

How to interface

# Weintek cMT-G01

# IloT device with PLC S7-1200



## In 3 easy steps

# Things required

## Hardware used:



Siemens PLC  
S7-1200

**IP Address: 192.168.1.100**



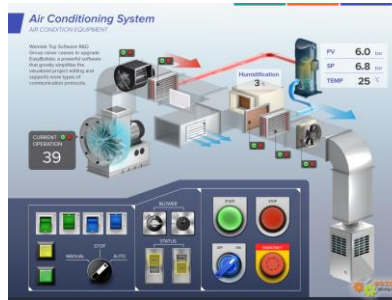
Ethernet cable



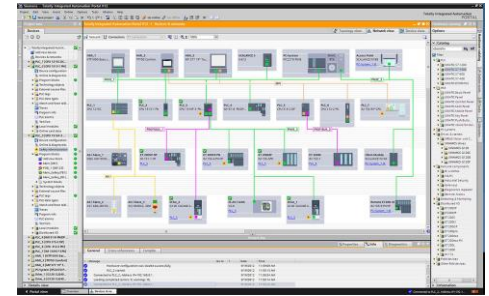
Weintek IloT  
cMT-G01

**IP Address: 192.168.1.104**

## Software used:



EasyBuilder Pro  
Free



Siemens TIA Portal  
V13/V14/V15

# Requirement 1) Configure the PLC & write a program



Check the option to Permit access with PUT/GET communication as shown below

PLC Program in TIA Portal

| Access level   | Access |      |       | Access permi... |
|--|--------|------|-------|-----------------|
|  | HMI    | Read | Write |                 |
| <input checked="" type="radio"/> Full access (no protection) | ✓      | ✓    | ✓     |                 |
| <input type="radio"/> Read access                            |        | ✓    |       |                 |
| <input type="radio"/> HMI access                             | ✓      |      |       |                 |
| <input type="radio"/> No access (complete protection)        |        |      |       |                 |

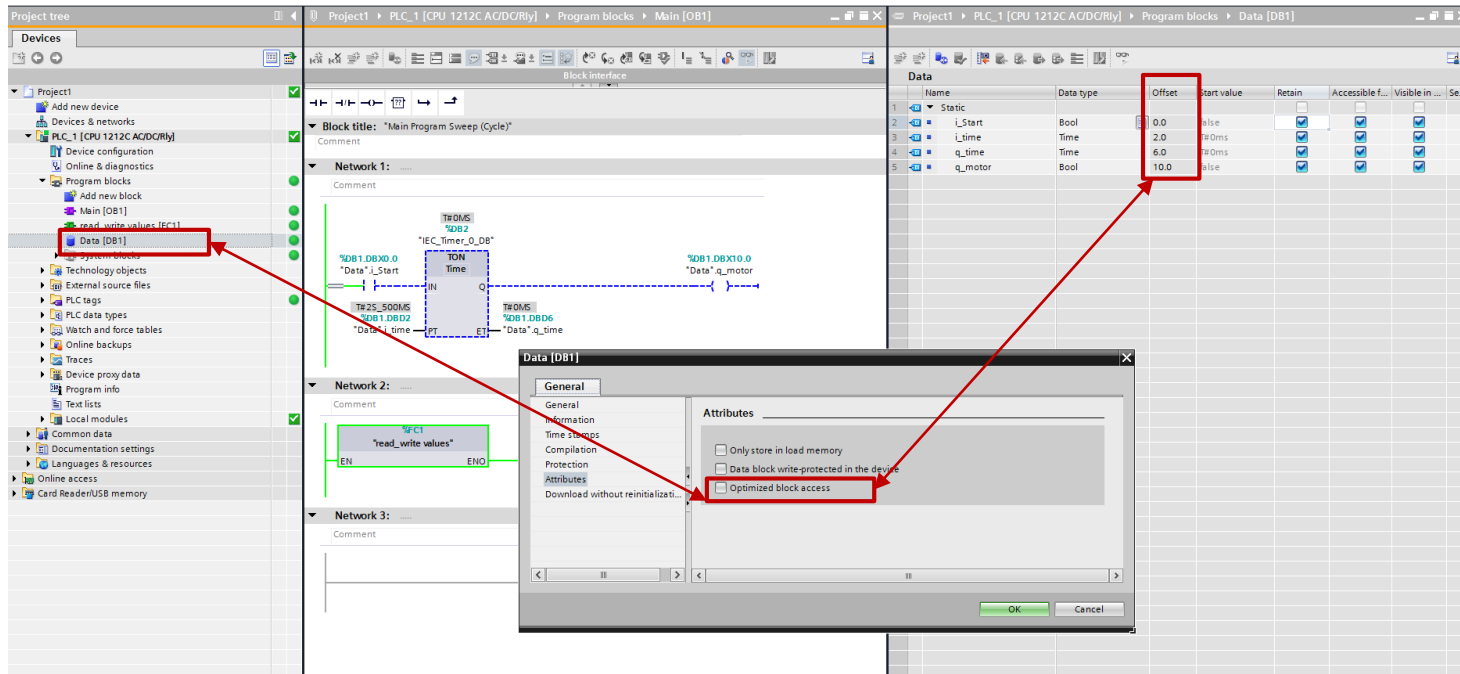
**Full access (no protection):**  
TIA Portal users and HMI applications will have access to all functions.  
No password is required.

Permit access with PUT/GET communication from remote partner (PLC, HMI, OPC, ...)

# Requirement 2) Setup the DB

Make sure the DB you want to access is not checked with Optimized block access.

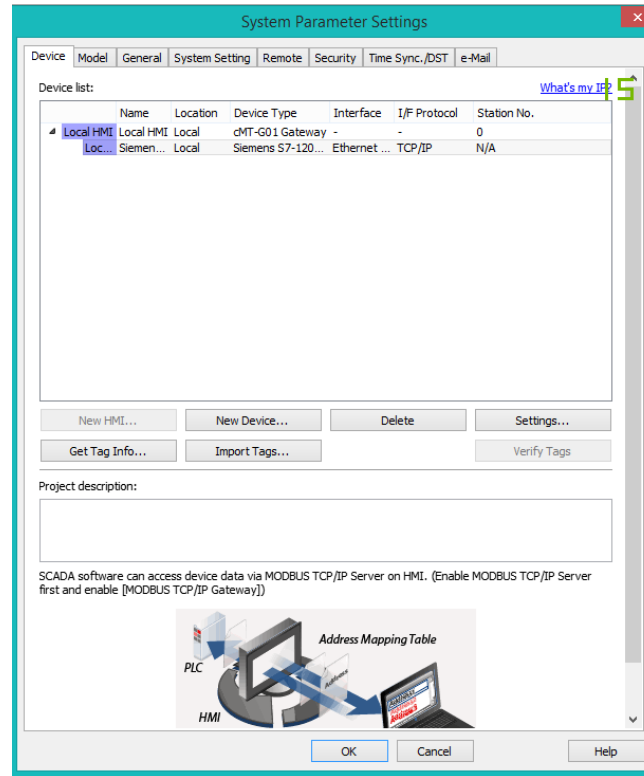
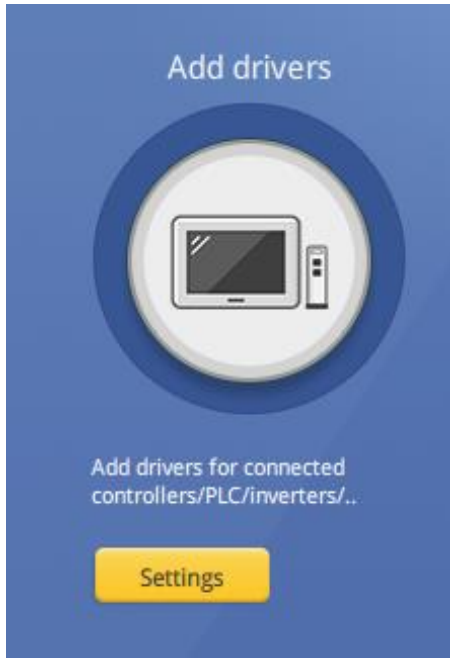
This will activate the offset addresses in the DB



The screenshot displays the SIMATIC Manager interface. On the left, the 'Project tree' shows the 'Data [DB1]' block selected. The main window shows the 'Block interface' with a ladder logic diagram. A red box highlights the 'Data [DB1]' block in the project tree. Another red box highlights the 'Optimized block access' attribute in the 'Data [DB1]' dialog box. A third red box highlights the 'Offset' column in the 'Data' table.

| Name | Data type | Offset | Start value | Retain | Accessible f... | Visible in ... | Se... |
|------|-----------|--------|-------------|--------|-----------------|----------------|-------|
| 1    | Static    |        |             |        |                 |                |       |
| 2    | Bool      | 0.0    | false       |        |                 |                |       |
| 3    | Time      | 2.0    | %Dms        |        |                 |                |       |
| 4    | Time      | 6.0    | %Dms        |        |                 |                |       |
| 5    | Bool      | 10.0   | false       |        |                 |                |       |

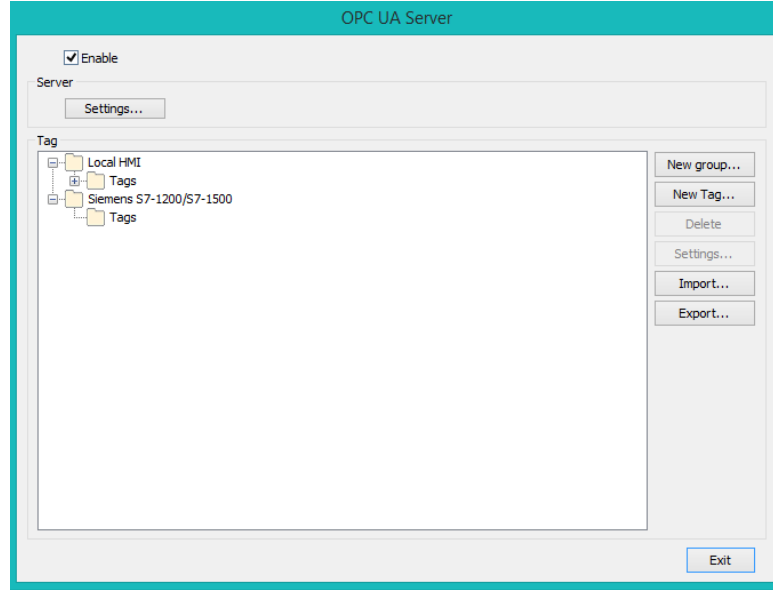
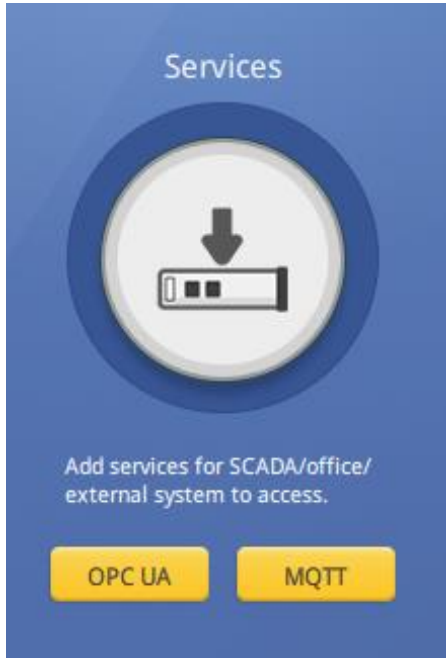
# Step 1) Add drivers in EasyBuilder Pro



Add your controller from the list of available controllers and setup the tags.

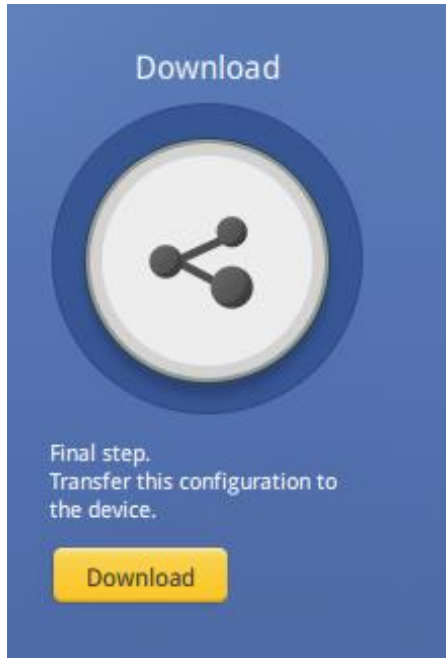
Here I added Siemens S7-1200 PLC

# Step 2) Setup OPC-UA in EasyBuilder Pro



Assign the OPC-UA tags from the tags imported in the library

# Step 3) Download the project



That's it!  
Download the project in IloT Device



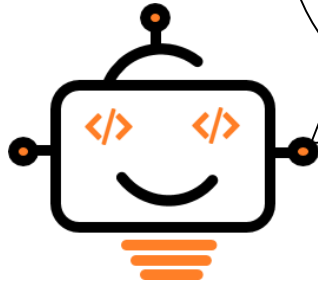
# Monitor Tag status via OPC-UA Client software

## Add the OPC-UA Server in OPC-UA Client software (UaExpert) and read tag status

The screenshot displays the UaExpert software interface. The main window is titled "Unified Automation UaExpert - The OPC Unified Architecture Client - NewProject". The interface is divided into several panes:

- Project:** Shows a tree view of the project structure, including "Servers" and "Documents".
- Address Space:** Shows a tree view of the address space, including "Local HMI", "Statistics", "Tags", and "Sys\_Tags". The "Common Error Codes" folder is expanded, showing several error codes.
- Data Access View:** A table showing the data access view for the selected tag. The table has columns for "Server", "Node Id", "Display Name", "Value", "Datatype", and "Source Time".
- Attributes:** A table showing the attributes of the selected tag. The table has columns for "Attribute" and "Value".
- References:** A table showing the references of the selected tag. The table has columns for "Reference" and "Target Display Name".
- Log:** A log window at the bottom showing the history of operations, including "Browse succeeded", "Browse on mode 'ns=2;Local HMI;Tags;Sys;Tags;Comm Error Codes' succeeded", and "Browse on mode 'ns=2;Local HMI;Tags;Sys;Tags;Comm Error Codes;LW-9400 Device1 error code' succeeded".





LINK YOUR CONTROLLER  
TO OPC-UA SERVER IN  
3 EASY STEPS!

To get more information visit

<https://www.weintek.com>

*Link is also given in the video description*



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