



***CtSbusTcpip - Driver of S-Bus Ethernet
Protocol
User's Manual***

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1. CtSbusTcpip - Driver of S-Bus Ethernet Protocol

1.1. Driver Use

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

1.2. Declaration of Transmisison Channel

The declaration of transmission channel using the CtSbusTcpip driver is as follows:

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

where:

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

EXAMPLE

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

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

```
CHANNEL = UNIDRIVER, CtSbusTcpip, 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 the S-BUS driver. The syntax of the variable address is as follows:

<type><index>

where:

type	- variable type,
index	- indexes within the framework of the type.

The notations of 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 a 32-bit signed number (LONG),
- RF** - values of registers treated as a 32-bit floating-point number in SAIA format (FLOAT),
- S** - statuses (WORD),
- T** - timer values (DWORD).

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

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

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

EXAMPLE

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 the 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. |
|---------|----------------------------------------------|

Default value	- by default, the item assumes that the log file has a size of 1 MB.
Parameter:	
<i>number</i>	- size of the log file in MB.
Defining	- manual.

***LOG_OF_TELEGRAMS =YES / NO***

Meaning	- the item allows writing to the log file (declared with use of the 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 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.

EXAMPLE

An exemplary driver section:

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


1.	CTSBUSTCPIP - DRIVER OF S-BUS ETHERNET PROTOCOL	3
1.1.	DRIVER USE	3
1.2.	DECLARATION OF TRANSMISISON CHANNEL	3
1.3.	DECLARATION OF VARIABLES	3
1.4.	DRIVER CONFIGURATION	4