Automation Technology > Automation Systems > Industrial Automation Systems SIMATIC > PLC > Modular Controller SIMATIC S7 > S7-1200 > CPUs

S7-1200 CPU 12xx -- Setting up and parameterizing hardware -- Initializing and parameterizing modules

- How does startup work in an S7-1200?
- What is the connection between subnet masks and IP addresses with regard to subnetting and supernetting (classless inter domain routing CIDR)?
- How can you prevent data loss of runtime-generated parameters when updating your S7-1200 PLC program?
- How can you share runtime-generated parameters between several S7-1200 PLCs with a KTP Basic Panel?
- How can you change the IP address of an S7-1200 without using STEP 7 Basic?
- How can you erase the IP address and set your S7-1200 PLC back to factory settings, using the SIMATIC MC memory card (2MB or 24MB)?
- How can you download to a network of several S7-1200 PLCs with the same IP address?
 How can you reset the IP address of your S7-1200 PLC using STEP 7 Basic software?
- STEP 7 Basic -- Setting up and parameterizing hardware -- Setting up modules for distributed operation

How can you change the IP address of an S7-1200 without using STEP 7 Basic?

Description

The S7-1200 tool enables you to specify the IP address of one or several S7-1200 CPUs without using the STEP 7 Basic software.

This tool is particularly useful for mass filling; if, for example, you download a project by means of a memory card to multiple CPUs in a network and then have to change the IP address for each CPU.

Setting the PG/PC interface

No.	
1.	Click the "PG/PC Interface" button.
	File View CPU Beadme PG/PC Interface Fig. 01
2.	 Select the access point below for the application: "S7IPTool". For "Interface Parameter Assignment Used:" you select "TCP/IP" and the network card you are using. You achieve the best results with the "TCP/IP(Auto)" for automatic configuration of the network card you are using. Apply the settings with "OK".

et PG/PC Interface		×
Access Path LLDP / DCP		- 1
Access Point of the Application:		
S7IPTool> TCP/IP(Auto) -> HighSpeed L	JSB-Ethernet 💌	
(Standard for S7-1200 IP Tool)		
Interface Parameter Assignment Used:		
TCP/IP(Auto) -> HighSpeed USB-Ethernet.	Properties	
TCP/IP(Auto) -> Broadcom NetXtre 🔺	Diagnostics	
🕮 TCP/IP(Auto) -> HighSpeed USB-E		
TCP/IP(Auto) -> LevelOne USB-02	Copy	
TCP/IP(Auto) -> VMware Virtual Etr	Delete	
(Assigning Parameters for the IE-PG access		
(RFC-1006))		
□ Interfaces		
Add/Bemover	Select	
OK	Cancel Help	
n 02		

Table 01

Manual assignment of an IP address for your S7-1200

NO.	
1.	Double-click the "Update accessible devices" button to update the list of accessible nodes.
	57-1200 Tool
	File View CPU Help
	Image: Seadme Image: TCP/IP(Auto) -> HighSpeed USt Image: Update accessible devices Fig. 03
2.	The S7-1200 tool displays the MAC address of CPUs without an assigned IP address.
	57-1200 Tool
	File View CPU Help
	Readme TCP/IP(Auto) -> HighSpeed USB-Ethernet Update accessible devices 192.168.0.2 00:1C:06:02:25:81 00:1C:06:02:A4:E5

Fig. 04	
 Select the CPU to be configured from the list of accessible devices. Click the "Flash LED lights" button to flash the status LEDs of the CP 	J selected.
File View CPU Help	
Readme Flash LED Lights	
CP/IP(Auto) > Highspeed U S Update accessible devices 00:1C:06:02:25:81 00:1C:06:02:A4:E5	
Fig. 05	
4. Click the "Stop CPU" button to put the CPU into STOP mode.	
57-1200 Tool	
File View CPU Help	
TCP/IP (CARO, 2014)	
Update accessible devices	
00:1C:06:02:25:81 00:1C:06:02:A4:E5	
Fig. 06	
 Specify the IP address, subnet mask and gateway address for the CF Then click the "Set" button 	PU selected.
If you enable the "Set as Default" option, the current settings are save	ed as "Default"
settings when you click the "Set" button.3. Click the "Use Defaults" button to load the saved "Default" settings.	
Device Properties	
MAC Address: 00:1C:06:03:61:68	
CPU Type: CPU 1214C ACDCRly	
CPU Type: CPU 1214C ACDCRly Order ID: 6ES7 214-1BE30-0XB0	
CPU Type: CPU 1214C ACDCRly Order ID: 6ES7 214-1BE30-0XB0 Hardware E-Stand: 1 Firmware Version: V 2.1.2	
CPU Type:CPU 1214C ACDCRlyOrder ID:6ES7 214-18E30-0X80Hardware E-Stand:1Firmware Version:V 2.1.2Operating State:STOP	
CPU Type: CPU 1214C ACDCRIy Order ID: 6ES7 214-1BE30-0XB0 Hardware E-Stand: 1 Firmware Version: V 2.1.2 Operating State: STOP	
CPU Type: CPU 1214C ACDCRly Order ID: 6ES7 214-18E30-0X80 Hardware E-Stand: 1 Firmware Version: V 2.1.2 Operating State: STOP Settings IP Address: 192.168.0.1 Set	
CPU Type: CPU 1214C ACDCRly Order ID: 6ES7 214-18E30-0×80 Hardware E-Stand: 1 Firmware Version: V 2.1.2 Operating State: STOP Settings IP Address: 192.168.0.1 Subnet Mask: 255.255.0 Use Defaults	
CPU Type: CPU 1214C ACDCRly Order ID: 6ES7 214-1BE30-0X80 Hardware E-Stand: 1 Firmware Version: V 2.1.2 Operating State: STOP Settings IP Address: 192.168.0.1 Subnet Mask: 255.255.0 Default Gateway: 0.0.0 Set as Default	
CPU Type: CPU 1214C ACDCRly Order ID: 6ES7 214-18E30-0X80 Hardware E-Stand: 1 Firmware Version: V 2.1.2 Operating State: STOP Settings IP Address: 192.168.0.1 Subnet Mask: 255.255.0 Default Gateway: 0.0.0 Set as Default E: 67	
CPU Type: CPU 1214C ACDCRly Order ID: 6ES7 214-18E30-0X80 Hardware E-Stand: 1 Firmware Version: V 2.1.2 Operating State: STOP Settings 192.168.0.1 IP Address: 192.168.0.1 Subnet Mask: 255.255.0 Use Defaults Default Gateway: 0.0.0.0 Set as Default	



Table 02

Network Mapping

No.								
1.	Mark the network card folder in	the tree view.						
	A table is displayed listing all th	ne connected S	57-1200) CPUs.				
	57-1200 Tool							
	Beadme	Network Mapping						
	CPTCP/IPIAuto) > HighSpeed USB-Ethernet	This table will allow	v séveral IP.	Addresses to be	changed at	one time (using a ".csv fi	e.
	192.168.0.1	MAC	IP	Subnet Mask	Gateway	NewiP	New Subnet	New Gateway
	0010:06:02:44:65	00.10.06.03.61.68	192,168,0.1	255,255,255,0	0.0.0.0			
		2 001C0602A4E5	0000	66.0.0	0.000			
		1						
	<				Impo	at	Export.	Update
								4
	Fig. 09							
2.	Click the "Export" button to g	enerate a CS\	/ file wit	th the curr	ent net	work	settings of	of all the
	connected S7-1200 CPUs.							
	Save this file on your computer							

	MAC	IP	Subnet Mask	Gateway	New IP	New Subnet	New Gateway
	00:10:06:03:61:68	192.168.0.1	255.255.255.0	0.0.0.0			
	00:10:06:02:25:81	0.0.0.0	0.0.0.0	0.0.0.0			
	00:1C:06:02:A4:E5	0.0.0.0	0.0.0.0	0.0.0.0			
•							
				Impo	rt	Export	Update
Fig.	10						
You addr You File File 00: 00:	can change the ress. can use the "#" Edit Format Vi MAC, New IP, 1C:06:03:61 1C:06:02:25 1C:06:02:A4 11	network se character to - Notepad ew Help New Subr :68, 192. :81, 192. :E5, 192.	ttings of each p insert comm net, New Ga 168.0.1, 1 168.0.2, 1 168.0.3, 1	ateway 255, 255, 255, 255,	required le CSV f . 255. 0 . 255. 0 . 255. 0	. You must r ile. 0.0.0.0 0.0.0.0 0.0.0.0	not change the MAC
- <u>.</u>		nutton and e	select the mo	dified CSV	∨ tile troi	n Step 3.	
Click	k the "Import" k etwork Mapping		ddrassas ta ba s	banacd at	ono tino i	uing a ^x agu fil	_
Click	k the "Import" k etwork Mapping This table will allow	v several IP A	ddresses to be a	changed at	one time u	using a [*] .csv file	e.
Click	k the "Import" k etwork Mapping This table will allow MAC 00:10:06:03:61:68	v several IP A	ddresses to be o Subnet Mask	changed at Gateway	one time u New IP	using a *.csv file New Subnet	e. New Gateway
Click	k the "Import" k etwork Mapping This table will allow MAC 00:10:06:03:61:68 00:10:06:02:25:81	v several IP A IP 192.168.0.1	ddresses to be o Subnet Mask 255.255.255.0 0.0.0.0	hanged at Gateway 0.0.00	one time u New IP	using a *.csv file New Subnet	e. New Gateway
Click	k the "Import" k etwork Mapping This table will allow MAC 00:1C:06:03:61:68 00:1C:06:02:25:81 00:1C:06:02:A4:E5	v several IP A IP 192.168.0.1 0.0.0.0 0.0.0.0	ddresses to be o Subnet Mask 255.255.255.0 0.0.0.0 0.0.0.0	Changed at Gateway 0.0.0.0 0.0.0.0 0.0.0.0	one time u New IP	using a *.csv file New Subnet	e. New Gateway
	k the "Import" k etwork Mapping This table will allow MAC 00:1C:06:03:61:68 00:1C:06:02:25:81 00:1C:06:02:A4:E5	v several IP A IP 192.168.0.1 0.0.00 0.0.00	ddresses to be o Subnet Mask 255.255.255.0 0.0.0.0	changed at Gateway 0.0.0.0 0.0.0.0	one time u New IP	using a *.csv file New Subnet	e. New Gateway
	k the "Import" k etwork Mapping This table will allow MAC 00:1C:06:03:61:68 00:1C:06:02:25:81 00:1C:06:02:A4:E5	v several IP A IP 192.168.0.1 0.0.00 0.0.00	ddresses to be o Subnet Mask 255.255.255.0 0.0.0.0 0.0.0.0	Changed at Gateway 0.0.0.0 0.0.0.0 0.0.0.0	one time u New IP	Ising a *.csv file New Subnet	e. New Gateway

	Luco					N 01 1	
	00:10:06:03:61:68	192 168 0 1	255 255 255 0	Gateway 0000	New IP 192168.01	New Subnet 255 255 0	New Gateway
	00:10:06:02:25:81	0.0.0.0	0.0.0.0	0.0.0.0	192.168.0.2	255.255.255.0	0.0.0.0
╟╴	00:1C:06:02:A4:E5	0.0.0.0	0.0.0.0	0.0.0.0	192.168.0.3	255.255.255.0	0.0.0.0
		Are you sur	e you want to u Yes	odate all der	vices in this lis	st?	X
Fig	ı. 13				Import	Export	Update
		novt to the	S7 1200 CD	Lindicato	s that the i	Indate has he	on successf
	 A green circle A red circle in A yellow circle 	next to the dicates that indicates t	S7-1200 CP the update h hat the S7-12	U indicate nas failed. 200 CPU i	es that the u	update has be	een successfu updated.
	 A green circle A red circle in A yellow circle Network Mapping This table will allow	e next to the dicates that e indicates t e several IP A	S7-1200 CP t the update h hat the S7-12 ddresses to be o	U indicate has failed. 200 CPU i changed at	es that the u is in the pro one time using	update has be ocess of being g a *.csv file.	een successfu g updated.
	 A green circle A red circle in A yellow circle Network Mapping This table will allow MAC 	e next to the dicates that e indicates t several IP A	S7-1200 CP the update h hat the S7-12 ddresses to be o Subnet Mask	U indicate has failed. 200 CPU i hanged at Gateway	es that the u is in the pro one time using New IP	update has be ocess of being g a *.csv file. New Subnet	een successfu updated. New Gateway
	 A green circle A red circle in A yellow circle Network Mapping This table will allow MAC 00:10:06:03:61:68 	e next to the dicates that e indicates t several IP A IP 192.168.0.1	S7-1200 CP t the update h hat the S7-12 ddresses to be o Subnet Mask 255.255.255.0	U indicate has failed. 200 CPU i changed at Gateway 0.0.0.0	es that the u is in the pro one time using New IP 192.168.0.1	update has be ocess of being g a *.csv file. New Subnet 255.255.255.0	een successfu updated. New Gateway 0.0.0

Table 03

Additional Functions





Table 04

Requirements

- Operating system: Windows XP, Windows Vista or Windows 7 (32-bit versions are supported)
- S7-1200
- Ethernet cable
- PC/PG with Ethernet interface
- S7-1200 Tool V2.0.0.5



S7-1200Tool.zip (55566 KB)

Keywords

IPTool, IP TOOL, IP-Tool

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