

# *GW-7553 (Modbus TCP Master)*

## *Example for SIMATIC STEP 7*

- [Search IP address](#)
- [Web Configuration](#)
- [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](#)



Step 1: Open MiniOS7 Utility

1.The utility is on the web site in the following directory:

[http://ftp.icpdas.com/pub/cd/8000cd/napdos/minios7/utility/minios7\\_utility/](http://ftp.icpdas.com/pub/cd/8000cd/napdos/minios7/utility/minios7_utility/)

2.Choose “Connection→Search” or “F12”.





Step 2: User can find the IP address of GW-7553

**MiniOS7 Scan**

Search   Options   Connect   Clear   IP setting   Help   Exit

Type	IP/Port	Name	Alias
TCP BroadCast	192.168.0.240	tGW-715	Tiny
TCP BroadCast	192.168.255.200	tGW-715	Tiny
TCP BroadCast	192.168.255.201	tGW-715	Tiny
TCP BroadCast	192.168.111.111	PDS-782	
▶ TCP BroadCast	192.168.1.223	GW-7553	GW-7553



(1) Enter the IP address of the GW-7553 module

- [Login](#)
- [User Account](#)
- [IP Setting](#)
- [Safe Value Setting](#)
- [Communication Log](#)
- [Information](#)

## User Login

You are not logged yet!!

Password Max. 16 characters (0~9, A~Z, a~z)	<input type="password" value="....."/>
---	--

(2) Default password : icpdas

(3) Click "Enter"

Reboot





## ICP DAS

- [Login](#)
- [User Account](#)
- [IP Setting](#)** (1)Click here
- [Safe Value Setting](#)
- [Communication Log](#)
- [Information](#)
- 

(2) Load the IP setting from GW-7553.

**Local IP Setting**

IP :

MASK :

GATEWAY:

(5)Click "Reboot"

**Remote IP Setting**

IP (1) :	<input type="text" value="192.168.0.100"/>	Time Out :	<input type="text"/>		
IP (2) :	<input type="text" value="192.168.0.100"/>	Time Out :	<input type="text"/>		
IP (3) :	<input type="text" value="192.168.0.100"/>	Time Out :	<input type="text"/>		
IP (4) :	<input type="text" value="192.168.1.222"/>	Time Out Value (ms)(1~65535) :	<input type="text" value="1500"/>	ReConnect Time (ms)(1~65535) :	<input type="text" value="8000"/>
IP (5) :	<input type="text" value="192.168.0.100"/>	Time Out Value (ms)(1~65535) :	<input type="text" value="1500"/>	ReConnect Time (ms)(1~65535) :	<input type="text" value="8000"/>
IP (6) :	<input type="text" value="192.168.0.100"/>	Time Out Value (ms)(1~65535) :	<input type="text" value="1500"/>	ReConnect Time (ms)(1~65535) :	<input type="text" value="8000"/>
IP (7) :	<input type="text" value="192.168.0.100"/>	Time Out Value (ms)(1~65535) :	<input type="text" value="1500"/>	ReConnect Time (ms)(1~65535) :	<input type="text" value="8000"/>
IP (8) :	<input type="text" value="192.168.0.100"/>	Time Out Value (ms)(1~65535) :	<input type="text" value="1500"/>	ReConnect Time (ms)(1~65535) :	<input type="text" value="8000"/>

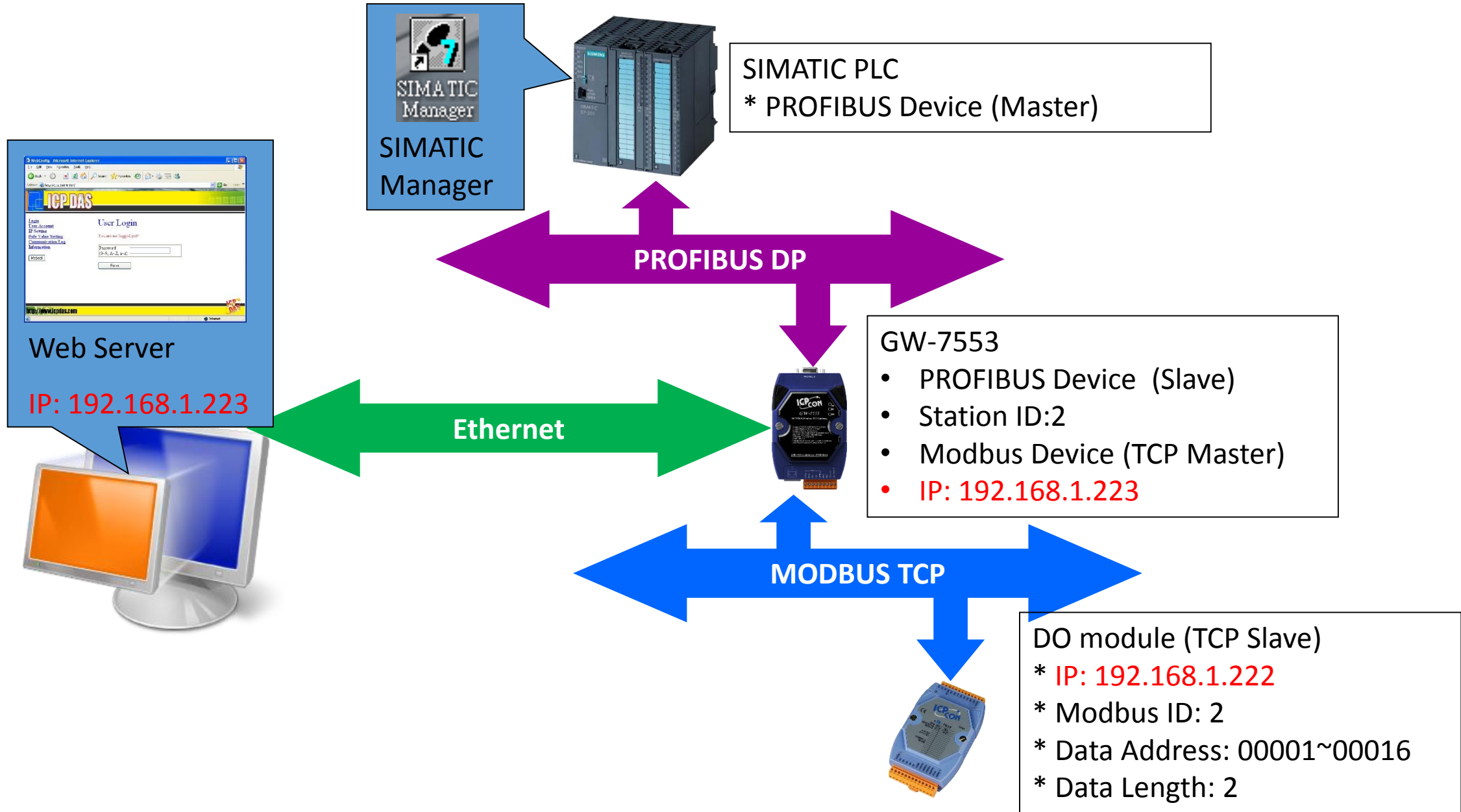
(3) The user can set IP address, time out value and reconnecting time of the Modbus TCP Slave in this part.

(4)Save the IP setting to GW-7553.

Load From Device OK !!



# Read and Write 16-channel DO



# Read and Write 16-channel DO



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

PROFIBUS(1): DP master system (1)

Select GW-7553 module

PROFIBUS(1): DP master system (1)

PROFIBUS address	Module	Order number	Firmware	Diagnostic address	Comment
2	GW-7553(DPV1)			1022	



# Read and Write 16-channel DO



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

PROFIBUS(1): DP master system (1)

(2) GW-753

Suchen: 7553

Profile Standard

GW-7553(DPV1)

- 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
- Output Relay/Coil-10 byte
- Output Relay/Coil-11 byte
- Output Relay/Coil-12 byte
- Output Relay/Coil-13 byte
- Output Relay/Coil-14 byte
- Output Relay/Coil-15 byte
- Output Relay/Coil-16 byte
- Output Relay/Coil-17 byte
- Output Relay/Coil-18 byte
- ...
- Input Relay/Coil-2 byte

(2) GW-7553(DPV1)

Slot	DP ID	Order Number / Designation	I Address	O Address	Comment
1	24DO	System setting		0..2	
2	2I	--> System setting	0...5		
3	16DO	Output Relay/Coil-2 byte		3..4	
4	16DI	Input Relay/Coil-2 byte	6...7		

Double click  
(1) "System setting"  
(2) "Output Relay/Coil-2 byte"  
(3) "Input Relay/Coil-2 byte"



# Read and Write 16-channel DO



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]


Station Edit Insert PLC View Options Window Help



(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
F	

PROFIBUS(1): DP master



(1) Double click GW-7553 icon

(3) The number of Modbus TCP slave.

Properties - DP slave

General Parameter Assignment (2) Select "Parameter Assignment"

Parameters	Value
General DP parameters	
Device-specific parameters	
baud rate	115200 baud
parity	none
data	8 data bit
stop bit	1 stop bit
Modbus Type	Master
Modbus Format	Modbus TCP
I/O Safe Mode	Retain Last Value
Byte Order	Little Endian(Intel format)
Output Data Mode	Auto
Modbus Device ID (S)	1
Modbus Polling Interval(ms) (M)	500
Query timeout Value(ms)(M)	500
TCP_Connect_Num(T)(M)	1
Hex parameter assignment	

OK Cancel Help

# Read and Write 16-channel DO



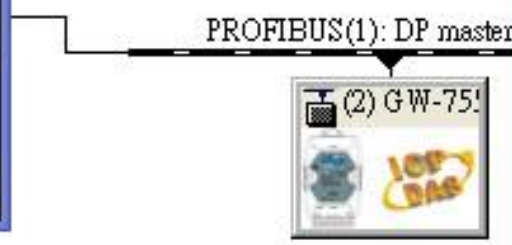
HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help



(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	



### Properties - DP slave

Address / ID **Parameter Assignment** (2)Select "Parameter Assignment"

Parameters	Value
Station parameters	
Device-specific parameters	
Modbus Slave Device ID (M)	2
Start Address (M)	0
NO. of Relay/Coil (M)	16 BITS
TCP_Connect_Index(T)(M)	4
Hex parameter assignment	

(2) GW-7553(DPV1)

Slot	Module	Address	Q Addr
1	2		0...2
2	2I	--> System setting	0...5
3	16DO	Output Relay/Coil--2 byte	3...4
4	16DI	Input Relay/Coil--2 byte	6...7

### Remote IP Setting

IP (1):	192.168.0.100	Time Out Value (ms)(1~65535):	1500	ReConnect Time (ms)(1~65535):	8000
IP (2):	192.168.0.100	Time Out Value (ms)(1~65535):	1500	ReConnect Time (ms)(1~65535):	8000
IP (3):	192.168.0.100	Time Out Value (ms)(1~65535):	1500	ReConnect Time (ms)(1~65535):	8000
IP (4):	192.168.1.222	Time Out Value (ms)(1~65535):	1500	ReConnect Time (ms)(1~65535):	8000
IP (5):	192.168.0.100	Time Out Value (ms)(1~65535):	1500	ReConnect Time (ms)(1~65535):	8000
IP (6):	192.168.0.100	Time Out Value (ms)(1~65535):	1500	ReConnect Time (ms)(1~65535):	8000
IP (7):	192.168.0.100	Time Out Value (ms)(1~65535):	1500	ReConnect Time (ms)(1~65535):	8000
IP (8):	192.168.0.100	Time Out Value (ms)(1~65535):	1500	ReConnect Time (ms)(1~65535):	8000

OK Cancel Help

(1)Double click "DO module"

(2)Select "Parameter Assignment"



# Read and Write 16-channel DO



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

PROFIBUS(1): DP master

(2) GW-751

Properties - DP slave

Address / ID Parameter Assignment (2)Select "Parameter Assignment"

Parameters	Value
Station parameters	
Device-specific parameters	
Modbus Slave Device ID (M)	2
Start Address (M)	0
NO. of Relay/Coil (M)	16 BITS
Module Type (M)	Read DO
TCP_Connect_Index(T)(M)	4
Hex parameter assignment	

Remote IP Setting

IP	Time Out Value (ms)(1~65535)	ReConnect Time (ms)(1~65535)
IP (1) : 192.168.0.100	1500	8000
IP (2) : 192.168.0.100	1500	8000
IP (3) : 192.168.0.100	1500	8000
IP (4) : 192.168.1.222	1500	8000
IP (5) : 192.168.0.100	1500	8000
IP (6) : 192.168.0.100	1500	8000
IP (7) : 192.168.0.100	1500	8000
IP (8) : 192.168.0.100	1500	8000

(2) GW-7553(DPV1)

Slot	DP ID	Order Number / Designation	I Address	Q Address
1	24DO	System setting		0...2
2	2I		0...5	
3	16DO			3...4
4	16DI	Input Relay/Coil--2 byte	6...7	

(1)Double click "DI module"

# Read and Write 16-channel DO



HW Config - [SIMATIC 300 Station (Configuration)]

Station Edit Insert PLC View Options Window Help

- New... Ctrl+N
- Open... Ctrl+O
- Open ONLINE
- Close
- Save
- Save and Compile Ctrl+S**
- Properties...
- Import...
- Export...
- Consistency Check Ctrl+Alt+K
- Check CiR Compatibility Ctrl+Alt+F
- Print... Ctrl+P
- Print Preview...
- Page Setup...
- 1 S7\_GW7553\SIMATIC 300 Station
- 2 S7\_7550testCom\SIMATIC 300 Station
- 3 S7\_7553cpm\SIMATIC 300 Station
- 4 S7\_7553\SIMATIC 300 Station
- Exit Alt+F4

HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

Download... Ctrl+L

Upload...

Download Module Identification...

Upload Module Identification to PG...

Faulty Modules...

Module Information... Ctrl+D

Operating Mode... Ctrl+I

Clear/Reset...

Set Time of Day...

**Monitor/Modify**

Update Firmware...

Save Device Name to Memory Card...

Ethernet ▶

PROFIBUS ▶

Save Service Data...

(0) UR	
1	
2	CPU
X2	DP
2.2	DI16
2.4	DO16
3	
4	
E	

(2) GW-7553

# Read and Write 16-channel DO



S7\_GW7553 -- C:\Program Files\Siemens\Step7\s7proj\S7\_GW7~3

S7\_GW7553

- SIMATIC 300 Station
  - CPU313 C-2 DP(1)
    - S7 Program(1)
      - Sources
      - Blocks

System data    OB1    OB82    OB86    VAT\_1

Double click

- Cut    Ctrl+X
- Copy    Ctrl+C
- Paste    Ctrl+V
- Delete    Del
- Insert New Object
  - Organization Block
  - Function Block
  - Function
  - Data Block
  - Data Type
  - Variable Table
- PLC
- Rewire...
- Compare Blocks...
- Reference Data
- Check Block Consistency...
- Print
- Rename    F2
- Object Properties...    Alt+Return
- Special Object Properties



# Read and Write 16-channel DO



Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help

Click "monitor variable"

	Address	Symbol	Display format	Status value	Modify value
1	QB 3		HEX	B#16#00	B#16#00
2	QB 4		HEX	B#16#00	B#16#00
3					
4					
16DO			Output Relay/Coil--2 byte		3...4
16DI			Input Relay/Coil--2 byte	6...7	
7					
8	IB 6		HEX	B#16#00	
9	IB 7		HEX	B#16#00	
10					
11					
12					
13					
14					
15					



# Read and Write 16-channel DO



Modbus SL...

File Connection Setup  
Display View Window  
Help

Mbslav1  
ID = 2

00001	=	0
00002	=	0
00003	=	0
00004	=	0
00005	=	0
00006	=	0
00007	=	0
00008	=	0
00009	=	0
00010	=	0
00011	=	0
00012	=	0
00013	=	0
00014	=	0
00015	=	0
00016	=	0

For Help, press F1. For Edit, d

Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help

VAT\_1 -- @S7\_GW7553\SIMATIC 300 Station\CPU313 C-2

	Address	Symbol	Display format	Status value	Modifv value
1	QB 3		HEX	B#16#00	B#16#55
2	QB 4		HEX	B#16#00	B#16#AA
3					
4					
5					
6					
7					
8	IB 6		HEX	B#16#00	
9	IB 7		HEX	B#16#00	
10					
11					
12					
13					
14					
15					

(2)Click "modify variable"

(1)Key in the output value

# Read and Write 16-channel DO



Modbus Slave

File Connection Setup  
Display View Window  
Help

Mbslav1

ID = 2

00001	=	1
00002	=	0
00003	=	1
00004	=	0
00005	=	1
00006	=	0
00007	=	1
00008	=	0
00009	=	0
00010	=	1
00011	=	0
00012	=	1
00013	=	0
00014	=	1
00015	=	0
00016	=	1

For Help, press F1. For Edit, d

Write DO

Write DO

Read DO

Read DO

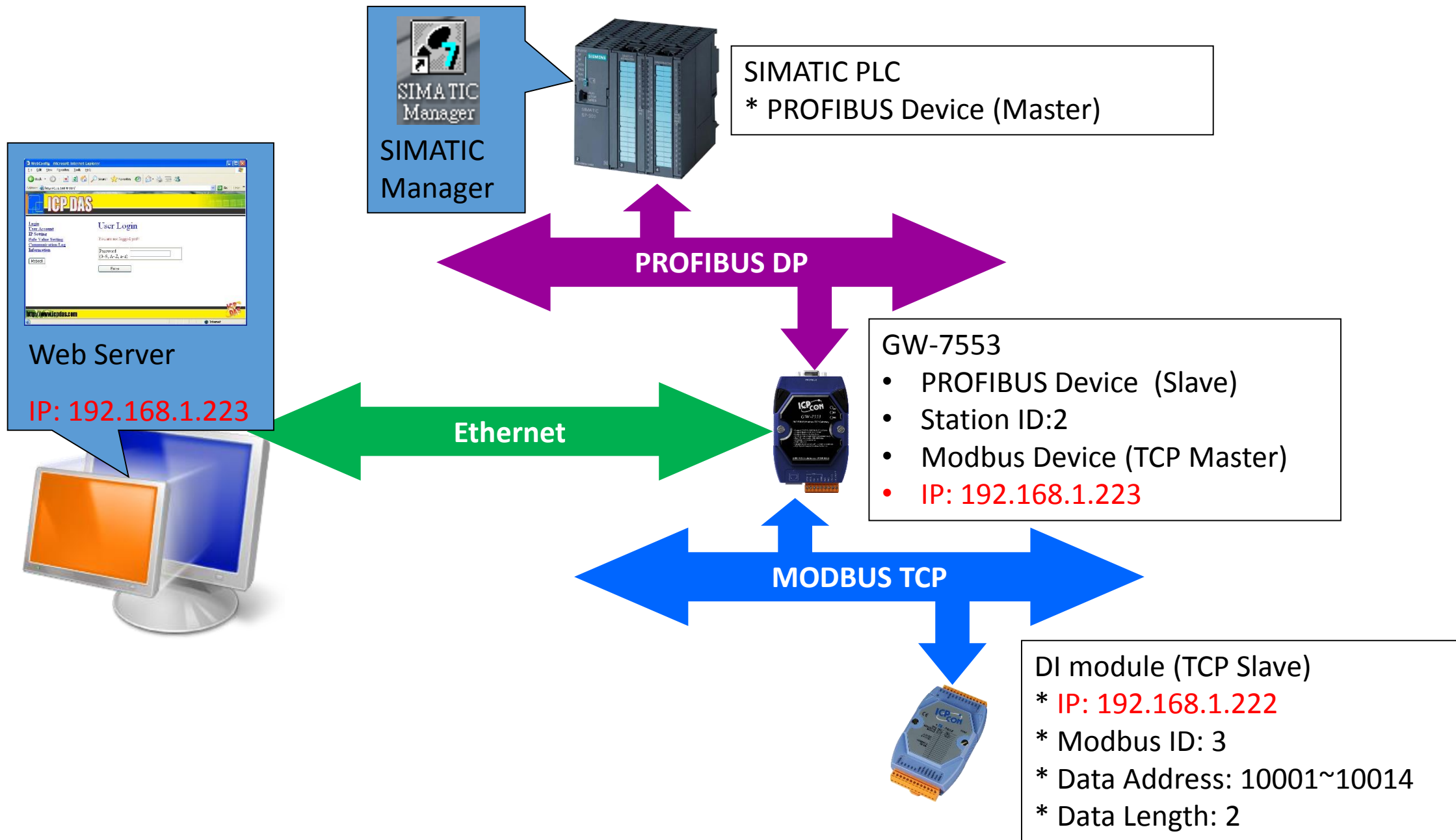
Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help

VAT\_1 -- @S7\_GW7553\SIMATIC 300 Station\CPU313 C-2 DP(1)\S7 Program(1) ONLINE

	Address	Symbol	Display format	Status value	Modify value
1	QB 3		HEX	B#16#55	B#16#55
2	QB 4		HEX	B#16#AA	B#16#AA
3					
4					
5					
6					
7					
8	IB 6		HEX	B#16#55	
9	IB 7		HEX	B#16#AA	
10					
11					
12					
13					
14					
15					

# Read 14-channel DI



# Read 14-channel DI




HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

PROFIBUS(1): DP master system (1)



Select GW-7553 module

PROFIBUS(1): DP master system (1)

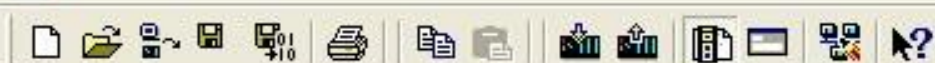
PROFIBUS address	Module	Order number	Firmware	Diagnostic address	Comment
2	GW-7553(DPV1)			1022	



# Read 14-channel DI

HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help



(0) UR	
1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
E	

PROFIBUS(1): DP master system (1)



Double click  
(1) "System setting"  
(2) "Input Relay/Coil--2 byte"

Suchen: 7553

Profile Standard

GW-7553(DPV1)	
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	
Output Relay/Coil--10 byte	
Output Relay/Coil--11 byte	
Output Relay/Coil--12 byte	
Output Relay/Coil--13 byte	
Output Relay/Coil--14 byte	
Output Relay/Coil--15 byte	
Output Relay/Coil--16 byte	
Output Relay/Coil--17 byte	

⋮

Input Relay/Coil--2 byte

(2) GW-7553(DPV1)

Slot	DP ID	Order Number / Designation	I Address	O Address	Comment
1	24DO	System setting		0..2	
2	2I	--> System setting	0...5		
3	16DI	Input Relay/Coil--2 byte	6...7		

# Read 14-channel DI



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help



(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

(1) Double click GW-7553 icon



Properties - DP slave

General **Parameter Assignment** (2) Select "Parameter Assignment"

Parameters	Value
General DP parameters	
Device-specific parameters	
baud rate	115200 baud
parity	none
data	8 data bit
stop bit	1 stop bit
Modbus Type	Master
Modbus Format	Modbus TCP
I/O Safe Mode	Retain Last Value
Byte Order	Little Endian(Intel format)
Output Data Mode	Auto
Modbus Device ID (S)	1
Modbus Polling Interval(ms) (M)	500
Query timeout Value(ms) (M)	500
TCP_Connect_Num(T)(M)	1
Hex parameter assignment	

OK Cancel Help

(3) The number of Modbus TCP slave.

(2) GW-7553(DPV1)

Slot	DP ID	Order Number / Designation	I Address	Q Address
1	24DO	System setting		0...2
2	2I	--> System setting	0...5	
3	16DI	Input Relay/Coil--2 byte	6...7	

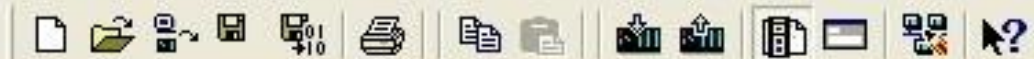


# Read 14-channel DI



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help



(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
E	



### Properties - DP slave

Address / ID **Parameter Assignment** (2) Select "Parameter Assignment"

Parameters	Value
Station parameters	
Device-specific parameters	
Modbus Slave Device ID (M)	3
Start Address (M)	0
NO. of Relay/Coil (M)	14 BITS
Module Type (M)	Read DI
TCP_Connect_Index(T)(M)	4
Hex parameter assignment	

Remote IP Setting

IP	Time Out Value (ms)(1~65535)	ReConnect Time (ms)(1~65535)	
IP (1)	192.168.0.100	1500	8000
IP (2)	192.168.0.100	1500	8000
IP (3)	192.168.0.100	1500	8000
IP (4)	192.168.1.222	1500	8000
IP (5)	192.168.0.100	1500	8000
IP (6)	192.168.0.100	1500	8000
IP (7)	192.168.0.100	1500	8000
IP (8)	192.168.0.100	1500	8000

OK Cancel Help

(2) GW-7553(DPV1)

Slot	DP ID	Order Number / Designation	I Address
1	24DO		
2	2I		0...5
3	16DI	Input Relay/Coil-2 byte	6...7

(1) Double click "DI module"

# Read 14-channel DI



HW Config - [SIMATIC 300 Station (Configuration)]

Station Edit Insert PLC View Options Window Help

- New... Ctrl+N
- Open... Ctrl+O
- Open ONLINE
- Close
- Save
- Save and Compile Ctrl+S**
- Properties...
- Import...
- Export...
- Consistency Check Ctrl+Alt+K
- Check CiR Compatibility Ctrl+Alt+F
- Print... Ctrl+P
- Print Preview...
- Page Setup...
- 1 S7\_GW7553\SIMATIC 300 Station
- 2 S7\_7550testCom\SIMATIC 300 Station
- 3 S7\_7553cpm\SIMATIC 300 Station
- 4 S7\_7553\SIMATIC 300 Station
- Exit Alt+F4

HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

Download... Ctrl+L

Upload...

Download Module Identification...

Upload Module Identification to PG...

Faulty Modules...

Module Information... Ctrl+D

Operating Mode... Ctrl+I

Clear/Reset...

Set Time of Day...

**Monitor/Modify**

Update Firmware...

Save Device Name to Memory Card...

Ethernet ▶

PROFIBUS ▶

Save Service Data...

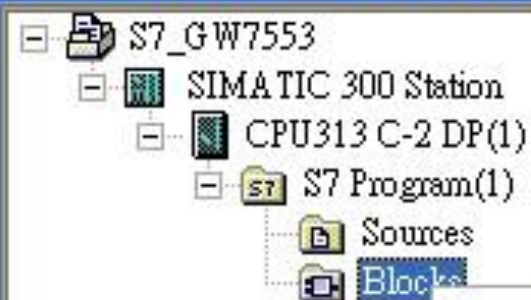
(0) UR	
1	
2	CPU
X2	DP
2.2	DI16
2.4	COU
3	
4	
E	

(2) GW-7553

# Read 14-channel DI



S7\_GW7553 -- C:\Program Files\Siemens\Step7\s7proj\S7\_GW7~3



System data    OB1    OB82    OB86

VAT\_1

Double click

- Cut                      Ctrl+X
- Copy                     Ctrl+C
- Paste                    Ctrl+V

---

- Delete                  Del

---

- Insert New Object      ▶
  - Organization Block
  - Function Block
  - Function
  - Data Block
  - Data Type
  - Variable Table
- PLC                      ▶

---

- Rewire...
- Compare Blocks...
- Reference Data         ▶
- Check Block Consistency...

---

- Print                    ▶

---

- Rename                  F2
- Object Properties...    Alt+Return
- Special Object Properties ▶



# Read 14-channel DI



Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help

Click "monitor variable"



VAT\_1 -- @S7\_GW7553\SIMATIC 300 Station\CPU313 C-2 DP(1)\S7 Program(1) ONLINE

		Address	Symbol	Display format	Status value	Modify value
1		IB 6		HEX	B#16#00	
2		IB 7		HEX	B#16#00	
3						
4						

Input Relay/Coil--2 byte 6...7

# Read 14-channel DI



Modbus SL...

File Connection Setup  
Display View Window  
Help

Mbslav1

ID = 3

10001	=	1
10002	=	1
10003	=	1
10004	=	1
10005	=	1
10006	=	1
10007	=	0
10008	=	1
10009	=	1
10010	=	0
10011	=	1
10012	=	1
10013	=	1
10014	=	1
10015	=	1
10016	=	1

For Help, press F1. For Edit, d

Read DI(8bit)

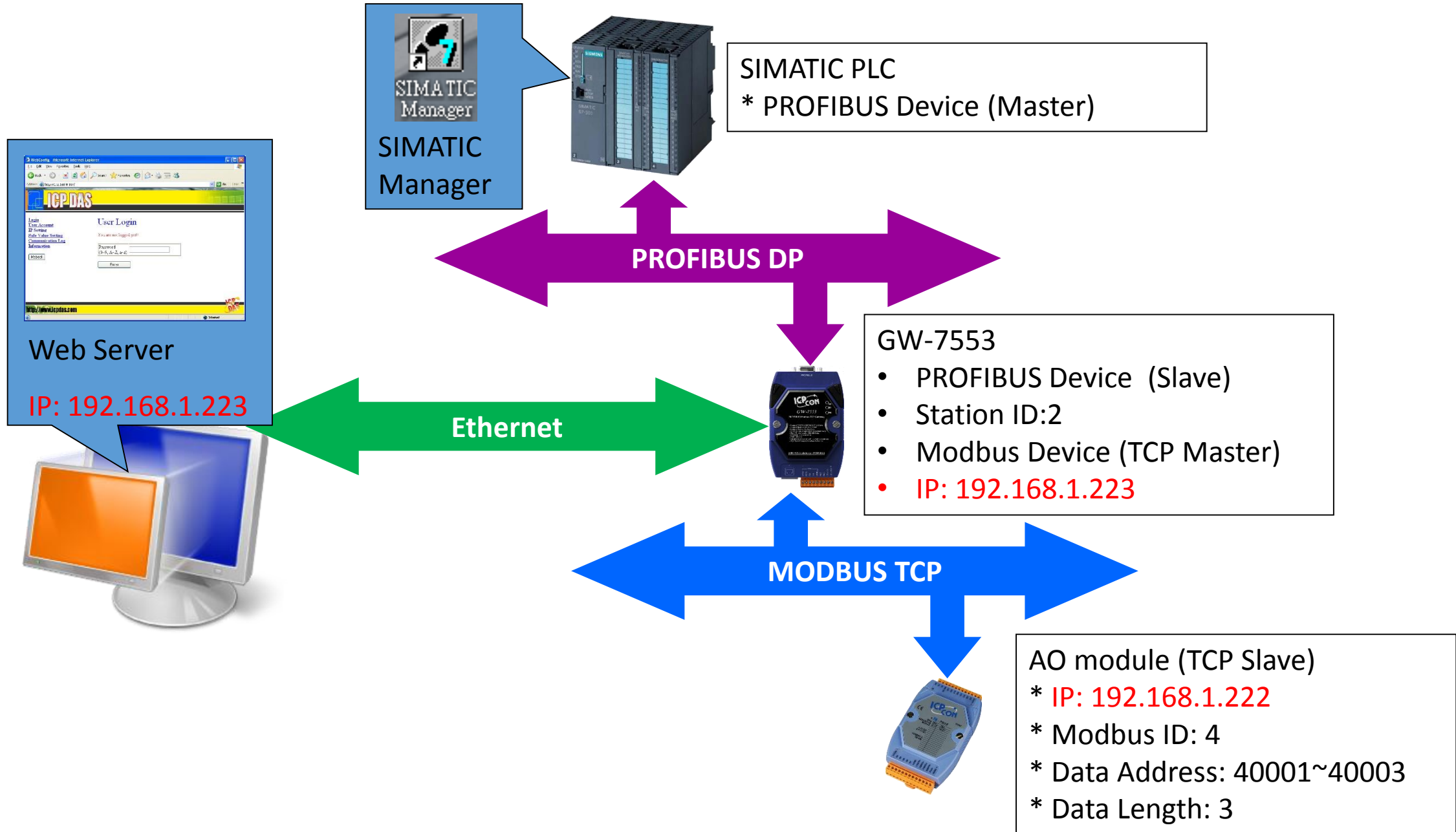
Read DI(6bit)

Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help

VAT\_1 -- @S7\_GW7553\SIMATIC 300 Station\CPU313 C-2 DP(1)\S7 Progr

	Address	Symbol	Display format	Status value	Modify value
1	IB 6		HEX	B#16#BF	
2	IB 7		HEX	B#16#3D	





# Read and Write 3-channel AO



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

PROFIBUS(1): DP master system (1)

(2) GW-7553

Select GW-7553 module

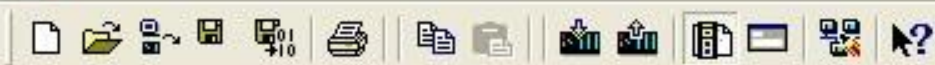
PROFIBUS(1): DP master system (1)

PROFIBUS address	Module	Order number	Firmware	Diagnostic address	Comment
2	GW-7553(DPV1)			1022	

# Read and Write 3-channel AO

HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help



(0) UR	
1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

PROFIBUS(1): DP master system (1)



Double click  
(1) "System setting"  
(2) "Output Register--3 word"  
(3) "Input Register--3 word"

Suchen: 7553

Profile Standard

- GW-7553(DPV1)
  - Universal module
  - System setting
  - Output Relay/Coil--1 byte
  - Output Relay/Coil--2 byte
  - ...
  - Output Register--3 word
  - ...
  - Input Register--3 word

(2) GW-7553(DPV1)

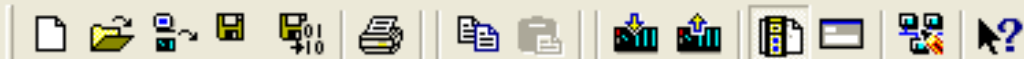
Slot	DP ID	Order Number / Designation	I Address	Q Address	Comment
1	24DO	System setting		0...2	
2	2I	--> System setting	0...5		
3	3AO	Output Register--3 word		256...261	
4	3AI	Input Register--3 word	256...261		

# Read and Write 3-channel AO



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help



(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

(1) Double click GW-7553 icon



### Properties - DP slave

General **Parameter Assignment** (2) Select "Parameter Assignment"

Parameters	Value
General DP parameters	
Device-specific parameters	
baud rate	115200 baud
parity	none
data	8 data bit
stop bit	1 stop bit
Modbus Type	Master
Modbus Format	Modbus TCP
I/O Safe Mode	Retain Last Value
Byte Order	Little Endian(Intel format)
Output Data Mode	Auto
Modbus Device ID (S)	1
Modbus Polling Interval(ms) (M)	500
Query timeout Value(ms)(M)	500
TCP_Connect_Num(T)(M)	1
Hex parameter assignment	

OK Cancel Help

(3) The number of Modbus TCP slave.

(2) GW-7553(DPV1)

Slot	DP ID	Order Number / Designation	I Address
1	24DO	System setting	
2	2I	--> System setting	0...5
3	3AO	Output Register--3 word	
4	3AI	Input Register--3 word	256...261



# Read and Write 3-channel AO

HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help



(0) UR	
1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

PROFIBUS(1): DP master



Properties - DP slave

Address / ID **Parameter Assignment**

(2) Select "Parameter Assignment"

Parameters	Value
Station parameters	
Device-specific parameters	
Modbus Slave Device ID (M)	4
Start Address (M)	0
TCP_Connect_Index(T)(M)	4
Hex parameter assignment	

Remote IP Setting

IP (1) :	192.168.0.100	Time Out Value (ms)(1~65535) :	1500	ReConnect Time (ms)(1~65535) :	8000
IP (2) :	192.168.0.100	Time Out Value (ms)(1~65535) :	1500	ReConnect Time (ms)(1~65535) :	8000
IP (3) :	192.168.0.100	Time Out Value (ms)(1~65535) :	1500	ReConnect Time (ms)(1~65535) :	8000
IP (4) :	192.168.1.222	Time Out Value (ms)(1~65535) :	1500	ReConnect Time (ms)(1~65535) :	8000
IP (5) :	192.168.0.100	Time Out Value (ms)(1~65535) :	1500	ReConnect Time (ms)(1~65535) :	8000
IP (6) :	192.168.0.100	Time Out Value (ms)(1~65535) :	1500	ReConnect Time (ms)(1~65535) :	8000
IP (7) :	192.168.0.100	Time Out Value (ms)(1~65535) :	1500	ReConnect Time (ms)(1~65535) :	8000
IP (8) :	192.168.0.100	Time Out Value (ms)(1~65535) :	1500	ReConnect Time (ms)(1~65535) :	8000

(2) GW-7553(DPV1)

Slot	Module	Address	Q Address
1	2		0...2
2	2I	--> System setting	0...5
3	3AO	Output Register--3 word	256...261
4	3AI	Input Register--3 word	256...261

(1) Double click "AO module"

OK

Cancel

Help

# Read and Write 3-channel AO



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help



(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
E	

PROFIBUS(1): DP master



**Properties - DP slave**

Address / ID **Parameter Assignment** (2)Select "Parameter Assignment"

Parameters	Value
Station parameters	
Device-specific parameters	
Modbus Slave Device ID (M)	4
Start Address (M)	0
Module Type (M)	Read AO
TCP_Connect_Index(T)(M)	4
Hex parameter assignment	

### Remote IP Setting

IP	Time Out Value (ms)(1~65535)	ReConnect Time (ms)(1~65535)
IP (1) : 192.168.0.100	1500	8000
IP (2) : 192.168.0.100	1500	8000
IP (3) : 192.168.0.100	1500	8000
<b>IP (4) : 192.168.1.222</b>	1500	8000
IP (5) : 192.168.0.100	1500	8000
IP (6) : 192.168.0.100	1500	8000
IP (7) : 192.168.0.100	1500	8000
IP (8) : 192.168.0.100	1500	8000

(2) GW-7553(DPV1)

Slot	DP ID	Order Number / Designation	I Address	Q Address
1	24DO	System setting		0...2
2	2I		0...5	
3	3AO			256...261
<b>4</b>	<b>3AI</b>	Input Register--3 word	<b>256...261</b>	

(1)Double click "AI module"

OK Cancel Help



# Read and Write 3-channel AO



HW Config - [SIMATIC 300 Station (Configuration)]

Station Edit Insert PLC View Options Window Help

- New... Ctrl+N
- Open... Ctrl+O
- Open ONLINE
- Close
- Save
- Save and Compile Ctrl+S**
- Properties...
- Import...
- Export...
- Consistency Check Ctrl+Alt+K
- Check CiR Compatibility Ctrl+Alt+F
- Print... Ctrl+P
- Print Preview...
- Page Setup...
- 1 S7\_GW7553\SIMATIC 300 Station
- 2 S7\_7550testCom\SIMATIC 300 Station
- 3 S7\_7553cpm\SIMATIC 300 Station
- 4 S7\_7553\SIMATIC 300 Station
- Exit Alt+F4

HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

Download... Ctrl+L

Upload...

Download Module Identification...

Upload Module Identification to PG...

Faulty Modules...

Module Information... Ctrl+D

Operating Mode... Ctrl+I

Clear/Reset...

Set Time of Day...

**Monitor/Modify**

Update Firmware...

Save Device Name to Memory Card...

Ethernet ▶

PROFIBUS ▶

Save Service Data...

(0) UR	
1	
2	CPU
X2	DP
2.2	DI16
2.4	COU
3	
4	
E	

(2) GW-7553



# Read and Write 3-channel AO



S7\_GW7553 -- C:\Program Files\Siemens\Step7\s7proj\S7\_GW7~3

- S7\_GW7553
  - SIMATIC 300 Station
    - CPU313 C-2 DP(1)
      - S7 Program(1)
        - Sources
        - Blocks

System data    OB1    OB82    OB86

VAT\_1

Double click

- Cut                    Ctrl+X
- Copy                   Ctrl+C
- Paste                   Ctrl+V

---

- Delete                   Del

---

- Insert New Object    ▶
- PLC                    ▶

---

- Rewire...
- Compare Blocks...
- Reference Data           ▶
- Check Block Consistency...

---

- Print                   ▶

---

- Rename                   F2
- Object Properties...    Alt+Return
- Special Object Properties ▶

- Organization Block
- Function Block
- Function
- Data Block
- Data Type
- Variable Table

# Read and Write 3-channel AO



Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help



Click "monitor variable"

VAT\_1 -- @S7\_GW7553\SIMATIC 300 Station\CPU313 C-2

	Address	Symbol	Display format	Status value	Modify value
1	PQW 256		HEX	<del>0x</del>	W#16#0000
2	PQW 258		HEX	<del>0x</del>	W#16#0000
3	POW 260		HEX	<del>0x</del>	W#16#0000
4					
	3AO	Output Register--3 word			256..261
	3AI	Input Register--3 word			256..261

Mo... [min] [max] [close]

File Connection  
Setup Display View  
Window Help



Mbslav1

ID = 4  
40001 = 0x0000  
40002 = 0x0000  
40003 = 0x0000

For Help, press F1. For

PQW 256  
PQW 258  
POW 260

W#16#0000  
W#16#0000  
W#16#0000

PIW 256  
PIW 258  
PIW 260

W#16#0000  
W#16#0000  
W#16#0000



# Read and Write 3-channel AO



Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help

VAT\_1 -- @S7\_GW7553SIMATIC 300 Station\CPU313 C-2 DP(1)\S7 Program(1) O...

	Address	Symbol	Display format	Status value	Modify value
1	PQW 256		HEX	<del>W#16#1234</del>	W#16#1234
2	PQW 258		HEX	<del>W#16#5678</del>	W#16#5678
3	PQW 260		HEX	<del>W#16#4321</del>	W#16#4321
4					
5					
6					
7					
8	PIW 256		HEX	W#16#1234	
9	PIW 258		HEX	W#16#5678	
10	PIW 260		HEX	W#16#4321	

Write AO

Read AO

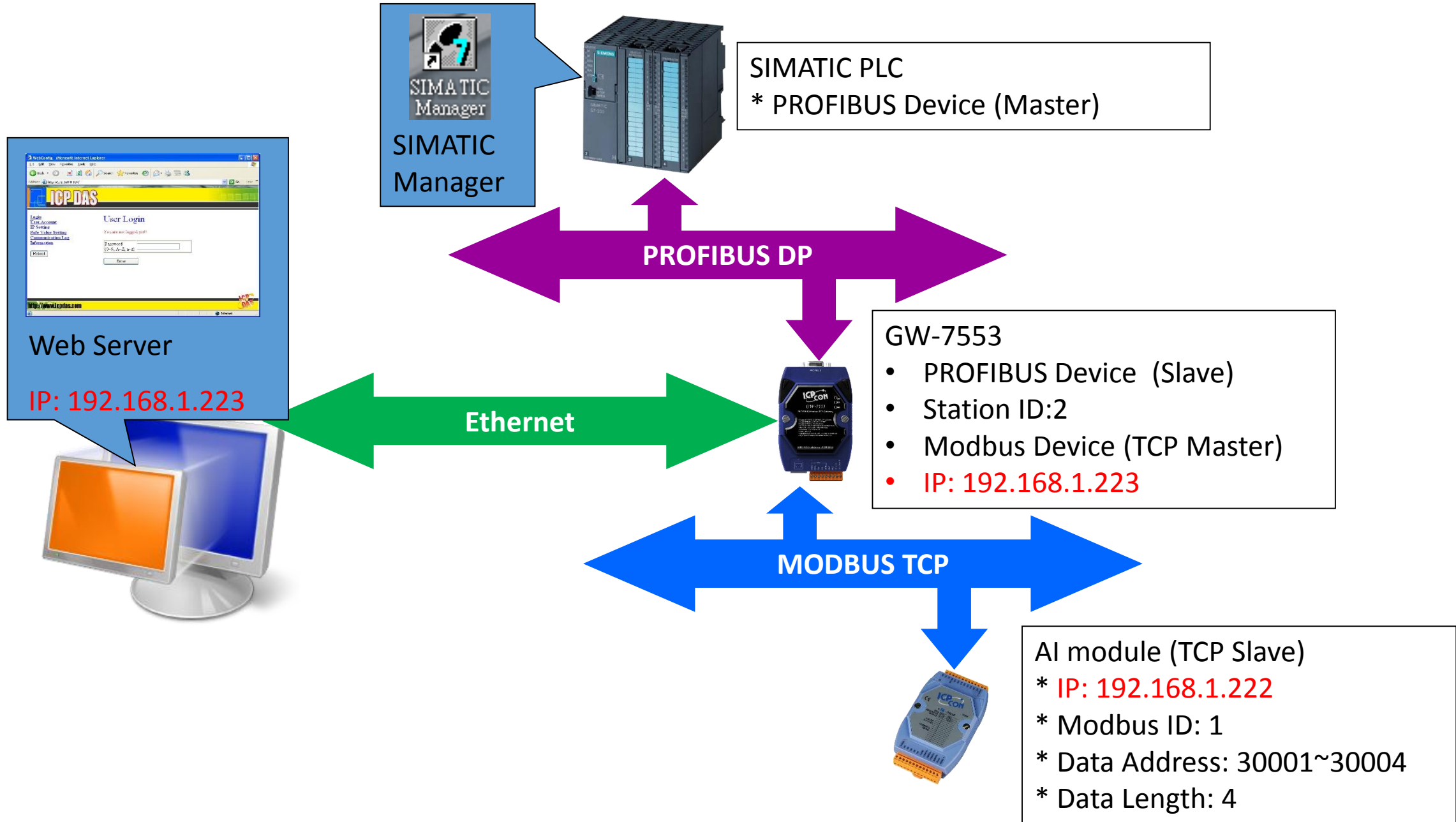
Mbslav1

ID = 4

40001 = 0x3412  
40002 = 0x7856  
40003 = 0x2143

For Help, press F1. For

# Read 4-channel AI





# Read 4-channel AI



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

Icons: File, Edit, Save, Print, Help, etc.

(0) UR

1	
2	CPU313 C-2 DP(1)
X2	DP
2.2	DI16/DO16
2.4	Count
3	
4	
5	

PROFIBUS(1): DP master system (1)

(2) GW-7553

Select GW-7553 module

PROFIBUS(1): DP master system (1)

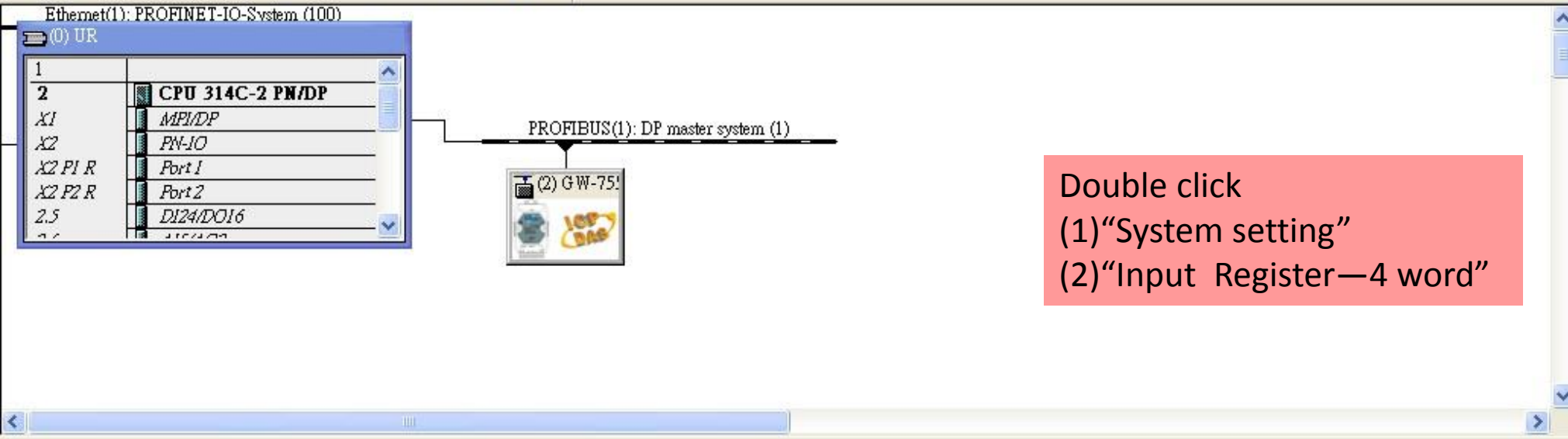
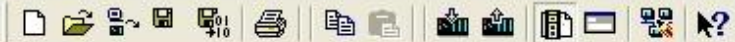
PROFIBUS address	Module	Order number	Firmware	Diagnostic address	Comment
2	GW-7553(DPV1)			1022	

# Read 4-channel AI



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_Pro8]

Station Edit Insert PLC View Options Window Help



Double click  
(1) "System setting"  
(2) "Input Register--4 word"

Suchen: 7553

Profile: Standard

- GW-7553(DPV1)
  - Universal module
  - System setting
  - ...
  - Input Register--4 word

Slot	DP ID	Order Number / Designation	I Address	O Address	Comment
1	24DO	System setting		0...2	
2	2I	--> System setting	0...5		
3	4AI	Input Register--4 word	256...263		
4					
5					

# Read 4-channel AI



HW Config - [SIMATIC 300 Station (Configuration) -- S7\_Pro8]

Station Edit Insert PLC View Options Window Help



Ethernet(1): PROFINET-IO-System (100)

(0) UR

1	
2	CPU 314C-2 PN/DP
X1	MPI/DP
X2	PN-IO
X2 P1 R	Port 1
X2 P2 R	Port 2
2.5	DI24/DO16

(1) Double click GW-7553 icon



(3) The number of Modbus TCP slave.

Properties - DP slave

General Parameter Assignment (2) Select "Parameter Assignment"

Parameters	Value
General DP parameters	
Device-specific parameters	
baud rate	115200 baud
parity	none
data	8 data bit
stop bit	1 stop bit
Modbus Type	Master
Modbus Format	Modbus TCP
I/O Safe Mode	Retain Last Value
Byte Order	Little Endian(Intel format)
Output Data Mode	Auto
Modbus Device ID (\$)	1
Modbus Polling Interval(ms) (M)	500
Query timeout Value(ms)(M)	500
TCP_Connect_Num(T)(M)	1
Hex parameter assignment	

OK Cancel Help

(2) GW-7553(DPV1)

Slot	DP ID	Order Number / Designation	I Address	Q Address
1	24DO	System setting		0...2
2	2I	--> System setting	0...5	
3	4AI	Input Register--4 word	256...263	



# Read 4-channel AI



HW Config - [SIMATIC 300 Station (Configuration) - S7\_Pro8]

Station Edit Insert PLC View Options Window Help

Ethernet(1): PROFINET-IO-System (100)

1	
2	CPU 314C-2 PN/DP
X1	MPI/DP
X2	PN-IO
X2 P1 R	Port 1
X2 P2 R	Port 2
2.5	DI24/DO16

PROFIBUS(1): DP

(2) GW-7553

Slot	DP ID	Order Number / Designation	I Address	Q Ad
1	24DO			0...2
2	2I		5	
3	4AI	Input Register--4 word	256...263	

Properties - DP slave

Address / ID **Parameter Assignment** (2)Select "Parameter Assignment"

Parameters	Value
Station parameters	
Device-specific parameters	
Modbus Slave Device ID (M)	5
Start Address (M)	0
Module Type (M)	Read AI
Change Word Order	Disable
TCP_Connect_Index(T)(M)	4
Hex parameter assignment	

Remote IP Setting

IP	IP Address	Time Out Value (ms)(1~65535)	ReConnect Time (ms)(1~65535)
IP (1)	192.168.0.100	1500	8000
IP (2)	192.168.0.100	1500	8000
IP (3)	192.168.0.100	1500	8000
IP (4)	192.168.1.222	1500	8000
IP (5)	192.168.0.100	1500	8000
IP (6)	192.168.0.100	1500	8000
IP (7)	192.168.0.100	1500	8000
IP (8)	192.168.0.100	1500	8000

OK Cancel Help

(1) Double click "AI module"

(2) Select "Parameter Assignment"



# Read 4-channel AI



HW Config - [SIMATIC 300 Station (Configuration)]

Station Edit Insert PLC View Options Window Help

- New... Ctrl+N
- Open... Ctrl+O
- Open ONLINE
- Close
- Save
- Save and Compile Ctrl+S**
- Properties...
- Import...
- Export...
- Consistency Check Ctrl+Alt+K
- Check CiR Compatibility Ctrl+Alt+F
- Print... Ctrl+P
- Print Preview...
- Page Setup...
- 1 S7\_GW7553\SIMATIC 300 Station
- 2 S7\_7550testCom\SIMATIC 300 Station
- 3 S7\_7553cpm\SIMATIC 300 Station
- 4 S7\_7553\SIMATIC 300 Station
- Exit Alt+F4

HW Config - [SIMATIC 300 Station (Configuration) -- S7\_GW7553]

Station Edit Insert PLC View Options Window Help

Download... Ctrl+L

Upload...

Download Module Identification...

Upload Module Identification to PG...

Faulty Modules...

Module Information... Ctrl+D

Operating Mode... Ctrl+I

Clear/Reset...

Set Time of Day...

**Monitor/Modify**

Update Firmware...

Save Device Name to Memory Card...

Ethernet ▶

PROFIBUS ▶

Save Service Data...

(0) UR	
1	
2	CPU
X2	DP
2.2	D116
2.4	Cou
3	
4	
E	

(2) GW-7553

# Read 4-channel AI



S7\_GW7553 -- C:\Program Files\Siemens\Step7\s7proj\S7\_GW7~3

- S7\_GW7553
  - SIMATIC 300 Station
    - CPU313 C-2 DP(1)
      - S7 Program(1)
        - Sources
        - Blocks

System data    OB1    OB82    OB86    **VAT\_1**

Double click

- Cut                      Ctrl+X
- Copy                     Ctrl+C
- Paste                    Ctrl+V

---

- Delete                  Del

---

- Insert New Object      ▶
  - Organization Block
  - Function Block
  - Function
  - Data Block
  - Data Type
  - Variable Table**
- PLC                      ▶

---

- Rewire...
- Compare Blocks...
- Reference Data         ▶
- Check Block Consistency...

---

- Print                    ▶

---

- Rename                  F2
- Object Properties...    Alt+Return
- Special Object Properties ▶

# Read 4-channel AI



Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help

Click "monitor variable"

VAT\_1 -- @S7\_Pro8SIMATIC 300 Station\CPU 314C-2 PN/DP\S7 Program(2) ONLINE

	Address	Symbol	Display format	Status value	Modify value
1	PIW 256		HEX	W#16#0000	
2	PIW 258		HEX	W#16#0000	
3	PIW 260		HEX	W#16#0000	
4	PIW 262		HEX	W#16#0000	
5					
6					
7					

Modbus Slave - Mbslav1

File Connection Setup Display View Window Help

Mbslav1

ID = 5

30001 = 0x0000  
30002 = 0x0000  
30003 = 0x0000  
30004 = 0x0000

4AI | Input Register--4 word | 256...263

For Help, press F1. For Edit, double click on a value

NUM



# Read 4-channel AI



Var - VAT\_1

Table Edit Insert PLC Variable View Options Window Help

VAT\_1 -- @S7\_Pro8\SIMATIC 300 Station\CPU 314C-2 PN/DP\S7 Program(2) ONLINE

	Address	Symbol	Display format	Status value	Modify value
1	PIW 256		HEX	W#16#AABB	
2	PIW 258		HEX	W#16#DDCC	
3	PIW 260		HEX	W#16#8877	
4	PIW 262		HEX	W#16#EEFF	
5					
6					
7					

Modbus Slave - Mbslav1

File Connection Setup Display View Window Help

Mbslav1

ID = 5

30001 = 0xBBAA  
30002 = 0xCCDD  
30003 = 0x7788  
30004 = 0xFFEE

Read AI(4word)

For Help, press F1. For Edit, double click on a value

NUM