



CONNECTION

GUIDE

GT2 Series / DL-PN1

SIEMENS

S7-1200 Series

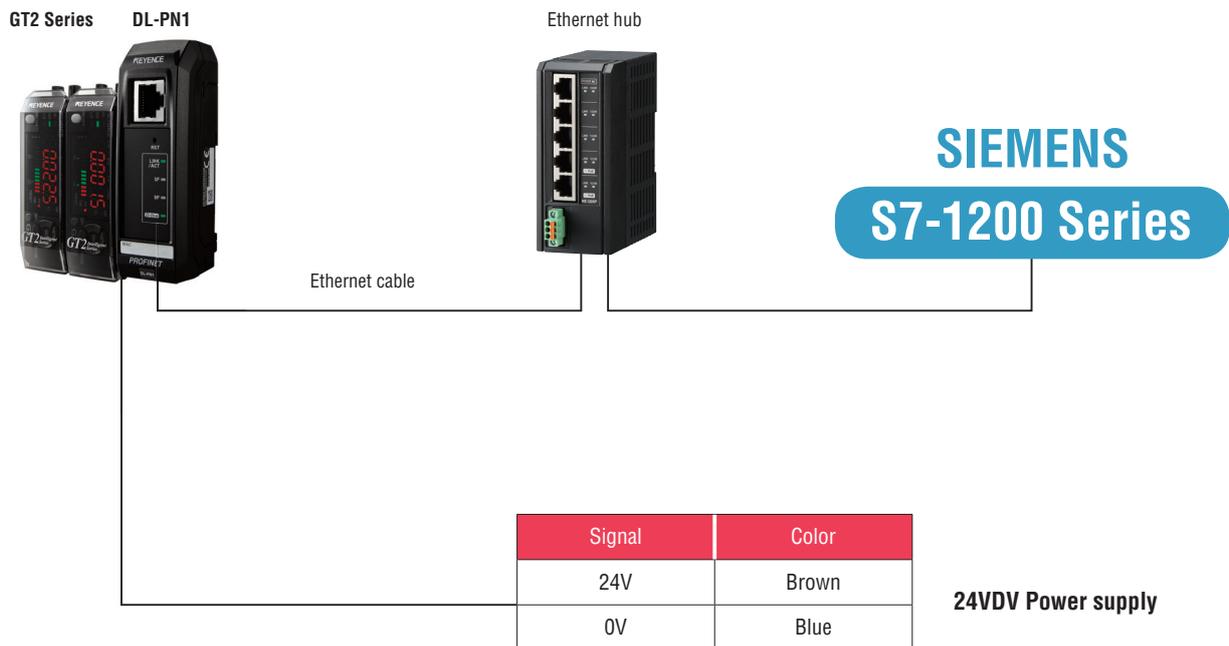
PLEASE PREPARE

Please prepare the following products.

<p>CPU module</p> <p>SIEMENS S7-1200 Series</p>	<p>Contact probe GT2 Series</p> 	<p>PROFINET unit DL-PN1</p>  <p>PROFINET</p>	<p>Ethernet cable / hub</p> 
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CONNECTING

Below would be the way how to connect the GT2 series and DL-PN1 to your PLC.



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BASIC SETTINGS [SIEMENS S7-1200 SERIES]

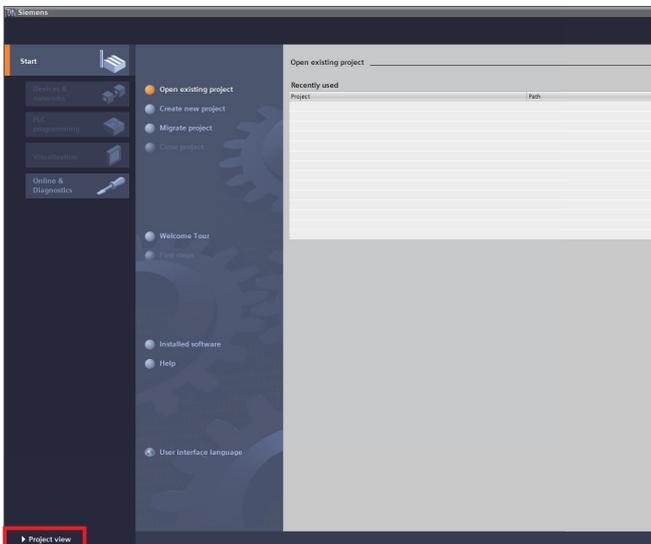
TIA Portal V.11 or later would be required to communicate PROFINET.

1 Start TIA Portal



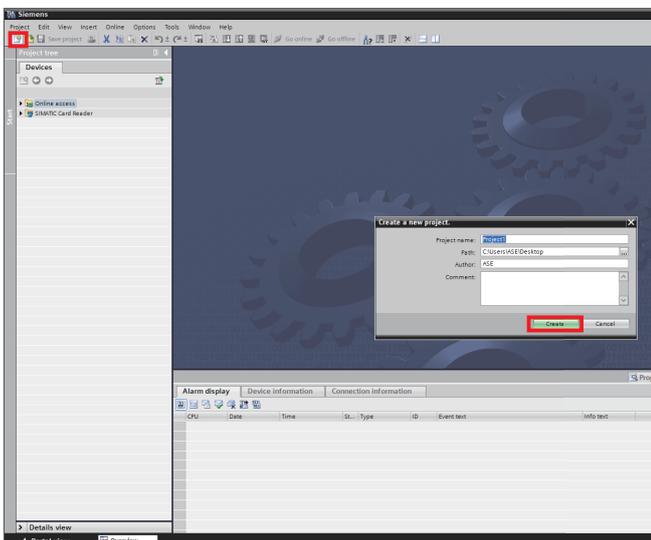
Double click the icon of TIA Portal on your desktop.

2 Click "Project View" which is in the lower left of the screen.



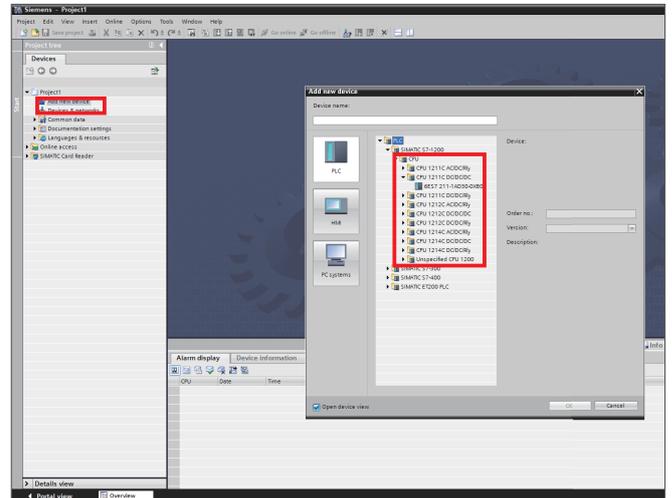
3 Click the "new project" icon, and open the "Create a new project" screen.

Input a project name, and then click "Create".



4 Double click "Add new device" under the new project that has been added to the "Project tree".

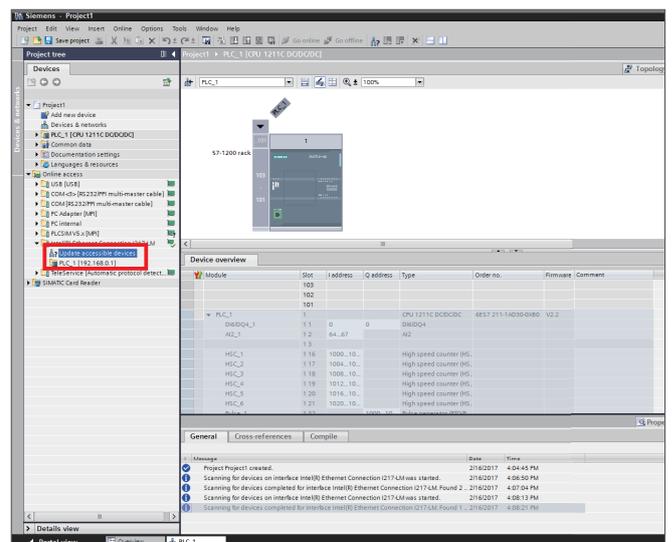
On the "Add new device" screen, click the S7-1200 Series you are using, and then click "OK".



5 Open the "Online access" which is inside the "Project tree", and then select the network card your S7-1200 is connected.

Double click "Update accessible devices". The S7-1200 which is connected would appear.

Open the appeared S7-1200, and then double click "Online & diagnostics".

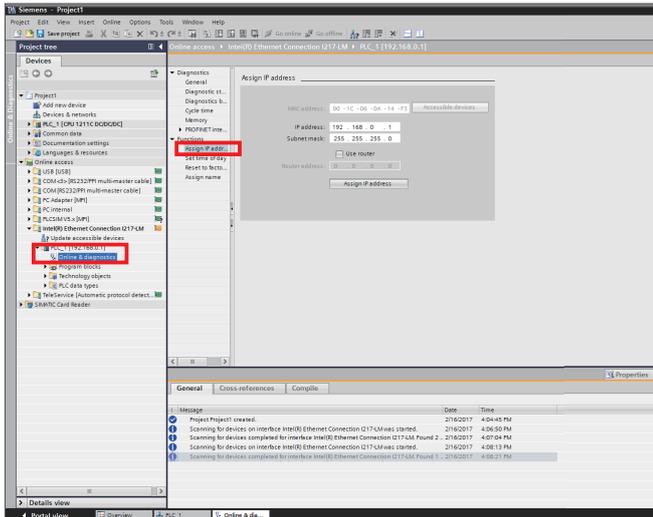


BASIC SETTINGS [SIEMENS S7-1200 SERIES]

6 Click “Assign IP address” which is under “Functions”, set the IP address and the subnet mask of the S7-1200, and then click “Assign IP address”.

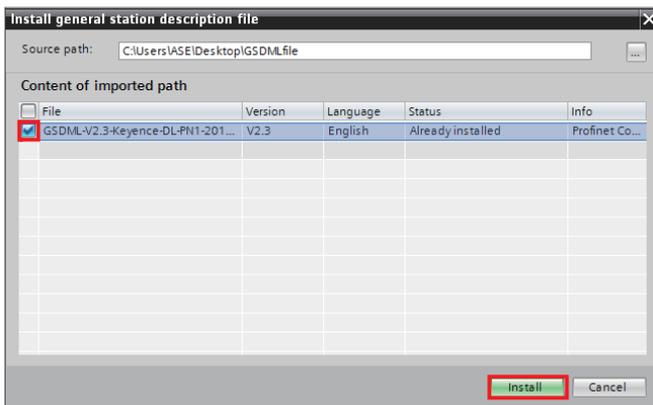
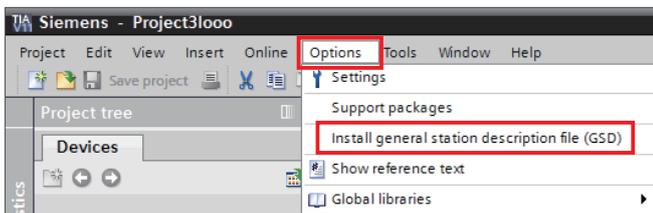
If the PLC already has one IP address set, you may not be able to set a new IP address.

At this case, click “Reset to factory settings”, and initialize the IP address once.

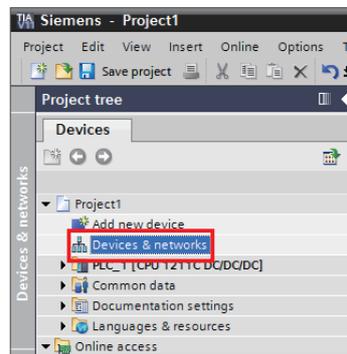


7 Register the GSDML file. Open the “Options” menu, and click “Install general station description file (GSD)”.

Specify the folder which has the GSDML file inside, select the check box of the target GSDML file, and click “Install”. After the install is finished, TIA Portal would restart.



8 Click “Project View” which is in the lower left of the screen, and then click “Open” on the “Project” menu.

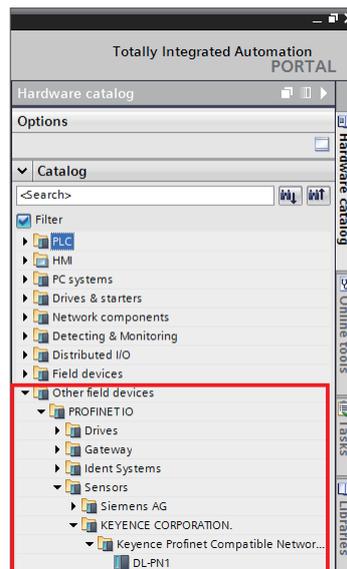


Select a project, and then click “Open”.

The “Open existing project” screen would be displayed, click a project and then click “Open”.

Double click “Devices & networks”.

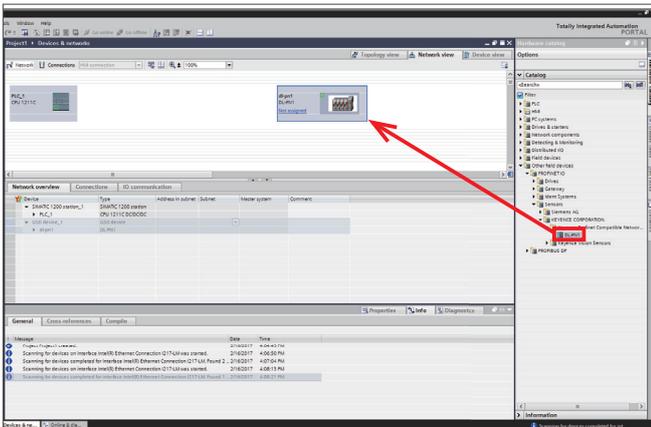
9 In the “Hardware catalog” field, click “Other field devices” → “PROFINET IO” → “Sensors” → “KEYENCE CORPORATION” → “Keyence Profinet Compatible Network..”.



Confirm that DL-PN1 could be selected.

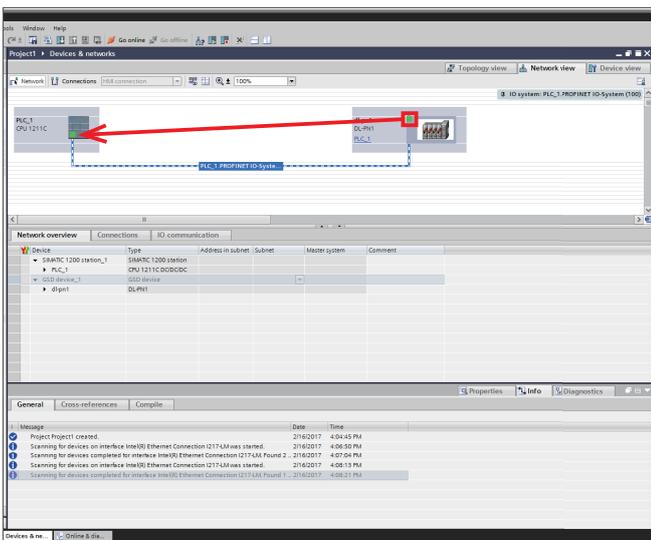
BASIC SETTINGS [SIEMENS S7-1200 SERIES]

10 In the “Devices & networks” field, click the “Network view” tab, and drag “DL-PN1” to this tab.



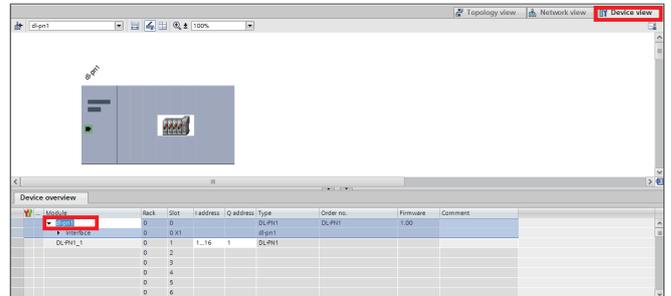
11 Click the green box which is close to “DL-PN1” to create a line, and extend it to the green box close to the “PLC”.

Your DL-PN1 would be connected to S7-1200.



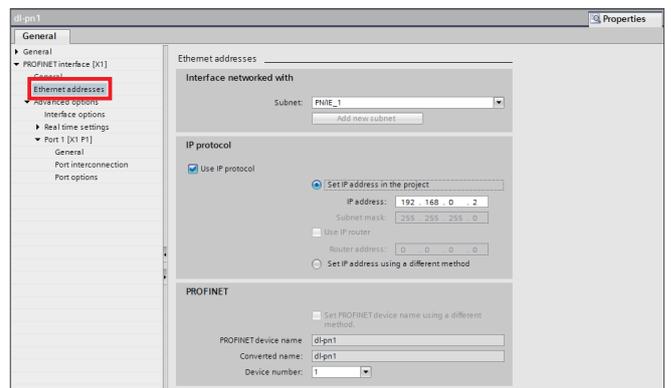
12 On the “Network view” tab, double click the image of DL-PN1.

In the “Device overview” window of the “Device view” tab, enter into the top of the table the Profinet device name of your DL-PN1.

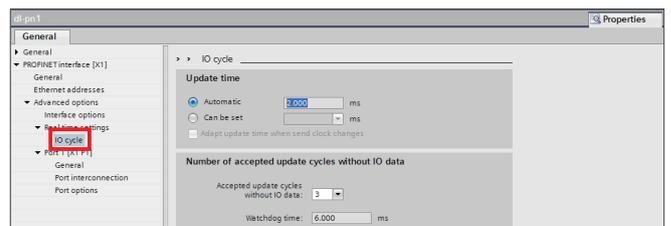


13 Double click the image of DL-PN1, click the “General” tab, click “PROFINET interface”, click “Ethernet addresses”, and then set the IP address of DL-PN1.

If the IP address which is already set to DL-PN1 was different from the one which you set here, the IP address would be overwritten to this.



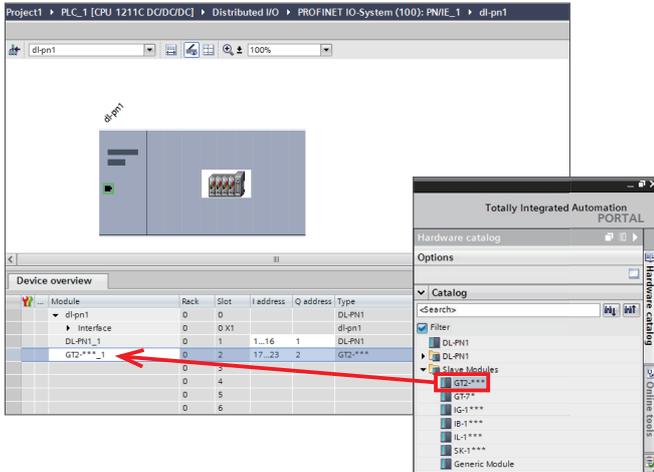
14 Double click the image of DL-PN1, click the “General” tab, click “PROFINET interface”, click “Advanced options”, click “IO cycle”, and then set the “Update time”.



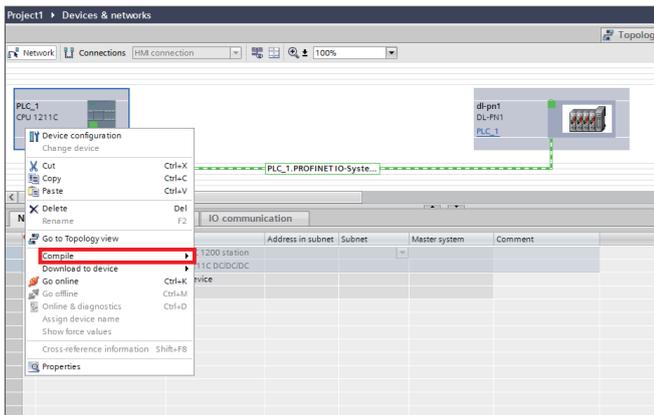
BASIC SETTINGS [SIEMENS S7-1200 SERIES]

15 Click GT2-*** in the “Hardware catalog”, and drag it under DL-PN1 in the “Device overview”.

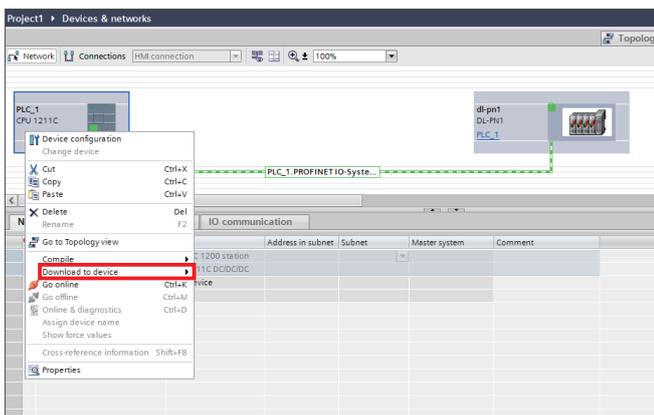
The sensor connected to DL-PN1 would be registered.



16 Click the “Network view” tab, right click the image of the PLC, point to “Compile”, and then click “All”.



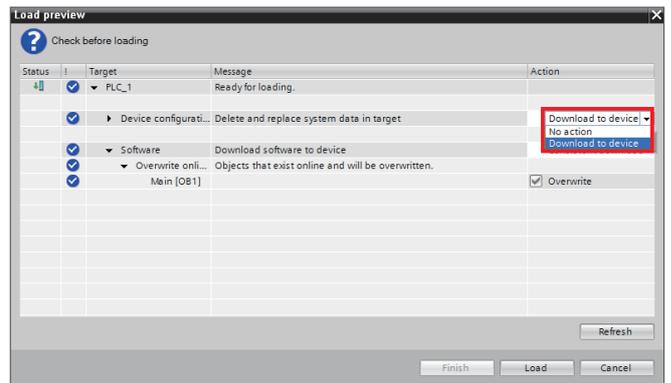
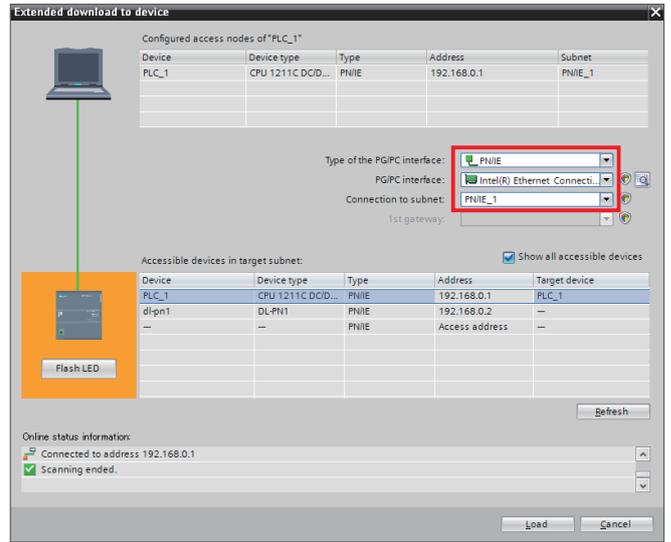
17 Right click the image of the PLC, point to “Download to device”, and then click “All” to transfer the settings to S7-1200.



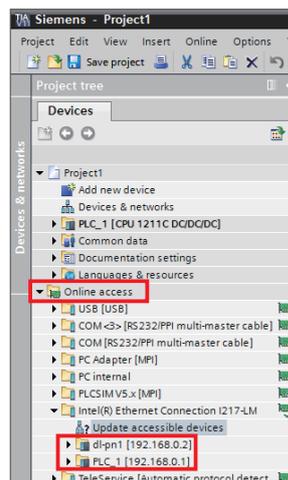
18 On the “Extended download to device” screen, select the interface connected to the PLC, select the target PLC, and then click “Load”.

If “Different modules”, “No action” is displayed on the “Load preview” screen, select “Accept all” or “Download to device”, and then click “Load”.

After the “Load results” screen is displayed, click “Finish”.



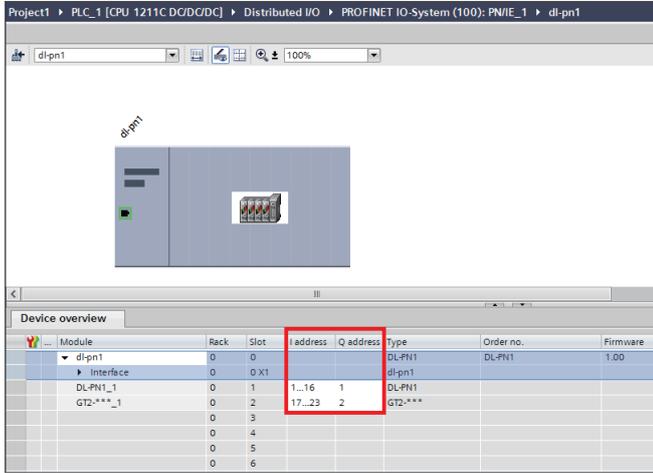
19 Confirm that the PLC and the DL-PN1 is linked correctly to the software.



MONITORING THE RESULT

1 Check the address of the PLC device assigned to DL-PN1

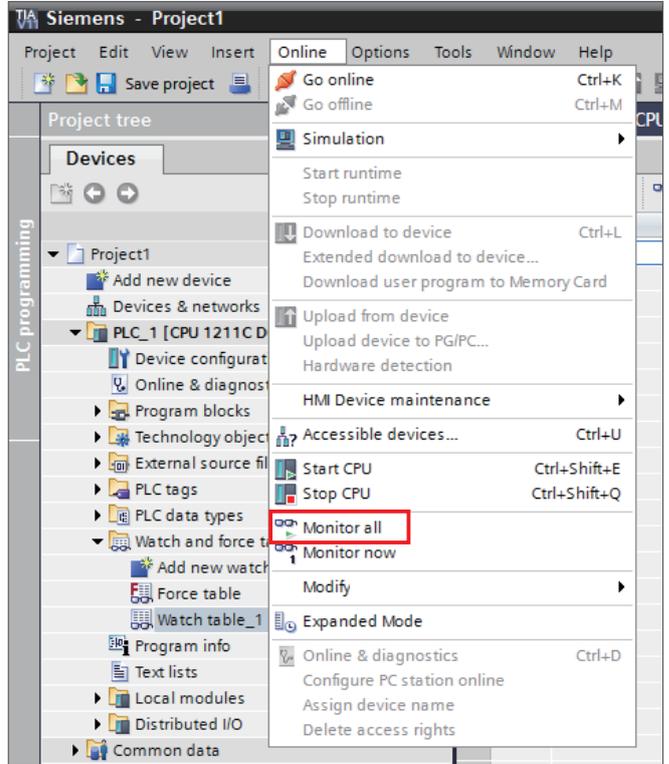
On the “Network view” tab, click DL-PN1, and click the “Device view” tab.



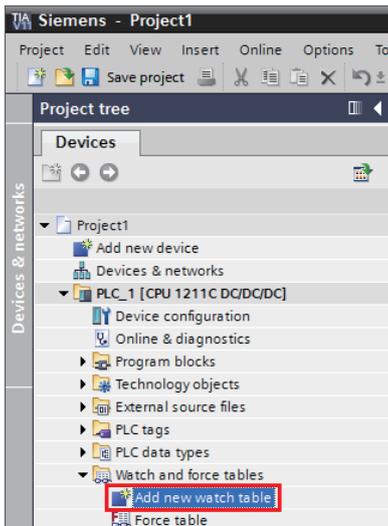
The addresses are assigned to each module automatically. (These could be assigned manually also)

3 Switch to online mode and start monitoring.

Click “Go online” to switch to online mode. On the “Online menu”, click “Monitor all”.



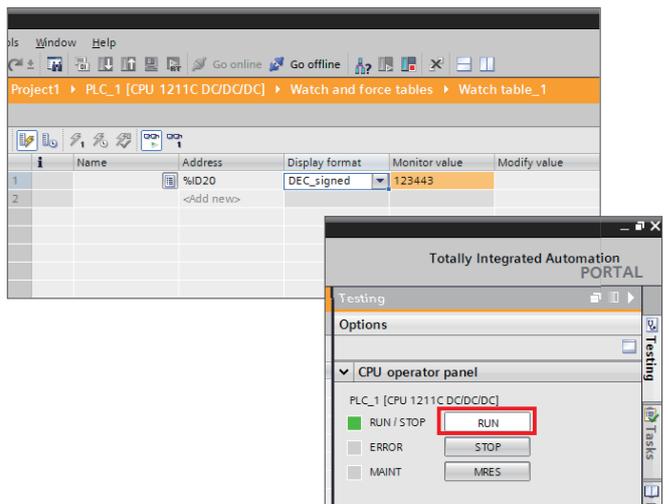
2 Click “Watch and force tables”, and then double click “Add new table”.



In Watch table, enter the address which is assigned.

4 Click “RUN” on the CPU operator panel.

You could see the result in the “Monitor value”.



In the “Address”, please input “IW” if the data type was “WORD”. please input “ID” if the data type was “DWORD”. please input “IB” if the necessary information was a “BIT data”. If the P.V. value of the main unit was necessary, please input “%ID20”



Please visit: www.keyence.com



SAFETY INFORMATION

Please read the instruction manual carefully in order to safely operate any KEYENCE product.

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