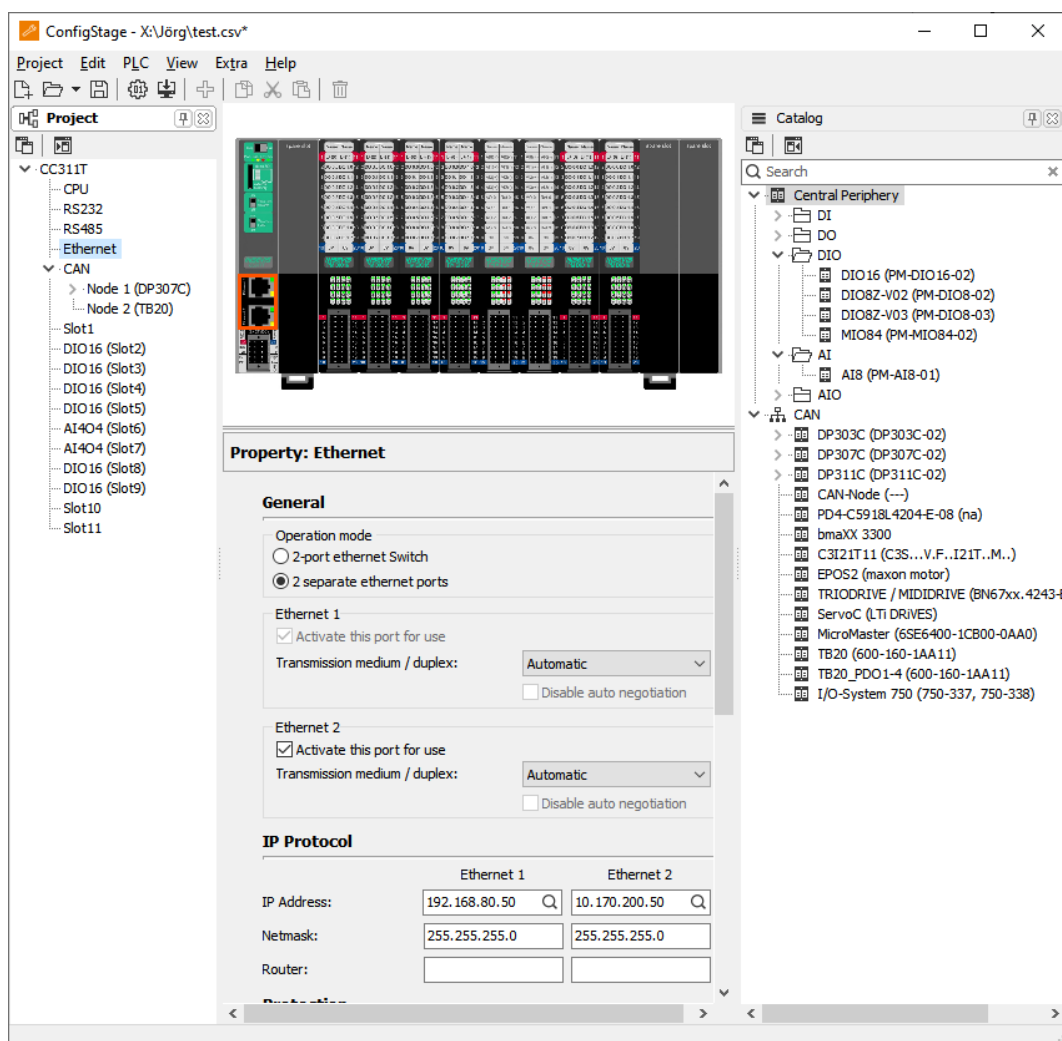


# Product information

## Configuration software

# ConfigStage



(valid from 02/2014)

### Changes to older versions of this document

- Changed in Rev. 1:** complete new document from CS 1.0.14.10
- Changed in Rev. 2:** new design line implemented
- New in Rev. 3:** NTP-Server, 16 Modbus registers, new periphery, online backup, no more for Win XP



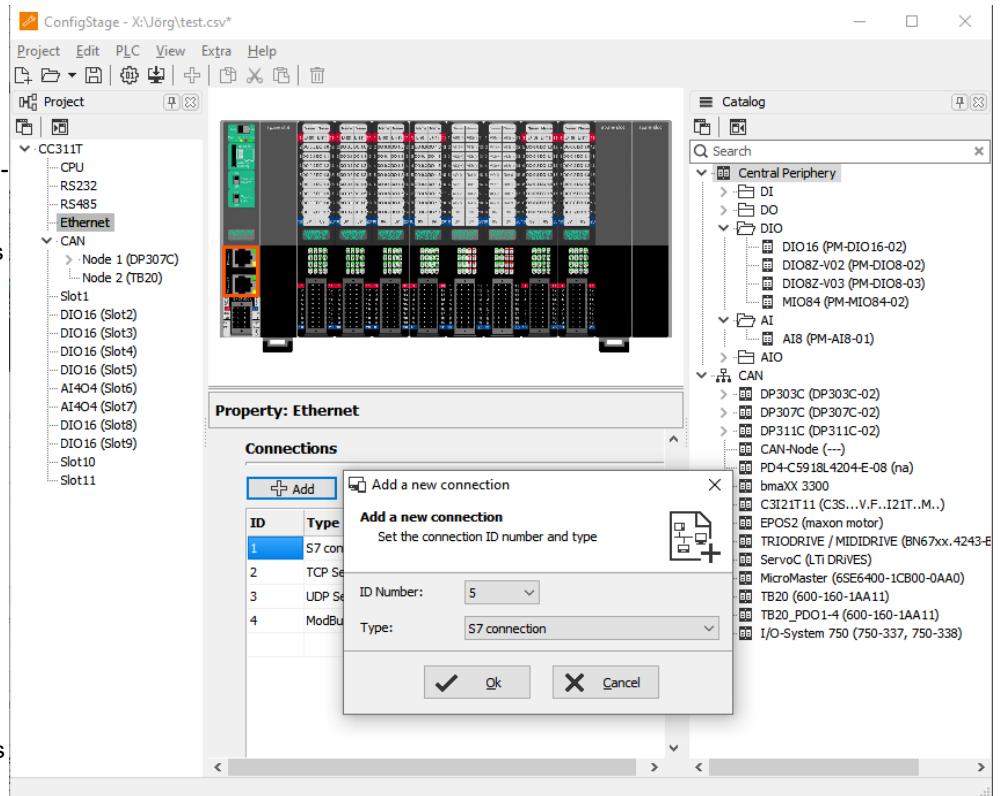
With the free configuration tool „ConfigStage“ you can config the **additional functions** of the INSEVIS-CPU's and download it into the PLC. The onboard- or decentral INSEVIS-periphery will be added easily by drag'n drop to the periphery slots. Parameters and address areas will be assigned in a box right below. Also you may assign **S7-CPU-parameters** like in your programming tools from Siemens (like startup, diagnostic, cycle and clock, retentive memory, etc.).

With the „ConfigStage“-software can be assigned these interfaces :

- RS232 with free ASCII,
- RS485 with free ASCII and Modbus RTU,
- Ethernet-connections (active S7-connection-RFC1006, TCP, UDP, Modbus-TCP, INSEVIS-Panel-HMI),
- CAN (CANopen® by pre-defined parameters or by imported and mapped EDS-files),

and these parameters

- the S7-control parameter of the CPU (cycle time exceed, retentivity, communication settings, etc.) and
- INSEVIS- specific settings (configuration and parametrization of central and decentral in- and outputs) and
- of external peripheries and intelligent drives via Modbus RTU/TCP, CAN or other interfaces by prefilled parameter blocks.



With the „ConfigStage“ all external peripheries and intelligent drives compatible to CAN or Modbus-RTU-/TCP can be included into the S7-environment in an easy way. Also It is very easy to create your own CAN-slave, to save it as macro and to use it as prefilled component again and again. Diverse S7-samples for external peripheries and motion-control functions are available for free download at INSEVIS' websites.

Installable under Windows 10 and (still) under Windows 7 (last XP version 2.1.0.26)

### Standard addressing ind the INSEVIS- PLCs

Without using software tool „ConfigStage“ the following address area will be set up in a standard way:

digital module: 4 byte inputs, 4 byte outputs  
 analog module: 16 byte inputs, 16 byte outputs

start address \ slot	slot 1	slot 2	slot 3	slot n
digital inputs	byte 0	byte 4	byte 8	byte (n-1)x4
digitale outputs	byte 0	byte 4	byte 8	byte (n-1)x4
analog inputs	byte 128	byte 144	byte 160	byte (n-1)x16 +128
analog outputs	byte 128	byte 144	byte 160	byte (n-1)x16 +128

### Different addressing in PLCs and addressing of decentralised peripherals

If decentralised peripherals are used and/or if other address ranges are to be used in the CPU, these are configured with the "ConfigStage" software tool and stored in system data blocks (SDBs).

The **CPU settings** in ConfigStage refer to the CPU-assignments in the Simatic Manager or TIA-Portal from Siemens. You can set up these functions:

- Startup behavior, diagnostic report,
- Know-how-protection (Password)
- Communication (channels),
- Cycle monitoring time,
- Clock, Retententove memory,
- Time-Of-Day interrupt, Cyclic interrupt,
- Webserver and NTP-server (CPU-T-devices only)

To set up the **Ethernet-interface** for communication, select here connections and protocol (connection type) and parameterize it (see right figure).

Every connection gets a connection-ID to assign it to the S7-program. Referring to the connection type the selected connection will be parameterized in separate boxes with these parameters:

The assign of **RS232 and RS485** is self-explanatory.

If you select at the RS485 the protocol „Modbus-RTU“, you will be asked to assign the node-ID as well as to map your S7-operands to input-bits and -words and to output-bits and -words.

### parameters at Modbus-TCP (Server) see below

Assign of S7-operand areas for up to 16 Modbus register areas now (see figure below)

- Input bits
- Input words
- Output bits
- Output words

If „Modbus Server is deactivated, Modbus RTU-telegrams will be received and sent by SFB60/61

**Property: Ethernet**

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**General**

Operation mode  
 2-port ethernet Switch  
 2 separate ethernet ports

Ethernet 1  
 Activate this port for use  
 Transmission medium / duplex: Automatic  
 Disable auto negotiation

Ethernet 2  
 Activate this port for use  
 Transmission medium / duplex: Automatic  
 Disable auto negotiation

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**IP Protocol**

	Ethernet 1	Ethernet 2
IP Address:	<input style="width: 80%;" type="text" value="192.168.80.50"/>	<input style="width: 80%;" type="text" value="10.170.200.50"/>
Netmask:	<input style="width: 80%;" type="text" value="255.255.255.0"/>	<input style="width: 80%;" type="text" value="255.255.255.0"/>
Router:	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>

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**Protection**

Permit access with S7 Communication from remote partner  Ethernet 1 (PG, PLC, HMI, OPC, ...) via  Ethernet 2

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**Connections**

ID	Type	Active	Local	Partner	Partner IP
1	S7 connection	Yes	10.02	02.02	192.168.80.60
2	TCP Send/Receive	No	2000	0	0.0.0.0
3	UDP Send/Receive		2000		
4	ModBus TCP Server		502		

Properties - ModBus TCP Server connection

Interface: Ethernet 1

Data area mapping:

	ModBus Area	Start address	Count	S7 Area	Block number	Byte offset	Length in bytes	Byte swap
1	Coils (output bits)	0	1	Output		0	1	
2	Discrete inputs (bits)	400	1	Data block	1	0	1	
3	Holding (output) registers	700	1	Data block	1	0	2	No
4	Input registers	200	1	Input		0	2	No

## CAN configuration for INSEVIS and external slaves

There is **no need to have any CAN-knowledge** to include decentral INSEVIS- periphery to the INSEVIS-S7-CPU's.

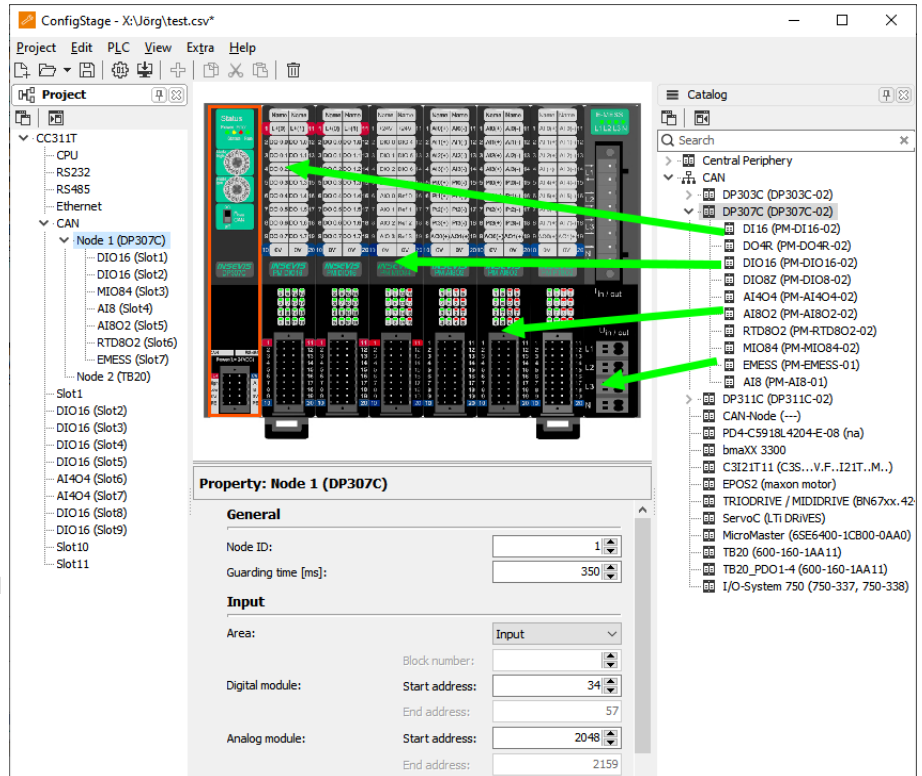
After have placed your INSEVIS head station on the CPU, this module appears in the project tree and in the display.

Now you can insert general start addresses for the head station for in-/outputs (no more possible at the single modules).

The periphery modules will be added per drag'n drop from a special sub area of the catalog tree below the CAN-title.

You type in the node-ID-number you have set up before at the INSEVIS-head stations hardware with the hexadecimal turn-switches.

Also you can change the pre-assigned guarding time if you want. Than all decentral I/Os will be used in S7 like onboard I/Os of an INSEVIS-PLC.



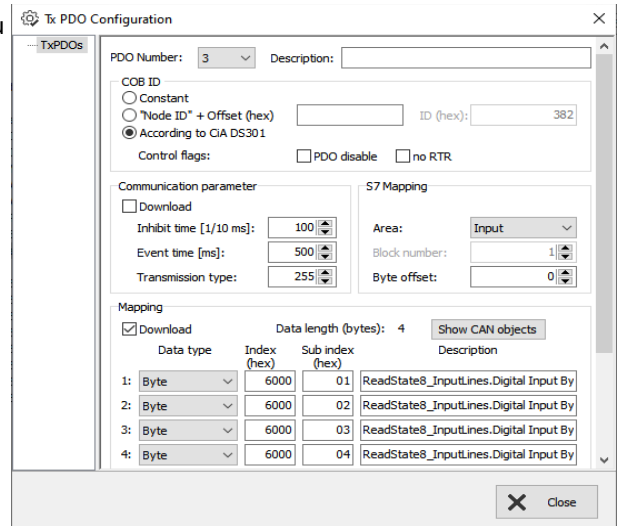
### Configure decentral external periphery by EDS-file

You need only to import the EDS-file of the external CAN-slave you want to configure.

By „Show CAN objects“ an object browser opens up with all CAN-objects available.

These were filtered from the EDS-file automatically.

Move single or multiple CAN-objects by Drag'n Drop into your configuration and map it to the S7.



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