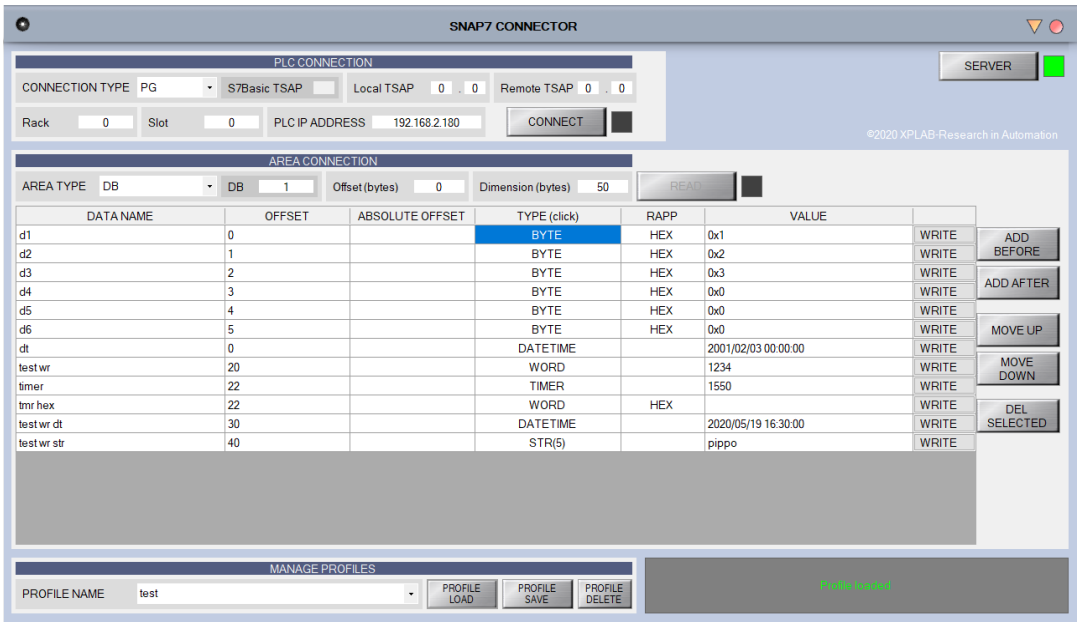

Snap 7 Connector is a very simple app to connect to a PLC and access data in reading and writing. It can also simulate a PLC, allowing you to test a Step 7 communication from other devices or applications.

1.0.0

SNAP 7 Connector manual

POWER-KI

Demo

DESCRIPTION			
PROJECT	PROJECT NAME	CODE	XXXXXXXXXX
COVER TITLE	SNAP 7 CONNECTOR MANUAL		
FIRST TITLE	POWER-KI	PAGES	9
SECOND TITLE	DEMO	PRINT DATE	
FILE	MAN-SNAP7CONN-EN	SAVED DATE	

MANAGED					
ORGANIZATION	XPLAB	ENTITY	DTC	MANAGE	MXXX.XX

STATUS		
DRAFT	REPLACE	//
	REPLACED	//

DISTRIBUTION	AVAILABILITY	CONFIDENTIAL

IDENTIFICATION								
SUBJECT	OBJ	CAT	T	TYP	ID	SEQ	VER	LANG
PXXX.XX	D	XXX	#	XX	XXXXXXXX	XX	1.0.0	EN

STORAGE						
SUBJECT	OBJ	CAT	T	TYP	ID	SEQ
PXXX.XX	B	XXX	#	XX	XXXXXXXX	XX

REVISION

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Document Information

Summary

Purpose

Validity

Relation

POWER-KI programming manuals.

References

[1] POWER-KI A PROGRAMMING LANGUIAGE
Preludio
Cesare A. Perani
2012 - XPLAB

Document Change

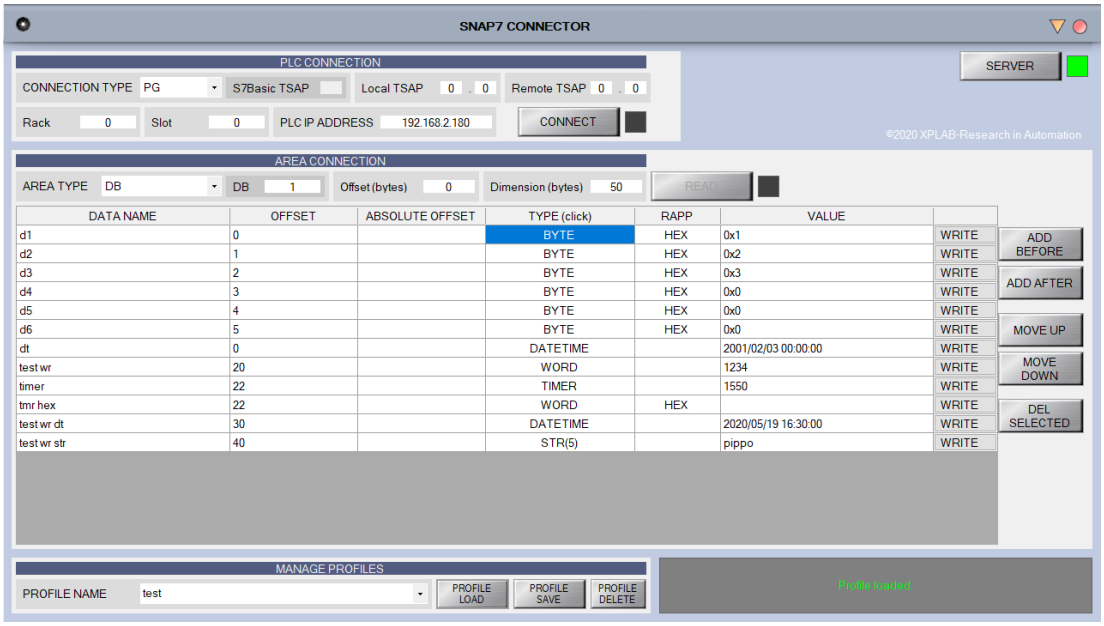
Terms and Definition

Glossary entry	Entry definition
PWK	POWER-KI

Conventions and Symbol

Text	Description	Example
`Courier new`	Code or code symbol	`U8 s=10;`

1 Descrizione



Snap 7 Connector is an application created in Power-KI to connect to Siemens Step 7 PLC and TIA Portal, allowing data to be read and written.

The photo shows the main screen, where you can insert all the settings suitable for connection to a PLC memory area.

The PLC must be equipped with a communication CPU for connection to a LAN, and the PC, from which the Connector is launched, must be on the same network.

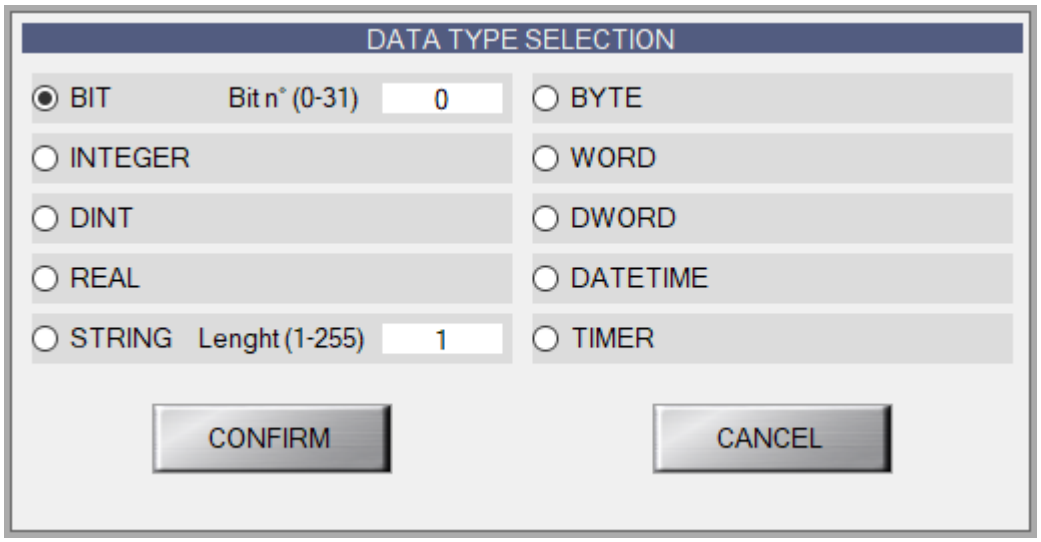
At this point it is sufficient to specify the PLC configuration parameters: the type of communication (PG, OP or Step7 Basic), other data such as S7Basic TSAP, Local TSAP or Remote TSAP, even if the most important are the IP address and the Rack and Slot, which correspond to the number assigned to the rack in which the PLC processor is inserted and the number of the slot it is occupying in it.

By pressing CONNECT it is already possible to test the correctness of the parameters and the validity of the connection: if everything is ok, the LED to the right of the button lights up green. If there is a problem, the LED turns red and an error message is displayed in the dialog box at the bottom right.

Once a valid connection has been established, it is possible to access the data of a memory area: describe the type (Bit memory, Inputs, Outputs, Counter, Timer or a DB.), The number if it is a DB, the offset in bytes from which to start reading the area (starting from 0) and the consecutive bytes to acquire.

In the table below, you have to insert the rows that make up the data mapping. To do this, on the right and in the column there are a whole series of commands to add rows, reorder them or delete them.

Each row corresponds to a variable: it can be baptized, the offset relative to the portion of data read is specified (the column absolute offset then automatically shows the absolute address of the data with respect to the entire area), the type of the data (by clicking the panel in the figure appears with the expected types to choose from), the decimal, binary or hexadecimal representation.



The last column will host the value read. It is possible to type in the new value to be assigned to the variable. To the right of the cell there is in fact the WRITE button to write the value on the PLC.

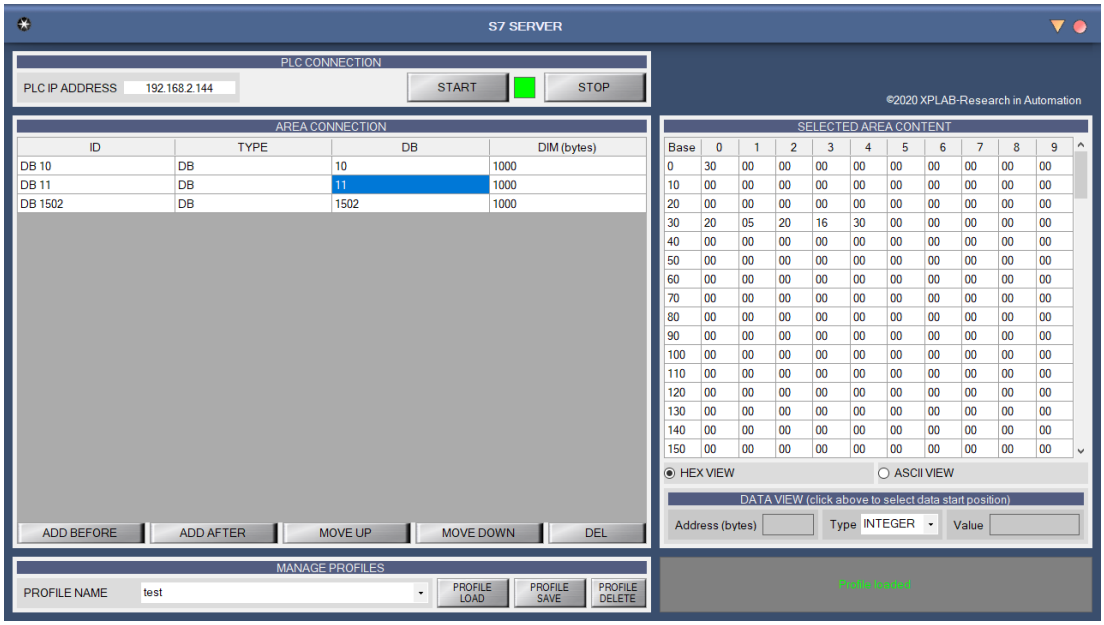
Once the mapping is complete, and if a connection is established, using the READ button you can read the value of the current variables, which can then be modified with the WRITE button described above.

The MANAGE PROFILES panel completes everything where, simply by typing a profile name, it is possible to save the data configuration entered, including connection and mapping parameters. Profile name is a drop-down menu, since it proposes the list of profiles already saved in the system, so that they can be reloaded quickly and easily. There is also a button for deleting profiles that have become obsolete.

The Connector also offers a second functionality: it allows you to create a server with data blocks accessible via the SNAP 7 protocol. In practice, you can simulate the data of a small (or large) PLC.

The function is accessible via the SERVER button on the main screen, which is flanked by a LED that lights up when it is active.

Here is the page where you can configure a server:



Activation is quite simple: you specify an IP address, add data areas in the table below (eg DB with the number), each with a dimension, and with the START button you activate the functionality.

By selecting an area, its contents are shown on the right in hex format. By selecting a box in the hex table, in the DATA VIEW panel it is possible to decode the data by specifying the type.

Here too we find a MANAGE PROFILES panel to quickly save SERVER profiles so that they can be reloaded and activated in a few clicks.

The functionality of modifying the contents of the server data areas is missing, since it is possible to do it with the main Connector screen, simply by auto-connecting to the simulated SERVER areas (or you can use a SNAP 7 Connector from another PC).