



CtSbusTcpip Driver *Manual*

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1. CtSbusTcpi - Driver of S-Bus Ethernet Protocol

1.1. Driver Use

CtSbusTcpi driver is used for data exchange between **asix** system computers and controllers of PCD SAIA-Burgess family by means of Ethernet S-Bus protocol.

1.2. Declaration of Transmisison Channel

The declaration of transmission channel using CtSbusTcpi driver is as follows:

```
Channel= UNIDRIVER, CtSbusTcpi, SbusNr=number; Port=number Server =
IPaddress
[;TimeSynchr = number] [;Timeout=number]
```

where:

UNIDRIVER	- universal asix system driver,
CtSbusTcpi	- name of the driver for communication with the controllers of PCD SAIA-Burgess family,
SbusNr	- number of the controller in S-BUS network,
Port	- number of TCPIP port of the controller (by default 5050),
Server	- IP address of the controller,
TimeSynchr	- period (in seconds) for the time synchronization with the controller – optional;
Timeout	- timeout (in milliseconds) between query sending and response receiving - optional.

EXAMPLE

An example declaration of the channel for communication with the controller:

- number in S-BUS network - 3;
- number of TCPIP port - 5050;
- IP address - 10.10.10.225;
- time synchronization - every 20 seconds;

```
CHANNEL = UNIDRIVER, CtSbusTcpi, SbusNr=3; Port=5050; Server=10.10.10.225;
TimeSynchr =20
```

1.3. Declaration of Variables

The declaration of variables is the same as in S-BUS driver. The syntax of the variable address is as follows:

```
<type><index>
```

where:

<i>type</i>	- variable type,
<i>index</i>	- indexes within a framework of the type.

The notations of the variable types (the raw variable type is put in parentheses):

C - counter values (DWORD),

- F** - flag states (WORD),
- I** - input states (WORD),
- K** - current date & time in the form of 8-byte table (BYTE),
- O** - output states (WORD),
- RI** - values of registers treated as 32-bit signed number (LONG),
- RF** - values of registers treated as 32-bit floating-point number in SAIA format (FLOAT),
- S** - statuses (WORD),
- T** - timer values (DWORD).

The variable values of the type of: **C, F, O, RI, RF, T** may be read and written.

The variable values of the type **I, S** may be only read.

The range of the indexes for the **S** type is from 20 to 27.

EXAMPLES OF VARIABLE DECLARATIONS

```
# values of registers treated as FLOAT
JJ_10, , RF1, CHANNEL1, 1, 1, NOTHING_FP
# values of registers treated as LONG
JJ_11, , RI11, CHANNEL1, 1, 1, NOTHING_LONG
# flag states
JJ_14, , F14, CHANNEL1, 1, 1, NOTHING
# input states
JJ_14, , I14, CHANNEL1, 1, 1, NOTHING
# output states
```

```
JJ_14, , O14, CHANNEL1, 1, 1, NOTHING
```

```
# counter values
JJ_21, , C21, CHANNEL1, 1, 1, NOTHING_DW
# statuses values
JJ_40, , S20, CHANNEL1, 1, 1, NOTHING
```

1.4. Driver Configuration

The driver configuration is performed by using a separate section named [CTSBUSTCPIP]. By means of this section it is possible to declare:

- log file and its size,
- log of telegrams,
- PCD status verification.

```
[
  LOG_FILE=file_name
Meaning          - it is a text file, to which messages about the driver operation state
                  are written; is used for diagnostic purposes.
Default value    - by default the log file is not created.
Defining         - manual
```

```
[
  LOG_FILE_SIZE=number
Meaning          - allows to define the size of the log file in MB.
Default value    - by default the item assumes that the log file has a size of 1 MB.
Parameter:
  number        - size of the log file in MB.
Defining         - manual
```

[***LOG_OF_TELEGRAMS =YES / NO***

Meaning - the item LOG_OF_TELEGRAMS allows writing to the log file (declared with use of LOG_FILE item) the contents of telegrams transmitted during the data exchange between the **asix** system and the controllers.

Default value - NO

Defining - manual

[***WITHOUT_PCD_STATUS =YES / NO***

Meaning - the WITHOUT_PCD_STATUS item allows to control the variable status modification depending on the current controller status (PCD own status). If the item has the value YES, then the variable status is not dependent on the current variable of the controller status. If the item is set at value NO, then the variable status is dependent on the controller status - if it differs from 0x52 (RUN state), then the variable status is set at OPC_QUALITY_COMM_FAILURE.

Default value - NO

Defining - manual

1.5. An Example of the Driver Section

```
[CTSBUSTCPIP]
LOG_FILE=d:\tmp\ctsbustcpip\sbus.log
LOG_FILE_SIZE =20
LOG_OF_TELEGRAMS=YES
```

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