How to setup configuration between I-7580 and SIMATIC TIA portal?

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

Step 1: Create the project



Step 2: Project configuration

Add a PLC device



	Add new device		Step2: Se	lect your device	
 Show all devices Add new device Step1: Select "Add new device 	PLC	CPU CPU CPU 1211C ACDCRBy CPU 1211C DC/DC/Rby CPU 1211C DC/DC/Rby CPU 1211C DC/DC/Rby CPU 1212C AC/DC/Rby CPU 1212C DC/DC/Rby CPU 1212C DC/DC/Rby CPU 1212C DC/DC/Rby CPU 1214C AC/DC/Rby CPU 1214C AC/DC/Rby CPU 1214C AC/DC/Rby CPU 1214C CC/DC/Rby CPU 1214C CC/DC/Rby	Order no.: Version: Description:	CPU 1211C AC/DC/Rly 6ES7 211-1BD30-0XB0 V2.2	
Configure networks	PC systems	 ▶ □ UP 174C DODKKY ▶ □ UP specified CPU 1200 ▶ □ SIMATIC S7-300 ▶ □ SIMATIC S7-400 ▶ □ SIMATIC ET200 PLC: 	Work memor with DI6 x 24 AI2 on board (expandable pulse output on-board I/O, for serial cor instructions; programmin communicat	y 25 KB; 120/240VAC power supply VDC SINV/SOURCE, DQ4 x relay and 3 high-speed counters with digital signal board perspends : up to 3 communications modules imunication; 0.1 ms/1000 PROFINET interface for g. HMI and PLC to PLC ion	
€ Help	<	St	æp3: Click '	'Add" button	Add

• Set the device name of PLC to "PLC_1"

		🚰 Topology view 💼
Network	stion 💌 🦉 🗄 🔍 ± 100% 💌	
PLC_1 CPU 1211C Step2: Select "Gene	Step1: Sele	ect "Properties"
PLC_1 [CPU 121]C AC/DC/RIy]		Properties 🔩
General 🦊		
General Cotolog information	General Step3: Input device name	
PROFINET interface	Project information	
DI6/DQ4		
▶ AI2	Name: PLC_1	1
High speed counters (HSC)	Author	
Pulse generators (PTO/PWM)		
Startup	• Comment:	~
Cycle	7	
Communication load	•	
System and clock memory		
Web server		
Time of day		×
Protection	PositionNumber 1	
Connection resources		
Overview of addresses	Catalog information	
Portal view	n Devices & ne	

• Set the IP and mask of PLC and add a new subnet

General Ethernet addresses PROFINET interface Ethernet addresses General Interface networked with Ethernet addresses Interface networked with Ethernet addresses Subnet: Not networked Interface networked with Ethernet addresses Interface networked with Di6/DQ4 Step2: Click "Add new subnet" Nds Subnet: Not networked Interface networked Add new subnet: Interface networked Nds Step3: Set IP address in the project Status Interface networked Web server Interface networked Time of day Status	PLC_1 CPU 1211C	1: Select "PROI	TNFT interface" -> "Eth	ernet addresses"	
General Ethernet addresses PROFINET interface Ethernet addresses General Interface networked with Ethernet addresses Interface networked with Ethernet addresses Subnet: Not networked Advanced Subnet: Not networked Time synchronization Step2: Click "Add new subnet" Add new subnet Add new subnet Dis/DQ4 Step2: Click "Add new subnet" High speed counters Button Pulse generators (PTO/PWM) Stertup Cycle Step3: Set IP & Mask Communication load System and clock memory Web server Router address: Time of day Stet P address:	PLC_1 [C				S Properties
General Ethermet addresses PROFINET interface Interface networked with Ethermet addresses Interface networked with Ethermet addresses Subnet: Not networked Not networked Interface networked with Ethermet addresses Add new subnet: Dis/DQ4 Step2: Click "Add new subnet" Al2 button High speed counters IP address in the project Startup Use generators (PTO/PWM) Startup Step3: Set IP & Mask Cycle Step3: Set IP & Mask System and clock memory Use IP router Web server Router address: 0 Time of day Step3 Step3	General				
Dis/DQ4 Step2: Click "Add new subnet" Add new subnet Al2 button High speed counters Button Pulse generators (PTO/PWM) Stertup Cycle IP address: Communication load System and clock memory Web server IV server Time of day St the address:	General PROFINET interfa General Ethernet add Advanced Time synchro	ice Iresses	Ethernet addresses _ Interface networked	with Subnet: Not networked	
Al2 High speed counters Pulse generators (PTO/PWM) Startup Cycle Communication load System and clock memory Web server Time of day	DI6/DQ4	Step2: Click	"Add new subnet"		
 High speed counterst Pulse generators (PTO/PWM) Startup Cycle Communication load System and clock memory Web server Time of day 	Al2	button	the formed on a second state of the second		
Step 3: Set IP & Mask Subnet mask: 255.255.0.0 System and clock memory Use IP router Web server Router address: 0.000 Time of day Set IP & Mask Set IP & Mask	High speed cou Pulse generator Startup Orcle	nters i ′s (PTO/PWM)		 Set IP address in t IP address: 	the project
System and clock memory Web server Time of day	Communication	ı load	Step3: Set IP & Mas	K Subnet mask:	255 . 255 . 0 . 0
Web server Router address: O O O O Set IB address with a different method	System and clo	ck memory		Use IP router	
Time of day	Web server			Router address:	
aet ir address using a different method	Time of day		V	Set IP address usi	ing a different method

Add I-7580 module

Double click I-7580 icon to add this device Double click I-7580 icon to Image: State icon to Image			• Caraina
Double click I-7580 icon to add this device Double click I-7580 icon to Image: State icon to Image		_	<search></search>
Double click I-7580 icon to add this device		=	🛃 Filter
Double click I-7580 icon to add this device		-	• 🧰 PLC
Double click I-7580 icon to add this device			🕨 🫅 HMI
Double click I-7580 icon to add this device Double click I-7580 ico			C systems
Double click I-7580 icon to add this device Double click J-7580 icon to Add this device		- 11	• 🌆 Drives & starters
Double click I-7580 icon to add this device Double click I-7580 icon to add this device		-8	Image: Network components
Double click I-7580 icon to add this device			• 🛄 Detecting & Monitoring
Double click I-7580 icon to add this device Double click I-7580 icon to add this device Profile Pr			• 🌆 Distributed I/O
Double click I-7580 icon to add this device		- 1	Field devices
Double click I-7580 icon to add this device			 Other field devices
Double click I-7580 icon to add this device			✓ m PROFINET IO
Double click I-7580 icon to add this device			Drives
Double click I-7580 icon to add this device	1		👻 🛄 Gateway
add this device	Double click I-7580 icon to		Siemens AG
 ✓ []] I-7580 []] I-7580 2-Port Device ↓ []] IO ↓ []] Ident Systems ↓ []] Sensors ↓ []] PROFIBUS DP 	add this device		🕈 🧰 ICP DAS
IIII-7580 2-Port Device ► IIIIIO ► IIIIO ► IIIIIO ► IIIIIO ► IIIIO ► IIIIO ► IIIIO ► IIIIIO ► IIIIIO ► IIIIIO ► IIIIIO ► IIIIIO ► IIIIIO ► IIIIIO ► IIIIIO ► IIIIIIO ► IIIIIO ► IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			
		- 8	III I-7580 2-Port Device
Dim Ident Systems Dim Sensors Dim PROFIBUS DP		-	• Tano
▶ 🛅 Sensors ▶ 🛅 PROFIBUS DP		-8	🕨 🛅 ldent Systems
🕨 🛅 PROFIBUS DP			🕨 🧊 Sensors
			PROFIBUS DP
		N 61	

Select PROFINET interface

Network	connection 💌 🖷 🛄	€ ± 100%	Topology view	/ & Ne
PLC_1 CPU 1211C	I-7580 I-7580 2-Port D <u>Not assigned</u> Select IV PLC_1.PI	D controller ROFINET interface_1		
PN/IE_1 Step1: (Click "Not assigned"	Step2: Se	lect "PLC_1.PRC 1"	FINET
		Interface_	1	



• Set the IP of I-7580 module

		4 IO system: PLC_1.PROFINETIC
PLC_1 CPU 1211C	PROFINET IO-Syste	
1-7580		Properties 🚺 Info 🗓 Diagnos
General	Step1: Select "PROFINET interf	ace"
General PROFINET interface [X1]	-> "Ethernet addresses"	
General		
Ethernet addresses Advanced ontions	Subnet PNUE 1	
Identification & Maintenance	Add no	ew subnet
	IP protocol	
	• Use IP protocol	
Step2: I	nput IP address	dress in the project
	IP a	ddress: 192 . 168 . 6 . 212
		a maski [200 200 0 0 0
	Use IP rou	iter

• Select module type of I-7580 module

							聋 Topology view 📑	Network view	w 🛛 🕅 Device view	Options
					1	Device view		-	2	
Device	overview							-		✓ Catalog
1	Module	Rack	Slot	l address	Q addre	Step1: Se	lect "Device view"	mware C	omment	<pre></pre> <pre></pre> <pre></pre>
	➡ I-7580	0	0			1-75		.3.0		Filter
	Internal	0	0 ×1			I-7580				III I-7580 2-Port Device
	RSW.0 Input:32Byte Output:	0		132	132	RSW:0 Input:32Byte	Step and add	2: Select m double clict module	nodule type k this icon to	Fill Input and Output Modules RSW 0 Input:32Byte Output:32Byte RSW:1 mput:32Byte Output:04Byte RSW:2 Input:128Byte Output:256Byte RSW:3 Input:256Byte Output:256Byte RSW:5 Input:512Byte Output:38Byte

Device overview					Step1: Clic	k modu	ule		
	Rack	Slot	l address	Q addre	Type	Order no.		Firmware	Comme
	0	0			580 2-Port Device	1-7580		v3.3.0	
Internal	0	UXI	4.00	1.00	F7580	Π.			-
RSW:U Input: 32Byte Output:	U		132	132	RSW:0 Input: 32Byte	-	Step3: Set parameters	Module S	
W:0 Input:32Byte Output:32Byte_1							/	🔍 Properti	es 🏄
General						/			-
General General Module parameters 70 addresses		Module Gene	e paramete eral param	ers eters	-	/]	
General Seneral Module parameters 10 addresses		Moduli Gene	e paramete eral param	ers eters Baud rat	te: 115200	2			
General General Todule parameters O addresses		Moduli Gene	e paramete eral param	ers eters Baud rat Pari	te: 115200. ity: None	_			
General Adule parameters To addresses rep2: Click "Module		Moduli Gene	e paramete eral param	ers eters Baud rat Pari Data t	te: 115200 ity: None itt: 8 data bit				
Seneral Seneral Module parameters O addresses ep2: Click "Module arameters"		Module Gene	e paramete eral param	eters eters Baud rat Pari Data b Stop b	te: 115200 ity: None oit: 8 data bit oit: 1 stop bit				
General Seneral Module parameters IO addresses rep2: Click "Module arameters"		Moduli	e paramete eral param End cha	eters eters Baud rat Pari Data b Stop b r of input dat	te: 115200. ity: None oit: 8 data bit oit: 1 stop bit ta: None				
General Module parameters To addresses tep2: Click "Module arameters"		Moduli	e paramete eral param End chai Input fixe	eters Baud rat Pari Data b Stop b r of input dat	te: 115200. ity: None bit: 8 data bit bit: 1 stop bit ta: None ta: Disable				
General Module parameters Vo addresses tep2: Click "Module arameters"		Modula	e paramete eral param End chai Input fixe Unit of 1	eters Baud rat Pari Data b Stop b r of input dat ed length dat timeout valu	te: 115200 ity: None ity: 8 data bit bit: 1 stop bit ta: None ta: Disable ue: 1 ms				

Compile and download to device



xtended download	to device						
	Configured acc	ess nodes of "PLC_1"					
	Device	Device type	Туре	Addre	55	Subr	net
	PLC_1	CPU 1211C AC/DC	PN/IE	192.1	68.6.211	PNA	E_1
	Step1: Sele	ct network interfa	ce				
		ту	pe of the PG/PC	C interface:	PN/IE		•
			PG/PC	Cinterface:	Intel(R) Pi	RO/1000 MT N	et 🔻 🕐 🚺
			Connection	to subnet:	PN/IE_1		- 0
				t gateway	-		
	Device	Device type	Туре	Add	lress	Target dev	vice
	Device	Device type 🦰	Туре	Add	ress	Target dev	vice
	ruc_i	CF01211CAODO	ENVIE ENVIE	192	000.0.211	PLC_1	_
0							
Flash LED							
						[Befresh
Online status information:						-	
루 Connected to add	ress 192.168.6.211		Step2: Cli	ick "Load	" button		
Scanning ended.							9
					-	Load	Gancel

Status	1	Target	Message	Action
1	0	▼ PLC_1	Ready for loading.	
	0	•	The software will not be loaded, because the online status is up-to	
	0	 Device configurati 	Delete and replace system data in target	Download to device
			Click "Load" button	
			X	Definesh

1	N	Target ▼ PLC_1	Message Downloading to device completed without error.	Action
	0		The software has not been loaded, because it is up-to-date.	
	4	 Start modules 	Start modules after downloading to device.	Start all
				1
			Sten1: S	elect "Start all"
			Subtraction of the second seco	
			Step 2: Click "Einich" hutton	
			Step2. Click Fillish Dutton	

PLC_1 CPU 1211C	I-7580 I-7580 2-Port D PLC_1	
	PN/IF 1	
1	i 🔺 i	uk data
	international and a second	Properties 11 In
General Cross-reference	s Compile	
Message		Date
Message Project \$7-1200_I-7580_001 (opened.	Date Download completes
Message Project \$7-1200_I-7580_001 (Start downloading to device.	opened.	Date Download completed
Message Project \$7-1200_1-7580_001 of Start downloading to device. PLC_1	opened.	Download completed and no error
Message Project S7-1200_I-7580_001 (Start downloading to device. PLC_1 Hardware configuratio	opened. n	Date Download completed and no error
Message Project S7-1200_I-7580_001 of Start downloading to device. PLC_1 Hardware configuratio Hardware configuratio	opened. n ation was loaded successfully.	Date Download completed and no error
Message Project S7-1200_I-7580_001 of Start downloading to device. PLC_1 Hardware configuratio Hardware configura The software has not b	opened. n ation was loaded successfully. een loaded, because it is up-to-date.	Date Download completed and no error
Message Project 37-1200_I-7580_001 of Start downloading to device. PLC_1 Hardware configuratio Hardware configura The software has not b Connected to PLC_1, Address	opened. n ation was loaded successfully. ieen loaded, because it is up-to-date. IP=192.168.6.211.	Date Download completed and no error
Message Project \$7-1200_I-7580_001 of Start downloading to device. PLC_1 Hardware configuratio Hardware configuration The software has not b Connected to PLC_1, Address Connection to PLC_1 termina	opened. n ation was loaded successfully. een loaded, because it is up-to-date. IP=192.168.6.211. ted.	Date Download completed and no error
Message Project S7-1200_I-7580_001 (Start downloading to device. PLC_1 Hardware configuration Hardware configuration The software has not b Connected to PLC_1, Address Connection to PLC_1 terminan Connected to PLC_1, Address	opened. n ation was loaded successfully. een loaded, because it is up-to-date. IP=192.168.6.211. ted. IP=192.168.6.211.	Date Download completed and no error
Message Project \$7-1200_I-7580_001 of Start downloading to device. PLC_1 Hardware configuratio Hardware configuratio Connected to PLC_1, Address Connected to PLC_1 termina Connected to PLC_1, Address Connected to PLC_1 termina	opened. n ation was loaded successfully. een loaded, because it is up-to-date. IP=192.168.6.211. ted. IP=192.168.6.211.	Date 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.

i-7580		
PROFINET to RS-232/422/485 Converter • Protocol: PROFINET IO Device • PROFINET Conformance Class B and RT Class 1 • Cyclic Time: 1ms (min) • Max I/O data length: 512/384 Bytes		
PROFINET IO Device		