

CTT Series G01

User Manual v1.0.0



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Chapter1. Overview

1.1. Specification



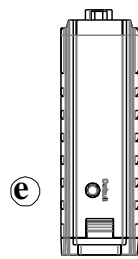
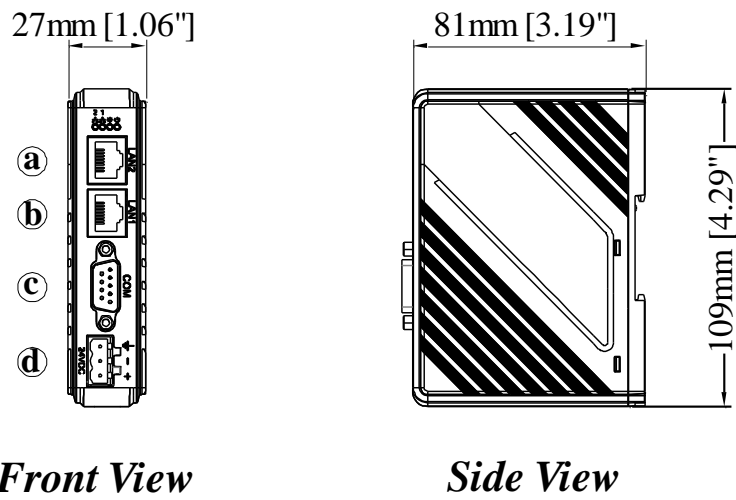
IloT Gateway

Features

- Supports OPC UA
- Supports MQTT
- Supports MODBUS TCP/IP Gateway
- Compact Design and DIN-rail Mountable
- Fan-less Cooling System
- Built-in 256 MB Flash Memory
- Supports MPI 187.5K
- Built-in Power Isolator

Memory	Flash	256 MB
	RAM	256 MB
Processor		32 bits RISC Cortex-A8 600MHz
I/O Port	SD Card Slot	N/A
	USB Host	N/A
	USB Client	N/A
	Ethernet (LAN1)	10/100/1000 Base-T x 1
	Ethernet (LAN2)	10/100 Base-T x 1
	COM Port	COM1: RS-232 2W, COM2: RS-485 2W/4W, COM3: RS-485 2W
	RS-485 Built-in Isolation	N/A
	CAN Bus	N/A
	HDMI	N/A
	Audio Output	N/A
	Video Input	N/A
RTC		Built-in
Power	Input Power	24±20%VDC
	Power Isolation	Built-in
	Power Consumption	230mA@24VDC
	Voltage Resistance	500VAC (1 min.)
	Isolation Resistance	Exceed 50MΩ at 500VDC
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)
Specification	PCB Coating	Yes
	Enclosure	Plastic
	Dimensions WxHxD	109 x 81 x 27 mm
	Weight	Approx. 0.14 kg
	Mount	35 mm DIN rail mounting
Environment	Protection Structure	IP20
	Storage Temperature	-20° ~ 60°C (-4° ~ 140°F)
	Operating Temperature	0° ~ 50°C (32° ~ 122°F)
	Relative Humidity	10% ~ 90% (non-condensing)
Certificate	CE	CE marked
	UL	Application in progress
Software		EasyBuilder Pro V5.06.01 or later versions

1.2. Dimensions



Top View

Bottom View

a	Ethernet 2 Port (10M/100M)
b	Ethernet 1 Port (10M/100M/1G)
c	COM1: RS-232 2W COM2: RS-485 2W/4W COM3: RS-485 2W
d	Power Connector
e	Default Button

1.3. Connector pinouts

COM1 RS-232, COM2 RS-485 2W/4W, COM3 RS-485 2W 9 Pin, Male, D-sub

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

1.4. Restoring factory default

Press and hold on the Default button on the unit for more than 15 seconds to restore factory default.

The IP setting will be restored to default:

Ethernet 1: DHCP

Ethernet 2: 192.168.100.1

Please note that the projects and data stored in the unit are all cleared after pressing this button.

1.5. LED indicator



LED indicators show the operation status of cMT-G01.

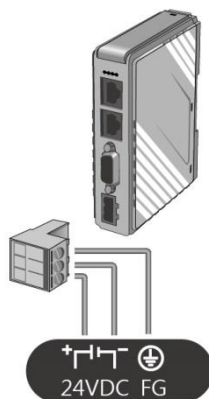
Icon	Color	Meaning
	Blue	LAN 1 Communication Status
	Blue	LAN 2 Communication Status
	Orange	Power Status
	Green	Helps the operator to find the cMT-G01. Triggering system register LB-11959 can turn this indicator on/off.

1.6. CR1225 battery

The cMT-G01 Series HMI requires a CR1225 coin type lithium battery to keep the RTC running.
Battery type: CR1225 3V lithium battery

1.7. 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.



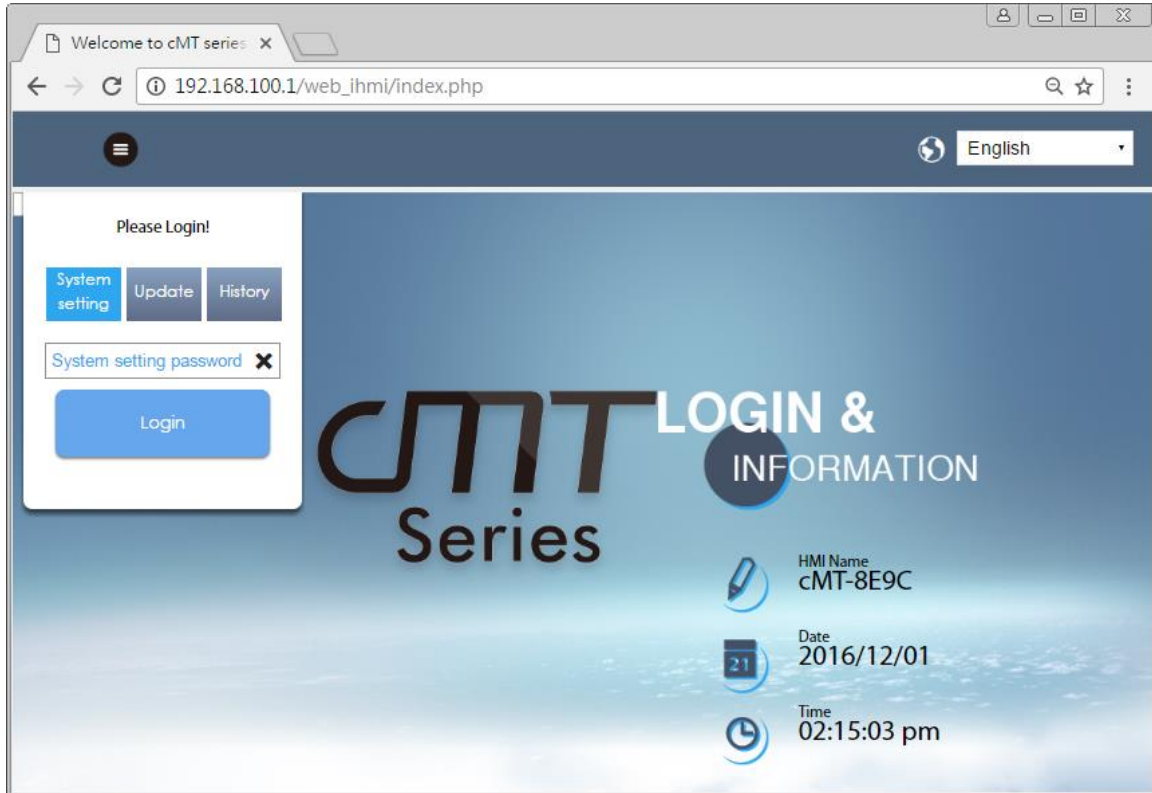
Note: Connect positive DC line to the "+" terminal and the DC ground to the "-" terminal.

Chapter2. cMT-G01 System Setting

Connect cMT-G01 via Ethernet cable, and configure system settings using the following ways.

Set in internet browser




Open internet browser (IE, Chrome, or Firefox), and enter cMT-G01 IP address (for example: 192.168.100.1) to configure cMT-G01.



The default IP: Ethernet 1: DHCP, Ethernet 2: 192.168.100.1

2.1.1. Information

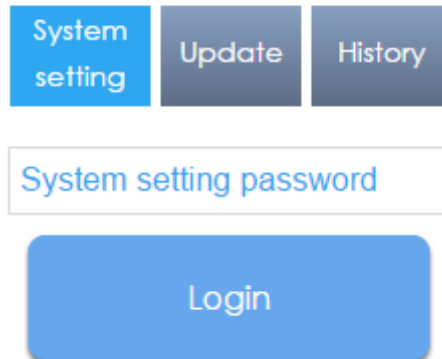
The following part introduces cMT-G01 system information.

Icon	Description
 HMI Name cMT-8E9C	Displays HMI name.
 Date 2016/12/01	Displays RTC date.
 Time 02:15:17 pm	Displays RTC time.

2.1.2. System Setting

The following part introduces cMT-G01 system settings.

Please Login!



There are three modes:

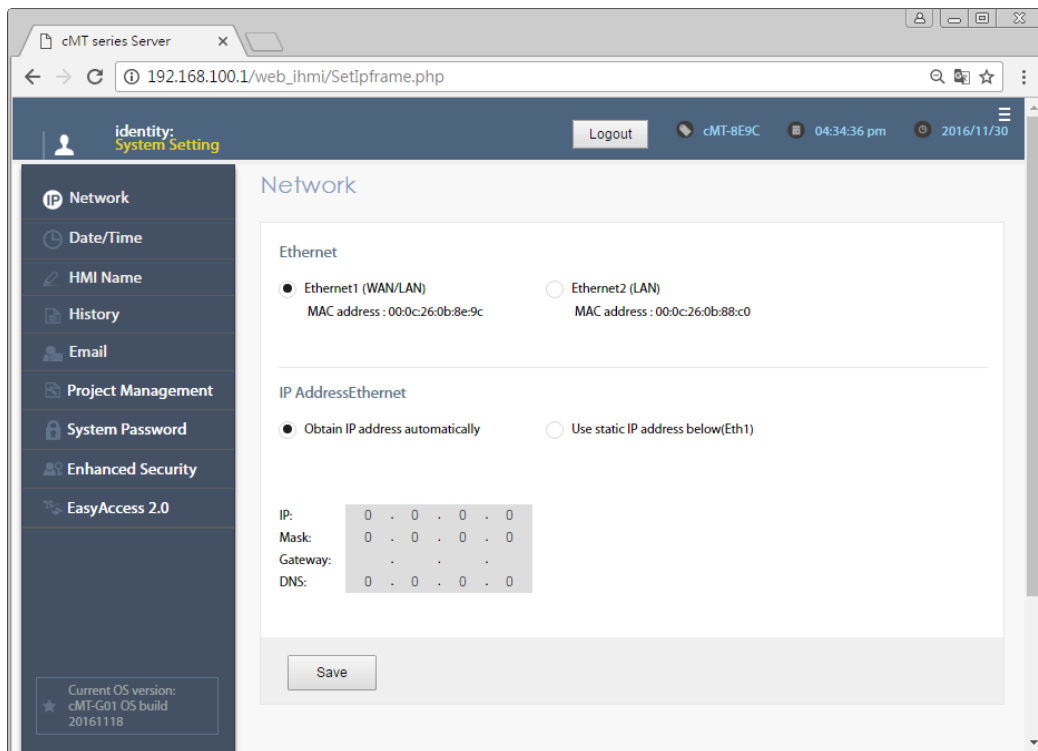
[System Setting]: Controls all the settings

[Update]: Controls limited items.

[History]: Downloads history data (Recipes and Event Logs).

Network

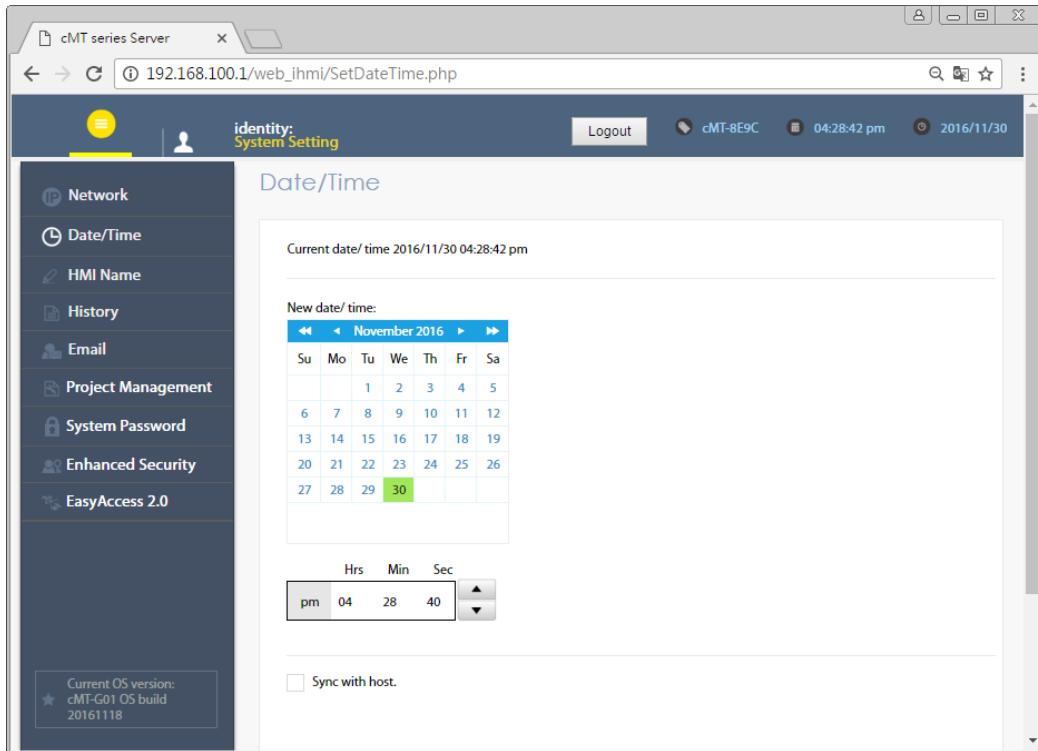
Set the IP address of Ethernet 1 and Ethernet 2. The default IP address of Ethernet 1 is DHCP. The default IP address of Ethernet 2 is 192.168.100.1.



Date/Time


Set RTC date and time. Select [Sync. with host] and then click [Save] to synchronize cMT-G01 time

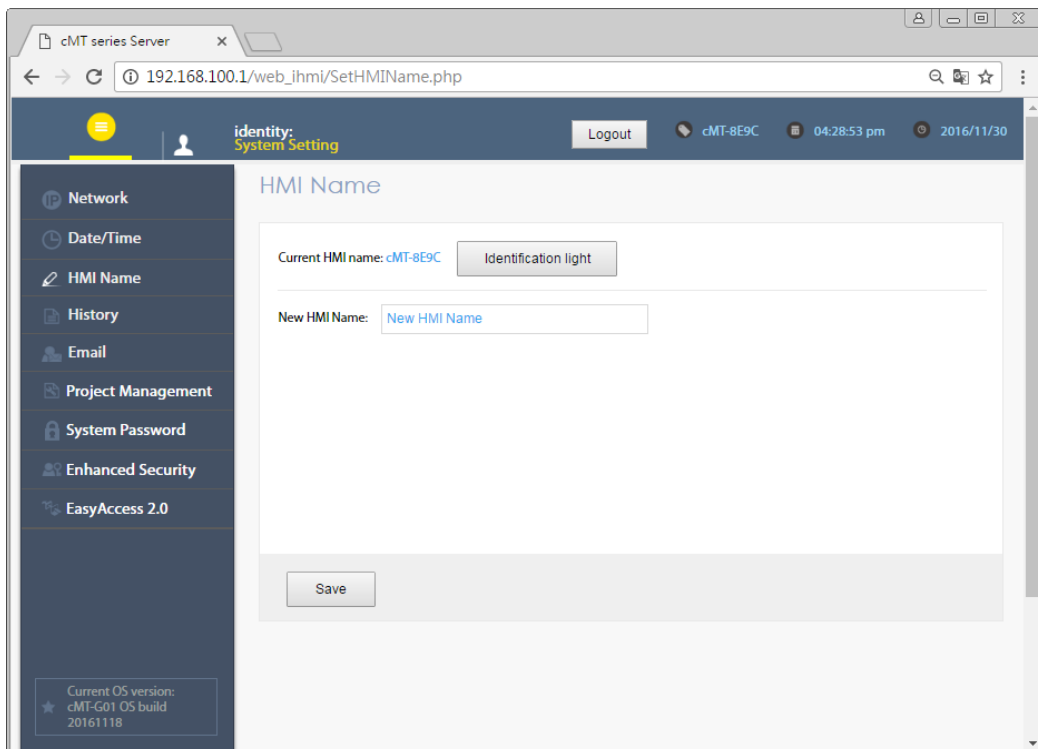
with the computer time.



HMI Name

Enter a cMT-G01 name to identify the unit when transferring data. This avoids remembering the IP address of each cMT-G01.

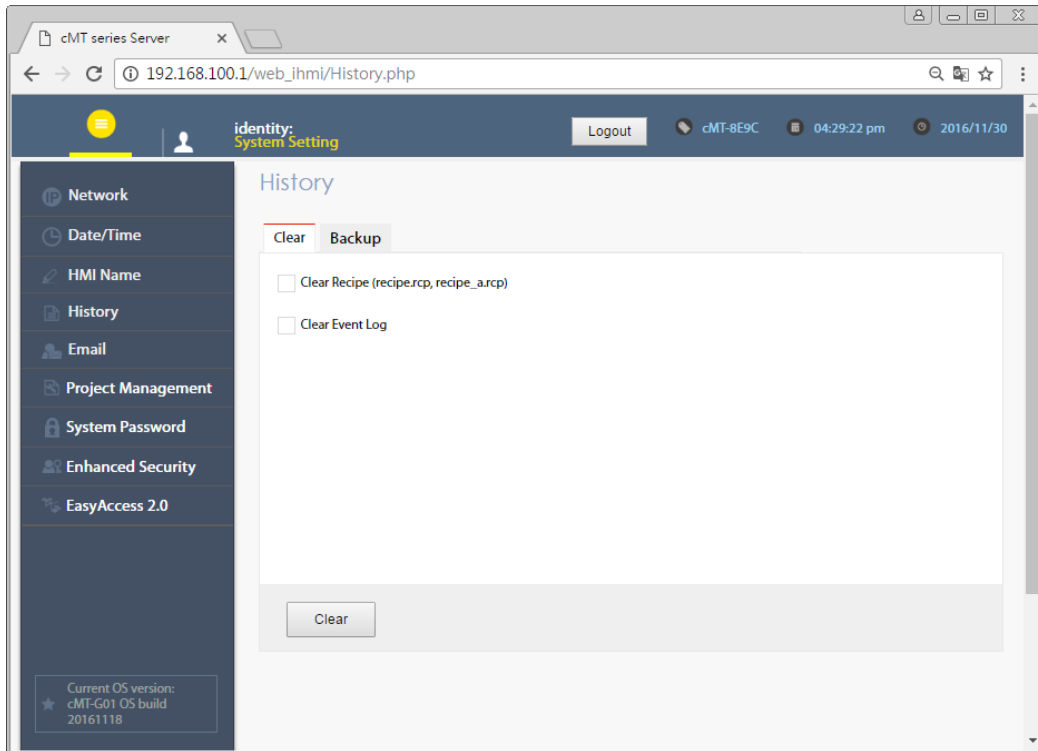
[Identification light]: The  indicator of current cMT-G01 will flash three times when this button is clicked, helping user to find the cMT-G01.



History

[Clear]: Clears history data in cMT-G01.

[Backup]: Downloads history data in cMT-G01 to this computer.

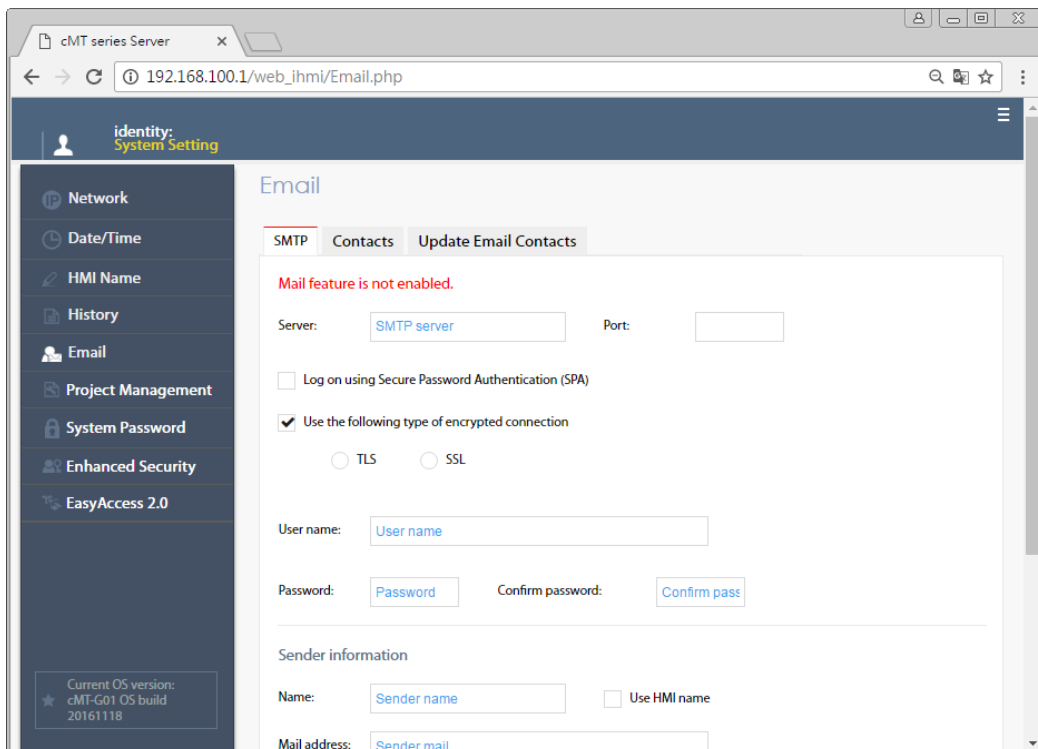


Email

[SMTP]: Configure email server and relevant settings.

[Contacts]: Set email contacts in this tab.

[Update Email Contacts]: Import the email contacts built using Administrator Tools.

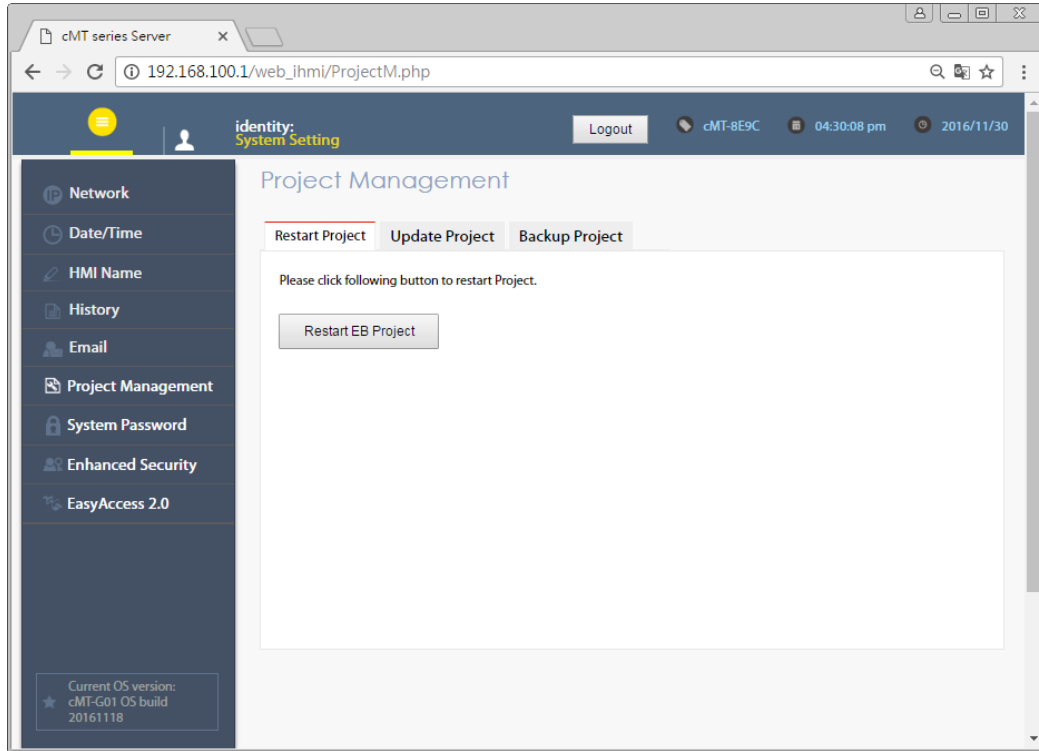


Project Management

[Restart Project]: Restart cMT-G01 project.

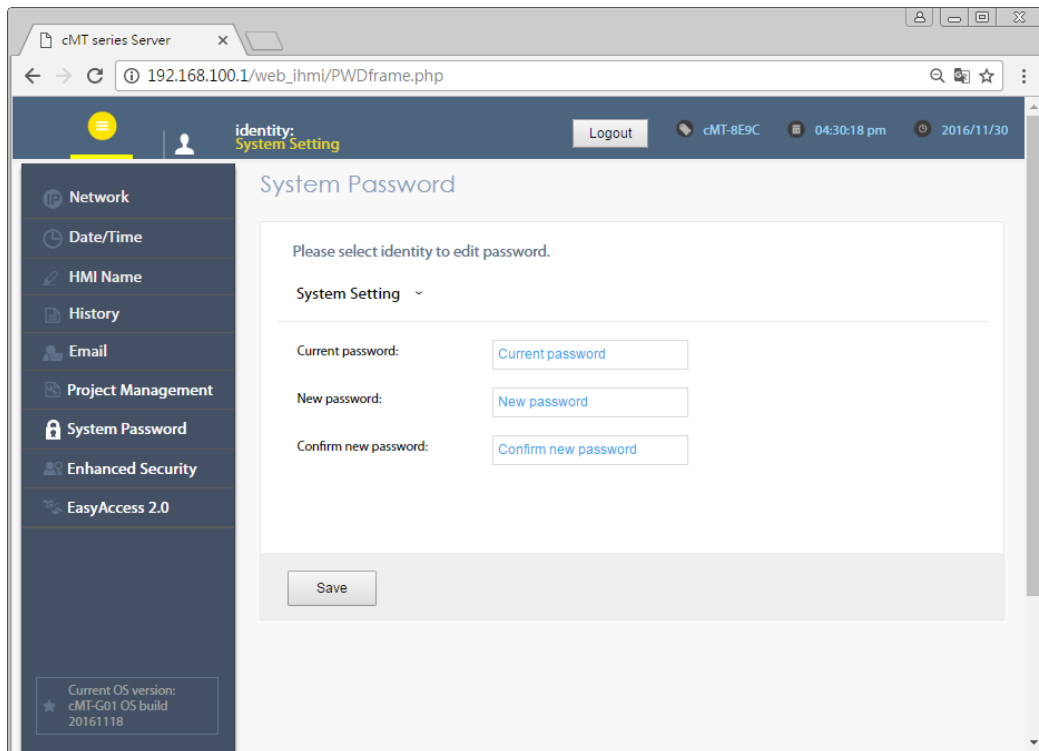
[Update Project]: Upload the project's *.cxob file to cMT-G01.

[Backup Project]: Backup the project file to this computer.



System Password

Set user password and the password for transferring project file.

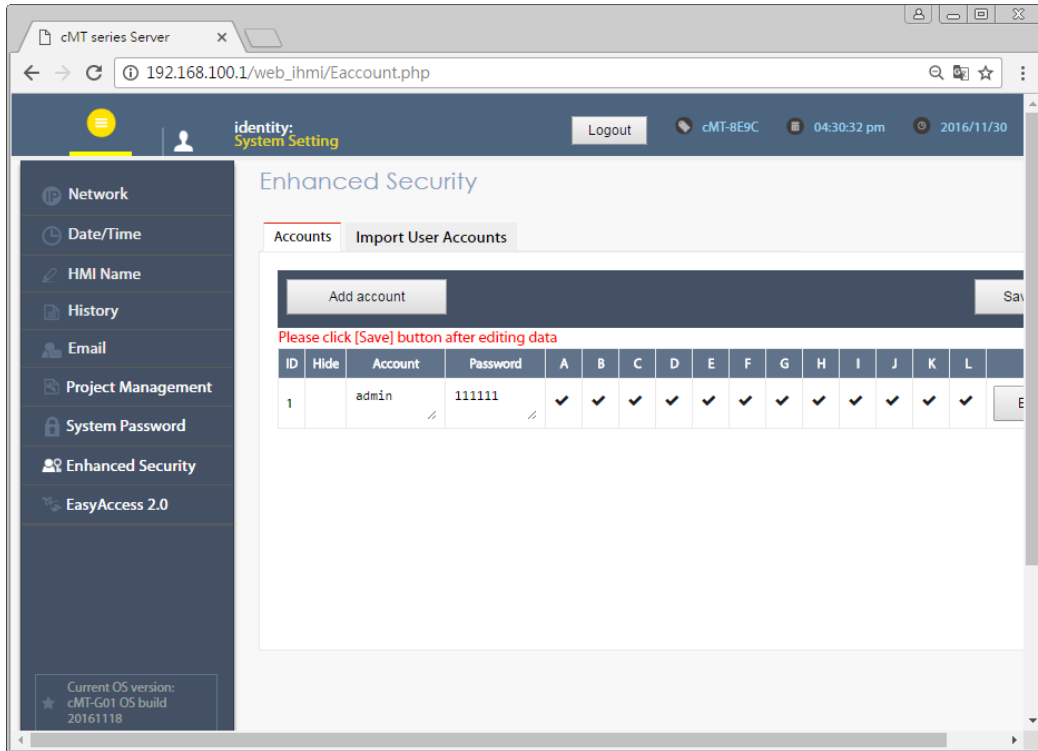


Enhanced Security

OPC UA can login using the accounts added here. The authentication methods: Browse/Read/Write can be enabled in EasyBuilder Pro project file.

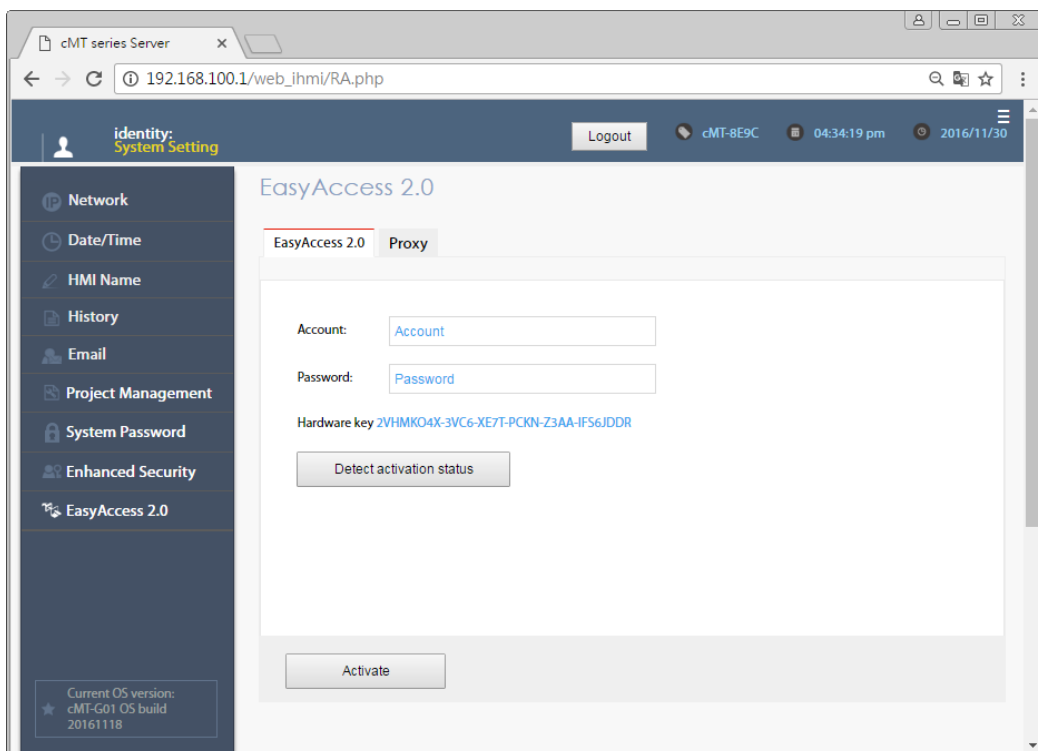
[Accounts]: Add user or change user password and operable classes.

[Import User Account]: Import the user accounts built in Administrator Tools.



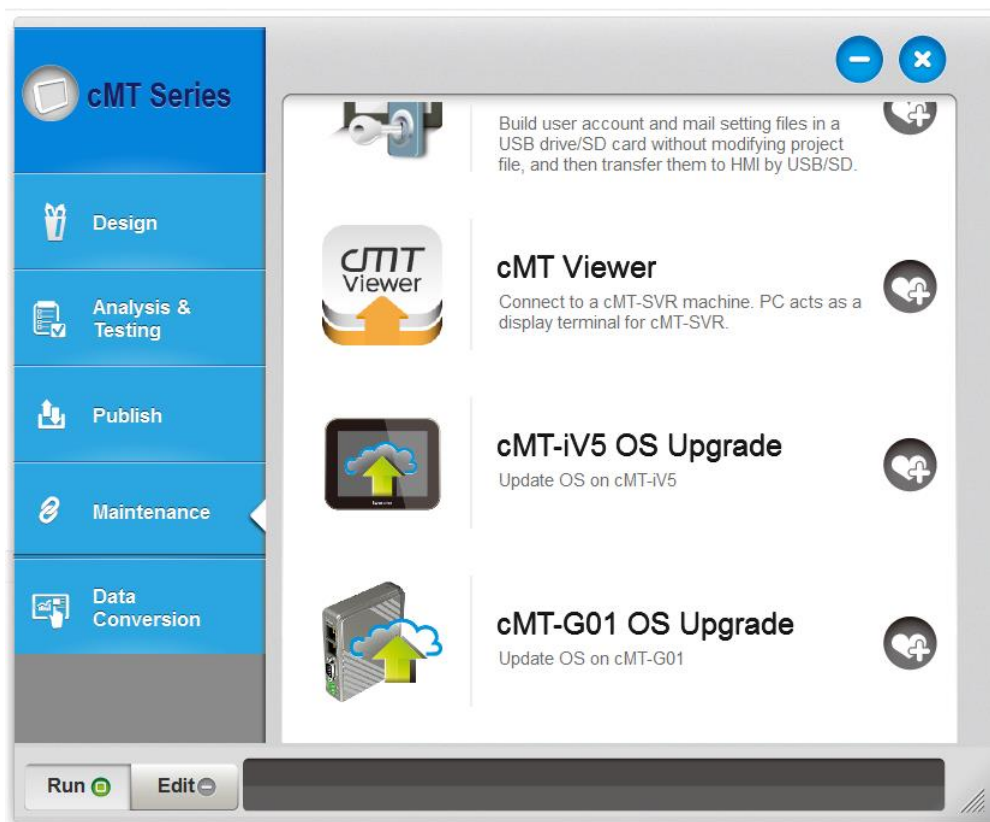
EasyAccess 2.0

Activate EasyAccess 2.0 for the cMT-G01 and set up Proxy.



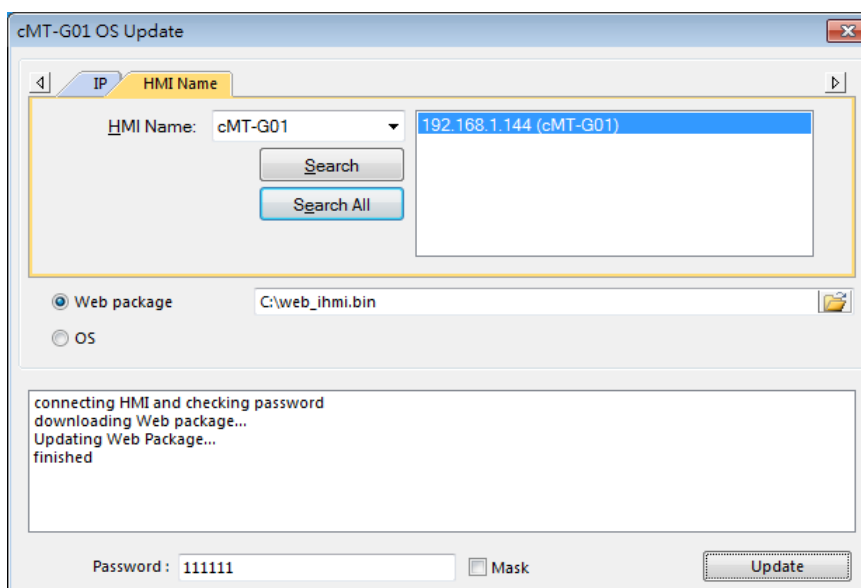
Chapter3. Updating Web Package and OS

cMT-G01 Web Package and OS can be updated through Ethernet. Launch Utility Manager, select [cMT Series] » [Maintenance] » [cMT-G01 OS Upgrade].



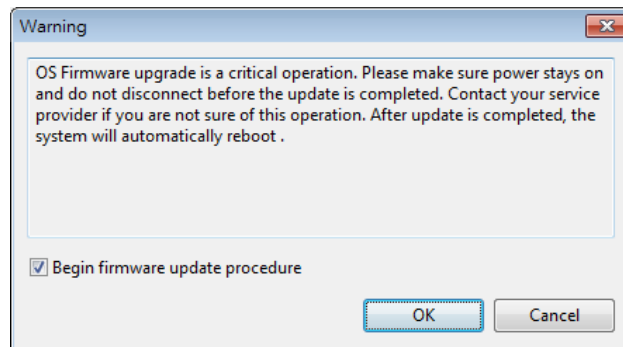
3.1 Updating Web Package

1. Select a cMT-G01.
2. Select [Web package] and browse for the source file.
3. Click [Update].

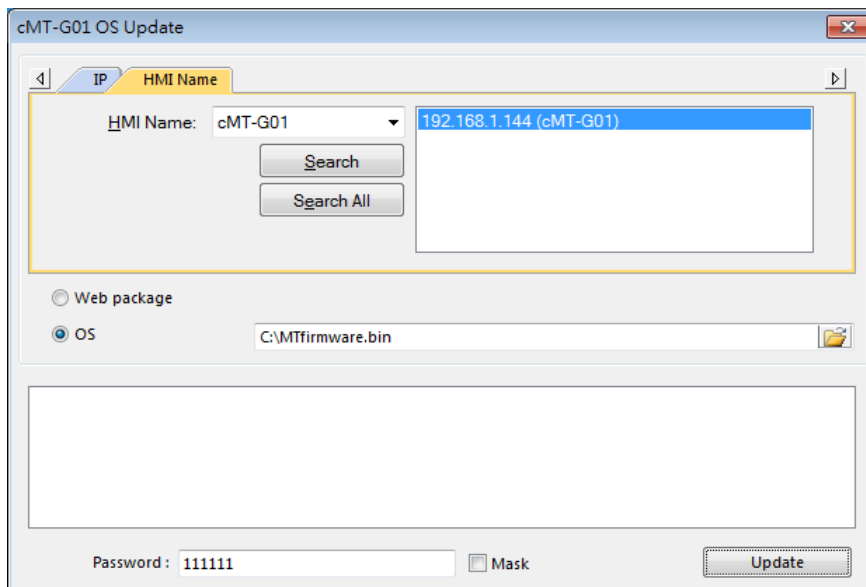


3.2 Updating OS

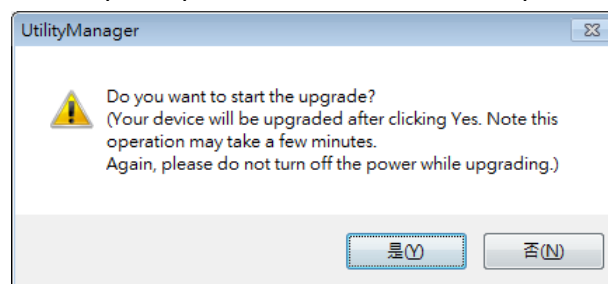
1. Select a cMT-G01.
2. Select [OS], a Warning message shows, please read this message carefully before you click [OK].



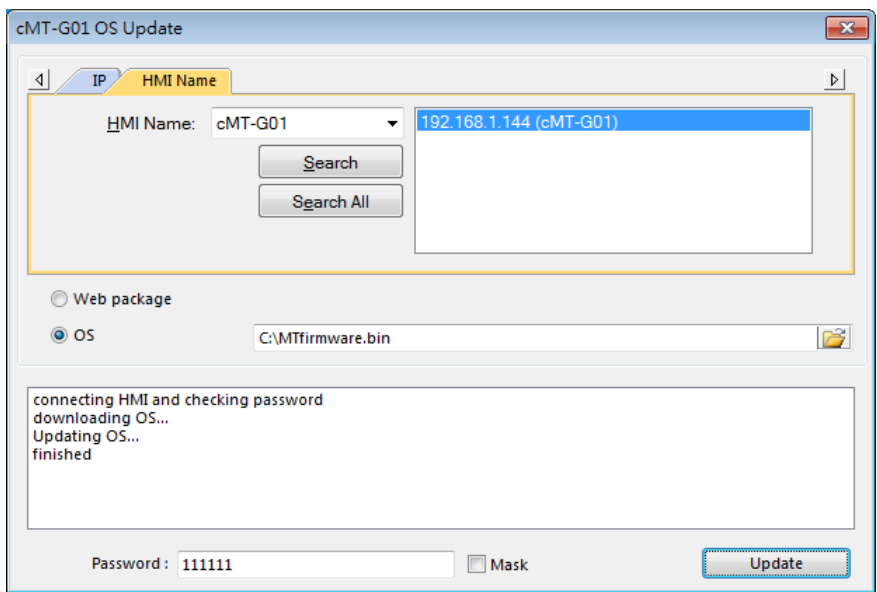
3. If you click [OK], the cMT-G01 OS Update window opens again, browse for the source file, and then click [Update].



4. The message window below opens, please do not turn off the power while upgrading.



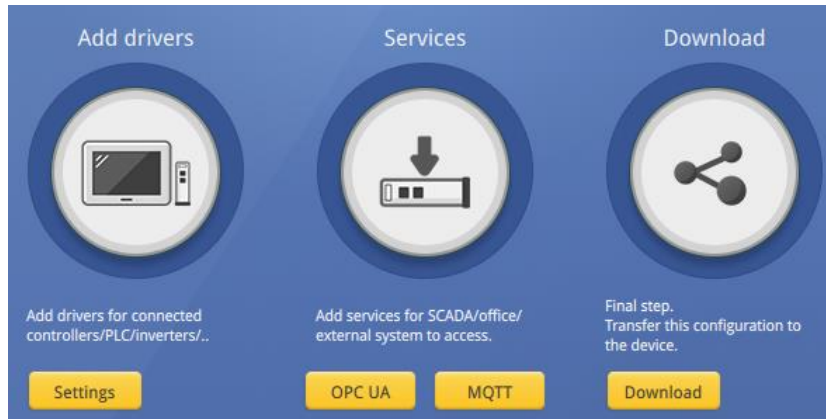
5. When finished, cMT-G01 OS Update window shows "finished".



Chapter4. How to create a cMT-G01 project

This chapter explains how to create a project when cMT-G01n is used as an OPC UA Server, and how to set the addresses used to communicate with OPC UA Clients. The basic steps are:

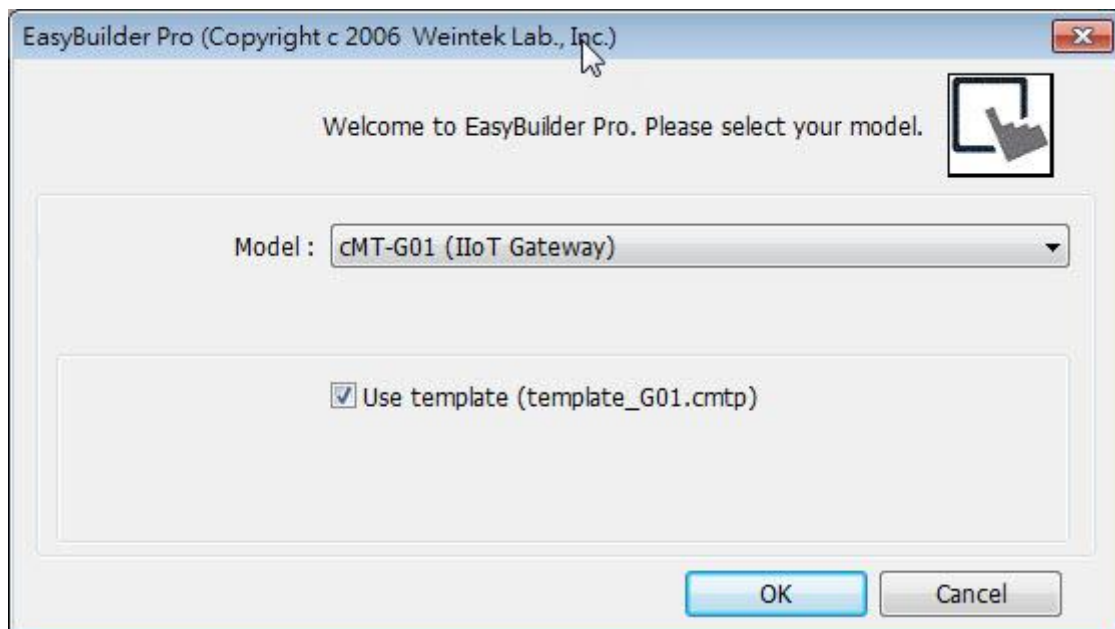
1. Add a driver in Device List in EasyBuilder Pro.
2. Enable OPC UA Server and designate communication address.
3. Download the project to HMI.



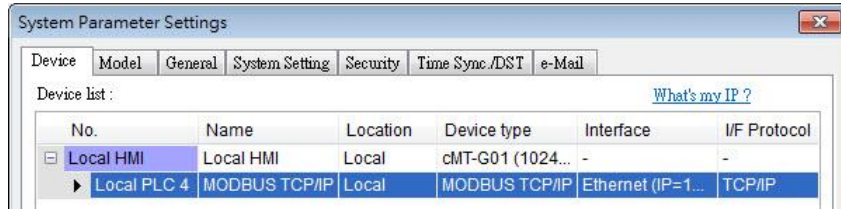
The following explains how to set up OPC UA Server in the project.

4.1. Create a new project

- Step 1. Launch EasyBuilder Pro and select cMT-G01 model.



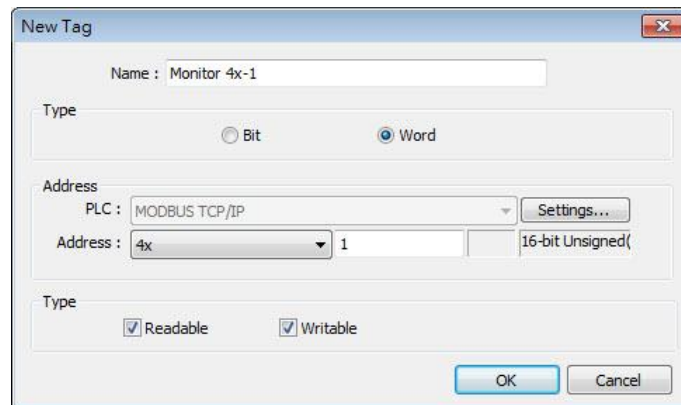
- Step 2. Add a PLC into the Device List.



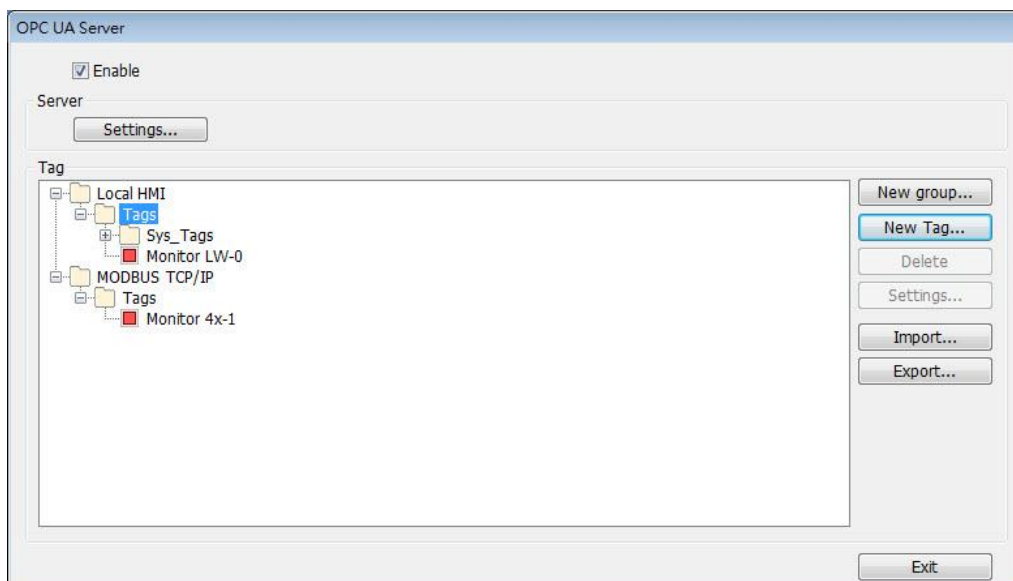
Step 3. Click [IIoT] » [OPC UA Server], and select [Enable] check box to enable OPC UA Server.



Step 4. Click [Tags] of the device and then click [New Tag] to add tags used for OPC UA. When finished, click [OK] to leave.



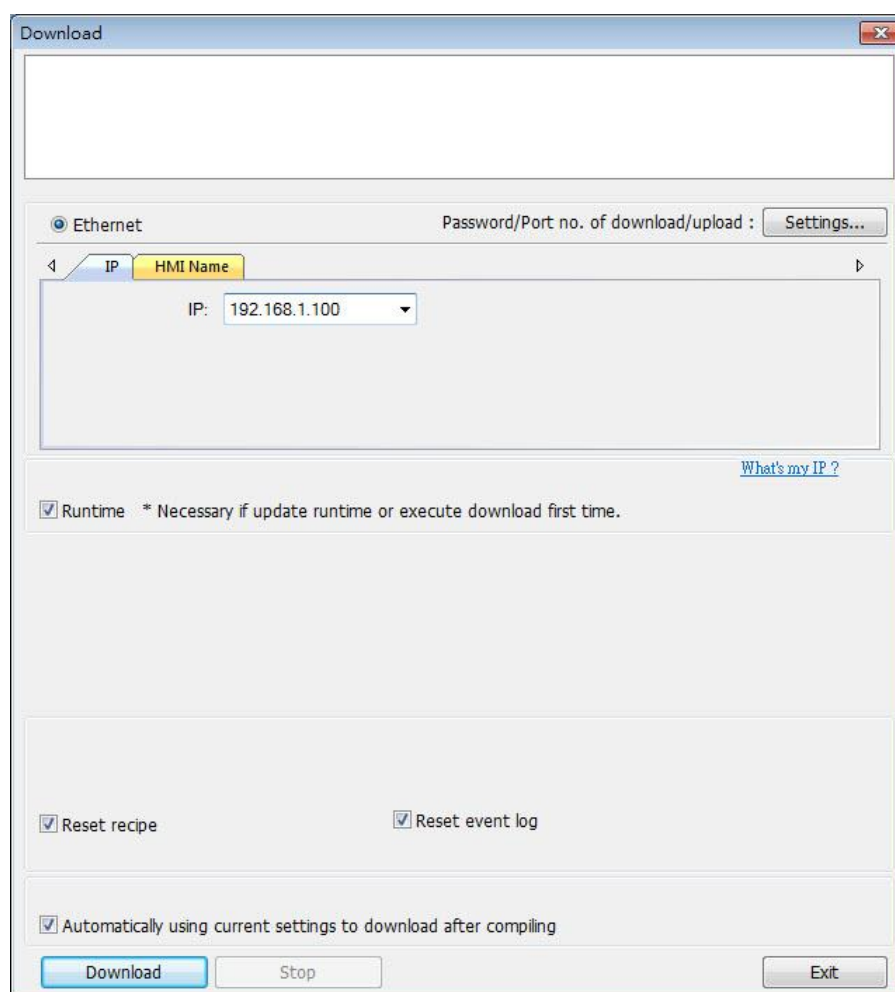
Step 5. Find the created tags in OPC UA Server window.



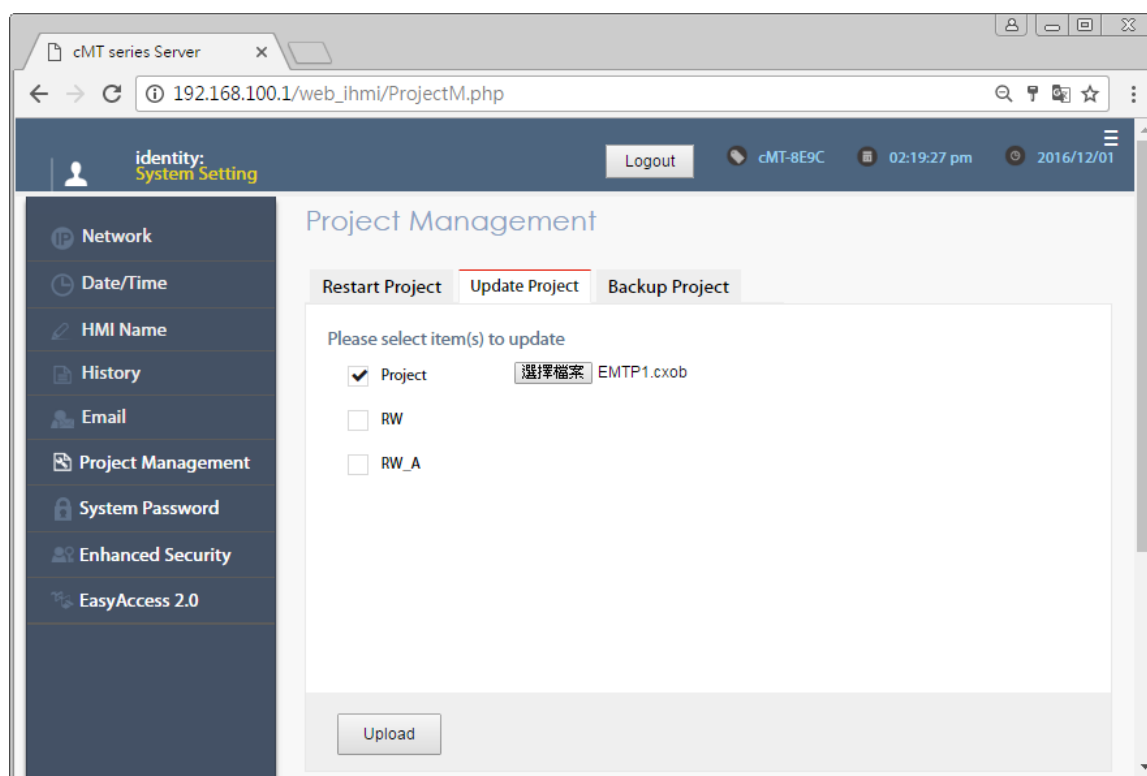
4.2. Download project to cMT-G01

The format of the project file run on cMT-G01 is *.cxob. In EasyBuilder Pro, click [Tools] » [Compile] to compile the project into *.cxob format. When finish compiling, you can download the project to cMT-G01 by two ways.

Way 1: Download using EasyBuilder Pro. Click [Tools] » [Download], and set HMI IP address. The project can be downloaded via Ethernet.

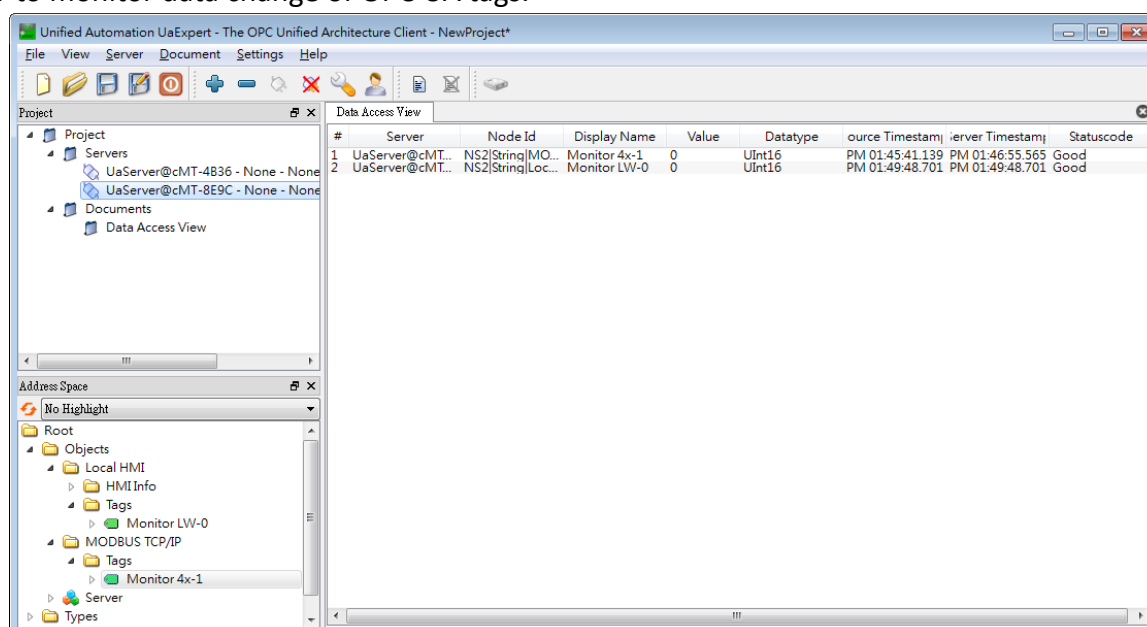


Way 2: Download using website. Open internet browser (IE, Chrome, Firefox), enter cMT-G01 IP address (for example: 192.168.100.1), click System Setting, enter password, and then configure cMT-G01 settings. Go to [Project Management] page and open [Upload Project] tab to download the project file from the computer to cMT-G01.



4.3. Monitoring OPC UA Client

After downloading the project file to HMI, use OPC UA Client software to connect with cMT-G01, in order to monitor data change of OPC UA tags.



Note: For more information on OPC UA Client software settings, please refer to the software's manual.

4.4. On-line/Off-line Simulation

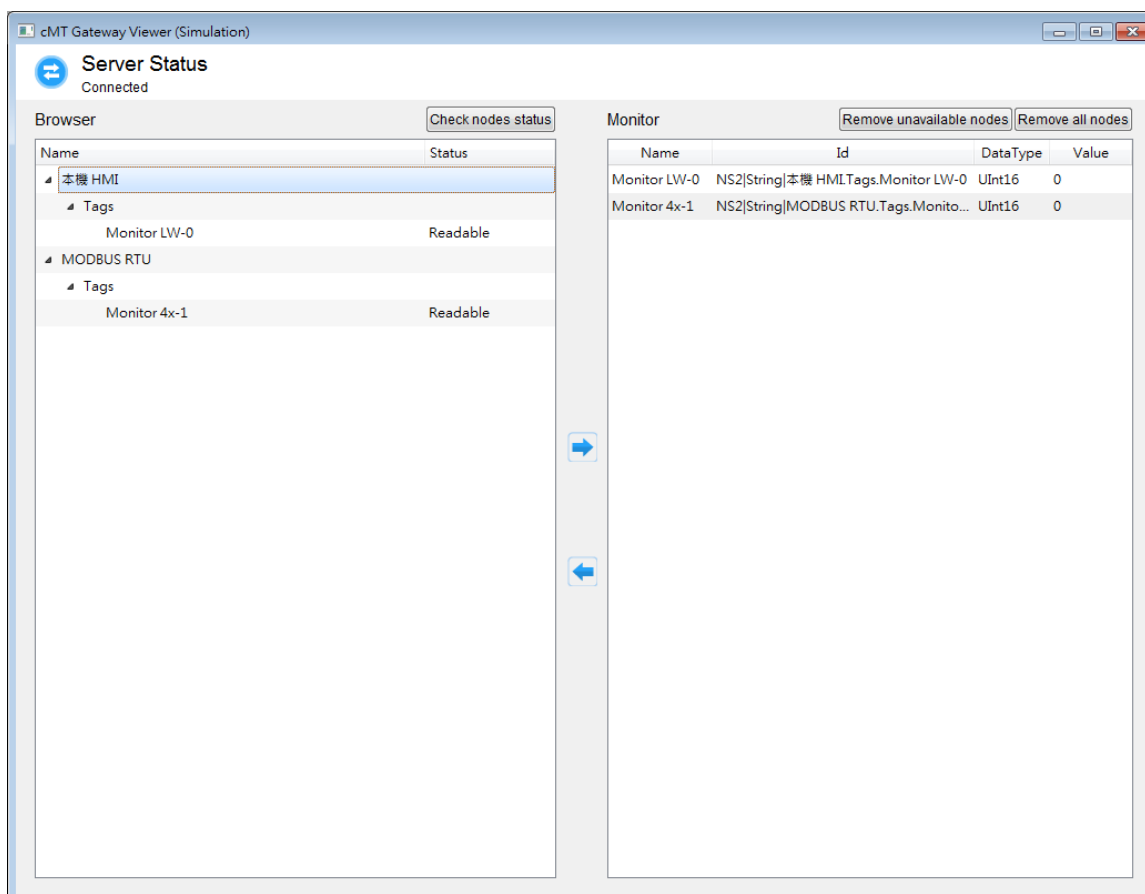
Running On-line or Off-line simulation in EasyBuilder Pro helps you examine OPC UA Tag settings. In

On-line simulation, cMT Gateway Viewer can read from or write to PLC. Please note that On-line simulation is limited to 10 minutes.

Step 1. In EasyBuilder Pro click [Tools] » [On-line Simulation] / [Off-line Simulation] to open cMT Gateway Viewer window.

Step 2. Add the tags to be previewed into the Monitor list on the right side.

Step 3. In On-line Simulation, data in PLC tags will also change.



Chapter5. Functions supported by cMT-G01

- OPC UA Server
<http://www.weintek.com/download/EBPro/Document/UM016009E OPC UA UserManual en.pdf>
Please note that a cMT-G01 can simultaneously connect to 64 OPC UA Clients at maximum.
- EasyAccess 2.0
<http://www.weintek.com/download/EasyAccess20/Manual/eng/EasyAccess2 UserManual en.pdf>
- Modbus TCP/IP Gateway
- MQTT
- Administrator Tools
- Time synchronization (NTP)
- Macro
- Project protection
- Communication with iE/XE/eMT/mTV HMI models.
- Pass-through
- Data Transfer (Global) object
- Off-line / On-line Simulation
- Recipes (RW, RW_A)
- Event Log (please note that cMT-G01 cannot read history data saved in an external device)
- E-Mail
- Scheduler