

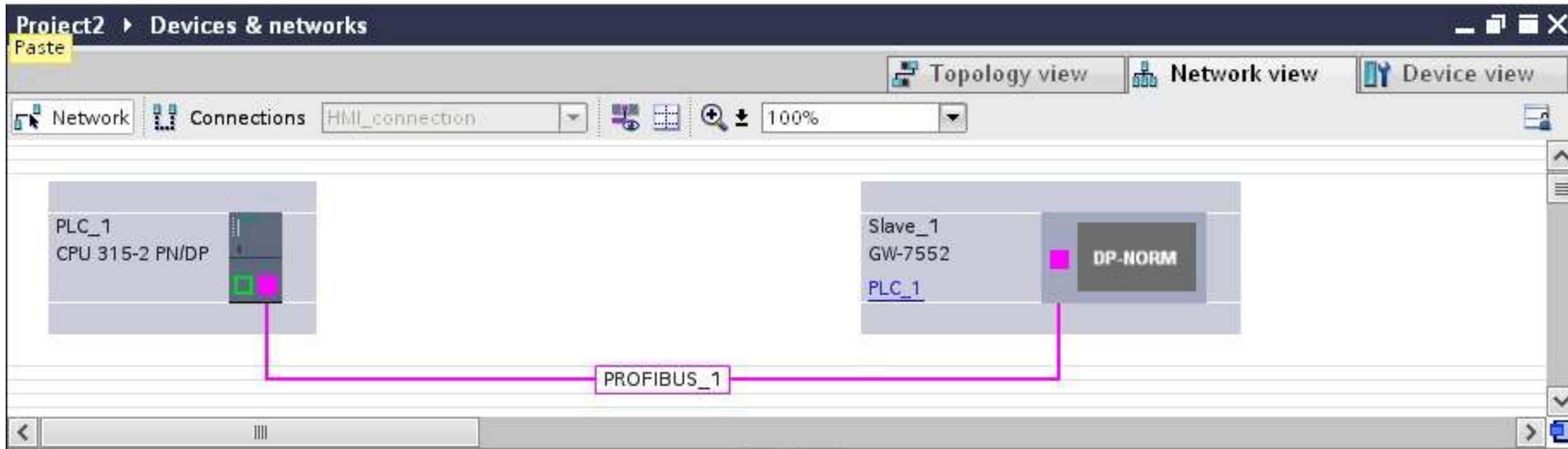
GW-7552 (Modbus RTU Master)

Example for SIMATIC STEP 7(TIA Portal)

- Before Connecting
- Example 1:Reads and Writes DO module data
- Example 2:Reads DI module data
- Example 3:Reads and Writes AO module data
- Example 4:Reads AI module data

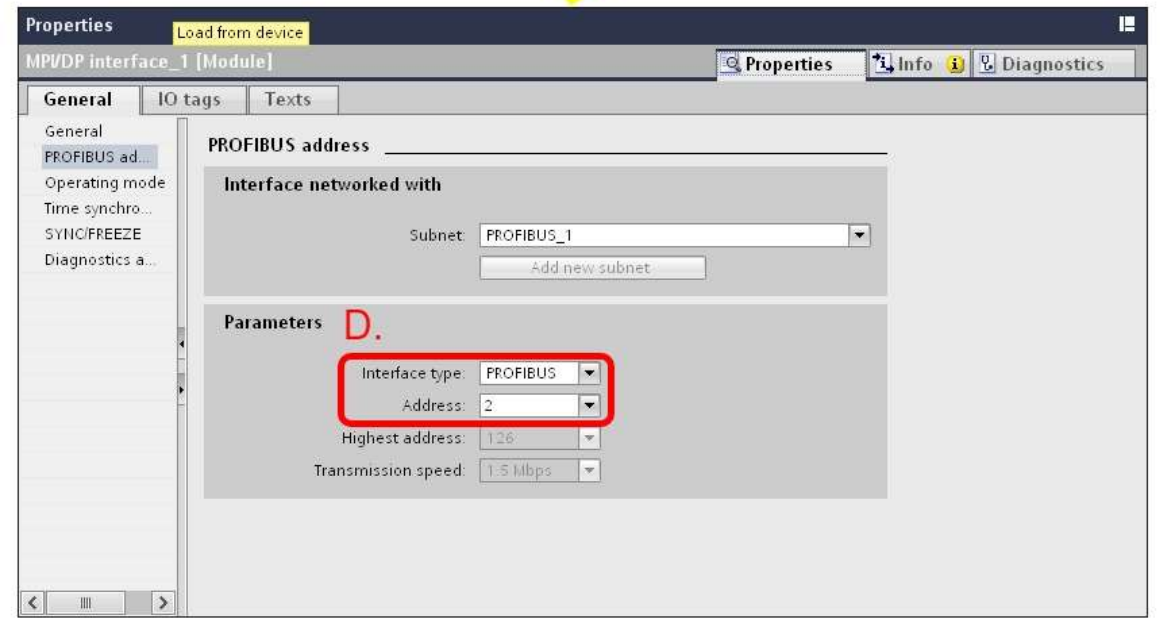
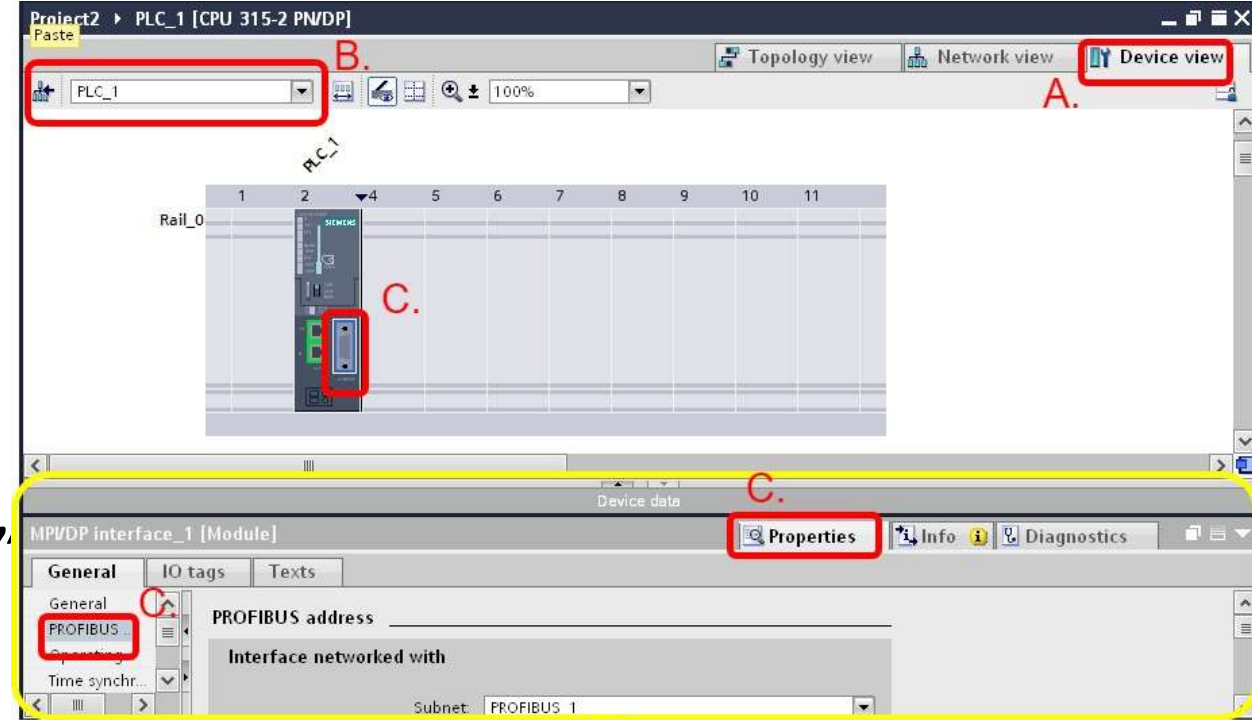
Before connecting

- Add a PROFIBUS master system and a PROFIBUS slave (GW-7552)



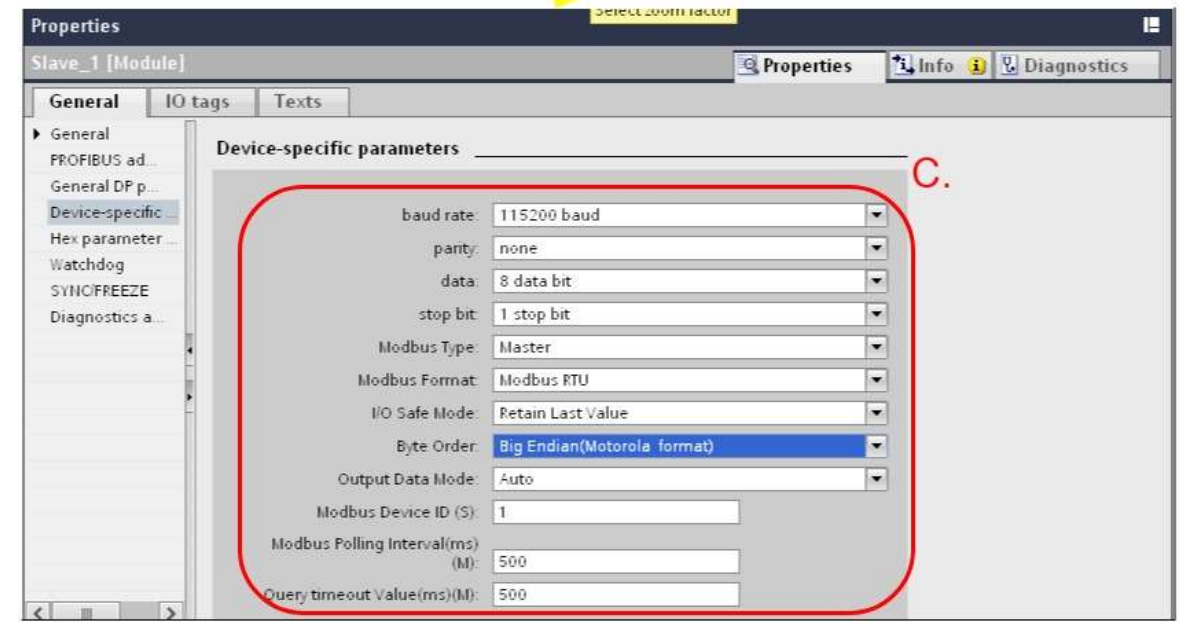
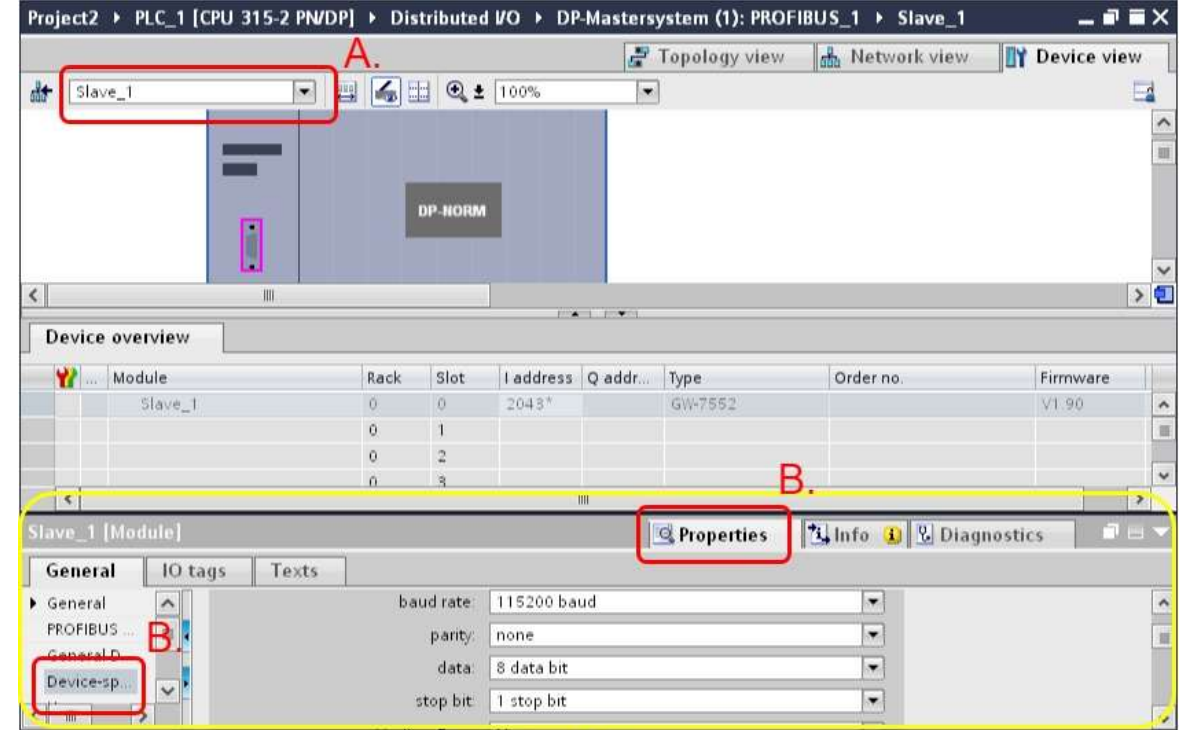
Set the address of PLC as below

- (A) Click “Device view”
- (B) Select “PLC_1” (Which PLC you connect to GW-7552)
- (C) Click “Properties” and “PROFIBUS address”
- (D) Set “interface type”=PROFIBUS and set “Address”=2



Set GW-7552 comport setting as below

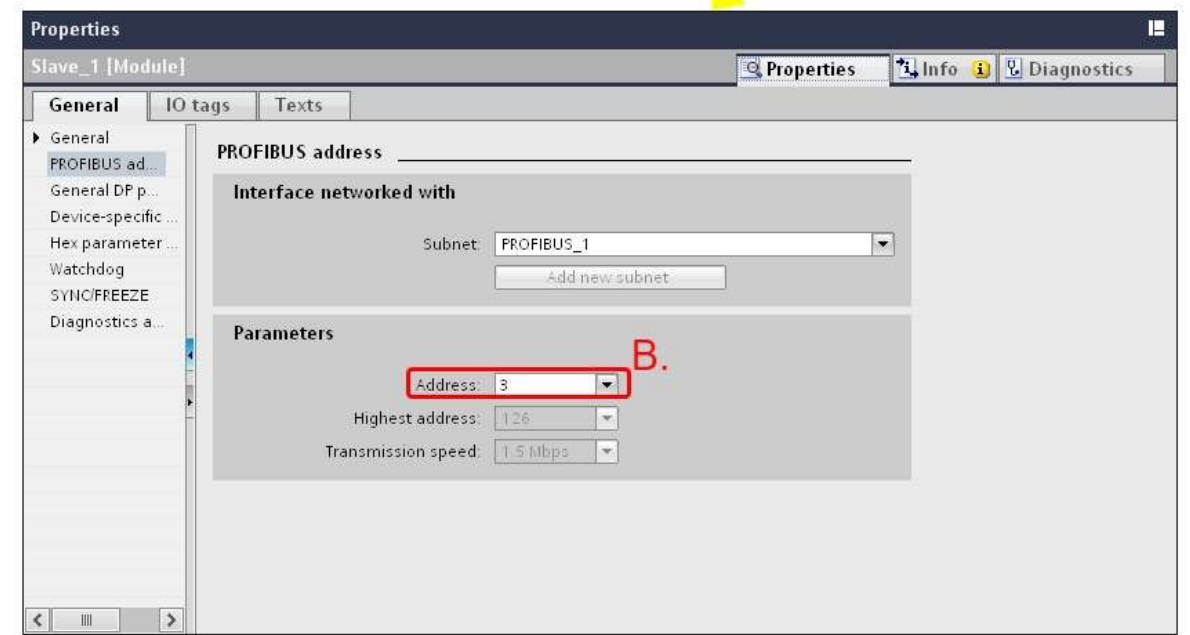
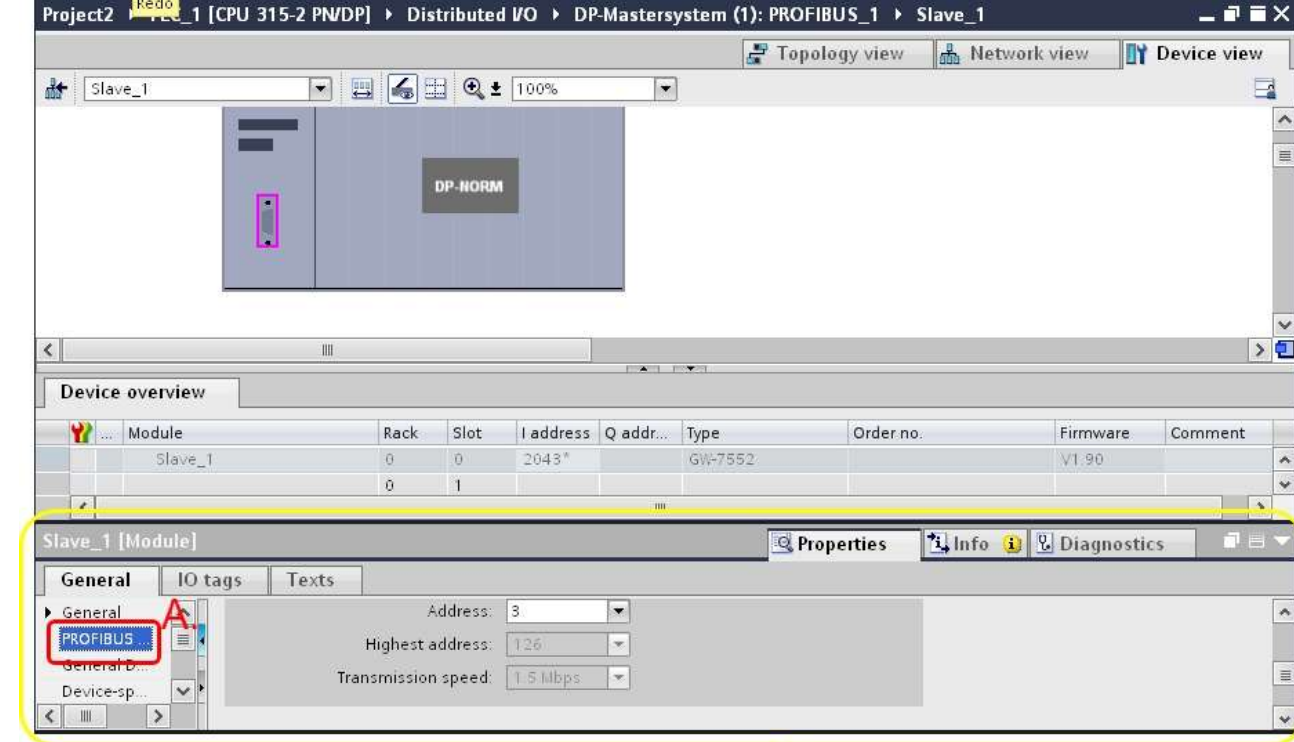
- (A) Select "Slave_1" (Select the slave which is GW-7552)
- (B) Select "Properties" and "Device-specific"
- (C) Set comport:
 - Buad rate: 115200 baud
 - Parity: None
 - Data bit: 8
 - Stop bit: 1
 - Byte order: Big Endian
 - Output Data Mode: Auto



Set the address of GW-7552 as below

(A) Click “Properties” and
“PROFIBUS address”

(B) Set “Address”=3



Before connecting

- Make sure the switch of the GW-7552 is at Normal mode
- Refer to [GW7552 user manual 2.6](#)



Before connecting

- Setup the address by the DIP switch to set GW-7552's address as 3 in PROFIBUS
- Refer to [GW-7552 user manual 2.4](#)

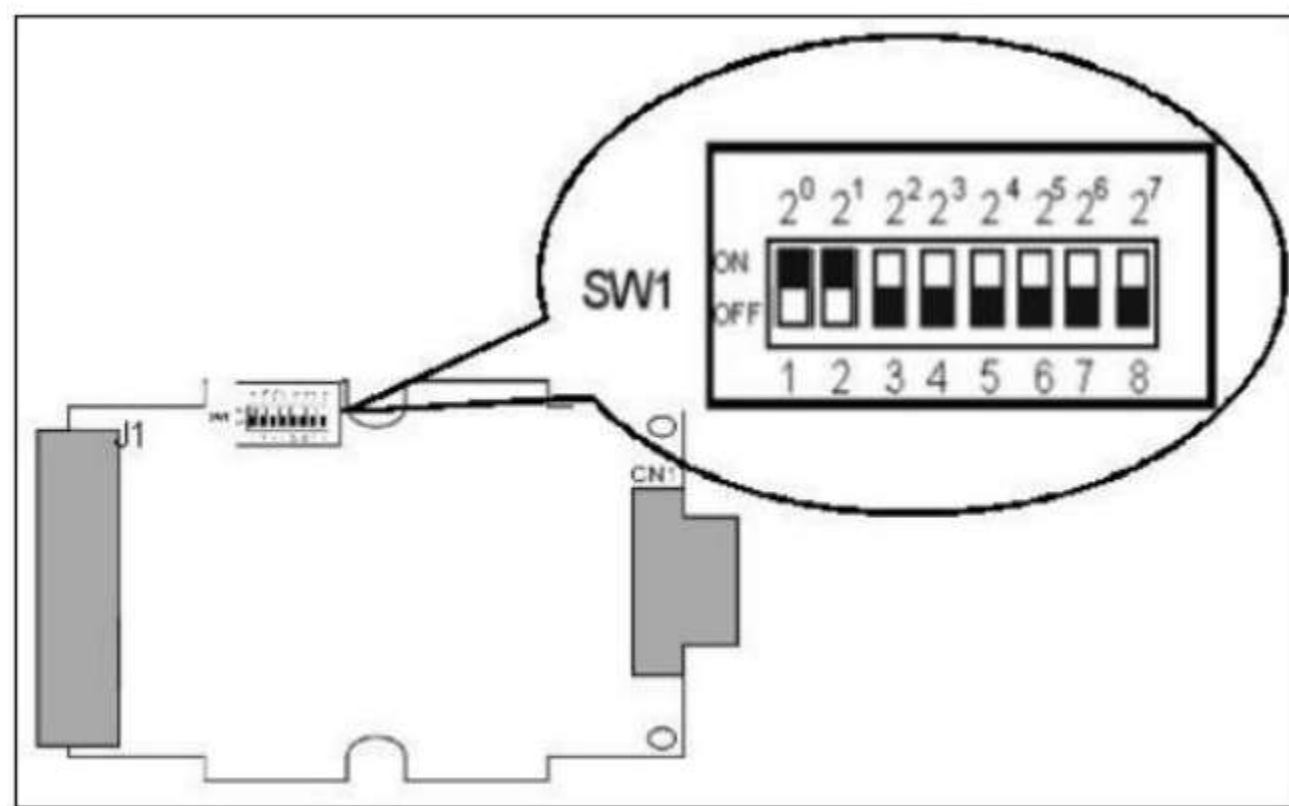
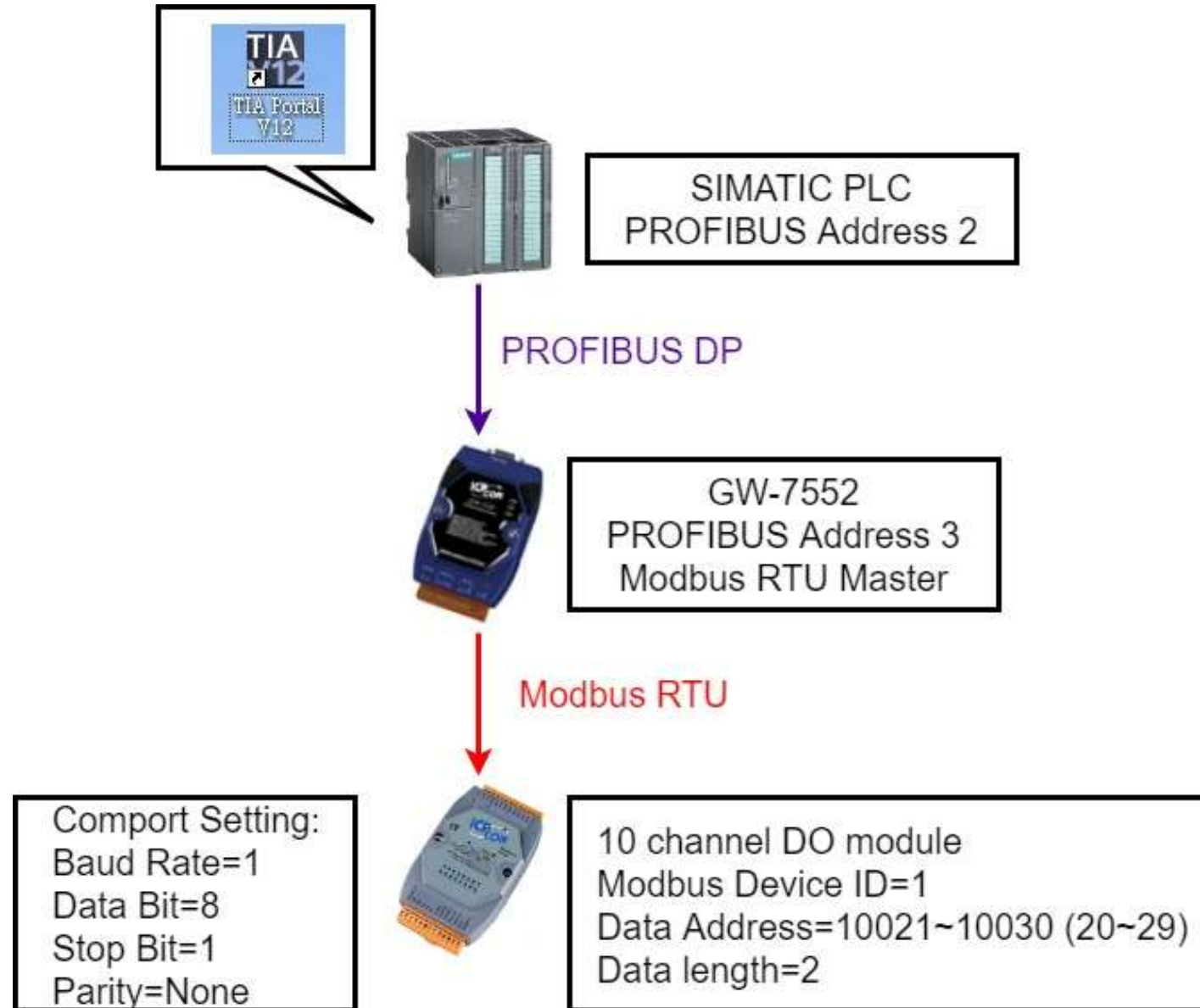


Figure 12: DIP switch

Reads and Writes DO module data



Reads and Writes DO module data

2. Select GW-7552

1. Click "Device view"

The screenshot displays the SIMATIC Manager interface. The breadcrumb path is: Project2 > PLC_1 [CPU 315-2 PN/DP] > Distributed I/O > DP-Mastersystem (1): PROFIBUS_1 > Slave_1. The 'Device view' tab is active. The 'Device overview' table is shown below:

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2043*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Input Relay/Coil-2 byte_1	0	3	4...5		Input Relay/Coil-2 ...		
Output Relay/Coil-2 byte_1	0	4		3...4	Output Relay/Coil-...		
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

The hardware catalog on the right shows the 'Filter' section with the following items:

- GW-7552
- Universal module
- System setting
- Output Relay/Coil-1 byte
- Output Relay/Coil-2 byte
- Output Relay/Coil-3 byte
- Output Relay/Coil-4 byte
- Output Relay/Coil-5 byte
- Output Relay/Coil-6 byte
- Output Relay/Coil-7 byte
- Output Relay/Coil-8 byte
- Output Relay/Coil-9 byte

Annotations include:

- A red box around 'Slave_1' in the breadcrumb path with an arrow pointing to '2. Select GW-7552'.
- A red box around 'Device view' in the top toolbar with an arrow pointing to '1. Click "Device view"'. A tooltip below it reads: 'maximizes/minimizes the Overview.'
- A red box around the hardware catalog items with an arrow pointing to '3. Double Click: (1) System setting (2) Input Relay/Coil-2byte (3) Output Relay/Coil-2byte'.

Reads and Writes DO module data

Project2 ▸ PLC_1 [CPU 315-2 PN/DP] ▸ Distributed I/O ▸ DP-Mastersystem (1): PROFIBUS_1 ▸ Slave_1

Topology view Network view Device view

Slave_1

100%

Device overview

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2048*		GW-7552		V1.90
System setting_2_1	0	1		0..2	System setting		
System setting_2_2	0	2	0..3		System setting		
Input Relay/Coil-2 byte_1	0	3	4..5		Input Relay/Coil-2 ...		
Output Relay/Coil-2 byte_1	0	4		3..4	Output Relay/Coil-...		
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

1. Click "Output Relay/Coil-2byte"

Output Relay/Coil-2 byte_1 [Module]

Properties Info Diagnostics

General IO tags Texts

Device-sp... Hex para... I/O addresses

Device-specific parameters

2. Click "Properties"

3. Click "Device-specific"

Modbus Slave Device ID (M): 1

Start Address (M): 0

Properties

Output Relay/Coil-2 byte_1 [Module]

General IO tags Texts

General

Device-specific parameters

Hex parameter... I/O addresses

4. Set module parameter as shown

Modbus Slave Device ID (M): 1

Start Address (M): 20

NO. of Relay/Coil (M): 10 BITS

Reads and Writes DO module data

Project2 > PLC_1 [CPU 315-2 PN/DP] > Distributed I/O > DP-Mastersystem (1): PROFIBUS_1 > Slave_1

Topology view | Network view | Device view

Slave_1

Device overview

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2043*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Input Relay/Coil-2 byte_1	0	3	4...5		Input Relay/Coil-2 ...		
Output Relay/Coil-2 byte_1	0	4		3...4	Output Relay/Coil-...		
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

1. Click "Input Relay/Coil-2byte"

Output Relay/Coil-2 byte_1 [Module]

Properties | Info | Diagnostics

General | IO tags | Texts

Device-specific parameters

2. Click "Properties"

3. Click "Device-specific"

Modbus Slave Device ID (M): 1

Start Address (M): 0

Properties

Input Relay/Coil-2 byte_1 [Module] | Properties

General | IO tags | Texts

Device-specific parameters

4. Set module parameter as shown

Modbus Slave Device ID (M): 1

Start Address (M): 20

NO. of Relay/Coil (M): 10 BITS

Module Type (M): Read DO

Reads and Writes DO module data

3. Click "Save project"

4. Click "Compile" and "Download"

6. Click "Start CPU"

The screenshot shows the Siemens SIMATIC Manager interface. The 'Project tree' on the left shows a project named 'Project2' with a sub-tree 'Devices & networks' containing 'PLC_1 [CPU 315-2 PN...]'. The main workspace shows the 'Topology view' of the PLC hardware rack, with 'PLC_1 CPU 315-2 PN/DP' highlighted. The 'Go online' button in the toolbar is also highlighted. Red arrows and boxes point to specific UI elements corresponding to the numbered instructions.

5. Click "Go online"

1. Click "Topology view"

2. Click your PLC

Reads and Writes DO module data

Check PLC and GW-7552 status

1. Check that it is online
online -> orange
offline -> blue

3. Check that PLC is RUN mode

2. Click "Online tools"

Device	Type	Address in subn...	Subnet	Master / IO system	Comment
PLC_1	CPU 315-2 PN/DP				
Slave_1	GW-7552				

Reads and Writes DO module data

Siemens - Project2

Project2 > PLC_1 [CPU 315-2 PN/DP] > Watch and force tables > Watch table_1

3. Click "Monitor all"

Name	Address	Display format	Monitor value	Modify value	Comment
1	%QB3	Hex	16#00		
2	%QB4	Hex	16#00		
3	%IB4	Hex	16#00		
4	%IB5	Hex	16#00		
5	<Add new>				

2. Output&Input type:
QB:Output Byte
IB: Input Byte

1. Click "Watch and force tables"
and double click "Add new watch table"

Module	Rack	Slot	I address	Q addr...
Slave_1	0	0	2043*	
System setting_2_1	0	1		0..2
System setting_2_2	0	2	0..3	
Input Relay/Coil-2 byte_1	0	3	4..5	
Output Relay/Coil-2 byte_1	0	4		3..4

Reads and Writes DO module data

Modify values and Send Modbus commands

The screenshot displays the SIMATIC Manager interface for a PLC project. The main window shows a 'Watch and force tables' view for 'Watch table_1'. The table contains the following data:

Name	Address	Display format	Monitor value	Modify value	Force	Warning	Comment
1	%QB3	Hex	16#00	16#29	<input checked="" type="checkbox"/>		
2	%QB4	Hex	16#00	16#02	<input checked="" type="checkbox"/>		
3	%IB4	Hex	16#00		<input type="checkbox"/>		
4	%IB5	Hex	16#00		<input type="checkbox"/>		
5	<Add new>						

Annotations in the image include:

- A red box around the 'Modify values' button in the toolbar, with a red arrow pointing to the text: **2. Click "Modify values button"**
- A red box around the 'Modify value' column header, with a red arrow pointing to the text: **1. Modify values**

The right-hand panel shows the 'Modbus Slave - Mbslav2' configuration window, displaying the slave ID and a list of addresses and their values:

```
ID = 1  
  
00020 = 0  
00021 = 0  
00022 = 0  
00023 = 0  
00024 = 0  
00025 = 0  
00026 = 0  
00027 = 0  
00028 = 0  
00029 = 0
```

Reads and Writes DO module data

Modify values and Send Modbus commands

Address	Display format	Monitor value	Modify value		Comment
%QB3	Hex	16#29	16#29	<input checked="" type="checkbox"/>	
%QB4	Hex	16#02	16#02	<input checked="" type="checkbox"/>	
%IB4	Hex	16#29		<input type="checkbox"/>	
%IB5	Hex	16#02		<input type="checkbox"/>	
<Add new>				<input type="checkbox"/>	

Type	Read/Write	Modbus Address	value
QB3	Write DO	20~27(00021~00028)	0x29
QB4	Write DO	28~29(00029~00030)	0x02
IB4	Read DO	20~27(00021~00028)	0x29
IB5	Read DO	28~29(00029~00030)	0x02

Properties Info Diagnostics

Connection information Alarm display

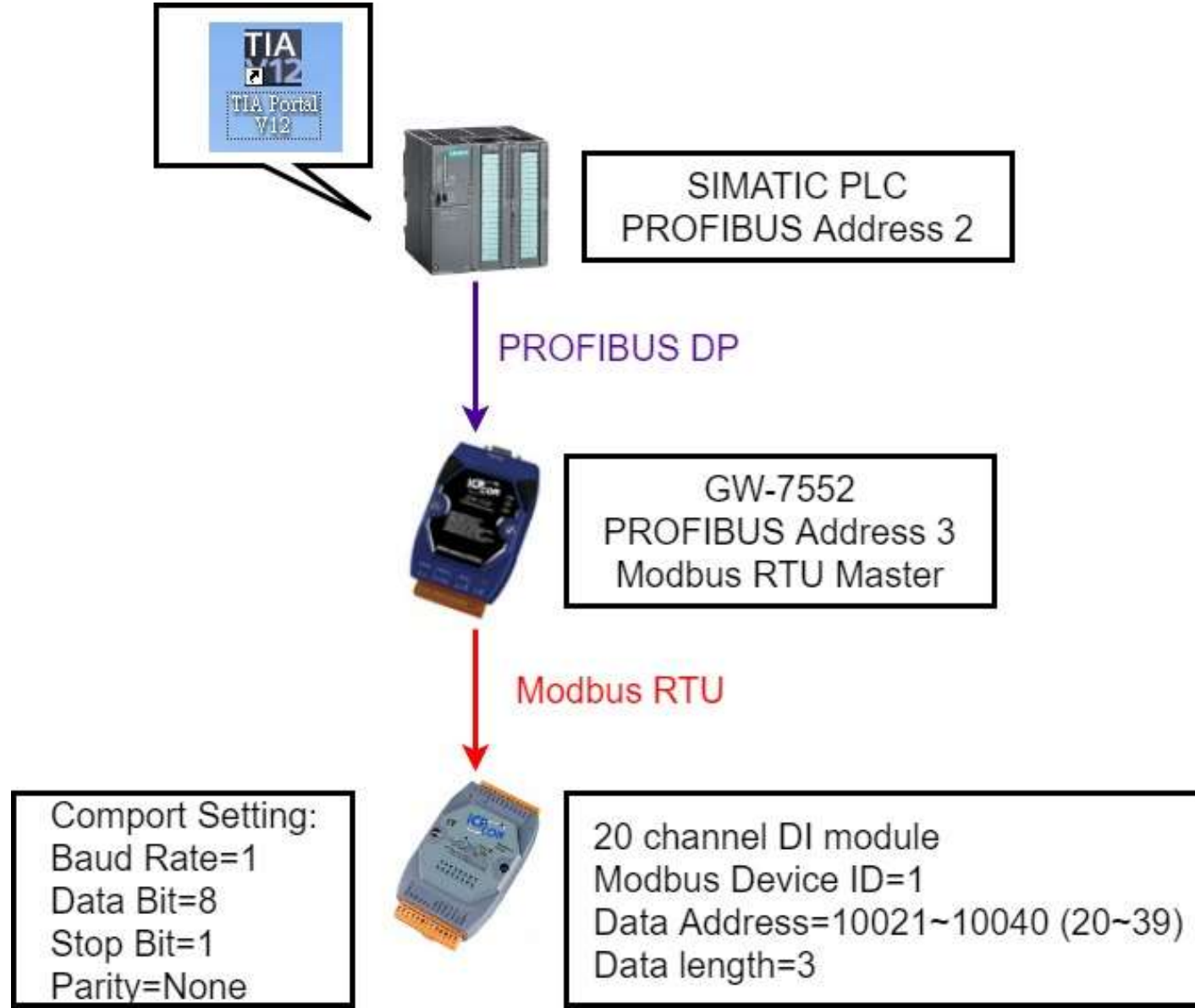
ms

Mbslav2

ID = 1

00020	=	1	
00021	=	0	→ 9
00022	=	0	
00023	=	1	
00024	=	0	
00025	=	1	→ 2
00026	=	0	
00027	=	0	
00028	=	0	→ 2
00029	=	1	

Reads DI module data



Reads DI module data

2. Select GW-7552

1. Click "Device view"

The screenshot displays the SIMATIC Manager interface. The breadcrumb path is: Project2 > PLC_1 [CPU 315-2 PN/DP] > Distributed I/O > DP-Mastersystem (1): PROFIBUS_1 > Slave_1. The 'Device view' button is highlighted with a red box and an arrow pointing to the instruction '1. Click "Device view"'. The 'Slave_1' dropdown menu is also highlighted with a red box and an arrow pointing to the instruction '2. Select GW-7552'. The 'Device overview' table is shown below, with the 'Input Relay/Coil-3 byte_1' row highlighted. The 'Hardware catalog' on the right shows a list of modules, with 'Input Relay/Coil-3 byte' highlighted and an arrow pointing to the instruction '3. Double Click: (1) System setting (2) Input Relay/Coil-3byte'.

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2043*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Input Relay/Coil-3 byte_1	0	3	4...6		Input Relay/Coil-3 ...		
	0	4					
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

3. Double Click:
(1) System setting
(2) Input Relay/Coil-3byte

Reads DI module data

Project2 > PLC_1 [CPU 315-2 PN/DP] > Distributed I/O > DP-Mastersystem (1): PROFIBUS_1 > Slave_1

Topology view | Network view | Device view

Slave_1

100%

Device overview

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2048*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Input Relay/Coil-3 byte_1	0	3	4..6		Input Relay/Coil-3 ...		
	0	4					
	0	5					
	0	6					
	0	8					
	0	9					
	0	10					

1. Click "Input Relay/Coil-3byte"

Input Relay/Coil-3 byte_1 [Module]

Properties | Info | Diagnostics

General | IO tags | Texts

Device-specific parameters

2. Click "Properties"

3. Click "Device-specific"

Modbus Slave Device ID (M): 1

Start Address (M): 0

Properties

Input Relay/Coil-3 byte_1 [Module]

General | IO tags | Texts

Device-specific parameters

4. Set module parameter as shown

Modbus Slave Device ID (M): 1

Start Address (M): 20

NO. of Relay/Coil (M): 20 BITS

Module Type (M): Read DI

Reads DI module data

3. Click "Save project"

4. Click "Compile" and "Download"

6. Click "Start CPU"

The screenshot shows the Siemens SIMATIC Manager interface. The title bar reads "Siemens - Project2". The menu bar includes "Project", "Edit", "View", "Insert", "Online", "Options", "Tools", "Window", and "Help". The toolbar contains icons for "Save project", "Compile", "Download", "Go online", "Go offline", and "Start CPU".

The "Project tree" on the left shows a hierarchy: "Devices" > "PLC_1 [CPU 315-2 PN...]" > "Device configuration", "Online & diagnostics", "Program blocks", "Technology objects", "External source files", and "PLC tags".

The main workspace shows "Project2 > Devices & networks" with a "Topology view" selected. A red box highlights the PLC_1 CPU 315-2 PN/DP device in the main workspace, with an arrow pointing to it from the text "2. Click your PLC".

Annotations with red arrows point to the following elements:

- "Save project" button in the toolbar (labeled 3).
- "Compile" and "Download" buttons in the toolbar (labeled 4).
- "Go online" button in the toolbar (labeled 5).
- "Start CPU" button in the toolbar (labeled 6).
- "Topology view" button in the view selector (labeled 1).

5. Click "Go online"

Topology view

Network view

Device view

1. Click "Topology view"

2. Click your PLC

Reads DI module data

Check PLC and GW-7552 status

1. Check that it is online
online -> orange
offline -> blue

The screenshot displays the SIMATIC Manager interface. The main workspace shows a network diagram with two devices: 'PLC_1 CPU 315-2 PN/DP' and 'Slave_1 GW-7552'. Both devices have a green checkmark icon in the top-left corner, indicating they are online. A purple line labeled 'PROFIBUS_1' connects the two devices. The right-hand side of the interface features the 'Online tools' panel, which is currently open. Under the 'CPU operator panel' section, the 'RUN' mode is selected and highlighted with a red box. The 'Mode selector' at the bottom of this panel shows 'RUN_P'. The 'Online tools' button in the vertical toolbar on the right is also highlighted with a red box.

3. Check that PLC is RUN mode

2. Click "Online tools"

Reads DI module data

The screenshot shows the Siemens TIA Portal interface. The 'Project tree' on the left is expanded to 'Watch and force tables', where 'Add new watch table' is highlighted. The main window shows a table with columns: Name, Address, Display format, Monitor value, Modify value, and Comment. The table contains three rows: %IB4, %IB5, and %IB6, all with a 'Hex' display format and a '16#00' monitor value. A red box highlights the 'Add new' button in the table toolbar. Red arrows point from the 'Add new watch table' button in the project tree to the 'Add new' button in the table toolbar, and from the 'Add new' button to the 'Monitor all' button in the table toolbar.

1. Click "Watch and force tables" and double click "Add new watch table"

2. Output&Input type: IB: Input Byte

3. Click "Monitor all"

Name	Address	Display format	Monitor value	Modify value	Comment
	%IB4	Hex	16#00		
	%IB5	Hex	16#00		
	%IB6	Hex	16#00		

Module	Rack	Slot	I address	Q addr...
Slave_1	0	0	2043*	
System setting_2_1	0	1		0..2
System setting_2_2	0	2	0..3	
Input Relay/Coil-3 byte_1	0	3	4..6	

Reads DI module data

Modify values and Send Modbus commands

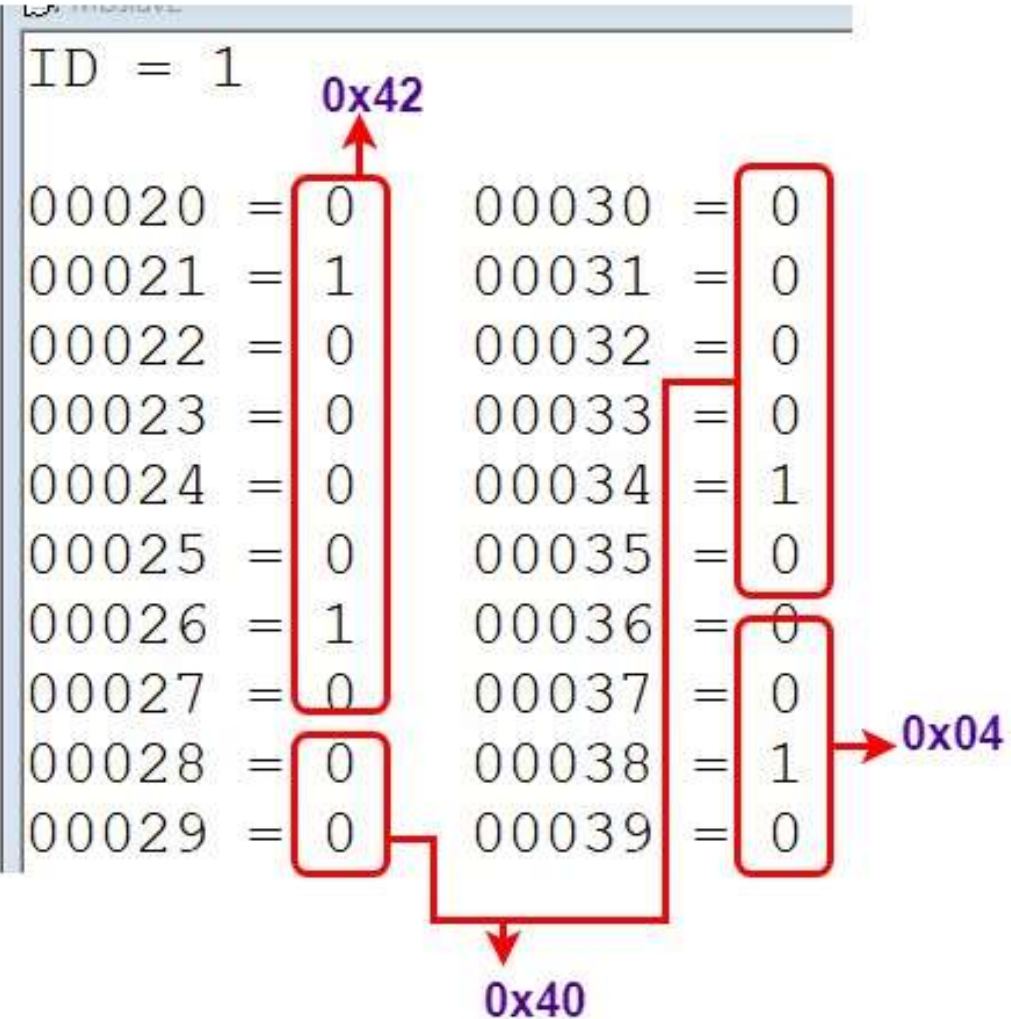
Address	Display format	Monitor value	Modify value	⚡	Comment
%IB4	Hex	16#42		<input type="checkbox"/>	
%IB5	Hex	16#40		<input type="checkbox"/>	
%IB6	Hex	16#04		<input type="checkbox"/>	
<Add new>				<input type="checkbox"/>	

Type	Read/Write	Modbus Address	value
IB4	Read DI	20~27(10021~10028)	0x42
IB5	Read DI	28~35(10029~10036)	0x40
IB6	Read DI	36~39(10037~10040)	0x04

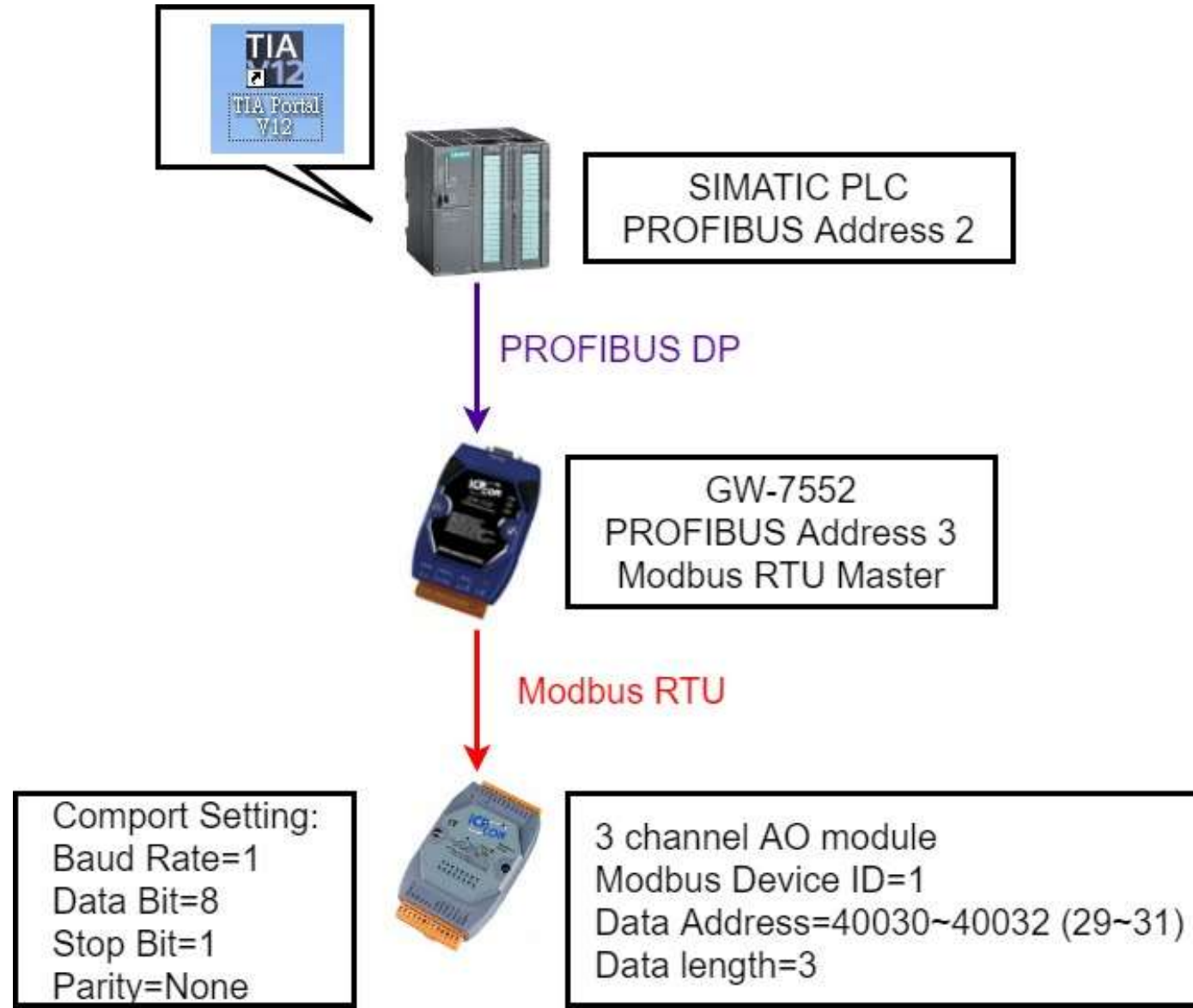
Properties Info Diagnostics

Connection information Alarm display

15



Reads and Writes AO module data



Reads and Writes AO module data

2. Select GW-7552

1. Click "Device view"

The screenshot shows the SIMATIC Manager interface. The breadcrumb path is: Project2 > PLC_1 [CPU 315-2 PN/DP] > Distributed I/O > DP-Mastersystem (1): PROFIBUS_1 > Slave_1. The 'Device view' tab is selected and highlighted with a red box. The 'Slave_1' dropdown menu is also highlighted with a red box. The 'Device overview' table is visible, showing modules for Slave_1, including system settings and registers. The hardware catalog on the right is open, showing a list of registers, with the first five items (Output Register-61 to -64) highlighted in a red box. A red arrow points from the text '3. Double Click:' to the first highlighted item in the catalog.

Module	Rack	Slot	I address	Q address	Type	Order no.	Firmware
Slave_1	0	0	2043*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Output Register-3 word_1	0	3		3...8	Output Register-3 ...		
Input Register-3 word_1	0	4	4...9		Input Register-3 w...		
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

3. Double Click:
(1) System setting
(2) Input Register-3 word
(3) Output Register-3 word

Reads and Writes AO module data

The screenshot shows the SIMATIC Manager interface. The 'Device overview' table is visible, with the row for 'Output Register-3 word_1' highlighted. A red box highlights this row, and a red arrow points to it with the text '1. Click "Output Register-3 word_1"'. Below the table, the 'Properties' dialog is open for 'Output Register-3 word_1 [Module]'. A red box highlights the 'Properties' button, with the text '2. Click "Properties"'. Another red box highlights the 'Device-specific' tab, with the text '3. Click "Device-specific"'. The 'Device-specific parameters' section is visible, showing 'Modbus Slave Device ID (M): 1' and 'Start Address (M): 0'. A yellow box highlights the entire properties dialog area.

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2043*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Output Register-3 word_1	0	3		3...8	Output Register-3 ...		
Input Register-3 word_1	0	4	4...9		Input Register-3 w...		
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

This is a close-up of the 'Device-specific parameters' section in the properties dialog. A red box highlights the 'Modbus Slave Device ID (M): 1' and 'Start Address (M): 29' fields. A red arrow points to this box with the text '4. Set module parameter as shown'.

Reads and Writes AO module data

Project2 > PLC_1 [CPU 315-2 PN/DP] > Distributed I/O > DP-Mastersystem (1): PROFIBUS_1 > Slave_1

Topology view Network view Device view

Slave_1

100%

Device overview

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2043*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Output Register-3 word_1	0	3		3...8	Output Register-3 ...		
Input Register-3 word_1	0	4	4...9		Input Register-3 w...		
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

1. Click "Input Register-3word"

Output Register-3 word_1 [Module]

Properties Info Diagnostics

2. Click "Properties"

3. Click "Device-specific"

Device-specific parameters

Modbus Slave Device ID (M): 1

Start Address (M): 0

Properties

Input Register-3 word_1 [Module] Properties

General IO tags Texts

4. Set module parameter as shown

Device-specific parameters

Modbus Slave Device ID (M): 1

Start Address (M): 29

Module Type (M): Read AO

Reads and Writes AO module data

3. Click "Save project"

4. Click "Compile" and "Download"

6. Click "Start CPU"

The screenshot shows the Siemens SIMATIC Manager interface. The 'Project tree' on the left lists 'PLC_1 [CPU 315-2 PN...]'. The main workspace shows 'PLC_1 CPU 315-2 PN/DP' with a hardware rack diagram. The 'Go online' button in the toolbar is highlighted. The 'Topology view' button is also highlighted. Red arrows point from text instructions to these specific UI elements.

5. Click "Go online"

1. Click "Topology view"

2. Click your PLC

Project tree: Devices > PLC_1 [CPU 315-2 PN...]

Devices & networks: PLC_1 CPU 315-2 PN/DP

Toolbar: Save project, Go online, Topology view, Network view, Device view

Reads and Writes AO module data

Check PLC and GW-7552 status

1. Check that it is online
online -> orange
offline -> blue

The screenshot displays the SIMATIC Manager interface. The main window shows a network diagram with a PLC_1 (CPU 315-2 PN/DP) and a Slave_1 (GW-7552) connected via PROFIBUS_1. Both devices have a green checkmark icon, indicating they are online. The 'Online tools' panel on the right shows the 'CPU operator panel' for PLC_1, with the 'RUN' mode selected. The 'Mode selector' is set to 'RUN_P'.

Device	Type	Address in subn...	Subnet	Master / IO system	Comment
PLC_1	CPU 315-2 PN/DP				
Slave_1	GW-7552				

3. Check that PLC is RUN mode

2. Click "Online tools"

Reads and Writes AO module data

Siemens - Project2

Project Edit View Insert Online Options Tools Window Help

Save project

Go online Go offline

Project2 > PLC_1 [CPU 315-2 PN/DP] > Watch and force tables > Watch table_1

3. Click "Monitor all"

	Name	Address	Display format	Monitor value	Modify value		Comment
1		%IW4	Hex			<input type="checkbox"/>	
2		%IW6	Hex			<input type="checkbox"/>	
3		%IW8	Hex			<input type="checkbox"/>	
4		%QW3	Hex			<input type="checkbox"/>	
5		%QW5	Hex			<input type="checkbox"/>	
6		%QW7	Hex			<input type="checkbox"/>	
7		<Add new>				<input type="checkbox"/>	

2. Output & Input type:
QW: Output Word
IW: Input Word

1. Click "Watch and force tables" and double click "Add new watch table"

Module	Rack	Slot	I address	Q addr...
Slave_1	0	0	2043*	
System setting_2_1	0	1		0..2
System setting_2_2	0	2	0..3	
Output Register-3 word_1	0	3		3..8
Input Register-3 word_1	0	4	4..9	

Reads and Writes AO module data

Modify values and Send Modbus commands

The screenshot displays the SIMATIC Manager interface. The main window shows a 'Watch table_1' with the following data:

	Name	Address	Display format	Monitor value	Modify value
1		%IW4	Hex	16#0000	
2		%IW6	Hex	16#0000	
3		%IW8	Hex	16#0000	
4		%QW3	Hex	16#0000	16#1177
5		%QW5	Hex	16#0000	16#4691
6		%QW7	Hex	16#0000	16#3103
7		<Add new>			

The 'Modify values' column for rows 4, 5, and 6 is highlighted in orange. A red box highlights the 'Modify values' button in the toolbar, and another red box highlights the 'Modify value' cells for rows 4, 5, and 6. Red arrows point from these boxes to the instructions below.

On the right side, the 'Mbsslav1' window shows the following Modbus data:

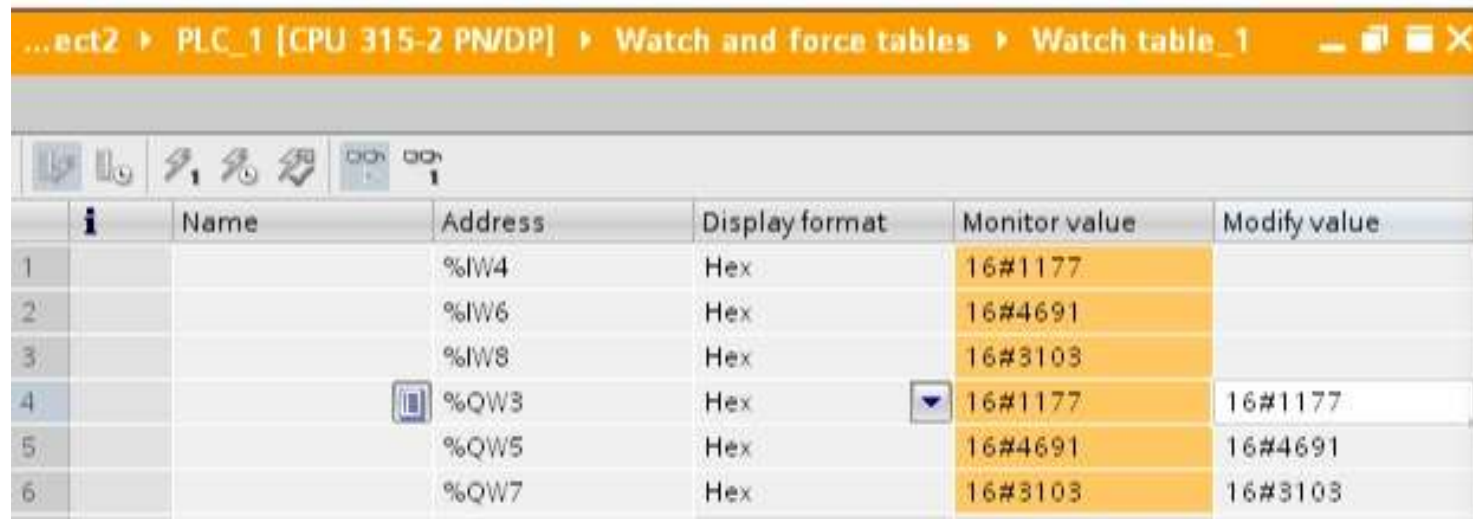
```
ID = 1  
  
00029 = 0x0000  
00030 = 0x0000  
00031 = 0x0000
```

2. Click "Modify values button"

1. Modify values

Reads and Writes AO module data

Modify values and Send Modbus commands



The screenshot shows the 'Watch and force tables' window for 'Watch table_1'. It contains a table with 6 rows and 6 columns: Name, Address, Display format, Monitor value, and Modify value. The rows correspond to the data in the summary table below.

	Name	Address	Display format	Monitor value	Modify value
1		%IW4	Hex	16#1177	
2		%IW6	Hex	16#4691	
3		%IW8	Hex	16#3103	
4	%QW3		Hex	16#1177	16#1177
5	%QW5		Hex	16#4691	16#4691
6	%QW7		Hex	16#3103	16#3103

Mbslav2

ID = 1

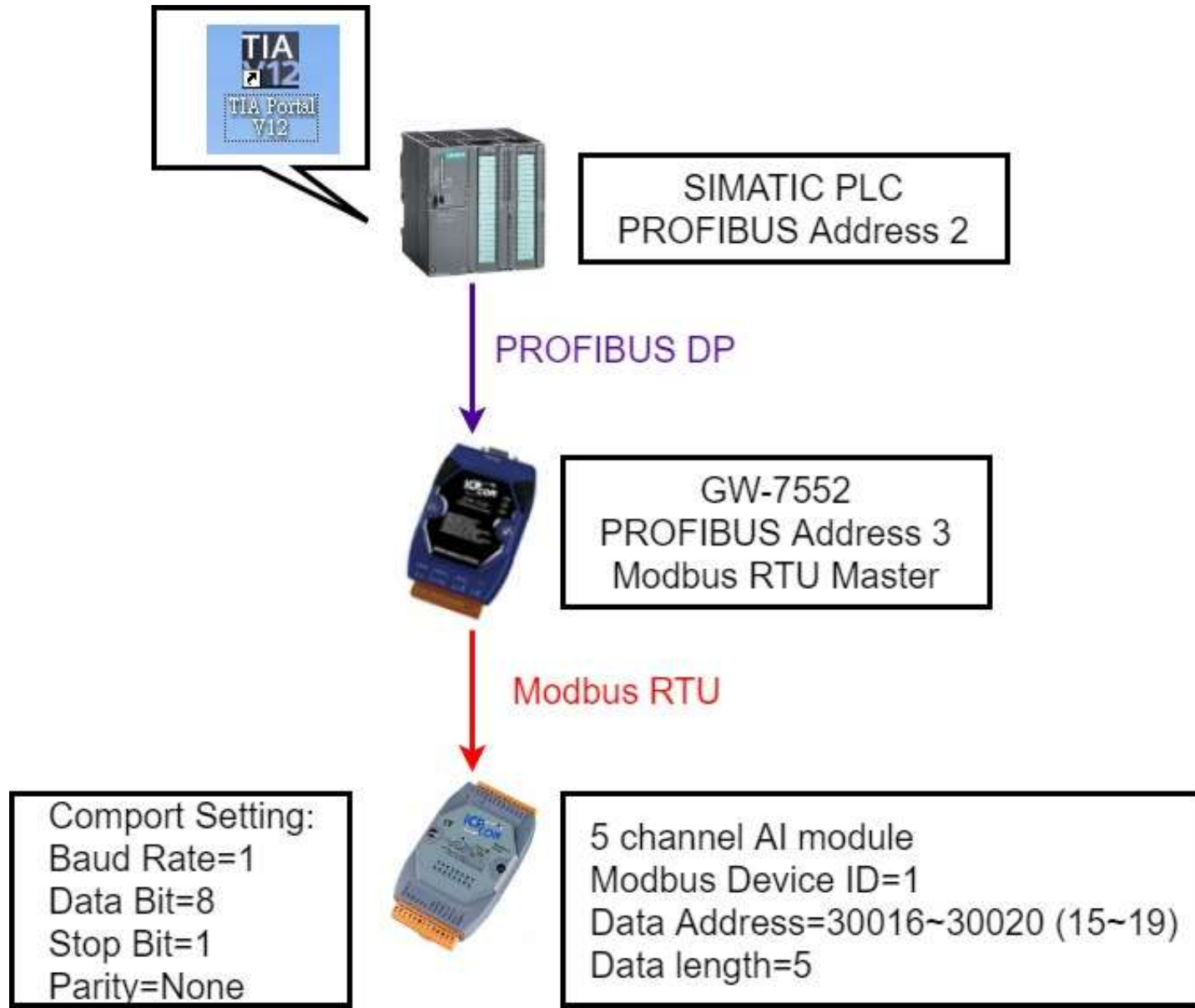
00029 = 0x1177

00030 = 0x4691

00031 = 0x3103

Type	Read/Write	Modbus Address	value
IW4	Read AO	29(40030)	0x1177
IW6	Read AO	30(40031)	0x4691
IW8	Read AO	31(40032)	0x3103
QW3	Write AO	29(40030)	0x1177
QW5	Write AO	30(40031)	0x4691
QW7	Write AO	31(40032)	0x3103

Reads AI module data



Reads AI module data

2. Select GW-7552

1. Click "Device view"

The screenshot shows the SIMATIC Manager interface. The breadcrumb path is: Project2 > PLC_1 [CPU 315-2 PN/DP] > Distributed I/O > DP-Mastersystem (1): PROFIBUS_1 > Slave_1. The 'Device view' button is highlighted with a red box. The 'Device overview' table is shown below:

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2043*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Input Register-5 word_1	0	3	4...13		Input Register-5 w...		
	0	4					
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

The 'Hardware catalog' on the right shows a list of modules. The 'Input Register-5 word' is highlighted with a red box. The 'Filter' checkbox is checked.

3. Double Click:
(1) System setting
(2) Input Register-5 word

Reads AI module data

Project2 > PLC_1 [CPU 315-2 PN/DP] > Distributed I/O > DP-Mastersystem (1): PROFIBUS_1 > Slave_1

Topology view | Network view | Device view

Slave_1

100%

Device overview

Module	Rack	Slot	I address	Q addr...	Type	Order no.	Firmware
Slave_1	0	0	2048*		GW-7552		V1.90
System setting_2_1	0	1		0...2	System setting		
System setting_2_2	0	2	0...3		System setting		
Input Register-5 word_1	0	3	4...13		Input Register-5 w...		
	0	4					
	0	5					
	0	6					
	0	7					
	0	8					
	0	9					
	0	10					

1. Click "Input Register-5 word_1"

2. Click "Properties"

3. Click "Device-specific"

Input Register-5 word_1 [Module]

Properties | Info | Diagnostics

General | IO tags | Texts

Device-specific parameters

Modbus Slave Device ID (M): 1

Start Address (M): 0

Properties | Device selection

Input Register-5 word_1 [Module] | Properties

General | IO tags | Texts

Device-specific parameters

4. Set module parameter as shown

Modbus Slave Device ID (M): 1

Start Address (M): 15

Module Type (M): Read AI

Reads AI module data

3. Click "Save project"

4. Click "Compile" and "Download"

6. Click "Start CPU"

The screenshot shows the Siemens SIMATIC Manager interface. The main window displays the 'Devices & networks' view for a project named 'Project2'. The 'Project tree' on the left shows a hierarchy with 'PLC_1 [CPU 315-2 PN...]' selected. The main workspace shows a graphical representation of the PLC hardware, with a red box highlighting the PLC unit. The 'Go online' button in the toolbar is also highlighted. The 'Topology view' button in the view selector is highlighted. The 'Save project' button in the toolbar is highlighted. The 'Compile' and 'Download' buttons in the toolbar are highlighted. The 'Start CPU' button in the toolbar is highlighted.

5. Click "Go online"

1. Click "Topology view"

2. Click your PLC

Reads AI module data

Check PLC and GW-7552 status

1. Check that it is online
online -> orange
offline -> blue

The screenshot displays the SIMATIC Manager interface. The main window shows a network diagram with two devices: PLC_1 (CPU 315-2 PN/DP) and Slave_1 (GW-7552). Both devices have a green checkmark icon in the top-left corner, indicating they are online. A purple line labeled 'PROFIBUS_1' connects the two devices. The 'Online tools' panel on the right shows the 'CPU operator panel' for PLC_1. The 'RUN' mode selector is highlighted with a red box, and the 'Online tools' button is also highlighted with a red box. The table at the bottom of the screen is as follows:

Device	Type	Address in subn...	Subnet	Master / IO system	Comment

3. Check that PLC is RUN mode

2. Click "Online tools"

Reads AI module data

Siemens - Project2

Project Edit View Insert Online Options Tools Window Help

Save project

Project2 > PLC_1 [CPU 315-2 PN/DP] > Watch and force tables > Watch table_1

3. Click "Monitor all"

Name	Address	Display format	Monitor value	Modify value	Comment
1	%IW4	Hex			
2	%IW6	Hex			
3	%IW8	Hex			
4	%IW10	Hex			
5	%IW12	Hex			
6					
7					

2. Output&Input type:
IW: Input Word

1. Click "Watch and force tables"
and double click "Add new watch table"

Module	Rack	Slot	Address
Slave_1	0	0	2048*
System setting_2_1	0	1	
System setting_2_2	0	2	0..
Input Register-5 word_1	0	3	4..13

Reads AI module data

Modify values and Send Modbus commands

The screenshot shows the 'Watch table_1' in SIMATIC Manager. The table lists five digital input modules (IW4 to IW12) with their addresses and current values in hexadecimal. To the right, a 'Mbslav2' window displays the Modbus ID (1) and the corresponding Modbus addresses for each input module.

	Name	Address	Display format	Monitor value	Modify v
1		%IW4	Hex	16#1479	
2		%IW6	Hex	16#2658	
3		%IW8	Hex	16#3113	
4		%IW10	Hex	16#6220	
5		%IW12	Hex	16#1522	
6					
7		<Add new>			

Mbslav2

ID = 1

00015 = 0x1479
00016 = 0x2658
00017 = 0x3113
00018 = 0x6220
00019 = 0x1522

Type	Read/Write	Modbus Address	value
IW4	Read AI	15(30016)	0x1479
IW6	Read AI	16(30017)	0x2658
IW8	Read AI	17(30018)	0x3113
IW10	Read AI	18(30019)	0x6220
IW12	Read AI	19(30020)	0x1522