

User Manual

cMT-SVR Startup Guide

Table of Contents

Chapter 1 Overview	1
1.1 Specification	1
1.2 Dimensions.....	2
1.3 Connector pin designations	3
1.4 USB host port and SD card slot	3
1.5 Ethernet port.....	3
1.6 DIP switch.....	3
1.7 LED indicator	4
1.8 CR1225 battery	4
1.9 Power connection	4
1.10 How to update cMT-SVR OS image.....	4
1.11 Requirements.....	5
Chapter 2 System Setting	6
2.1 cMT-SVR System Setting	7
2.1.1 Information.....	7
2.1.2 System Setting	8
Chapter 3 How to create a cMT-SVR project.....	13
3.1 Create a new project.....	13
3.2 Download project to cMT-SVR.....	14
Chapter 4 cMT Viewer App	15
4.1 Introduction of icons.....	15
4.2 How to load project file to the client device.....	16
4.1 How to switch between cMT-SVR projects.....	19

Chapter 1 Overview

1.1 Specification



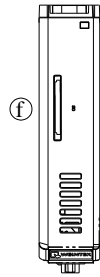
cMT-SVR Interface

Features

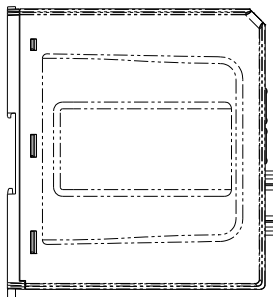
- Two Gigabit Ethernet Ports
- Supports E-mail
- Compact Design and DIN-rail Mountable
- Built-in 256MB Flash Memory
- SD Card Slot for Extension of Storage
- One USB Host Port
- Fan-less Cooling System
- Supports MPI 187.5K
- Power Isolator Inside

Display	Project Screen Size	1024x748 or 768x1004 (Portrait mode)
Memory	Storage(MB)	256
	RAM (MB)	256
Processor		ARM Cortex A8 600Mhz
I/O Port	SD Card Slot	SD/SDHC
	USB Host	USB 2.0 x 1
	USB Client	N/A
	Ethernet	10/100/1000M x 2
	COM Port	COM1 RS232,COM2 RS485 2W/4W,COM3 RS-485 2W
	CAN Bus	N/A
	HDMI	N/A
RTC		Built-in (CR1225 3V lithium battery)
Power	Input Power	24±20%VDC
	Power Consumption	230 mA@24V
	Power Isolation	Built In
	Voltage Resistance	500VAC (1 min)
	Isolation Resistance	Exceed 50MΩ at 500VDC
	Vibration Endurance	10 to 25Hz(X,Y,Z direction 2G 30 minutes)
Specification	Enclosure	Plastic
	Dimensions WxHxD	130 x 115 x 27mm
	Weight (kg)	Approx. 0.18 kg
	Mount	35mm Din rail mounting
Environment	Storage Temperature	-20° ~ 70°C (-4° ~ 158°F)
	Operating Temperature	-20° ~ 55°C (-4° ~ 131°F)
	Relative Humidity	10% ~ 90% RH (non-condensing)
Certificate	CE	CE marked; cULus Listed
Software		EasyBuilder Pro V4.00.01 or later versions

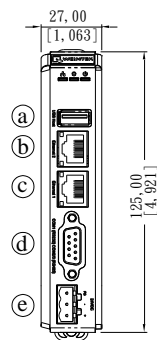
1.2 Dimensions



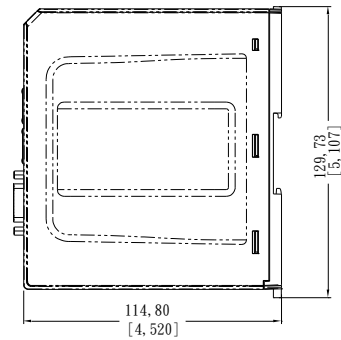
Top View



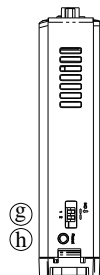
Side View



Front View



Side View



Bottom View

a	USB Host Port	e	Power Connector
b	Ethernet 2 Port	f	SD Card Slot
c	Ethernet 1 Port	g	DIP Switch
d	Com1 RS-232, Com2 RS-485 2W/4W, Com3 RS-485 2W	h	Reset Button

1.3 Connector pin designations

PIN#	Symbol	COM1 RS-232	COM2 RS-485		COM3 RS-485
			2W	4W	
1	Data+				Data+
2	RxD	Received Data			
3	TxD	Transmitted Data			
4	Data-				Data-
5	GND	Ground			
6	RX+		Data+	RX+	
7	RX-		Data-	RX-	
8	TX+			TX+	
9	TX-			TX-	

1.4 USB host port and SD card slot

USB 2.0 full speed host interface supports barcode scanners and USB drive. While using external hard drive, use external power supply. Do not use USB port to charge external device. You may use SD card as an extension of storage

1.5 Ethernet port

The unit has two 10/100/1000M Gigabit Ethernet ports.

The LED indicators on the Ethernet port indicate:

Orange LED: LAN link status

Green LED: Active communication status

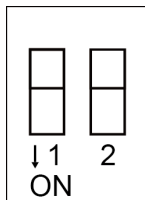
1.6 DIP switch

Each unit is 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.

When SW1 is turned ON and power the unit again, the IP setting is restored to default:

Ethernet 1: DHCP

Ethernet 2: 192.168.100.1



SW1	SW2	Mode
OFF	OFF	Normal mode
ON	OFF	Restore Ethernet IP settings
OFF	ON	Boot loader mode
ON	ON	Restore factory default

Note: Reboot cMT-SVR after adjusting DIP switches to start the corresponding mode. When restore factory default, the project file and history data stored in the unit are all cleared.

1.7 LED indicator

LED indicators show the operation status of cMT-SVR.

Power (Orange)	Indicates power status.
CPU (Green)	Indicates CPU status.
Communication (Blue)	Indicates communication status. It flashes during communication and may stay on when communication is good.

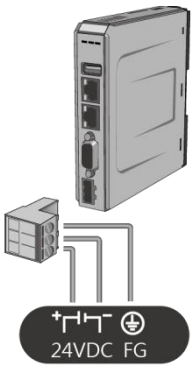
1.8 CR1225 battery

The cMT-SVR Series HMI requires a CR1225 coin type lithium battery to keep the RTC running.

Battery type: CR1225 3V lithium battery

1.9 Power connection

Power: The unit can be powered by DC power only, voltage range: $24\pm 20\%$ Volts DC, compatible with most controller DC systems. The power conditioning circuitry inside the unit is accomplished by a switching power supply. The peak starting current can be as high as 500mA.



Note: Connect positive DC line to the '+' terminal and the DC ground to the '-' terminal.

1.10 How to update cMT-SVR OS image

Copy the MTfirmware.bin file to SD card, insert the SD card to cMT-SVR and flip DIP Switch 2 to ON.

Restart cMT-SVR and wait about 2 minutes for the system to update OS image.

1.11 Requirements

1. HMI model: cMT-SVR
2. EasyBuilder Pro software version: V4.00.01 or later versions
3. Client device: cMT-iV5, iPad Series, Android devices
4. iOS version: iOS 6.0 or later versions



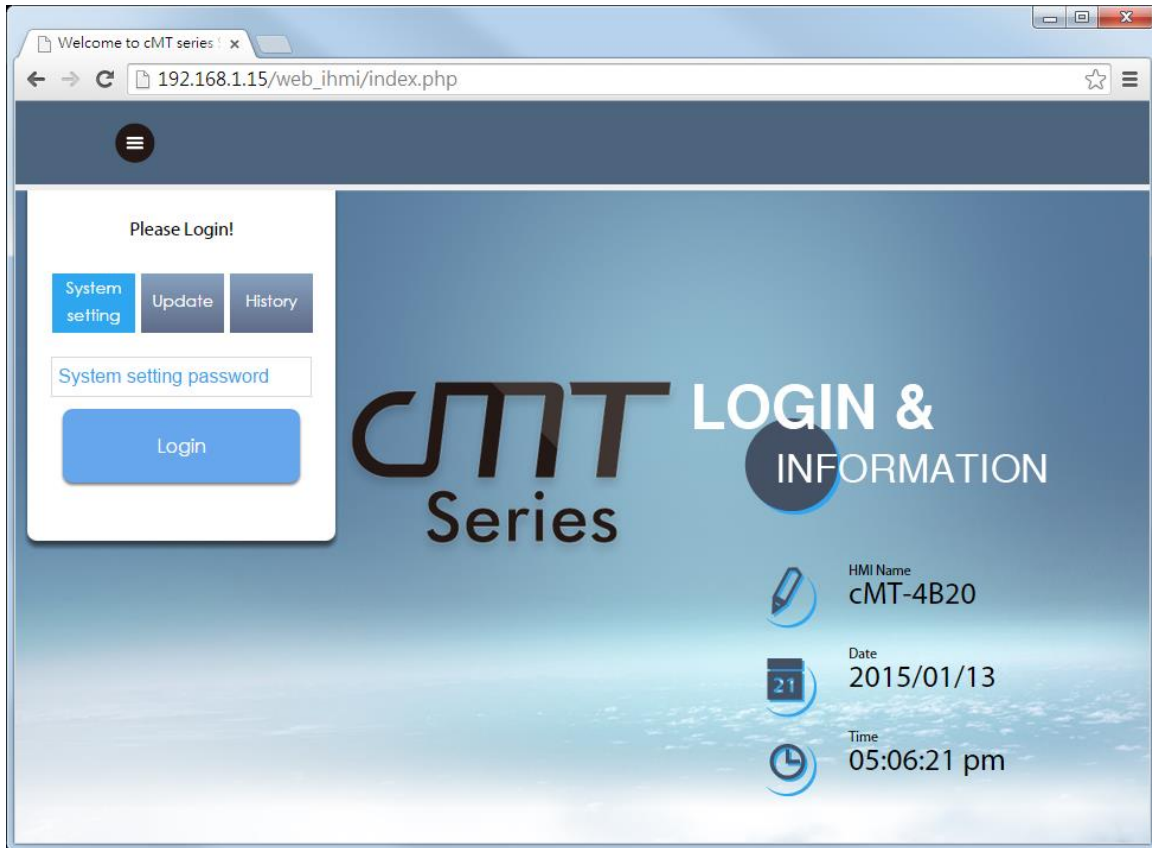
5. cMT Viewer App: Download cMT Viewer application from App Store or Google Play.
6. Wireless router: The cMT-SVR connects with other devices through wires. To connect an iPad or an Android device with cMT-SVR, use a wireless router. The router is not necessary when connecting cMT-iV5.
7. One client device can operate three logged in cMT-SVRs simultaneously.
8. One cMT-SVR can connect with three client devices simultaneously.

Chapter 2 System Setting

Connect cMT-SVR via Ethernet cable, and configure system settings using the following two ways.

Set in internet browser

Open internet browser (IE, Chrome, or Firefox), and enter cMT-SVR IP address (for example: 192.168.1.15/web_ihmi) to configure cMT-SVR.

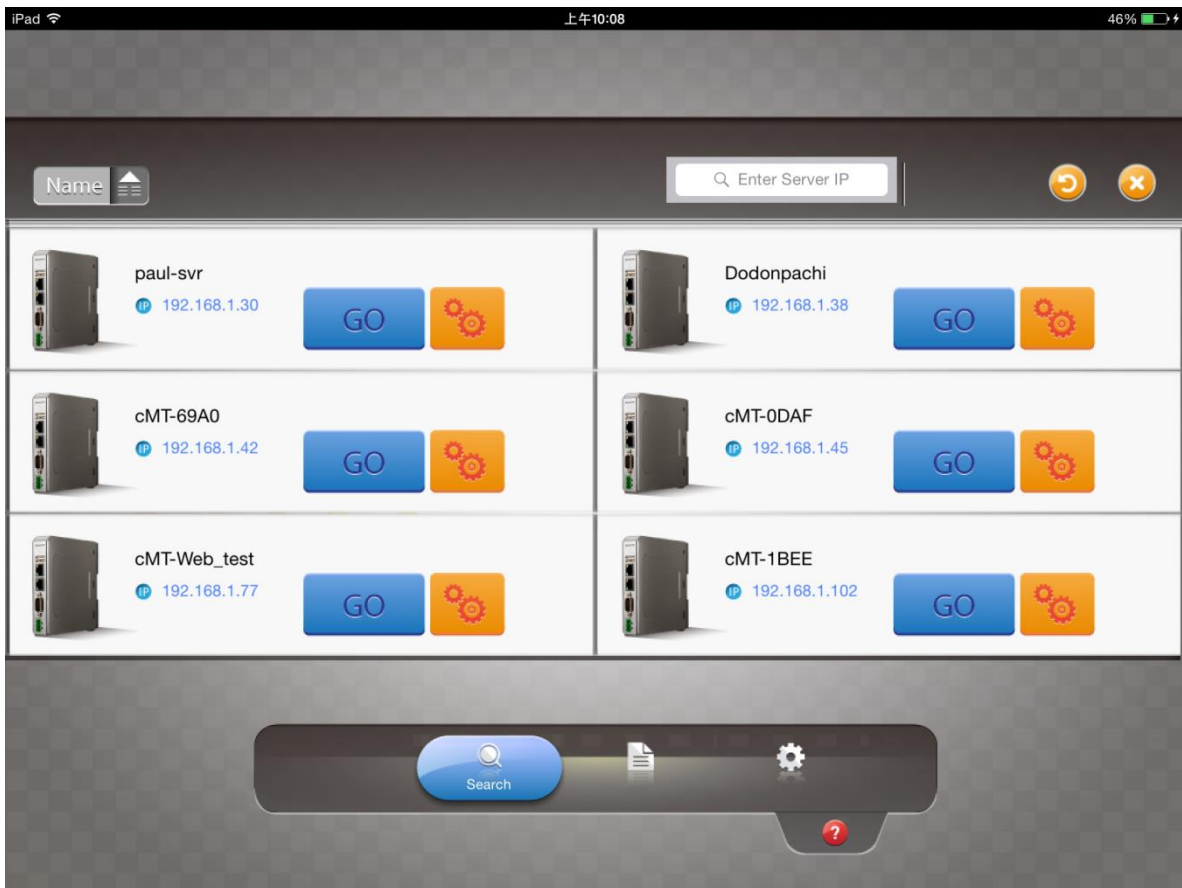


Set on iPad or Android device

Install and open cMT Viewer App on iPad or Android device.

Tap Search icon, select the cMT-SVR and tap  icon to configure cMT-SVR.

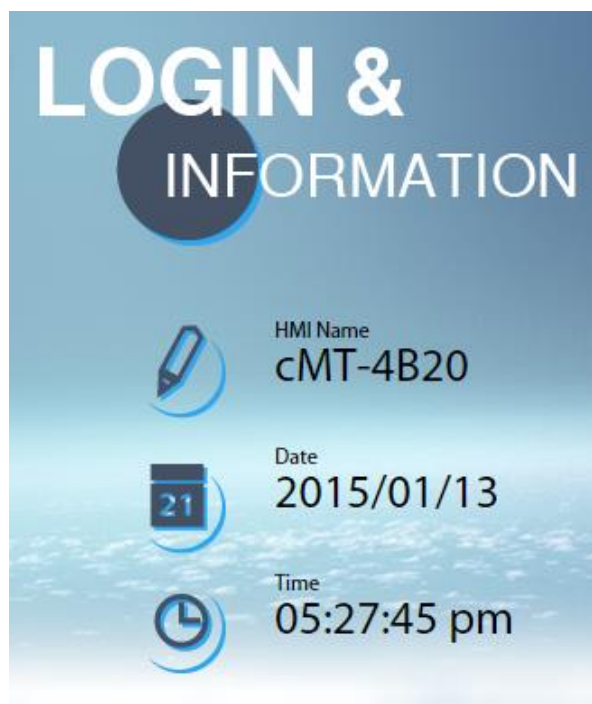
Note: The default IP address of Ethernet 1: DHCP, and Ethernet 2: 192.168.100.1






2.1 cMT-SVR System Setting

2.1.1 Information

The following part introduces cMT-SVR system information.



Icon	Description
	Displays HMI name.
	Displays RTC date.
	Displays RTC time.

2.1.2 System Setting

The following part introduces cMT-SVR system setting.

Please Login!

System
setting

Update

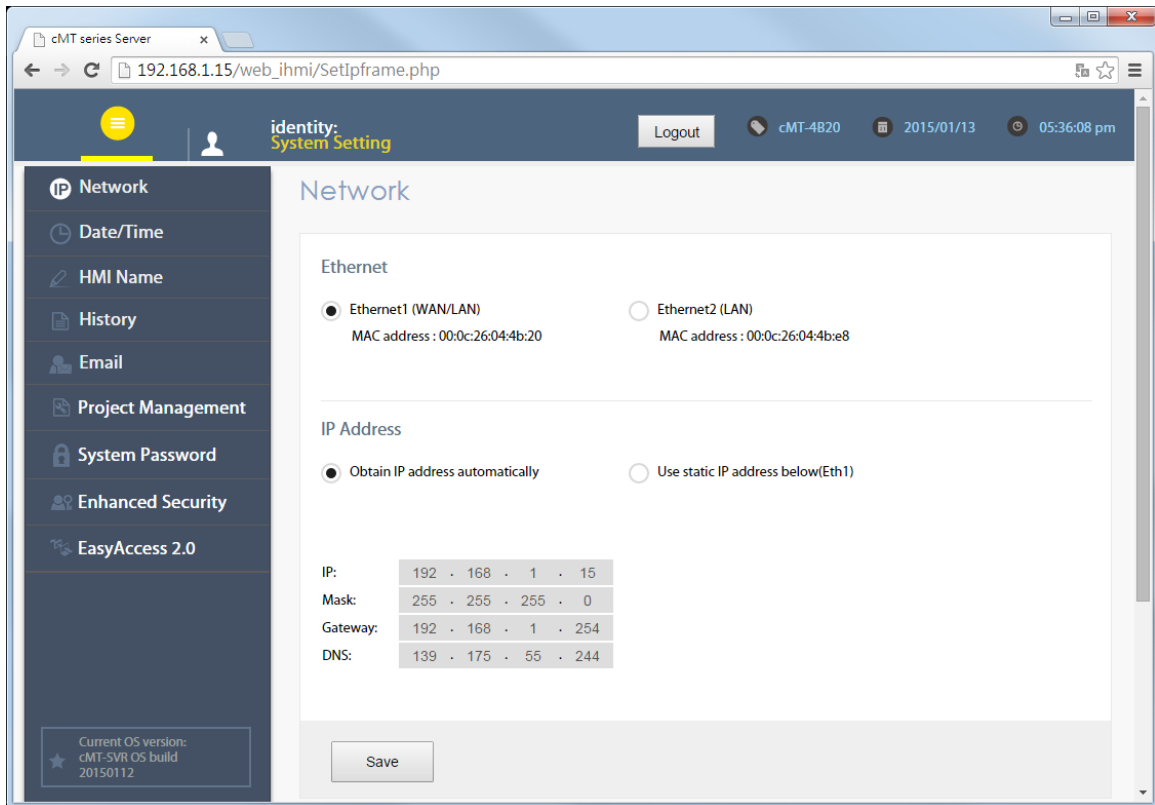
History

Login

There are two modes, [System setting] and [Update]. [System Setting] controls all the settings while [Update] controls limited items. For safety, confirm password before configuring. Also, before selecting [History], enter password. History data can be downloaded when password is confirmed.

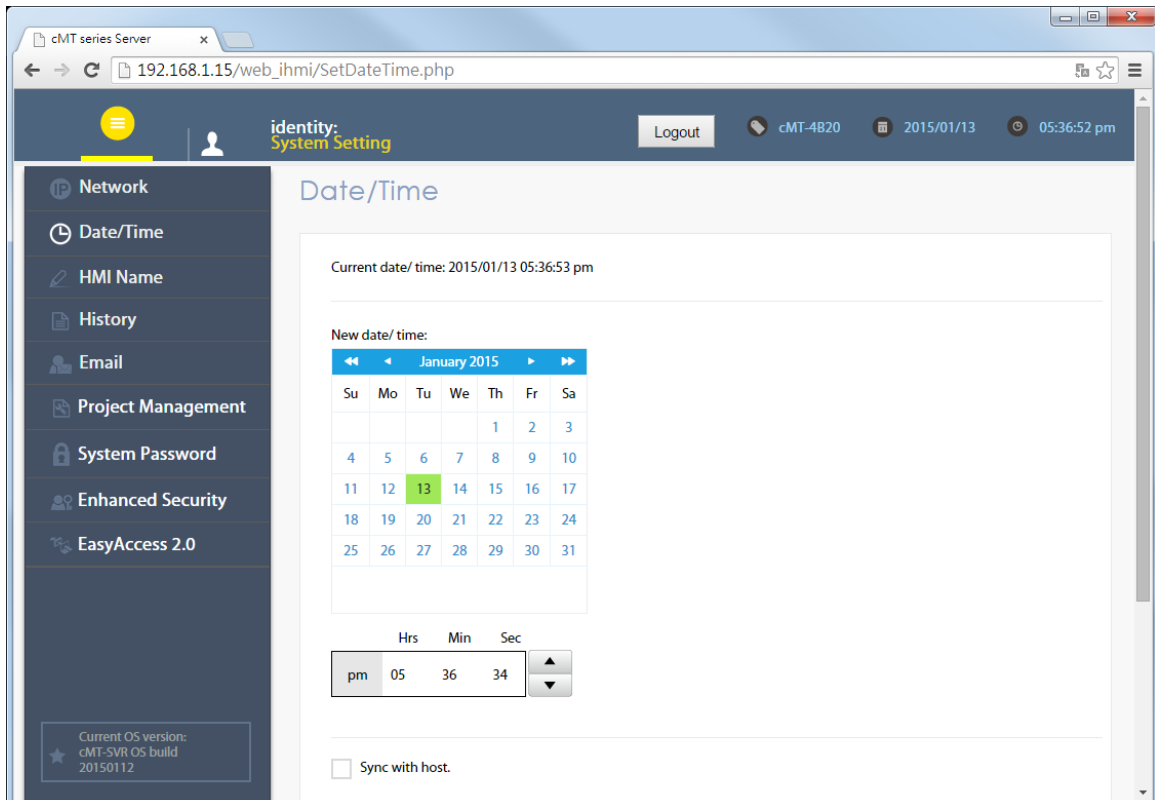
Network

Set the IP address of Ethernet 1 and Ethernet 2. The default IP address of Ethernet 1 is DHCP. The default IP address of Ethernet 2 is 192.168.100.1.



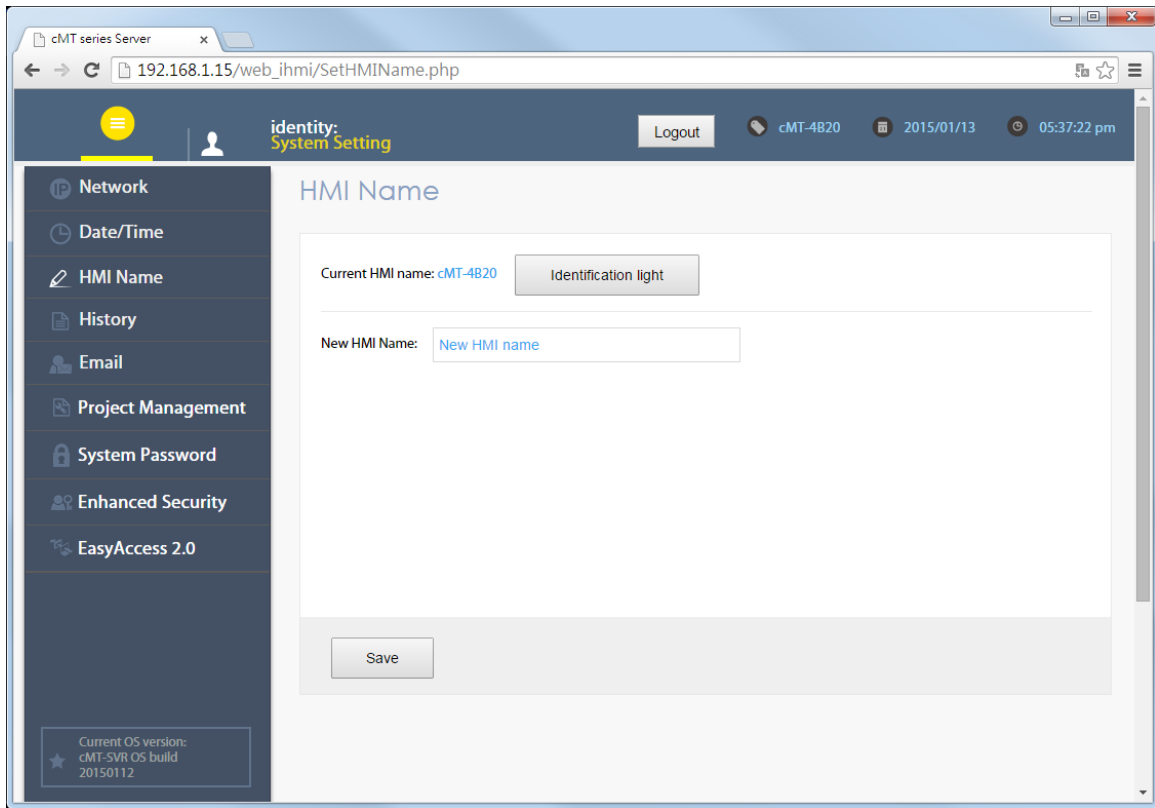
Date/Time

Set RTC time, or select [Sync with host.] to synchronize PC time with cMT-SVR.



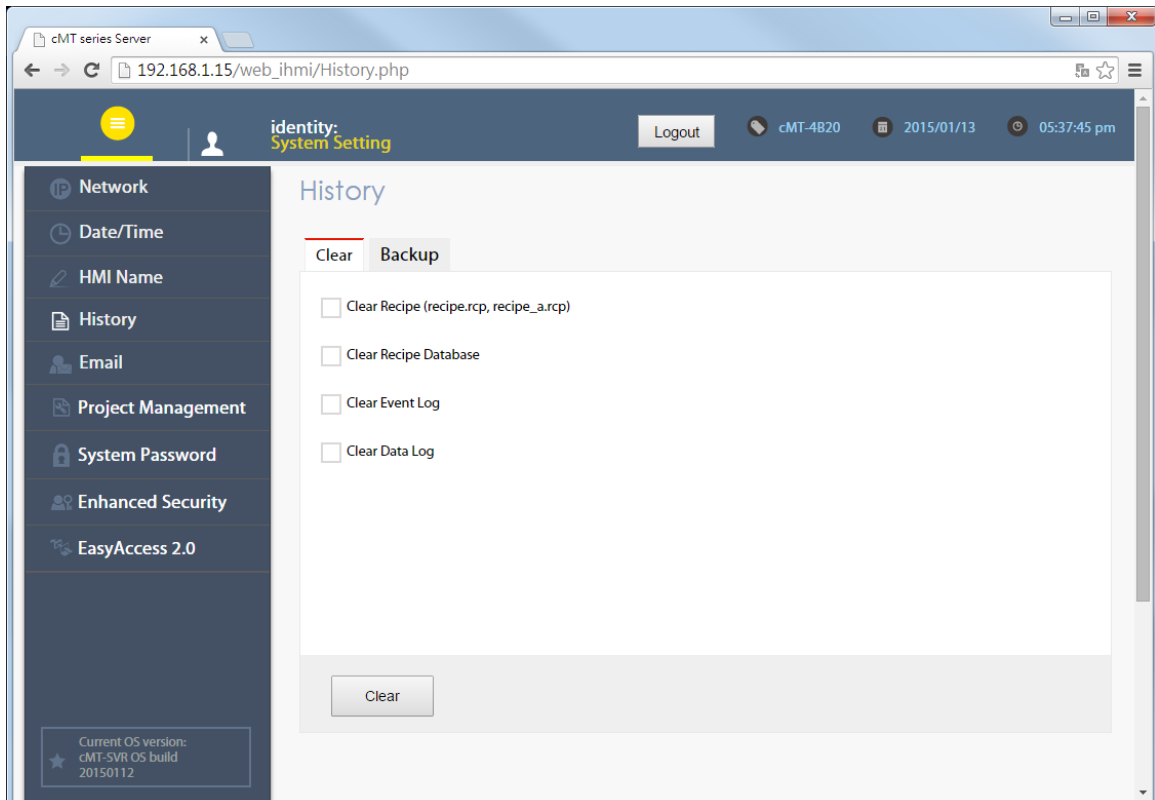
HMI Name

Enter a cMT-SVR name to identify the unit when transferring data. This saves the trouble of remembering the IP address of each cMT-SVR.



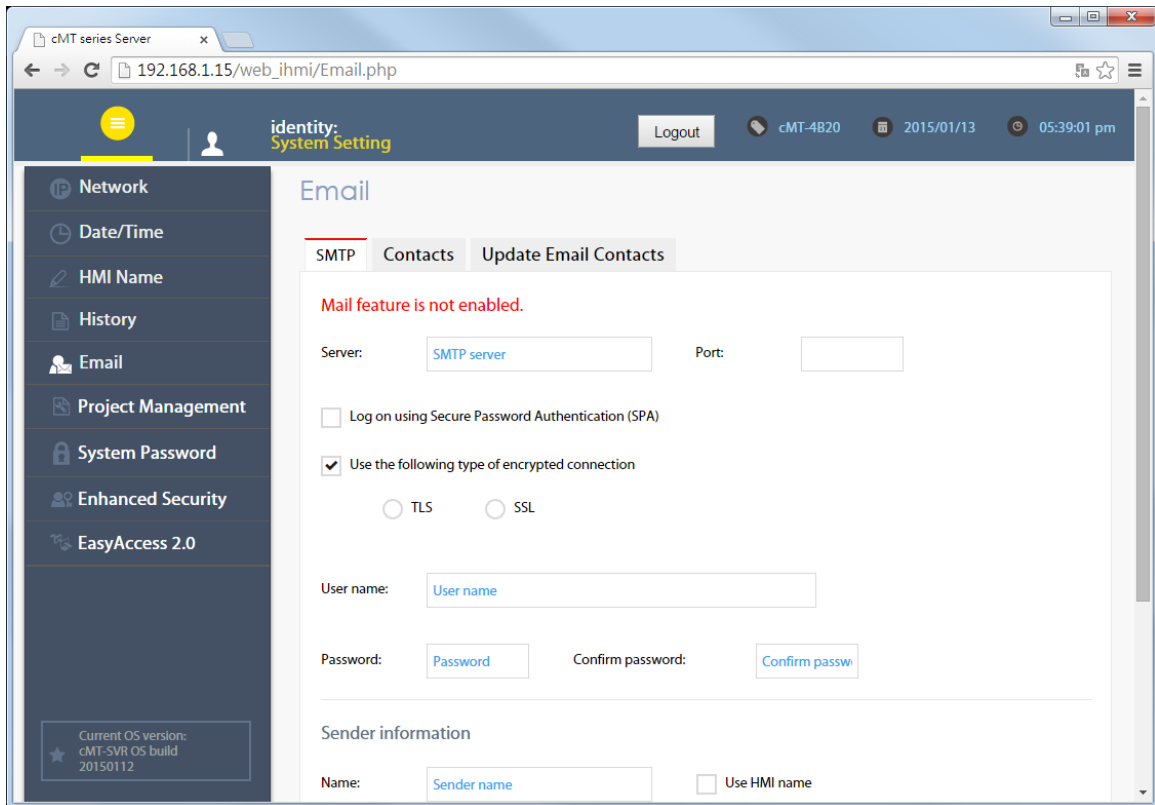
History

Clear and backup history data in cMT-SVR.



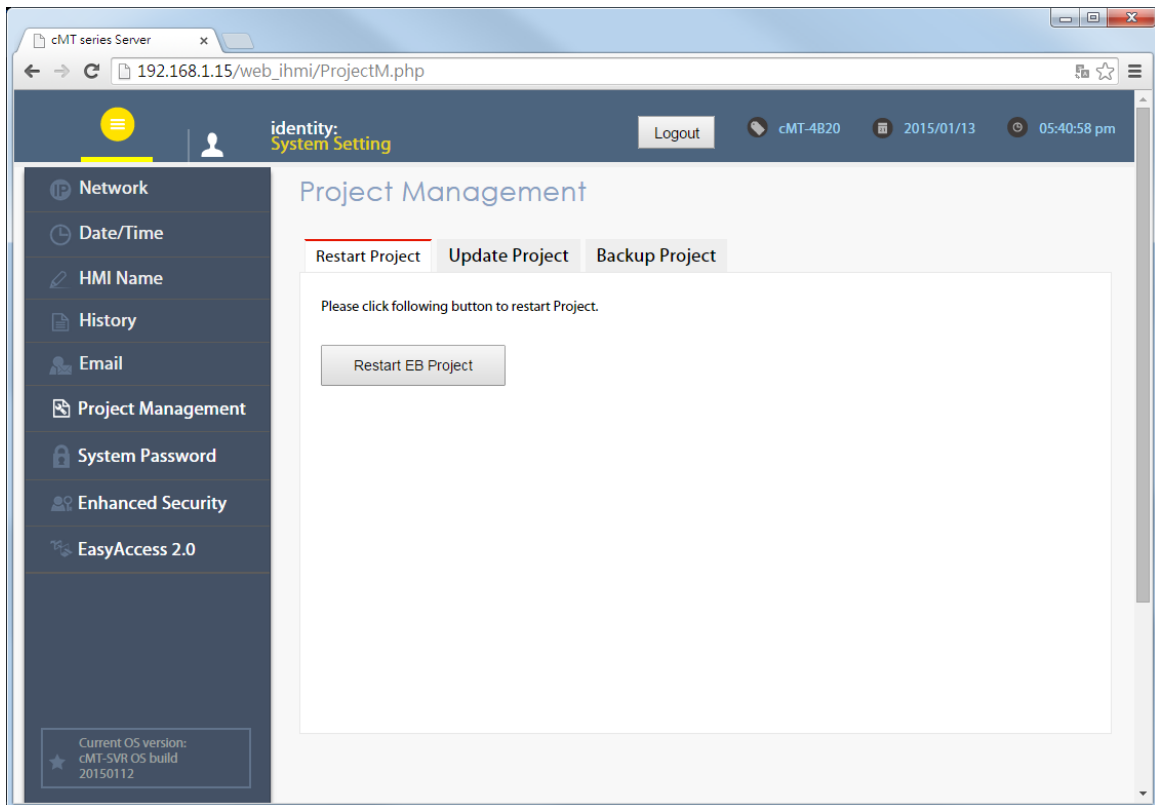
Email

Set the mail address and group of the Email contact.



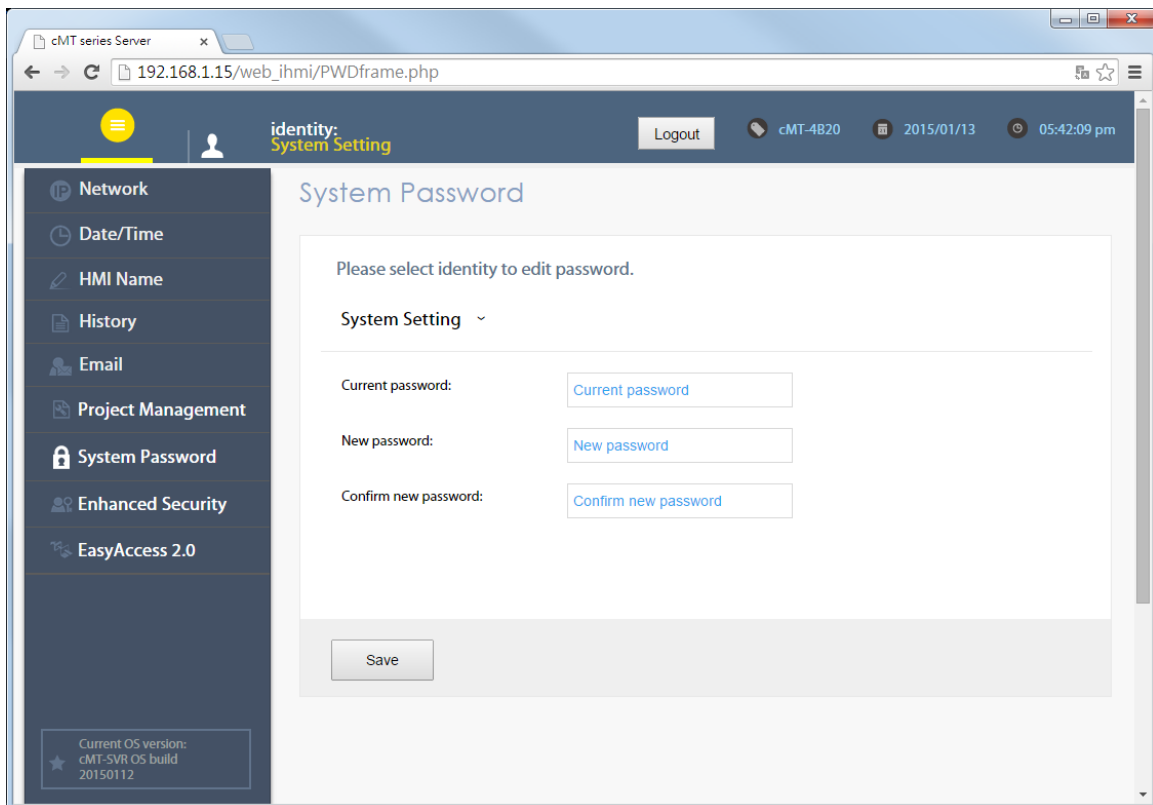
Project Management

Restart cMT-SVR project and restore to initial state, or update and backup project file.



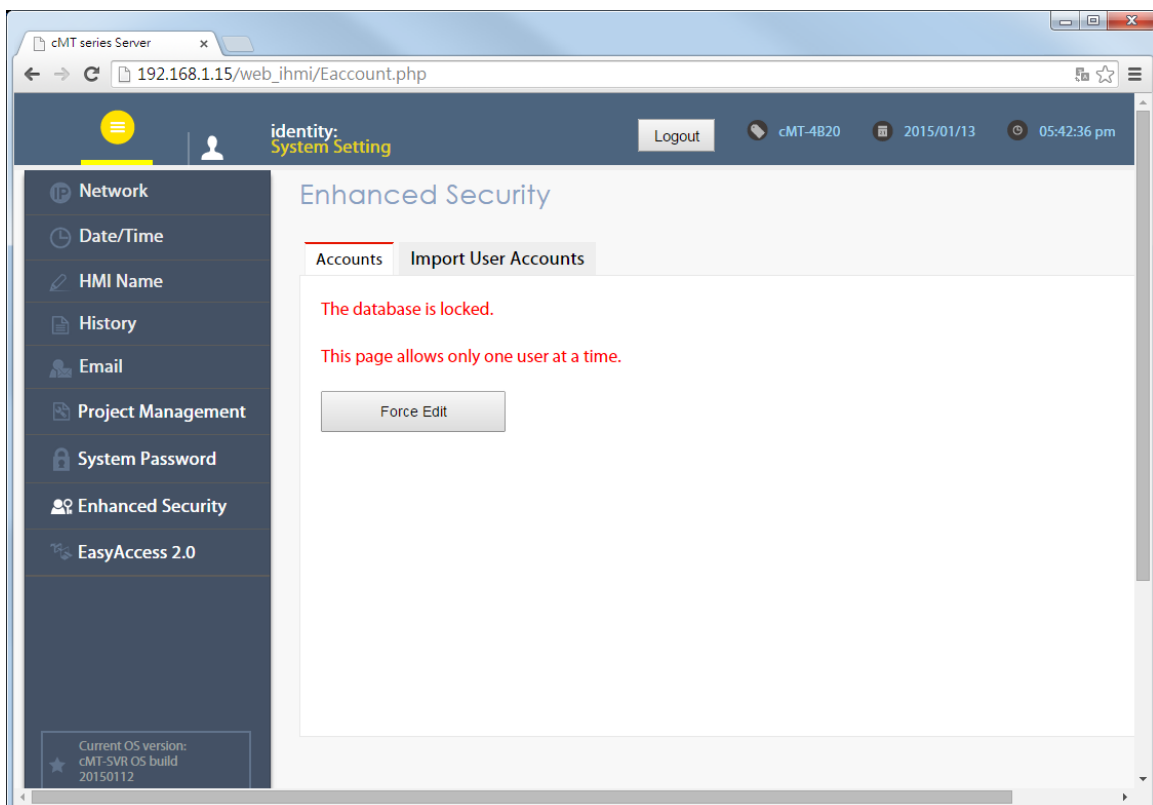
System Password

Set the password for login, and the password for transferring project file and history file.



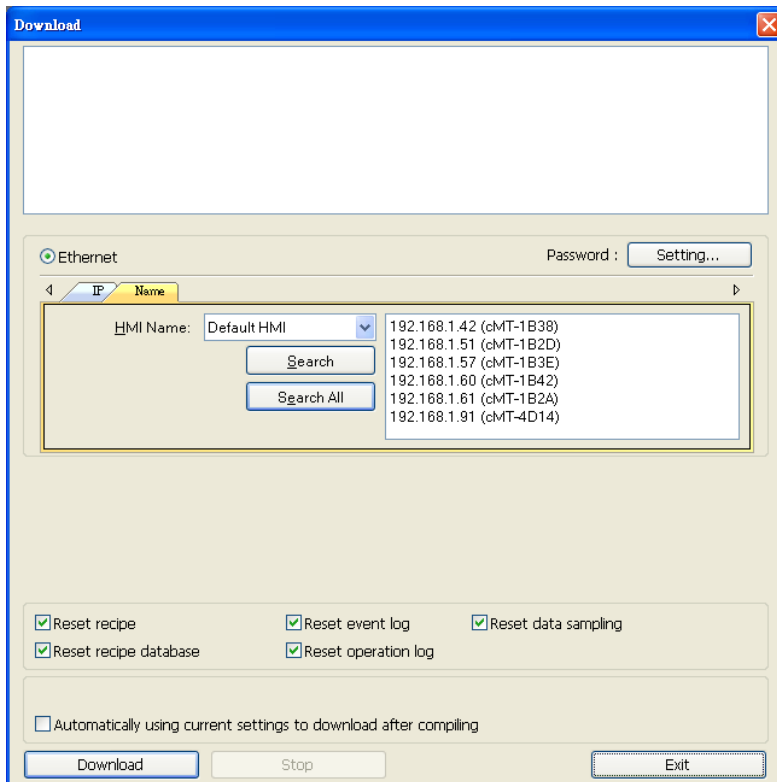
Enhanced Security

Set the privilege and password of the account.



3.2 Download project to cMT-SVR














The compiled *.cxob file can be downloaded by using EasyBuilder Pro via Ethernet.



Or, in cMT-SVR System setting, tap Project Management \ Update Project to transfer project file from PC to cMT-SVR. Open internet browser (IE, Chrome, Firefox), enter cMT-SVR IP address (for example: 192.168.1.15/web_ihmi), tap System setting, enter password, and then configure cMT-SVR settings.

Chapter 4 cMT Viewer App

4.1 Introduction of icons

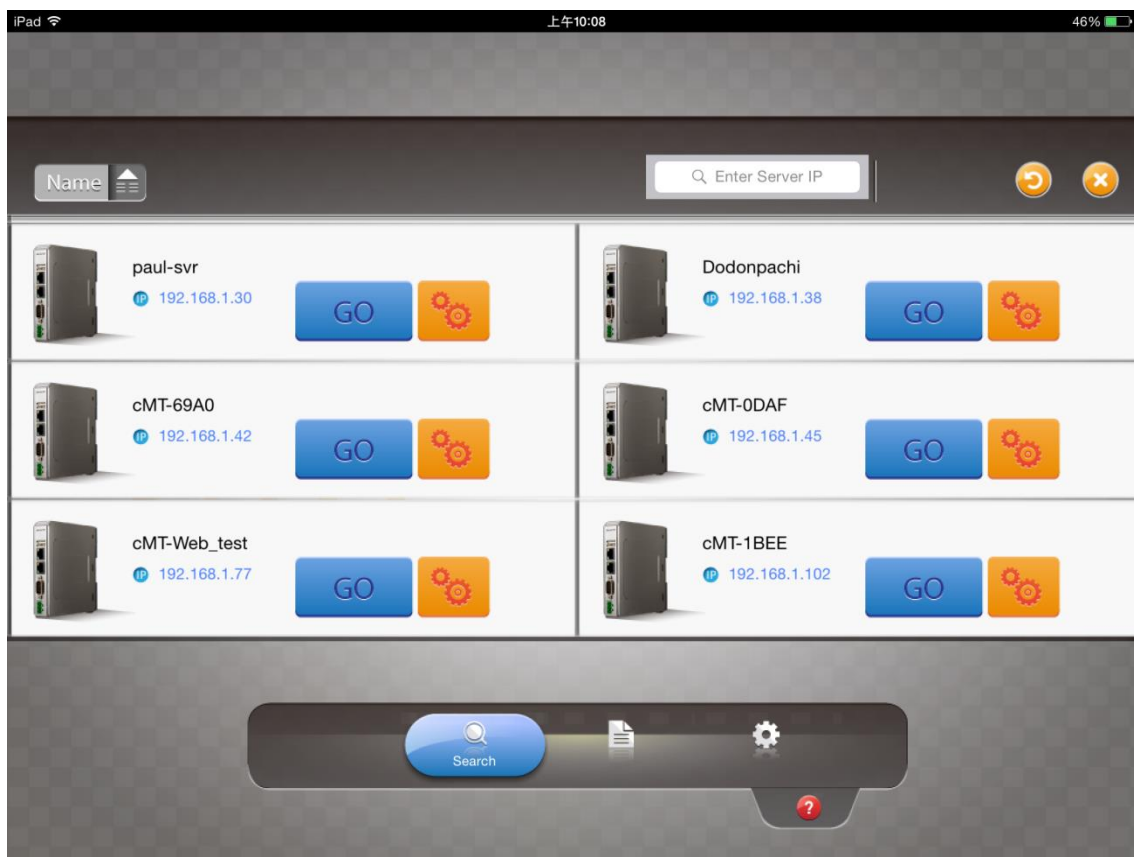
Icon	Description
	After download cMT Viewer from App Store or Google Play, tap this icon to run cMT Viewer App.
	After opening cMT Viewer, tap the Start Button to configure the settings.
	Project tab lists the logged in cMT-SVRs. Each client device can control three cMT-SVRs simultaneously.
	Search tab lists all the cMT-SVRs on the same network.
	History tab lists the cMT-SVRs that logged in before.
	Setting tab is used to adjust the volume or enable Auto-Lock feature on client end. If needed, switch languages here. After changing the language, log in cMT Viewer App again to update the setting.
	Tap this icon to make cMT-SVR CPU LED (green) flash for finding the cMT-SVR.
	Tap this icon to load cMT-SVR project to the client device and operate.
	Tap this icon to configure cMT-SVR system settings.
	In Search tab sort cMT-SVRs according to IP address.
	In Search tab sort cMT-SVRs according to HMI name.
	In History tab clear all the login records.
	Tap this icon to open Help.

4.2 How to load project file to the client device

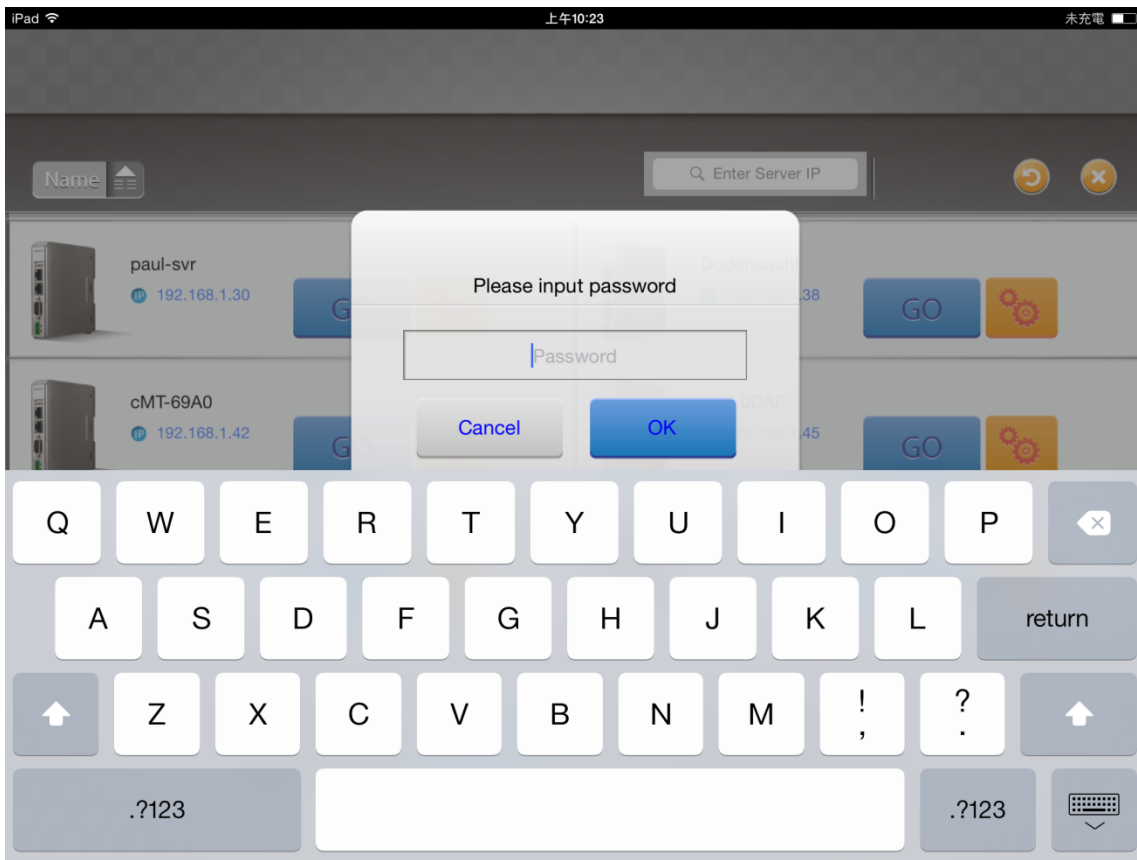
Step 1. Start cMT Viewer App, tap Start Button as shown in the following figure.



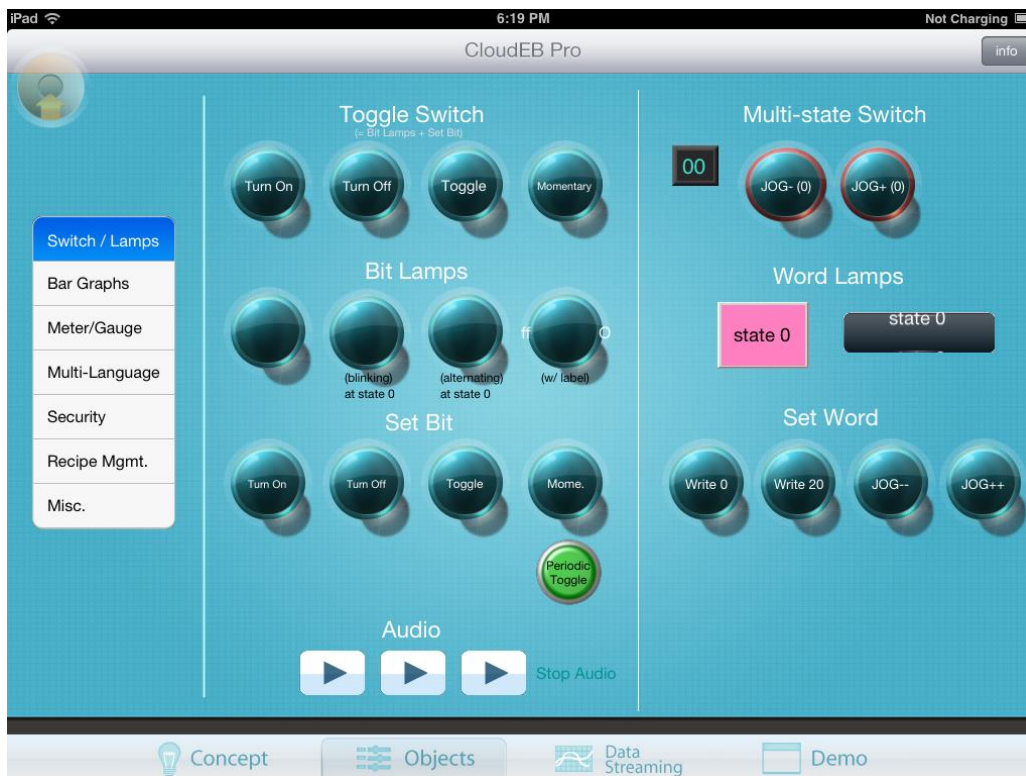
Step 2. Search all the cMT-SVRs on the same network.



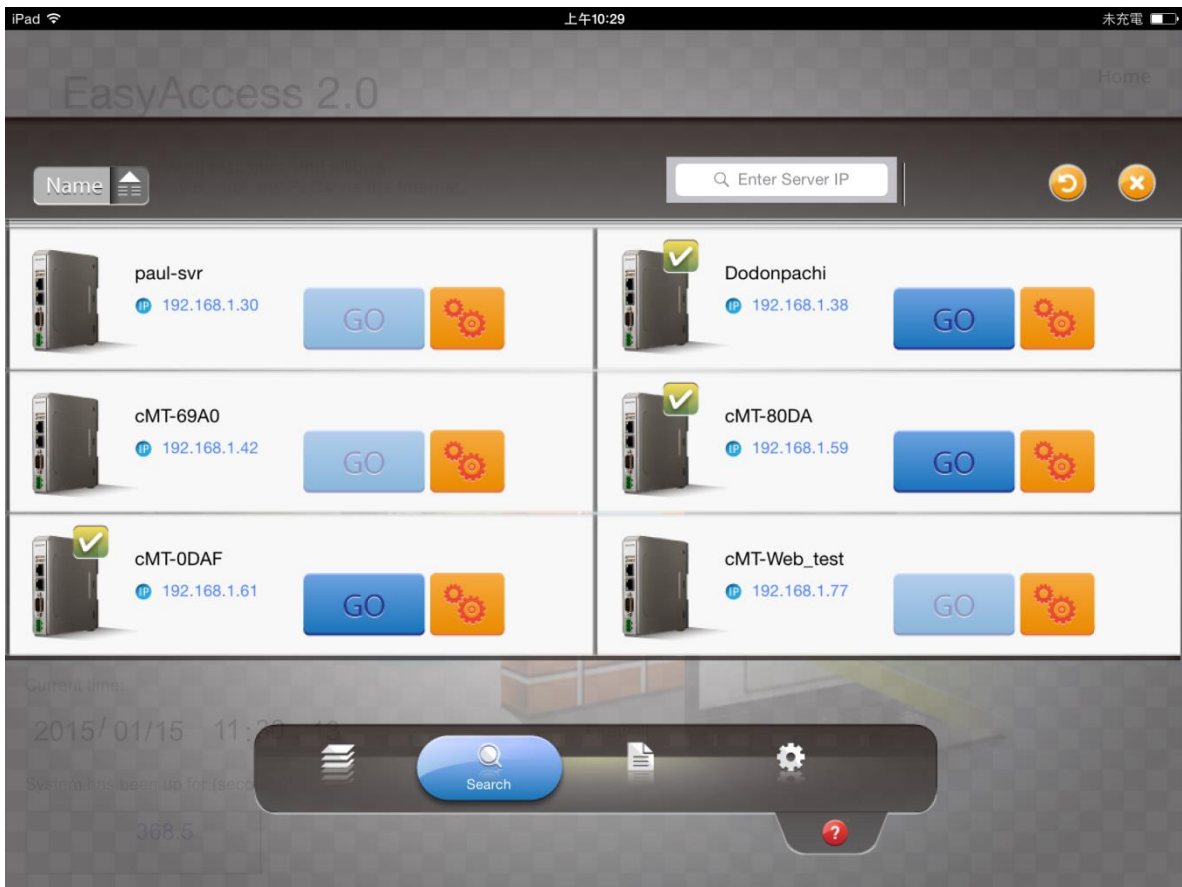
Step 3. Select the cMT-SVR, tap  and then enter password.





Step 4. The client device displays the project after the project is loaded




Tap Start Button to return to Search screen. To connect other cMT-SVR, follow the preceding steps to search cMT-SVR and load the project.



The  badge is displayed in the icons of the successfully connected cMT-SVRs.

Up to three cMT-SVRs can log in the client device simultaneously, and for the rest connected cMT-SVRs, the  button is not available.

4.1 How to switch between cMT-SVR projects

When multiple cMT-SVRs are connected, to switch between cMT-SVR projects, select from Project tab. To delete cMT-SVR project, tap .

