting		
4 EasyAccess 2.0		
-		

#### **Clear History**

Clear historical data stored on HMI.

#### **Project Management**

HMI can be rebooted by clicking the Restart button.

## System Password

By default the password is 111111. Userdefined passwords can be used after verification.

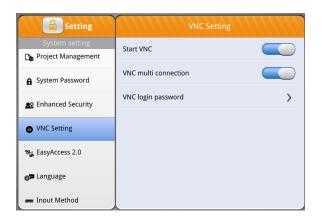


#### **Enhanced Security**

Add or delete user accounts and manage user privileges.







Setting	EasyAccess 2.0	
System setting	EasyAccess 2.0 Connection	>
Clear History	Proxy	``
🏠 Project Management		
System Password		
Security		
VNC Setting		
EasyAccess 2.0		
_		

<b>Setting</b>	Printer	
System setting	Printer name	Not installed
Ha EasyAccess 2.0	URI	
Language	Install network printer	>
Input Method		
🖶 Printer		
🗙 OS Upgrade		
<ol> <li>Reset options</li> </ol>		

#### **VNC Setting**

When enabled, VNC can be used to monitor a remote HMI over an Ethernet network.

[Start VNC]

Allows connections from VNC client devices.

[VNC multi connection]

Allows multiple VNC client devices to connect. Note that the more VNC client devices connected simultaneously, the more it may impact the communication speed of the HMI.

## EasyAccess 2.0

Activate EasyAccess 2.0 service. Click the icon to download the demo project. Please confirm your internet connection before downloading the demo project.

#### Printer

See Chapter 23.3 in this user manual for more information on printer installation.





Setting	Reset options	
System setting	Reset HMI to default	Start
EasyAccess 2.0		
Language		
🚥 Input Method		
🖶 Printer		
X OS Upgrade		
<ol> <li>Reset options</li> </ol>		

#### **OS Upgrade**

Select the OS file from SD card or USB drive to begin upgrading system firmware. During the upgrade, do not turn off the power. For detailed upgrade steps and precautions, please refer to the OS upgrade instructions for each model.

#### **Reset options**

Restore HMI to factory settings.

# eMT/iE/XE/mTV Series

System settings				$\times$		
/Network\Time/Dat	e\Sec	urity \y \	me∖∖r	setting\0\		
		A	- <b>4</b> : 11:			
O Obtain an IP Address Automatically						
• IP address get	from b	elow				
IP address:	192 .	168 .	1	. 64		
Subnet Mask:	255 .	255	255	0		
GateWay:	192	168	1	254		
DNS address						
Divis address.	8.	8.	8	. 8		
Prev Next	Can	cel A	ylgq	ок <=		
	<u>i</u>					

System settings 🛛 📈
Network <sup>V</sup> Time/Date Security by ame setting hg \
Year: 2013 Mon: 8 Day: 8
Week: 4
Hour: 10 Min: 12 Sec: 28
Prev Next Cancel Apply OK <*

#### Network

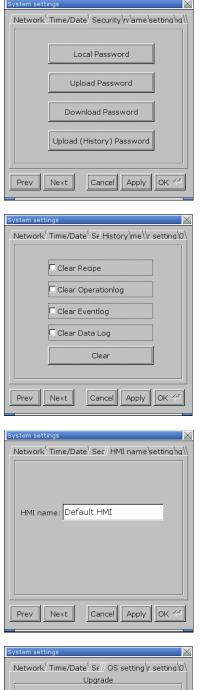
When downloading project file to HMI via Ethernet, set the correct IP of the target HMI. You can obtain an IP address automatically or enter the IP address manually. To use Email and EasyAccess2.0, please set correct DNS address. For models with two Ethernet ports, please associate two IP addresses with different domains to avoid network conflict.

#### Time / Date

Set HMI local time and date.



#### Hardware Settings



# Network' Time/Date' Sel/ OS setting'r setting'n Upgrade Upgrade OS Portrait Mode © 0 © 90 © 180 © 270 (It will take effect at next reboot) Prev Next Cancel Apply OK <

# Security

Password protection, the default is 111111. Please click the buttons to set the passwords, and finish password confirmation. [Password for entering system] [Password for uploading project] [Password for downloading project] [Password for uploading history data]

# History

Clears history data in HMI.

## **HMI** name

Set HMI name to be used when download/upload project.

# **OS** setting

#### [Upgrade OS]

Upgrade firmware. Please do not turn off or unplug HMI during OS upgrade process. For more details, see the instruction about OS upgrade of the model used.

# [Portrait Mode]

Set screen orientation mode. After changing the mode, reconnect HMI to power supply, for the setting to take effect. That is, disconnect all power from HMI, and then connect again. If portrait mode



System settings
Network <sup>y</sup> Time/Date <sup>y</sup> Sec/// VNC server setting\\
Start VNC single-connection
Start VNC multi-connection
Stop VINC
VNC login password
Prev Next Cancel Apply OK 1

System settings 🛛 🔀		
Network <sup>1</sup> Time/Date <sup>1</sup> Sec/// VNC / Miscellaneous		
Backlight		
Brightness		
Download setting		
Popup download window		
Restart after download/upload		
L		
Prev Next Cancel Apply OK <		

System settings	$\times$
Network <sup>y</sup> Time/Date <sup>y</sup> Secur <sup>i</sup> ///VNf/ Misc 2\cess 2.0 <sup>\</sup>	1
☐ Hide mouse cursor	
Enable [Reset HMI to default] button in calibration mode	
FTP client can modify USB/SD data	
Modify HMI ports	
	4
Prev Next Cancel Apply OK <	

**VNC** server setting

correctly displayed.

Remote HMI monitoring and controlling via Ethernet.

is used (90 or 270 degree), the project must be

designed for portrait mode, otherwise it cannot be

[Start VNC single-connection]

Allows connection with one VNC client.

[Start VNC multi-connection]

Allows connection with multiple VNC clients.

Connecting more VNC clients may slow down the communication speed.

Please see the settings steps in the later part.

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

#### Misc 1

Rotary switch for adjusting LCD brightness. [Popup download window] If selected, after inserting USB disk or SD card to HMI, the Upload / Download dialog box shows. [Restart after download/upload] If selected, restarts HMI automatically after uploading / downloading project.

#### Misc 2

[Hide mouse cursor]

If selected, the mouse cursor will be hidden. [Enable [Reset HMI to default] button in calibration mode]

If selected, when the operator presses and holds anywhere on the screen for more than 2 seconds during HMI startup, the touch screen calibration mode will start. After calibration, [Reset HMI to default] option shows.

[FTP client can modify USB/SD data] If selected, USB/SD data can be modified using FTP. [Modify HMI ports]



System settings		
Network <sup>Y</sup> Time/Date <sup>Y</sup> Se/// VN// EasyAccess 2.0		
EasyAccess 2.0 is activated		
account :		
password :		
HWkey =YCT5B500-S5BN-JOWB -VSH7-42A4-NVBM6WHH		
Proxy Refresh Activate		
Prev Next Cancel Apply OK <=		

Change the port number for Upload/Download and FTP.

EasyAccess 2.0 Activate EasyAccess 2.0 service.

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

The following steps explain how to set VNC server.

- **1.** Enable HMI VNC server, set password.
- 2. Install Java IE or VNC Viewer on PC.
- **3.** Enter remote HMI IP in Internet Browser. Or, in VNC Viewer enter remote HMI IP and password.



# 4.5.2. System Information

Network: Displays network information & HMI IP address.

System information (Defau	lt HMI)	$\times$
Network\Version\		
IP Address:	192.168.1.56	
Net Mask:	255.255.255.0	
Route Address:	192.168.1.254	
Mac Address:	00:0C:26:04:70:AC	
	Ok	

Version: Displays HMI firmware version and model type.



#### Hardware Settings

