



ШКОЛА ИНОСТРАННЫХ ЯЗЫКОВ

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2011



SATRE

Monitoring & Control Interface

Ref: SAT-TIM-MA-0004
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Iss./Rev: 3 / 2
Date: 06.02.2009

3. Monitoring and Control Interfaces

3.1 General

Message formats are independent of the interface type: TCP, UDP or serial. All messages out of the SATRE are 7 bit ASCII-encoded and terminated by a <CR/LF> character pair. A <CR/LF> character pair shall terminate also all messages to the SATRE.

The measurement file format is the same as the format of the data output messages.

The user should be aware, that SATRE may output spontaneous messages. Therefore, any dispatcher software should not be confused by messages it does not expect.

Responses to commands include the commands. Thus it can be checked, whether the command was correctly understood and executed.

There is no command hierarchy; the commands are executed in the order of reception.

```

SATRE TMS111 Modem 999 TimeTech GmbH 1994-2 | _11 Dec 08 07:33:03 + GPS
[?] [x] Rcv [x] Rcv [x] Measurement [x] Display [x] Global [x] Set Modules [x] Quit

----- Communication and Storage Statistics -----
Connector Protocol Sent Received Status Info
1: Internal Mod.-GPS 117.7M tinercv 07:33:03 U/T 10/10 S: $08/CF40
2: LAN (TCP) AscII 284.6M 0 waiting < not used >:2000 e: 0
3: Port 1 AscII 0 0 RTS IIO: 19200 bps ch 4
4: Port 2 GrazTime 0 0 RTS IIO: 1200 bps ch 3
6: Dummy Tekelec-Rb 3,634k 0 CTS RTS IIO: 1200 bps ch 7
7: LAN (TCP) DataOutput 5,889k 0 waiting < not used >:2001 e: 0
8: LAN (TCP) ANSI-Term 103.4M 1,304 connect 192.168.007.239:23 e: 0
9: Port 3 IIO-TIC 627,726 102.8M RTS IIO: 38400 bps ch 6
10: LAN (UDP) SNMP Time 6,413k 3,740k wait 00 ( 0.0k big) < 192.168.017.022
11: LAN (UDP) UDP_BCast 8,138k 0 wait 00 ( 0.0k big) < < not used >
12: LAN (UDP) Syslog UDP 0 0 wait 00 ( 0.0k big) < < not used >
Net-I/F: Link OK | DiskSize: C: 124M | D:2000M | E: 29M |
TCP : OK | Free: 119M | 1944M | 22M | Log data to E:
IIO: Xmt: 4,350.3k, Rcv: 225,371.8k; X0pr: 6, R0pr: 0; Up: 12.7d

remote control by Terminal 192.168.007.239
Rx1: --- Locked, verifying link ---
Rx2: --- idle - no lock ---

```

The screen shows the Port Setup Screen (Display | Communication and Storage). Here, any settings of command ports are visible:

Serial connectors are located at the rear side of the modem and labelled with Port1, Port2, Port3 and Port4 (Port3 and Port4 available on option only). The protocol shows the active protocol language of this port.

Port speeds (serial ports only) are shown in the info column. Change of these parameters is described in [Maint].

The columns 'sent' and 'received' count the valid packets in and out and help tracing of faulty interfaces.



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3.

3.1

(TCP, UDP, 7-
<CR/LF> ASCII) SATRE <CR/LF> SATRE.

SATRE

```

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[?] [x] Rcv [x] Rcv [x] Measurement [x] Display [x] Global [x] Set Modules [x] Quit

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remote control by Terminal 192.168.007.239
Rx1: --- Locked, verifying link ---
Rx2: --- idle - no lock ---

```

Port Setup Screen (Display | Communication and Storage).

Port1, Port2, Port3, Port4 (Port3, Port4 Protocol)

() [Maint]. Info.

Sent Received



3.2 Serial Connections

SATRE serial connections use only the TxD, RxD and GND wire; any CTS / RTS, DCD, DCE, RI lines are not used and ignored. Since SATRE uses RTS/CTS signalling for internal purposes (ground station commanding), any equipment connected to the modem should not rely on specific levels on these lines. It is recommended to leave these pins unconnected.

3.3 TCP Ports

SATRE servers listen on TCP ports. By default, three ports are used:

- 23 for telnet (remote control)
- 2000 for command
- 2001 for data delivery

Note 1: Only one connection is allowed per port. If the port is already connected, SATRE will refuse a second connection.

Note 2: SATRE does a limited user check by evaluating the IP address of the connecting client. The details can be seen in the menu Global / Maintenance / LAN configuration.

Data delivery port

There is a dedicated port called 'data delivery port'. By default it is enabled on a TCP interface, listening for connections on port 2001.

The data delivery protocol is basically an ASCII protocol, however any outputs of this port can be commanded from a different port. So this port can be connected to a 'listen only' client, which grabs any output for further processing. No input on this port is required.

Example:

The following request could be used on the command port to get a status message (protocol details in the next chapters):

!SYS:RQF

If the response should come out of the data delivery port instead of the normal ASCII port, the request would be:

!SYS:DDP;RQF

SATRE does not check, if there is any connection present at the data delivery port; if nobody is connected, the response will be lost. In any case, no response is sent on the command port.



3.2

GND; CTS / RTS, DCD, DCE, RI SATRE TxD, RxD
 (SATRE), RTS/CTS

3.3 TCP

SATRE TCP 3 :
 23 ()
 2000
 2001

_____ 1:

_____ 2: SATRE
 IP
 Global / Maintenance / LAN configuration.

SATRE TCP 2001. « ».

ASCII,

_____ :

():

!SYS:RQF

ASCII

!SYS:DDP;RQF

SATRE ;