

I-7580 Quick Start

This Quick Start will provide information needed to get started with I-7580. Please also consult the User Manual for detailed information on the setup and use of I-7580.

What's In the Box ?

In addition to this guide, the package includes the following item:



I-7580 Module



Product CD



Screw driver

Technical Support

- **I-7580 User Manual**

CD: \fieldbus_cd\profinet\converter\i-7580>manual\

ftp://ftp.icpdas.com/pub/cd/fieldbus_cd/profinet/converter/i-7580/manual/

- **PROFINET Website**

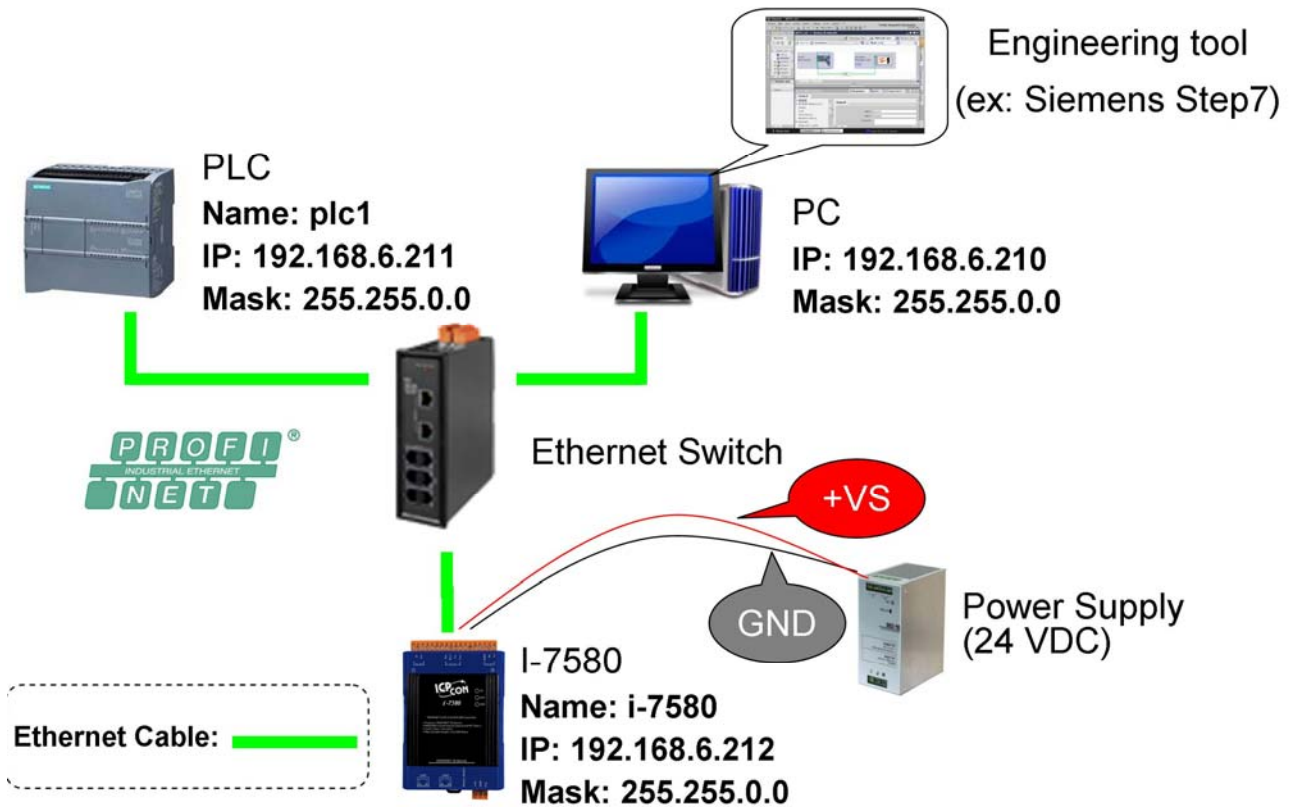
http://www.icpdas.com/products/Industrial/profibus/profinet_intro.htm

Let's Start

In the following examples the S7-1200 PLC from Siemens is used. The configuration and communication is done by the program "Step 7 V11 (TIA PORTAL)" provided by Siemens. We will establish a PROFINET IO network.

1

Connecting to Network, PC, PLC and Power



2

Network Configuration

In this example, please follow the below configuration to configure the network.

PC=>

IP: 192.168.6.210

Mask: 255.255.0.0

PLC=>

Device name: plc1

IP: 192.168.6.211

Mask: 255.255.0.0

I-7580=>

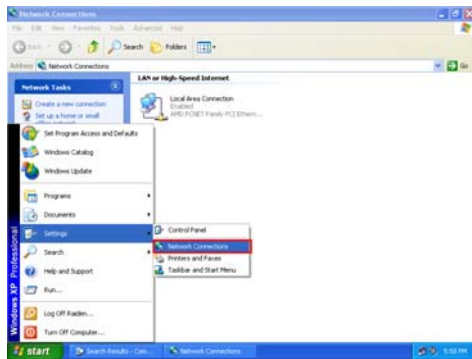
Device name: i-7580

IP: 192.168.6.212

Mask: 255.255.0.0

Step 1: Set PC's IP & Mask (IP=192.168.6.210, Mask=255.255.0.0)

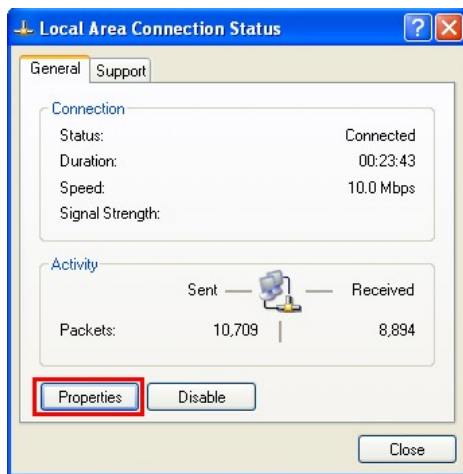
1. Click “start->Settings->Network Connections”



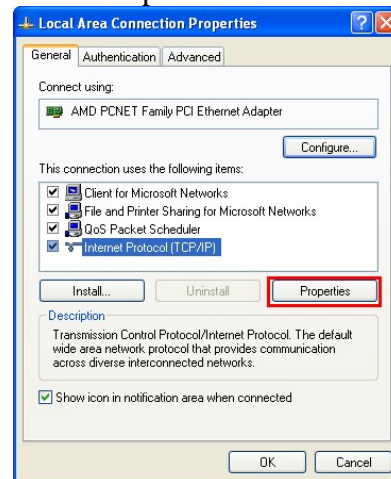
2. Double click “Local Area Connection” icon



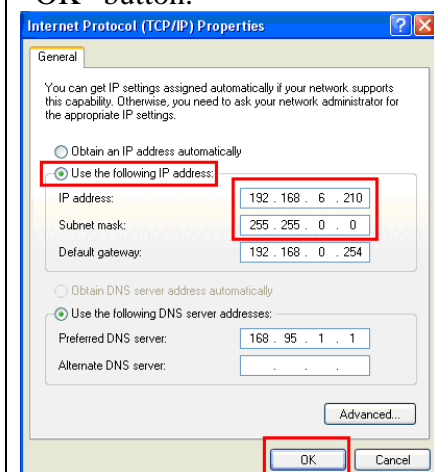
3. Click “Properties” button



4. Select “Internet Protocol(TCP/IP)” and click “Properties” button



5. Set “Internet Protocol Properties” and then click “OK” button.



3 GSD Import


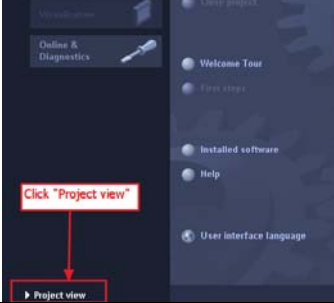
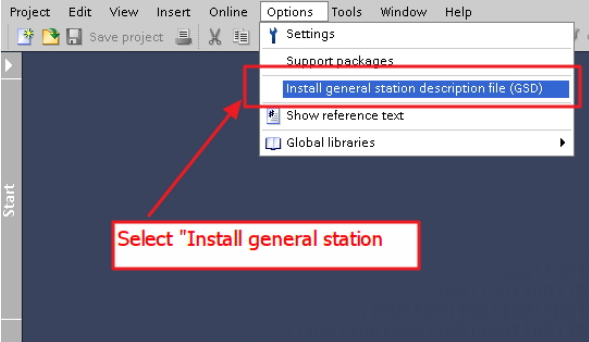
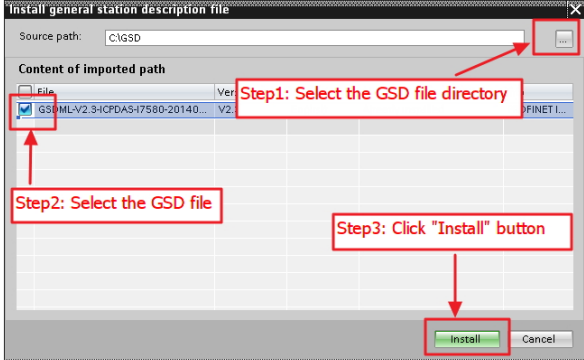
In this example, please follow the step to import GSD file.

Step 1: Get GSD file

The GSD file can be obtained from companion CD or our FTP site:

CD: \fieldbus_cd\profinet\remote io\I-7580\gsd\
ftp://ftp.icpdas.com/pub/cd/fieldbus_cd/profinet/converter/i-7580/gsd/

Step 2: Import GSD file

<p>1. Double Click TIA icon to start Step 7 V11</p> 	<p>2. Click "Project view"</p> 
<p>3. Select "Menu->Options->Install general station description file (GSD)"</p> 	<p>4. Select and install GSD file</p>  <p>Note: Select the GSD file directory=>Select GSD file of I-7580=>Click "Install" button</p>

4 Project Setup

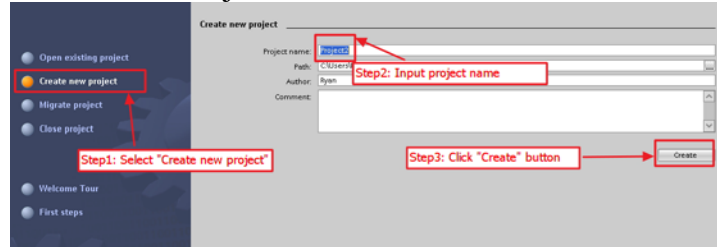
In this example, please follow the step to setup project.

Step 1: Create the project

1. Double Click TIA icon to start Step 7 V11



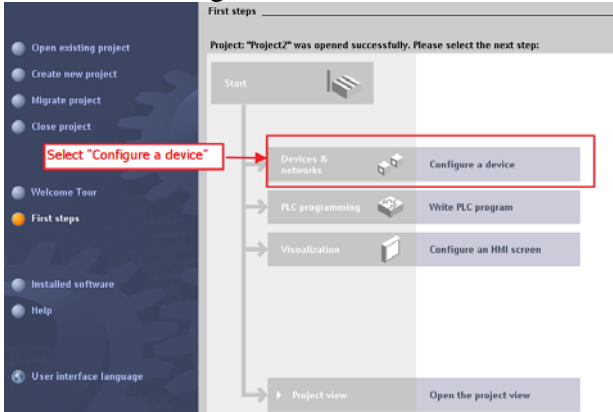
2. Create the Project



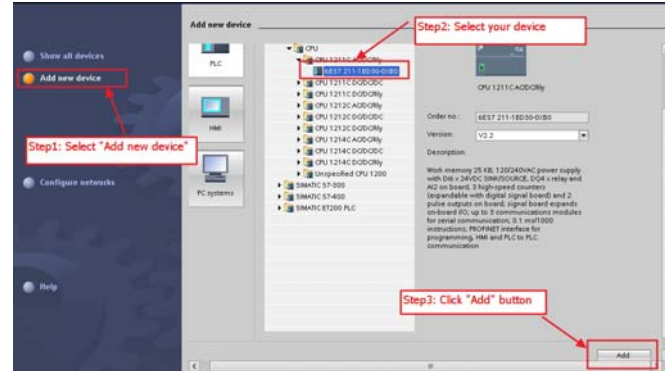
Note: Select "Create new project" => Click "Create" button

Step 2: Project configuration

1. Select "Configure a device"



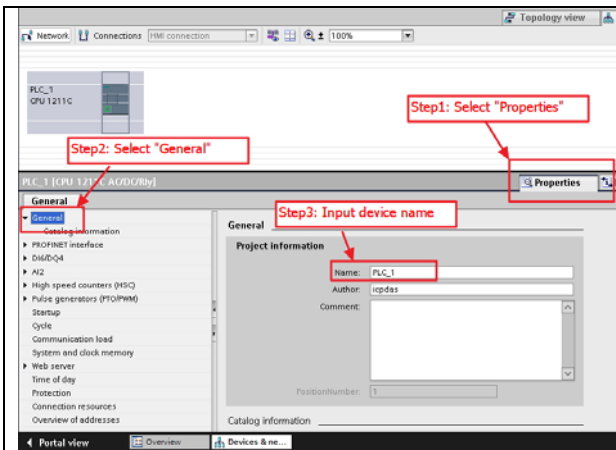
2. Select "Add new device"



Note: Select "Add new device" => Select your PLC module => Click "Add" button

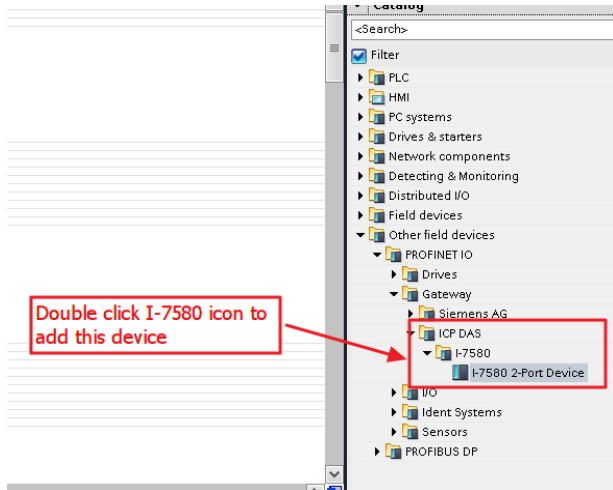
3. Set the device name of PLC to "plc1"

4. Set the IP and mask of PLC and add a new subnet



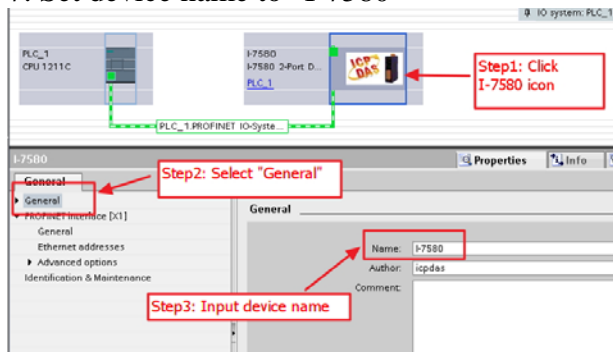
Note: Select "Properties" windows => Select "General" => Input device name = plc1 at "Project Information"

5. Add I-7580 module



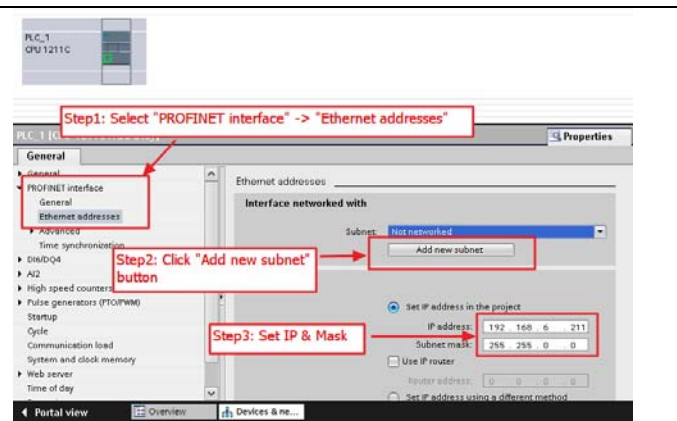
Note: Add I-7580 device by Hardware catalog (Other field devices->PROFINET IO->Gateway->ICP DAS->I-7580)

7. Set device name to "I-7580"



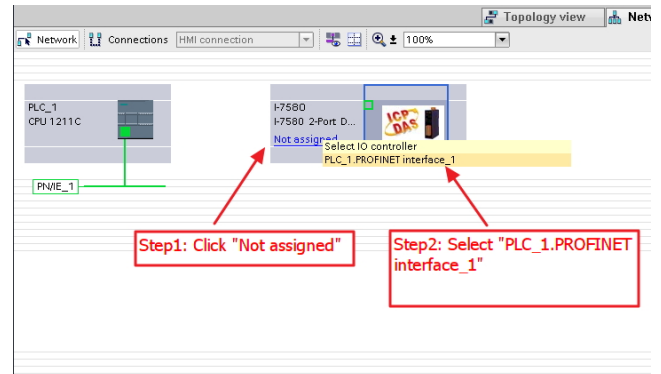
Note: Select I-7580 icon => Select "Properties" => Select "General" => Input name = I-7580 at "Project Information"

9. Select module type of I-7580 module



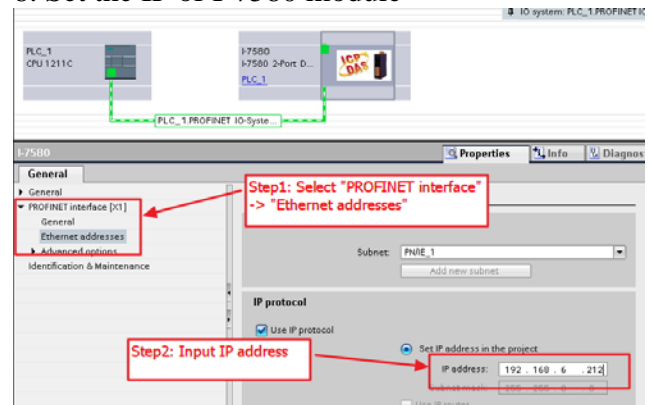
Note: Select "PROFINET Interface" => Click "Add new subnet" button at "Ethernet addresses" => Input IP=192.168.6.211, mask=255.255.0.0

6. Select PROFINET interface



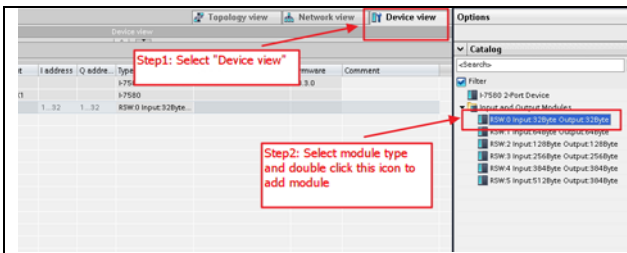
Note: Click "Not assigned" text => Select plc1.PROFINET Interface_1

8. Set the IP of I-7580 module

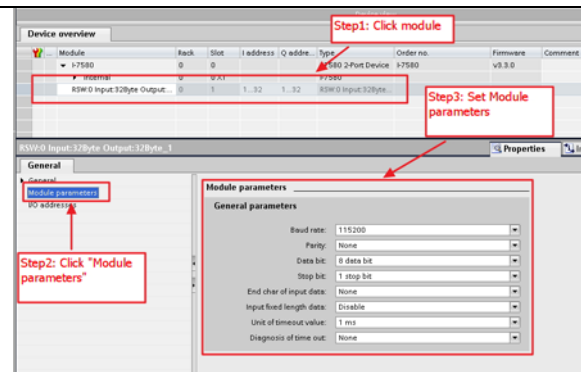


Note: Select "PROFINET Interface [X1]" => Input IP=192.168.6.212 at "IP addresses"

10. Set module parameters of I-7580

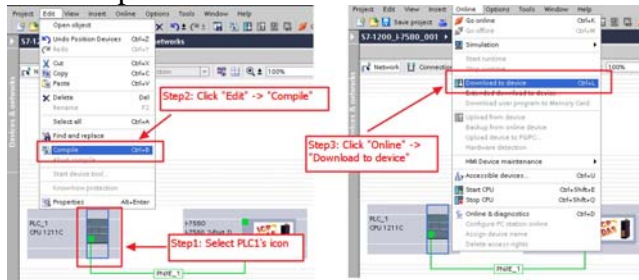


Note: Select "Device view" windows => Select "RSW:0 Input:32Byte Output:32Byte" module at "Hardware catalog" and double click the icon to add this module



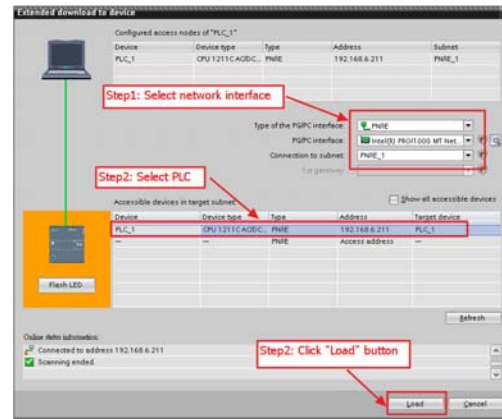
Note: Use default values (COM port: 115200, n, 8, 1)

11. Compile and download to device



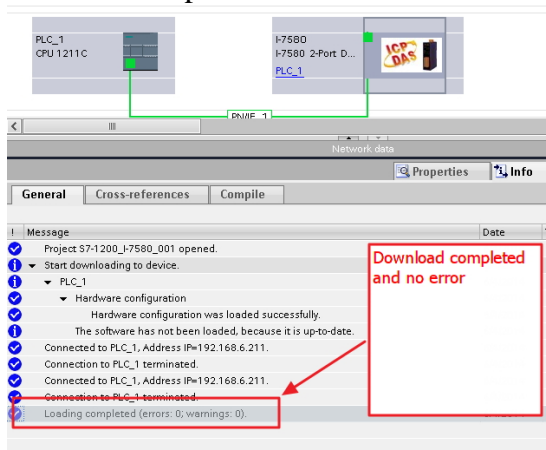
Note: Select "Network view" windows => Select PLC icon => Click compile icon => Click download icon

12. Select network interface and PLC



Note: Select network interface => Select PLC => Click "Load" button

13. Load completed



Note: Select "Info" windows, it will show "Load completed (errors: 0, warnings: 0)" message, it means download completed and no error.

At this time, the AP LED should turn on, BOOT LED and ERR LED should turn off, it means the connection between PLC and I-7580 module is established.

5

Communication test

we use “Send232” to test PROFINET communication and serial communication. This utility simulates a serial device and can be obtained from our FTP site.

<ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/tcp/pcdiag/source/send232.vb6>
2.0.1

1. Open COM port

2. Input data string “sendtoI7580”

3. Receive data string from PROFINET input data area

Name	Address	Display format	Monitor value
"IState"	%IB1	DEC_unsigned	0
"error state"	%IB2	DEC_unsigned	0
"rov len"	%IW3	DEC_unsigned	13
"rov cnt"	%IW5	DEC_unsigned	1
"out_cnt"	%IW7	DEC_unsigned	0
"IN_data_(0)"	%IB9	Character	's'
"IN_data_(1)"	%IB10	Character	'e'
"IN_data_(2)"	%IB11	Character	'n'
"IN_data_(3)"	%IB12	Character	'd'
"IN_data_(4)"	%IB13	Character	't'
"IN_data_(5)"	%IB14	Character	'o'
"IN_data_(6)"	%IB15	Character	'i'
"IN_data_(7)"	%IB16	Character	'r'
"IN_data_(8)"	%IB17	Character	'5'
"IN_data_(9)"	%IB18	Character	'8'
"IN_data_(10)"	%IB19	Character	'0'
"IN_data_(11)"	%IB20	Hex	16#0D
"IN_data_(12)"	%IB21	Hex	16#0A

Annotations: Data length: 13, Received data count: 1, Received data: 'sendtoI7580'

4. Transmit data string "sendtoPC" from PROFINET output data area to Send232

Name	Address	Display format	Monitor value	Modify
"output cmd"	%QB1	DEC_unsigned	1	1
"Control bit"	%QB2	Hex	16#00	
"output len"	%QW3	DEC_unsigned	8	
"fix len"	%QW5	DEC_unsigned	0	
"interval time"	%QB7	DEC_unsigned	0	
"timeout value"	%QB8	DEC_unsigned	0	
"OUT_data_(0)"	%QB9	Character	's'	's'
"OUT_data_(1)"	%QB10	Character	'e'	'e'
"OUT_data_(2)"	%QB11	Character	'n'	'n'
"OUT_data_(3)"	%QB12	Character	'd'	'd'
"OUT_data_(4)"	%QB13	Character	't'	't'
"OUT_data_(5)"	%QB14	Character	'o'	'o'
"OUT_data_(6)"	%QB15	Character	'p'	'p'
"OUT_data_(7)"	%QB16	Character	'c'	'c'

Annotations: Data output cmd: 0x00 -> 0x01, Data length: 8, Input string: sendtoPC