

# How to interface Weintek cMT3071 with PLC S7-1200



One click PLC TAG mapping

# Things required

## Hardware used:



Siemens PLC  
S7-1200

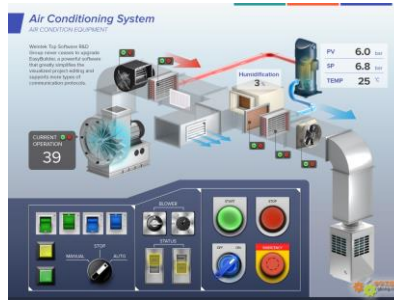


Weintek HMI  
cMT3071

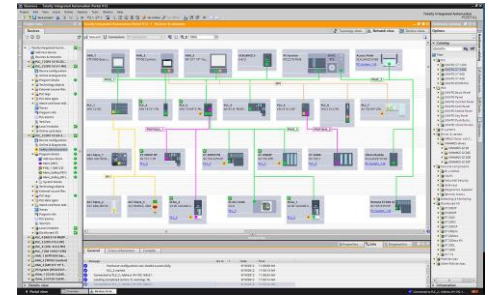


Ethernet cable

## Software used:



EasyBuilder Pro  
Free

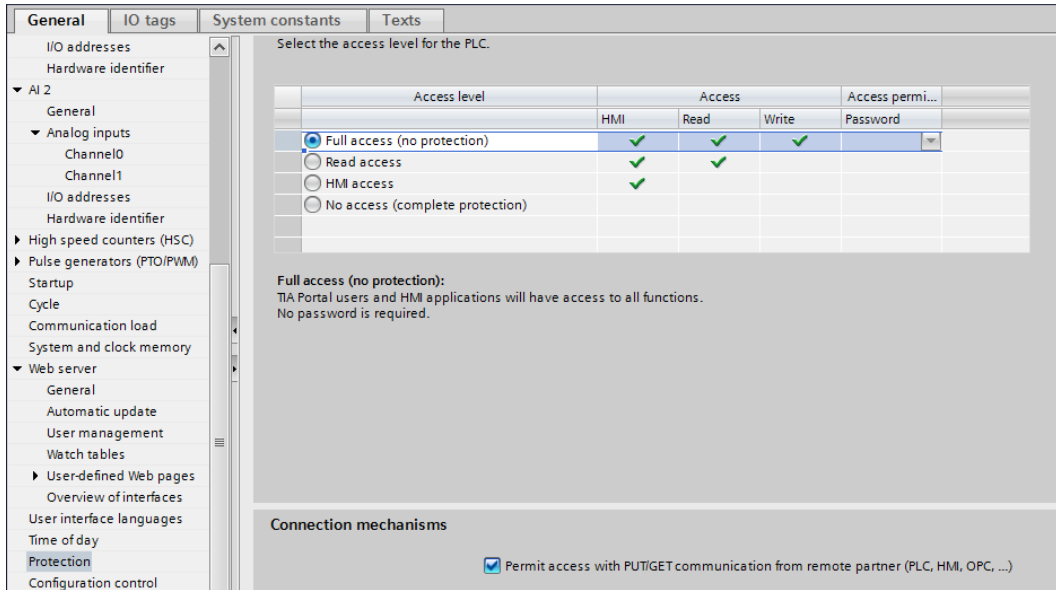


Siemens TIA Portal  
V13/V14/V15

# Step 1) Configure the PLC & write a program

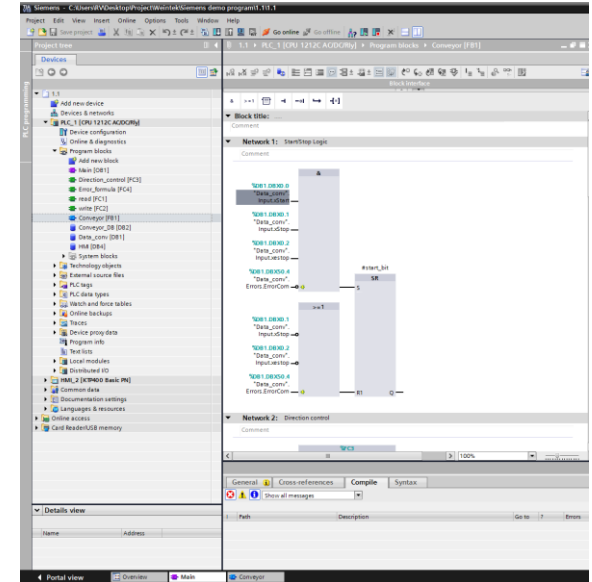
Check the option to Permit access with PUT/GET communication as shown below

PLC Program in TIA Portal



The screenshot shows the 'Protection' configuration dialog in TIA Portal. The 'General' tab is active, and the 'Protection' section is expanded. The 'Access level' is set to 'Full access (no protection)'. The 'Access' table shows that HMI, Read, and Write access are all permitted (indicated by green checkmarks). The 'Access permission' column is empty. Below the table, the text reads: 'Full access (no protection): TIA Portal users and HMI applications will have access to all functions. No password is required.' At the bottom, the 'Connection mechanisms' section has a checked checkbox for 'Permit access with PUT/GET communication from remote partner (PLC, HMI, OPC, ...)'.

Access level	Access			Access permission
	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)				

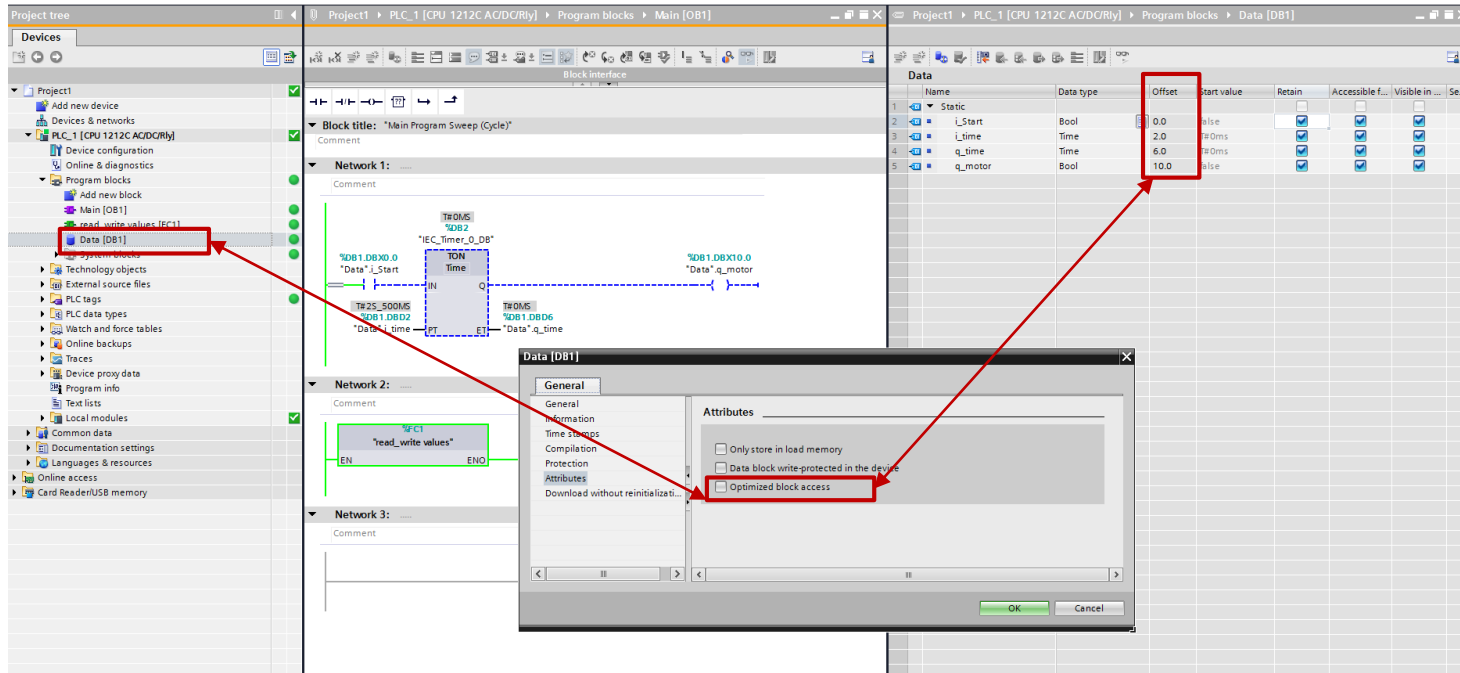


The screenshot shows the TIA Portal PLC program editor. The 'Network 1: Start/Stop Logic' is visible, showing a sequence of steps with various PLC instructions like 'set', 'reset', and 'set\_r'. The 'Network 2: Direction control' is also visible, showing a sequence of steps with instructions like 'set', 'reset', and 'set\_r'. The 'Details view' at the bottom shows the 'Name' and 'Address' columns.

# Step 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 'Offset' column in the 'Data' table. A third red box highlights the 'Optimized block access' checkbox in the 'Data [DB1]' dialog box, which is currently unchecked. The 'Data' table is as follows:

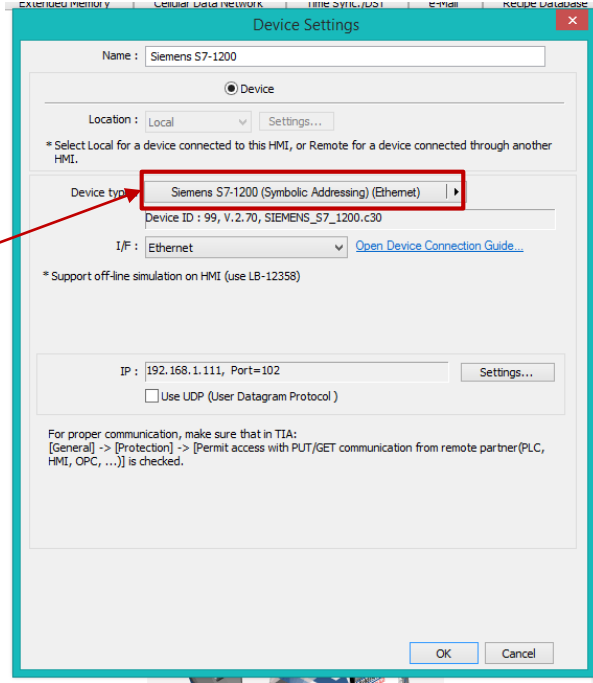
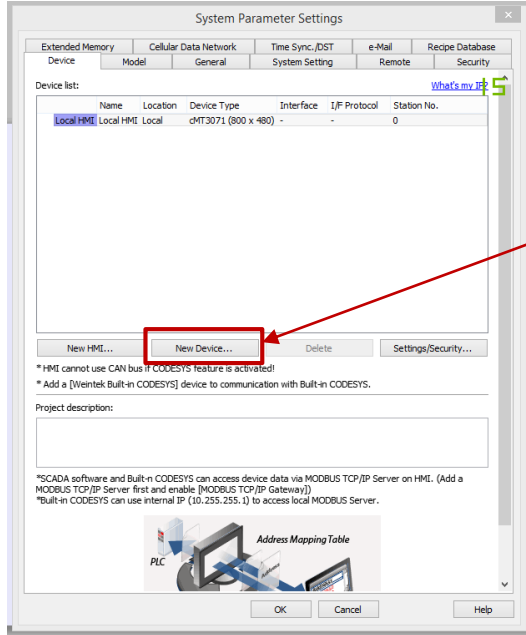
Name	Data type	Offset	Start value	Retain	Accessible f...	Visible in ...	Se...
1	Static						
2	Bool	0.0	alse				
3	Time	2.0	#Dms				
4	Time	6.0	#Dms				
5	Bool	10.0	alse				



# Step 3) Add device in EasyBuilder Pro

Make sure the device is connected via required communication cable

Select your controller from the list





# Step 4) Setup IP address & tags

Enter the IP Address and port number of your controller

Import the tags using one click tag function in EasyBuilder Pro

The screenshot shows the 'IP Address Settings' dialog box. It has a title bar with the text 'IP Address Settings'. The main area contains two input fields: 'IP address : 192 . 168 . 1 . 111' and 'Port no. : 102'. Below these are two more input fields: 'Timeout (sec) : 1.0' and 'Turn around delay (ms) : 0'. At the bottom, there is a dropdown menu for 'The number of resending commands : 0'. At the very bottom are 'OK' and 'Cancel' buttons.

The screenshot shows the 'Import Tags' dialog box. It has a title bar with the text 'Import Tags'. The main area is divided into several sections: 'PLC firmware version' with radio buttons for 'Version 3.0 or earlier versions' and 'Version 4.0 or later versions'; 'PLC tags' with a 'File name' input field and a 'Browse...' button; 'Program blocks' with a checkbox 'Use single file for multiple data blocks' and a table with columns 'DB Number' and '[Program Blocks] file name'; 'Technology objects' with a table with columns 'DB Number' and 'Technology Object'; and 'Import status' with a large empty text area. At the bottom are 'Import', 'OK', and 'Cancel' buttons. There are also some small text notes at the bottom of the dialog.




# Step 5) Design screen and link tags


Design the screen in EasyBuilder Pro as per your PLC logic requirement


Link the tags quickly using one click tag import option

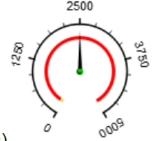
**Code and Compile**


Interfacing Weintek HMI with Siemens S7-1200




Start/Stop 

On-delay (in ms) 



Motor 



Tag Manager

Find :

- PLC
  - Blocks
    - Data
      - i\_Start
      - i\_time
      - q\_time
      - q\_motor
    - IEC\_Timer\_0\_DB
  - UDTs
  - Tags
    - Table
      - q\_motor

Select all Discard all OK Cancel

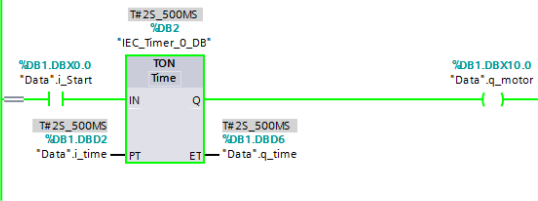
# Step 6) Download the screen and run!

Project1 ▶ PLC\_1 [CPU 1212C AC/DC/Rly] ▶ Program blocks ▶ Main [OB1]

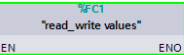
Block Interface

Block title: "Main Program Sweep (Cycle)"  
Comment

Network 1: ---  
Comment



Network 2: ---  
Comment

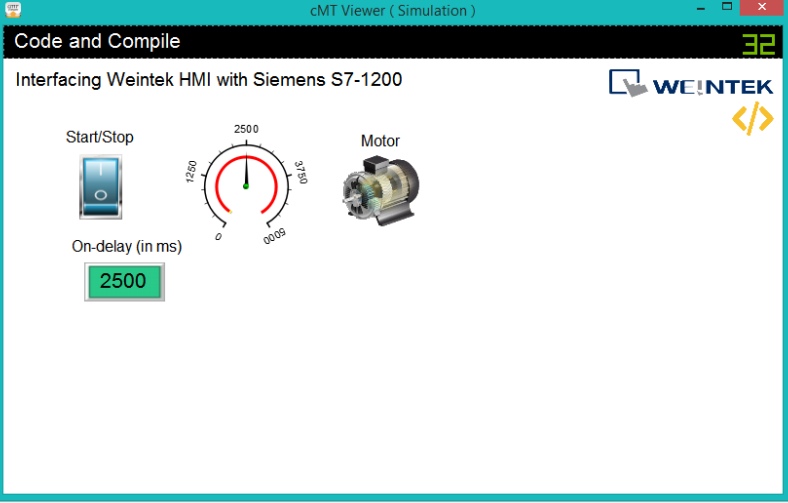


Network 3: ---  
Comment

cMT Viewer (Simulation)

Code and Compile 32

Interfacing Weintek HMI with Siemens S7-1200



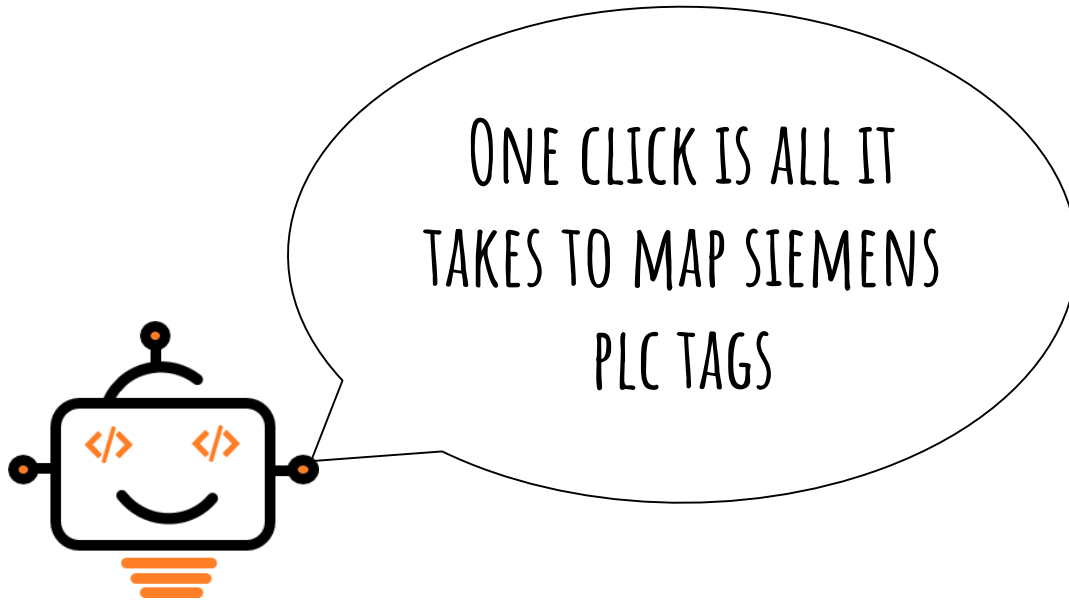


# How to Download screen

Via Web Interface



A screenshot of a web browser displaying the WEINTEK web interface. The browser address bar shows "192.168.1.103/web\_hmi/ProjectM.php". The page title is "Project Management". The interface includes a sidebar menu with options like Network, Date/Time, HMI Name, History, Email, Project Management, System Password, Enhanced Security, EasyAccess 2.0, and CODESYS. The main content area shows the "Update Project" tab selected, with a "Please select item(s) to update" section containing a list of items: Project (checked), RW, RW\_A, and Recipe Database. A "Choose File" button and "No file chosen" text are visible next to the "Project" item. The top right corner of the interface shows a "Logout" button, the user identity "identity: System Setting", and the system time "08:40:31 pm" on "2019/03/16".



**To get more information visit**

<https://www.weintek.com>

*Link is also given in the video description*



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cMT3071