





Table of Contents

Chapter1.	Overview
1.1.	Specification
1.2.	Dimensions
1.3.	Connector pinouts
1.4.	Restoring factory default 3
1.5.	LED indicator
1.6.	CR1225 battery 4
1.7.	Power connection 4
Chapter2.	cMT-G01 System Setting5
2.1.1	. Information
2.1.2	. System Setting
Chapter3.	Updating Web Package and OS11
3.1	Updating Web Package
3.2	Updating OS
Chapter4.	How to create a cMT-G01 project14
4.1.	Create a new project
4.2.	Download project to cMT-G0116
4.3.	Monitoring OPC UA Client
4.4.	On-line/Off-line Simulation17
Chapter5.	Functions supported by cMT-G0119

Chapter1. Overview

1.1. Specification



IIoT 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

Mamany	Flash	256 MB				
wemory	RAM	256 MB				
Processor		32 bits RISC Cortex-A8 600MHz				
	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				
I/O Port	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				
	Input Power	24±20%VDC				
	Power Isolation	Built-in				
Power	Power Consumption	230mA@24VDC				
TOWER	Voltage Resistance	500VAC (1 min.)				
	Isolation Resistance	Exceed 50M Ω at 500VDC				
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)				
	PCB Coating	Yes				
	Enclosure	Plastic				
Specification	Dimensions WxHxD	109 x 81 x 27 mm				
	Weight	Approx. 0.14 kg				
	Mount	35 mm DIN rail mounting				
	Protection Structure	IP20				
Environment	Storage Temperature	-20° ~ 60°C (-4° ~ 140°F)				
Linvironment	Operating Temperature	0° ~ 50°C (32° ~ 122°F)				
	Relative Humidity	10% ~ 90% (non-condensing)				
Certificate	CE	CE marked				
Gertificate	UL	Application in progress				
Software		EasyBuilder Pro V5.06.01 or later versions				

1.2. Dimensions



Front View

Side View





Top View

Bottom View

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

1.3. Connector pinouts

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

DIN!#	COM1 BS 222	COM2 R	S-485		
PIN#	COIVI1 K3-232	2W	4W	COIVIS NS-465	
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.

lcon	Color	Meaning
-:	Blue	LAN 1 Communication Status
2	Blue	LAN 2 Communication Status
Э	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: $24\pm20\%$ 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.
O2:15:17 pm	Displays RTC time.

2.1.2. System Setting

The following part introduces cMT-G01 system settings.



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.

CMT series Server X			
\leftarrow \rightarrow C (192.168.100.1	/web_ihmi/SetIpframe.php		ର୍ 🖻 🛧 🚦
identity: System Setting		Logout ScMT-8E9C 🐻 04:34:36 pr	n 💿 2016/11/30
P Network	Network		
🕒 Date/Time	Ethernet		
🖉 HMI Name	Ethernet1 (WAN/LAN)	Ethernet2 (LAN)	
History	MAC address : 00:0c:26:0b:8e:9c	MAC address : 00:0c:26:0b:88:c0	
🌨 Email			
🖹 Project Management	IP AddressEthernet		
System Password	Obtain IP address automatically	Use static IP address below(Eth1)	
Enhanced Security			
EasyAccess 2.0	IP: 0.0.0.0		
	Mask: 0 . 0 . 0 . 0		
	DNS: 0 . 0 . 0 . 0		
Current OS version:	Save		
cMT-G01 OS build 20161118			
			•

Date/Time

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

with the computer time.

CMT series Server X												
$\boldsymbol{\leftarrow}$ \rightarrow C (i) 192.168.100.1/v	veb_ihm	i/Se	tDat	eTim	e.ph	р						ର୍⊠ ☆ :
ider	ntity: tem Setti	ing						L	ogout	S cMT-8E9C	👼 04:28:42 pm	2016/11/30
P Network	Date	/Tir	ne									
Date/Time	Curre	nt dat	e/tim	ne 201	6/11/:	30 04:	:28:42	m				
🖉 HMI Name												
History	New o	date/	time:	_	2026							
🔝 Email	Su	Mo	Tu	We	2016 Th	Fr	Sa					
🔊 Project Management			1	2	3	4	5					
System Password	6	7	8	9	10	11	12					
Enhanced Security	20	21	22	23	24	25	26					
EasyAccess 2.0	27	28	29	30								
		ŀ	lrs	Min	Se	c 	•					
	pm	04	•	28	40	•	•					
Current OS version:	S	ync w	rith ho	ost.								
20161118												

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.

CMT series Server X		
$\boldsymbol{\leftarrow}$ \rightarrow C (1) 192.168.100.	1/web_ihmi/SetHMIName.php	ର୍ 🗟 🛧 🚦
<u> </u>	dentity: Logout OMT-8E9C B 04:28:53 pm system Setting	 2016/11/30
P Network	HMI Name	
Date/Time	Current HMI name: cMT-8F9C Identification light	
🖉 HMI Name	concrete menalication right	
History	New HMI Name: New HMI Name	
🏊 Email		
Project Management		
System Password		
Enhanced Security		
EasyAccess 2.0		
	Save	
Current OS version: CMT-G01 OS build 20161118		

History

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

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

CMT series Server X		
\leftarrow \rightarrow C (i) 192.168.100.1	L/web_ihmi/History.php	ର୍ଢା ☆ :
	dentity: Jesting Logout CMT-8E9C B 04:29:22 pm	© 2016/11/30
P Network	History	
🕒 Date/Time	Clear Backup	
🖉 HMI Name	Clear Recipe (recipe_rcp, recipe_a.rcp)	
History	Clear Event Log	
San Email		
Project Management		
System Password		
Enhanced Security		
EasyAccess 2.0		
	Clear	
Current OS version: cMT-G01 OS build 20161118		

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.

🗋 cMT series Server 🗙		
$\boldsymbol{\leftarrow}$ \rightarrow \mathbf{C} (1) 192.168.100.	.1/web_ihmi/Email.php	ର୍ଢା ☆ :
identity: System Setting		Ē
Network	Email	
Date/Time	SMTP Contacts Update Email Contacts	
🖉 HMI Name	Mail feature is not enabled.	
History	Server: SMTP server Port:	
🔈 Email		
Project Management	Log on using Secure Password Authentication (SPA)	
System Password	Use the following type of encrypted connection	
Enhanced Security		
SeasyAccess 2.0	User name: User name	
	Password: Password Confirm password: Confirm pass	
	Sender information	
Current OS version: cMT-G01 OS build 20161118	Name: Use HMI name	
	Mail address: Sender mail	-

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.

🗅 cMT series Server 🛛 🗙		
\leftarrow \rightarrow C (i) 192.168.100.1	/web_ihmi/ProjectM.php	ର୍ଢ ☆ :
	entity: Logout S cMT-8E9C S 04:30:08 pm	© 2016/11/30
🕞 Network	Project Management	
🕒 Date/Time	Restart Project Update Project Backup Project	
🖉 HMI Name	Please click following button to restart Project.	
History	Desited ED Desited	
🏊 Email	Restances Project	
🖹 Project Management		
System Password		
Security		
EasyAccess 2.0		
Current OS version:		
20161118		-

System Password

Set user password and the password for transferring project file.

CMT series Server X					
\leftarrow \rightarrow C (i) 192.168.100.1	/web_ihmi/PWDframe.php				ର୍ଢା ☆ :
	lentity: ystem Setting	Logout	S cMT-8E9C	💼 04:30:18 pm	© 2016/11/30
Network	System Password				
Date/Time	Please select identity to edi	t password.			
🖉 HMI Name	System Setting ~				
History	· · · ·				- 1
se Email	Current password:	Current password			
Project Management	New password:	New password			
System Password	Confirm new password:	Confirm new password			
Enhanced Security					
EasyAccess 2.0					
	Save				
Current OS version: CMT-G01 OS build 20161118					

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.

🕒 cMT series Server 🛛 🗙 🦷																25
\leftarrow \rightarrow C (i) 192.168.100.1/	/web_ihmi/Ea	account.php												Q	©≊ ☆	:
ide	entity: stem Setting				Logou	ut	۲	cMT-	8E9C	6	04:3	0:32 p	m	<mark>©</mark> 2	016/11/	/30
Network	Enhanc	ed Secu	rity													
🕒 Date/Time	Accounts	Import User	Accounts													
🖉 HMI Name			1													
History	Ad	id account														Sav
🏊 Email	ID Hide	k [Save] button Account	after editing da Password	ata A	в	с	D	E	F	G	н	I	J	к	L	el,
Project Management	1	admin	111111	~	~	~	~	~	~	~	~	~	~	~	~	E
System Password		h	h													
₽ Enhanced Security																
EasyAccess 2.0																
Current OS version: TGUI OS build 20161118														_		

EasyAccess 2.0

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

CMT series Server X		
$\boldsymbol{\leftarrow}$ \rightarrow C (1) 192.168.100.	1/web_ihmi/RA.php	ର୍ଢା ☆ :
identity: System Setting	Logout 🕥 cMT-8E9C 🥫 04:34:19 pm	
Network	EasyAccess 2.0	
Date/Time	EasyAccess 2.0 Proxy	
🖉 HMI Name		
History	Account: Account	
💁 Email	hammad a constant of the second	
Project Management	Password: Password	
System Password	Hardware key 2VHMKO4X-3VC6-XE7T-PCKN-Z3AA-IFS6JDDR	
Enhanced Security	Detect activation status	
^ත ්ය EasyAccess 2.0		
Current OS version:	Activate	
cMT-G01 OS build 20161118		

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].

cMT-G01 OS Update	×
IP HMI Name HMI Name: cMT-G01 Search Search All	▶ 2.168.1.144 (cMT-G01)
Web package C:\web_ihmi.bin OS	
connecting HMI and checking password downloading Web package Updating Web Package finished	
Password: 111111	Mask 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].

Warning	×
OS Firmware upgrade is a critical op and do not disconnect before the u provider if you are not sure of this o system will automatically reboot .	eration. Please make sure power stays on pdate is completed. Contact your service peration. After update is completed, the
📝 Begin firmware update procedure	2
	OK Cancel

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

cMT-G01 OS Update			×
IP HMI Name			4
<u>H</u> MI Name: cMT	-G01 <mark>1</mark> 9 <u>S</u> earch S <u>e</u> arch All	2.168.1.144 (cMT-G01)	
🔘 Web package			
OS	C:\MTfirmware.bin		
Password: 111111		Mask	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".

cMT-01 Startup Guide

cMT-G01 OS Update			×
IP HMI Name			٥
<u>H</u> MI Name: cM	G01 ▼ 19 Search Search All	2.168.1.144 (cMT-G01)	
Web package			
OS	C:\MTfirmware.bin		1
connecting HMI and checking downloading OS Updating OS finished	password		
Password : 111111		Mask 🗌	Update

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.

EasyBuilder Pro (Copyright c 2006 Weintek Lab., Inc.)
Welcome to EasyBuilder Pro. Please select your model.
Model : CMT-G01 (IIoT Gateway)
Use template (template_G01.cmtp)
OK Cancel

Step 2. Add a PLC into the Device List.

Device	Model	General	System Setting	Security	Time Sync./DST	e-Mail		
Device	list :						What's m	y IP ?
N	0.	N	ame	Location	Device type		Interface	I/F Protocol
	cal HMI	Lo	cal HMI	Local	cMT-G01 (10	024	÷	-80
•	Local P	LC 4 MC	DBUS TCP/IP	Local	MODBUS T	CP/IP	Ethernet (IP=1	TCP/IP

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

PC UA Server	
🕼 Enable	
Server Settings	
Tan	

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.

Na	me: Monitor 4x-1				
Гуре	🔘 Bit		() Word		
Address PLC :	MODBUS TCP/IP			-][Settings
Address :	4x	• 1		i)	6-bit Unsigned(
Гуре		-			
1	Readable .	V Writable			

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

OPC UA Server	
Enable Server Settings	
Tag	New group New Tag Delete Settings Import Export
	Exit

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 vie Ethernet.

ethernet	Password/Port no. of download/upload :	Settings
4 IP HMI Name		Þ
IP: 1	92.168.1.100 🔹	
Runtime * Necessary	${\underline{{\mathbb W}}}$ if update runtime or execute download first time.	hat's my IP ?
Reset recipe	☑ Reset event log	
✓ Reset recipe ✓ Automatically using cur	Reset event log rent settings to download after compiling	

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.

CMT series Server ×		
$\boldsymbol{\leftarrow}$ \rightarrow \mathbf{C} (i) 192.168.100	1/web_ihmi/ProjectM.php	୧ ମ ହା ☆ :
identity: System Setting	Logout CMT-8E9C 🛛 02:19:27 pm	■ ▲ 0 2016/12/01
🕞 Network	Project Management	
🕒 Date/Time	Restart Project Update Project Backup Project	
🖉 HMI Name	Please select item(s) to update	
History	▼ Project 選擇檔案 EMTP1.cxob	
🧥 Email	RW	
🖹 Project Management	RW_A	
System Password		
Enhanced Security		
CasyAccess 2.0		
	Upload	

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.

Server Status Connected					
Browser	Check nodes status	Monitor	Remove unavailable	nodesRemo	ove all node
Name	Status	Name	Id	DataType	Value
⊿ 本機 HMI		Monitor LW-0	NS2 String 本機 HMLTags.Monitor LW-0) UInt16	0
▲ Tags		Monitor 4x-1	NS2 String MODBUS RTU.Tags.Monito	UInt16	0
Monitor LW-0	Readable				
MODBUS RTU					
⊿ Tags					
Monitor 4x-1	Readable				

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 <u>http://www.weintek.com/download/EasyAccess20/Manual/eng/EasyAccess2_UserManual_en.pdf</u>
- 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