

# 4. Hardware Settings

This chapter explains HMI settings.

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## 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:

**Models: MT8121XE, MT8150XE, 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)

**Other Models:**

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

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

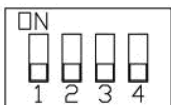
#### 4.4. System Reset

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.
2. 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 / iE**  
**Dip Switch**



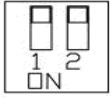
SW1	SW2	SW3	SW4	Mode
ON	OFF	OFF	OFF	Touch Screen Calibration Mode
OFF	ON	OFF	OFF	Hide HMI System Setting Bar
OFF	OFF	ON	OFF	Boot Loader Mode
OFF	OFF	OFF	ON	Reserved
OFF	OFF	OFF	OFF	Normal

#### Note

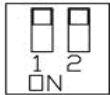
- The state of DIP Switch 4 on each unit may be different. If it should be ON when out from factory, the Dip Switch 4 would be set ON and cut off. If it should be OFF, the Dip Switch 4 would be set OFF but the switch is not cut.

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

<b>mTV</b>	OFF	ON	Boot loader mode
<b>Dip Switch</b>	OFF	OFF	Normal mode



<b>cMT-SVR</b>		SW1	SW2	Mode
<b>Dip Switch</b>		ON	ON	Restore factory default
		ON	OFF	Restore Ethernet IP Settings
		OFF	ON	Boot loader mode
		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.



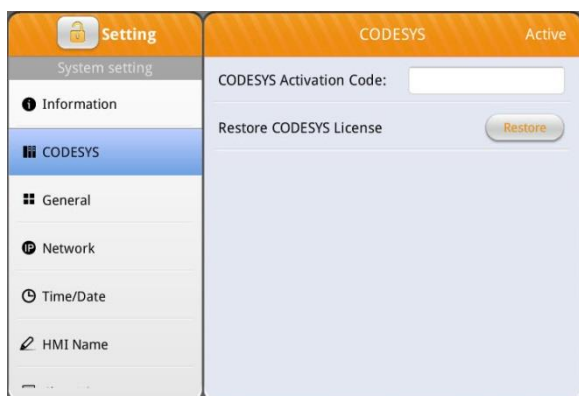
How to hide HMI System Setting Toolbar:

- 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

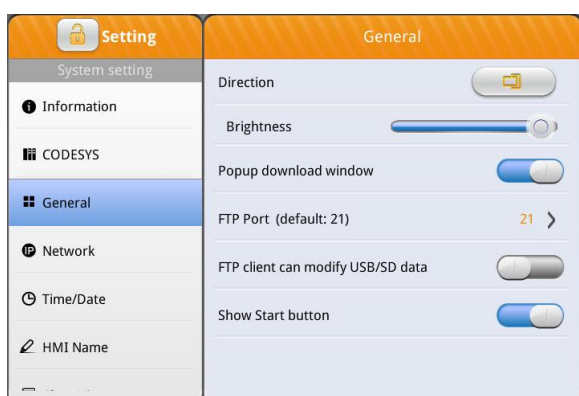
#### cMT/cMT X Series

Set or modify system parameters. Confirm password for security first. The factory default password is 111111.



## CODESYS

Enter the activation code to activate CODESYS.



## General

General settings including FTP settings.

[Direction]

Set screen orientation mode to landscape or portrait by selecting degrees from 0 / 90 / 180 / 270.

[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]

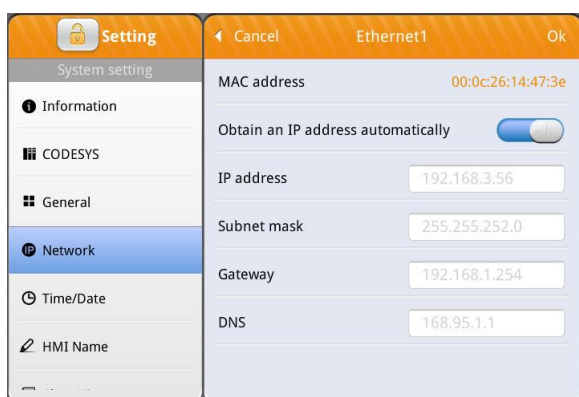
When enabled, the mouse cursor is displayed.

## Network

Download project file to HMI via Ethernet.

The IP address of the target device (HMI) must be correctly set. Users can choose from obtaining an IP address automatically or entering an IP address manually. To use Email or EasyAccess 2.0, please set DNS correctly. For models with two Ethernet ports, please associate two IP addresses with different domains to avoid network conflict.

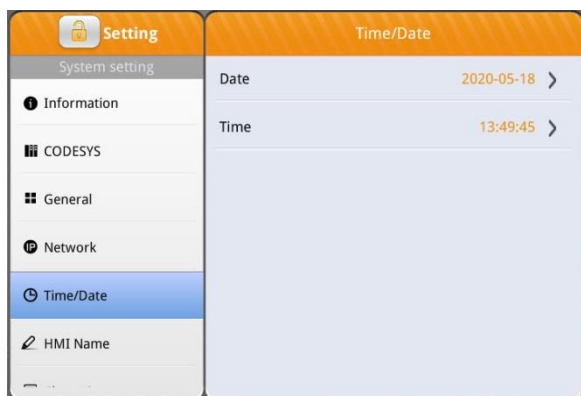
[Enable Bridge Mode]



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.

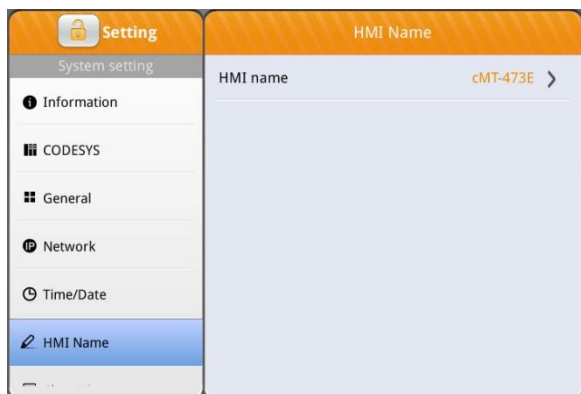
### Time/Date

Set HMI local date and time.



### HMI name

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



### Clear History

Clear historical data stored in HMI.





### Project Management

HMI can be rebooted by clicking the Restart button.



### System Password

By default the password is 111111. User-defined passwords can be used after verification.



### Enhanced Security

Add or delete user accounts and manage user privileges.



### 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. Connecting multiple VNC Client devices simultaneously may affect the communication speed of the HMI.



### EasyAccess 2.0

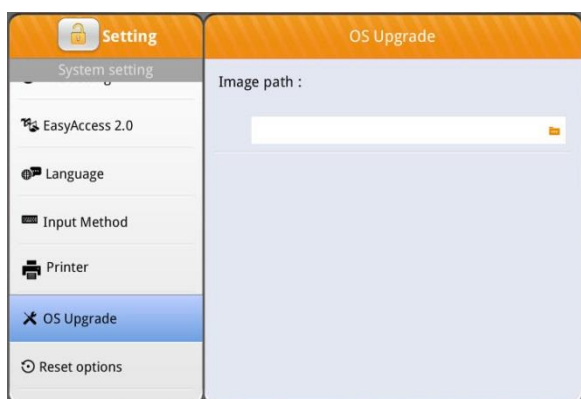
Activate EasyAccess 2.0 service.

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



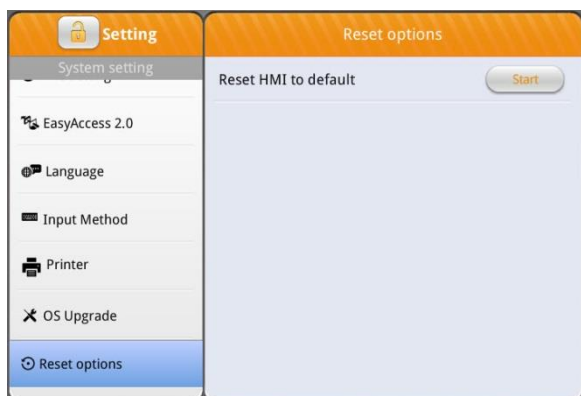
### Printer

Please see Chapter 23.3 in EasyBuilder Pro user manual for more information on installing printers.



### OS Upgrade

Select an OS file saved in an SD card or USB disk to upgrade OS. When OS is upgrading, please do not cut off HMI power. For more information on upgrade steps or notes, see the OS upgrade manual of the model in use.

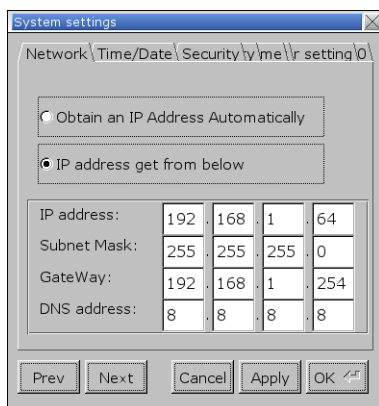


### Reset options

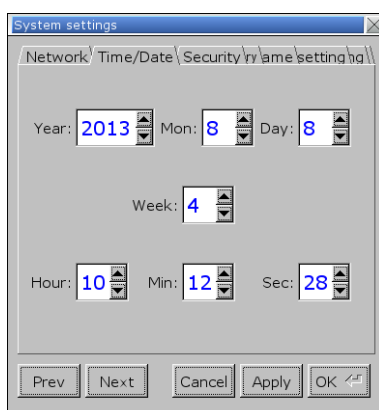
Restore HMI to factory settings.



## eMT/iE/XE/mTV Series

**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.

**Security**

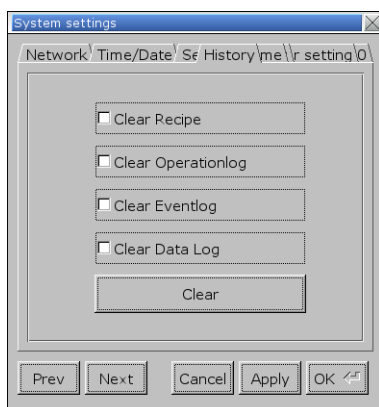
Password protection, the default is 111111. Please click the buttons to set the passwords, and finish password confirmation.

[Password for entering system]

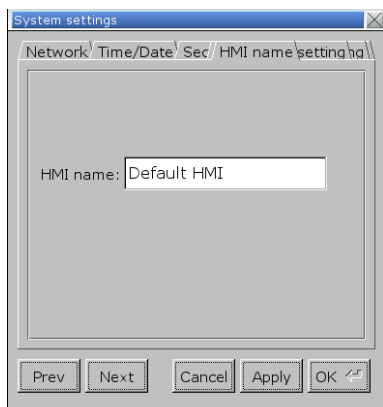
[Password for uploading project]

[Password for downloading project]

[Password for uploading history data]

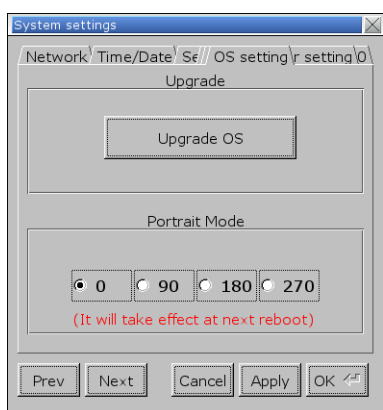
**History**

Clears history data in HMI.



### HMI name

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



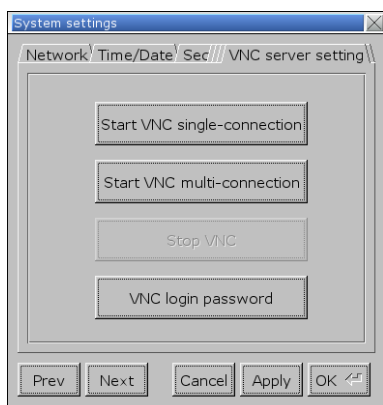
### OS setting

[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 is used (90 or 270 degree), the project must be designed for portrait mode, otherwise it cannot be correctly displayed.



### VNC server setting

Remote HMI monitoring and controlling via Ethernet.

[Start VNC single-connection]


Allows connection with one VNC client.

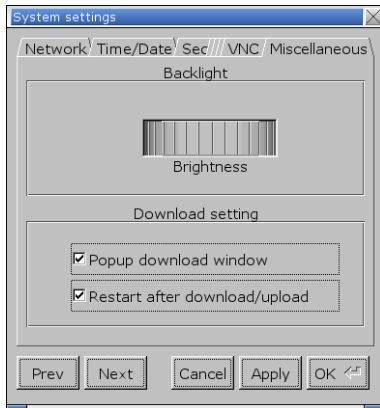
[Start VNC multi-connection]

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**

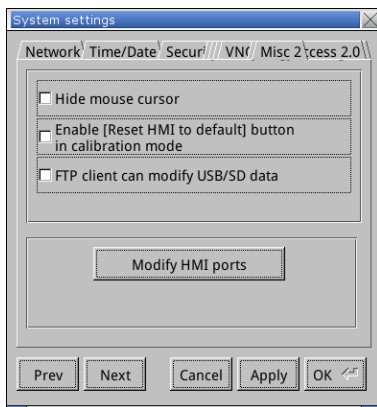
Rotary switch for adjusting LCD brightness.

[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]

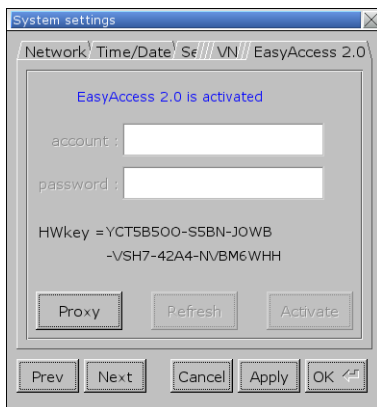
If selected, when the operator presses and holds anywhere on the screen for more than 2 seconds during HMI startup, the touch screen calibration mode will start. After calibration, [Reset HMI to default] option shows.

[FTP client can modify USB/SD data]

If selected, USB/SD data can be modified using FTP.

[Modify HMI ports]

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.

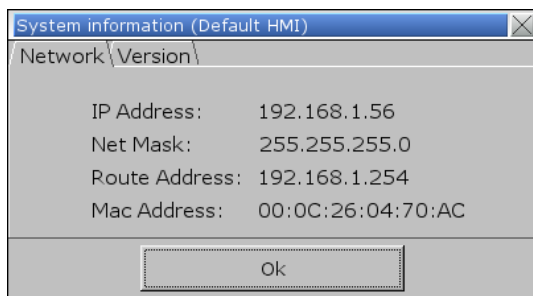
The following steps explain how to set VNC server.

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.



**Version:** Displays HMI firmware version and model type.

