

MAYAH®

Communications



Ganymed 1002 User Manual

as of Software-Version
1.0.1.1

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Ganymed 1002, user manual as of software version 1.0.1.1

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1 Introduction

The GANYMED 1002's are audio decoder with extensive network ability (Internet, Intranet, LAN, WAN). They support all common coding procedures and transmission protocols.

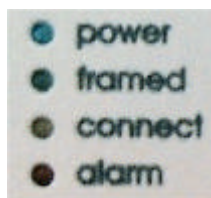
2 Description

2.1. Frontpanel



Figure 1: GANYMED 1002 frontpanel

2.1.1. Indicator LED's



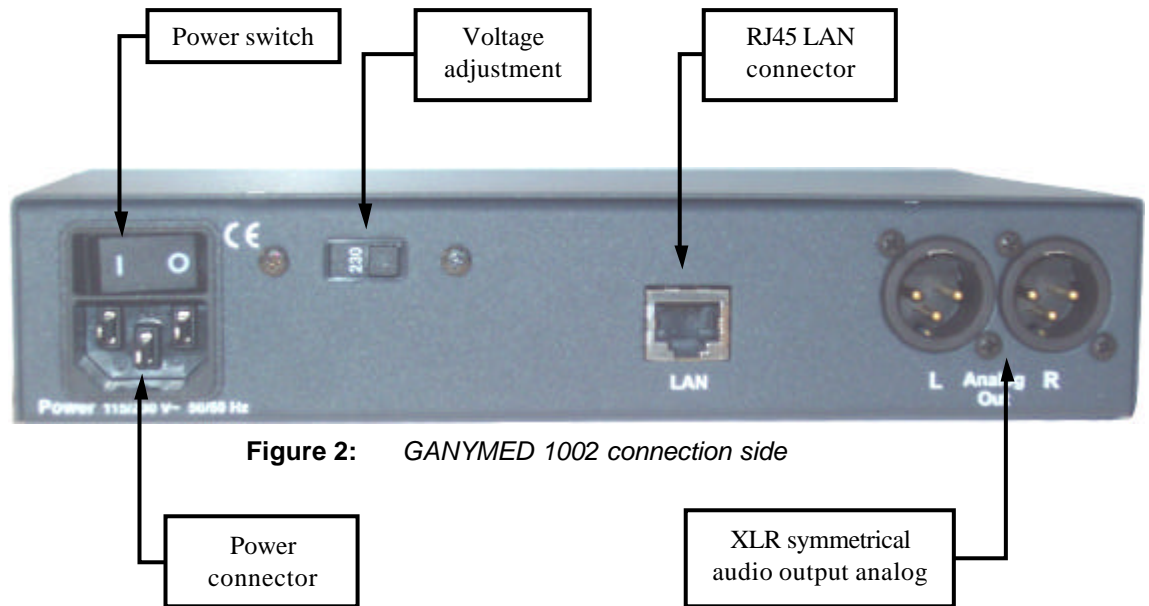
When the unit is powered on, all LEDs are lit for a short time. After that all LEDs are switched off except the Power LED. Normally the LEDs indicate the following when shining:

- Power : Unit is powered
- Framed: Audio hardware has data to play
- Connect: A connection for Audio Data is established
- Alarm: Audio hardware ran out of audio data. This condition normally is removed within 1 second

Additionally some LEDs indicate more conditions:

- Power: Short flash when OSI Layer2 connection established or failed. This, for example, happens if the network cable is inserted or removed.
- Connect: blinking slow if 'aimed' for a connection, blinking fast if a connect attempt actually is in progress
- Alarm: As long as a software update takes place this LED is lit.

2.2. Backside



- Power Connector
- LAN connector
- XLR symmetrical analog audio out

Caution: XLR outputs are symmetrized electronically, not by a transformer.

Sometimes, if unsymmetrical signals are required, one method is shorting pin 3 (Signal -) and pin 1 (Gnd). At pin 2 (Signal +) an unsymmetrical signal relative to Gnd is available.

This is only true for transformer outputs and must not be done with electronic output stages!

Some de-symmetrizer adapter cables are wired up this way. Using such an adapter on an electronic output stage will destroy the permanently shortened Signal- output amplifier.

If you need an unsymmetrical output from Ganymed's XLR, simply use pin 1 (Gnd) and pin 2 (Signal +) and leave pin 3 open.

2.3. Command interface

Ganymed 1002 has a simple Telnet Command Interface. If for example your unit has the default ip address of 10.0.0.10, then type

```
telnet 10.0.0.10 2000
```

on a MS/Dos prompt to get access to the unit.

Telnet connections are released by hitting **Ctrl+C**. Only one connection can be active at a time.

A second way to access a Ganymed 1002 is via the RS232 interface. RS232 communication parameters are as follows:

115200 baud, 8 bit, no parity, 1 stop bit and no handshake.

In either connection method when hitting the return key the unit answers with a command prompt

```
10.0.0.10>
```

2.4. Command format and error numbers

Every command consists of a dedicated keyword that may be followed by one or more parameters. Every command is terminated by the combination carriage return and line feed (the usual effect of the return key). If the command could be performed, a positive acknowledge is responded in that way, that the command and its parameters is repeated, followed by 'ok'. In the case of an error an error number is reported. The following error numbers are defined:

1. Unknown command
2. Unknown
3. Invalid arguments
4. Not available
5. Ignored by application
6. No file
7. EOF
8. No entry
9. No access
10. Entry used
11. Algo
12. Samplerate
13. Bitrate
14. Mode
15. Insufficient information

2.5. SNMP - Simple Network Management Protocol

The access syntax for Ganymed SNMP is described in the document entitled *MIB table (...)*. If there is a SNMP command existing according to the Ganymed command, its SNMP-OID is indicated.

2.6. Ethernet and IP Commands

Please note that Ethernet and IP Commands 3.3.1 until 3.3.4 needs a reboot to become active if they are configured via SNMP.

The following section describes commands and requests to control the Ganymed1002 network functions.

2.6.1. IP Address

Command to set and get the Ganymed's IP address for the network interface card. This address is also used as a Unit ID. It should be unique in one installation environment.

Default value is 10.0.0.10 .

SNMP-OID : 1.3.6.1.4.1.6210.6.1

Syntax:

ip_address <param1>

Parameter:

Param1: [address, ?]

Response:

- set IP Address
ip_address <param1>: ok [CR][LF][IP address]>
- request IP Address
ip_address ?: [address][CR][LF][IP address]>
- error
ip_address <param1>: error [err no][CR][LF][IP address]>

Example :

Set ip address to 10.0.0.50

ip_address 10.0.0.50

Query ip address

ip_address ?

2.6.2. IP Subnet Mask

Command to set and get the IP subnet mask of the default network gateway for the Ganymed's network interface card.

Default value is 255.255.255.0 .

SNMP-OID : 1.3.6.1.4.1.6210.6.2

Syntax:

```
ip_netmask <param1>
```

Parameter:

Param1: [mask, ?]

Response:

- set IP subnet mask
`ip_netmask <param1>: ok [CR][LF][IP address]>`
- request IP subnet mask
`ip_netmask ?: [mask][CR][LF][IP address]>`
- error
`ip_netmask <param1>: error [err no][CR][LF][IP address]>`

Example :

Set subnet mask to 255.255.0.0

```
ip_netmask 255.255.0.0
```

Query subnet mask

```
ip_netmask ?
```

Caution : Entering improper values can make the unit to be inaccessible via IP network

2.6.3. IP Gateway Address

Command to set and get the IP address of the default network gateway for the Ganymed's network interface card. This value is set only if a network gateway is used.

Default value is 255.255.255.255 .

SNMP-OID : 1.3.6.1.4.1.6210.6.3

Syntax:

ip_gateway <param1>

Parameter:

Param1: [**ip address, ?**]

Response:

- set IP gateway address
ip_gateway <param1>: ok [CR][LF][IP address]>
- request IP gateway address
ip_gateway ? : [ip address][CR][LF][IP address]>
- error
ip_gateway <param1>: error [err no][CR][LF][IP address]>

Example :

Set gateway to 192.168.1.2

```
ip_gateway 192.168.1.2
```

Query gateway

```
ip_gateway ?
```

2.6.4. IP Domain Name Server (DNS) Address

Command to set and get the IP address of the domain name server for the Ganymed's network interface card. This value is only set if a domain name server is used.

Default value is 255.255.255.255 .

SNMP-OID : 1.3.6.1.4.1.6210.6.4

Syntax:

ip_dnsserver <param1>

Parameter:

Param1: [ip address, ?]

Response:

- set IP DNS address
ip_dnsserver <param1>: ok [CR][LF][IP address]>
- request IP DNS address
ip_dnsserver ?: [ip address][CR][LF][IP address]>
- error
ip_dnsserver <param1>: error [err no][CR][LF][IP address]>

Example :

Set DNS to 192.168.1.3

ip_dnsserver 192.168.16.3

Query DNS server

ip_dnsserver ?

2.6.5. IP Remote

Command to connect to a remote Centauri or to get the IP address Ganymed is connected to.
Default value is OFF .

Note:

This command establishes a RTP connection to an IP address with the option of using a dedicated port. The second parameter 'port' enables to listen to the four different qualities of a Centauri 400x.

- Port 5004: 1.chain of Centauri 400x
 - Port 5006: 2.chain of Centauri 400x
 - Port 5008: 3.chain of Centauri 400x
 - Port 5010: 4.chain of Centauri 400x
- SNMP-OID : 1.3.6.1.4.1.6210.8.4

Syntax:

```
ip_remote <param1>
```

Parameter:

Param1: [address, address:port, OFF, ?]

Response:

- set IP Remote

```
ip_remote <param1>: ok [CR][LF][IP address]>
```
- request IP Remote

```
ip_remote ?: [address:port][CR][LF][IP address]>
```
- error

```
ip_remote <param1>: error [err no][CR][LF][IP address]>
```

Example :

Assume there is a Centauri 400x streaming at 192.168.1.99

Listen to the default port on a Centauri 400x

```
ip_remote 192.168.1.99
```

Listen to a specific port (ie. Port 5008)

```
ip_remote 192.168.1.99:5008
```

Close connection and stop listening

```
ip_remote OFF
```

Query setting

```
ip_remote ?
```

2.6.6. IP SHOUTcast

Command to connect to a SHOUTcast server. The port number defaults to 8000 and may be omitted.

Syntax:

```
ip_shoutcast <param1>
```

Parameter:

Param1: [address, address:port, OFF, ?]

Response:

- establish connection to server
ip_shoutcast <param1>: ok [CR][LF][IP address]>
- request shoutcast connection
ip_shoutcast ?: [ip address:port][CR][LF][IP address]>
- error
ip_udpport <param1>: error [err no][CR][LF][IP address]>

Example :

Establish connection

```
ip_shoutcast 194.158.114.66:8000
```

Release connection

```
ip_shoutcast off
```

Query setting

```
ip_shoutcast ?
```

2.6.7. IP Network speed

Command to set the network connection speed capability.

Syntax:

```
ip_transferrate <param1>
```

Parameter:

Param1: [auto, 100, 10, ?]

Response:

- Set transfer rate capability
ip_transferrate <param1>: ok [CR][LF][IP address]>
- Request transfer rate capability
ip_transferrate ?: [ip address:port][CR][LF][IP address]>
- error
ip_transferrate <param1>: error [err no][CR][LF][IP address]>

Example :

Set speed capability to 100 mbit only

```
ip_transferrate 100
```

Set speed capability to any speed

```
ip_transferrate auto
```

Query setting

```
ip_transferrate ?
```

Note:

Parameter change becomes effective after next reboot. Also, see note on next page.

2.6.8. IP Network duplex mode

Command to set the network connection duplex capability

Syntax:

```
ip_duplex <param1>
```

Parameter:

Param1: [auto, half, full, ?]

Response:

- Set duplex mode capability
`ip_duplex <param1>: ok [CR][LF][IP address]>`
- Request duplex mode capability
`ip_duplex ? : [ip address:port][CR][LF][IP address]>`
- error
`ip_duplex <param1>: error [err no][CR][LF][IP address]>`

Example :

Set network duplex mode to half duplex only

```
ip_duplex half
```

Set network to any duplex mode

```
ip_duplex auto
```

Query setting

```
ip_duplex ?
```

Note:

These two commands influence the negotiation process between a Ganymed and it's direct network partner it is connected to (switch, hub etc.) The default is 'auto' for both, ip_transferspeed and ip_duplex, so the two units should auto negotiate to the highest capabilities both have in common. This process may fail or lead to incorrect results. For example both negotiated to 100 mbit, full duplex, but in reality one unit can do transfers in half duplex only. The result is an unreliable connection.

With ip_transferrate and ip_duplex you can limit the capabilities of Ganymed to some fixed or lower values.

However, if you have Ganymed connected to a 10 mbit component and ip_transferrate is set to '100' no network connection can be established.

Parameter change becomes effective after next reboot.

2.6.9. TCP window size

With this command the maximum TCP window size can be set. Parameter range is from 200 to 8192 and default is 8192.

Syntax:

```
ip_windowsize <param1>
```

Parameter:

Param1: [size, ?]

Response:

- set window size
ip_windowsize <param1>: ok [CR][LF][IP address]>
- request window size
ip_windowsize ? : [port no][CR][LF][IP address]>
- error
ip_windowsize <param1>: error [err no][CR][LF][IP address]>

Example :

Set window size to 2048

```
ip_windowsize 2048
```

Query setting

```
ip_windowsize ?
```

Note:

With TCP window size the receiver can tell the sender how many data to send in one bulk before the receiver has to acknowledge the data. Generally spoken it is a good idea to have a big window size since data transmission is at its fastest then. This is the preferred setting for internet connections, especially when connecting Shoutcast servers.

On the other hand some sender can become that fast (especially in local networks) that the Ganymed overruns. Here it is better to use small window sizes, resulting in smaller bulks containing fewer IP packets.

If you experience the Ganymed falling out of sync over and over though IP conditions should be fine, then try smaller window sizes.

2.6.10. Reconnect time

The time between 2 connect attempts to a shoutcast server can be defined with this command. Default is 30 seconds.

Syntax:

```
time_reconnect <param1>
```

Parameter:

Param1: [time in seconds, ?]

Response:

- set reconnect time
time_reconnect <param1>: ok [CR][LF][IP address]>
- query reconnect time
time_reconnect ?: [time in seconds][CR][LF][IP address]>

Example :

Set reconnect time to 60 seconds

```
time_reconnect 60
```

Query setting

```
time_reconnect ?
```

Note:

The reconnect timer has a resolution of 10 seconds and param1 is rounded up or down to the next suitable value.

2.6.11. UDP Port

Command to set and query the port number for UDP connections. Default value is port no 2002

Syntax:

```
ip_udpport <param1>
```

Parameter:

Param1: [port no, ?]

Response:

- set UDP port no
ip_udpport <param1>: ok [CR][LF][IP address]>
- request UDP port no
ip_udpport ?: [port no][CR][LF][IP address]>
- error
ip_udpport <param1>: error [err no][CR][LF][IP address]>

Example :

Set UDP port no to 2060

```
ip_udpport 2060
```

Query setting

```
ip_udpport ?
```

2.6.12. RTP Port

Command to set and query the port number for RTP connections. Default value is port no 5004

Syntax:

```
ip_rtpport <param1>
```

Parameter:

Param1: [port no, ?]

Response:

- set RTP port no
ip_rtpport <param1>: ok [CR][LF][IP address]>
- request RTP port no
ip_rtpport ?: [port no][CR][LF][IP address]>
- error
ip_rtpport <param 1>: error [err no][CR][LF][IP address]>

Example :

Set RTP port no to 5008

```
ip_rtpport 5008
```

Query setting

```
ip_rtpport ?
```

2.6.13. TCP Port

Command to set and query the port number for TCP connections. Default value is port no 2001

Syntax:

```
ip_tcpport <param1>
```

Parameter:

Param1: [port no, ?]

Response:

- set TCP port no
ip_tcpport <param1>: ok [CR][LF][IP address]>
- request TCP port no
ip_tcpport ?: [port no][CR][LF][IP address]>
- error
ip_tcpport <param 1>: error [err no][CR][LF][IP address]>

Example :

Set TCP port no to 2020

```
ip_tcpport 2020
```

Query setting

```
ip_tcpport ?
```

2.6.14. Ping

Determine the round trip time to a certain IP address

Syntax:

```
ip_ping <param1>
```

Parameter:

Param1: [ip address]

Response:

- Perform ping
round trip time result
ip_ping <param1>: ok [CR][LF][IP address]>
- error
ip_ping <param 1>: error [err no][CR][LF][IP address]>

Example :

```
192.168.16.240>ip_ping 80.67.17.51  
Time: 47ms  
Time: 48ms  
Time: 47ms  
Time: 54ms  
ip_ping 80.67.17.51: ok
```

2.6.15. Set Multicast

This command is used to set up to 9 predefined multicast addresses. Later on 2 entries of this list may be chosen the Ganymed 1002 shall listen to.

SNMP-OID : 1.3.6.1.4.1.6210.20.1

Syntax:

```
mcast_set <param1> <param2> <param3>
```

Parameter:

Param1: [entry number, ?]

Param2: [IP-address, ?]

Param3: [name]

Response:

- set multicast entry
mcast_set <param1> <param2> <param3>: ok [CR][LF][IP address]>
- request list of all multicast entries
mcast_set ?: [list of all multicast entries][CR][LF][IP address]>
- request multicast entry
mcast_set <param1> ?: [multicast entry][CR][LF][IP address]>
- error
mcast_set <param1><param2><param3>: error [err no][CR][LF][IP address]>

Example :

Valid examples are

Create a new entry

```
mcast_set 1 10.0.0.50 AudioServer1
```

Query entry at list position 1

```
mcast_set 1 ?
```

Query all 9 list entries

```
mcast_set ?
```

2.6.16. Select Multicast

Command to select an entry from the previously defined list for listening and to assign a priority (1 or 2). Multicast stream with priority 1 is privileged to a Multicast stream with priority 2.

Note:

Priorities can be disabled with 'Deselect Multicast' (see chapter 3.1.8)

SNMP-OID : 1.3.6.1.4.1.6210.20.2

Syntax:

```
mcast_select <param1> <param2>
```

Parameter:

Param1: [number, ?]

Param2: [priority]

Response:

- select multicast

```
mcast_select <param1> <param2>: ok [CR][LF][IP address]>
```
- request multicast entry with priority 1 and 2

```
mcast_select ?: [multicast entries with priority 1 and 2]  
[CR][LF][IP address]>
```
- error

```
mcast_select <param1> <param2>: error [err no][CR][LF][IP  
address]>
```

Example :

Select the first entry of the definition list to be the higher priority one to listen to

```
mcast_select 1 1
```

Select the eighth entry of the definition list to be the lower priority one to listen to

```
mcast_select 8 2
```

Query selected multicasts

```
mcast_select ?
```


2.6.17. Deselect Multicast

This command is the opponent to `mcast_select` and simply removes the higher or lower prioritized Ip address to listen to

SNMP-OID : 1.3.6.1.4.1.6210.20.3

Syntax:

```
mcast_deselect <param1>
```

Parameter:

Param1: [number]

Response:

- select multicast
`mcast_deselect` <param1>: ok [CR][LF][IP address]>
- error
`mcast_deselect` <param1>: error [err no][CR][LF][IP address]>

Example :

Remove the high priority ip address

```
mcast_deselect 1
```

Note:

It is necessary to first deselect an old ip address from a priority before you can assign a new ip address to that priority.

2.6.18. Active Multicast

This command simply returns the ip address and the name assigned to it of that multicast stream that is actually playing. The answers are either the characteristics of the high priority assignment, the characteristics of the low priority assignment, or, if no multicast stream matches, “none”.

SNMP-OID : 1.3.6.1.4.1.6210.20.4

Syntax:

mcast_active <param1>

Parameter:

Param1: [?]

Response:

- request currently decoded multicast environment
mcast_active ?: <number> [IP address] [name] ok [CR][LF][IP address]>
- error
mcast_active <param1>: error [err no][CR][LF][IP address]>

2.6.19. Clear Multicast

This is the opposite to `mcast_set` and clears entries from the multicast definition list.
SNMP-OID : 1.3.6.1.4.1.6210.20.5

Syntax:

```
mcast_clear <param1>
```

Parameter:

Param1: [number]

Response:

- delete Multicast entry
`mcast_clear <number>: ok [CR][LF][IP address]>`
- error
`mcast_clear <param1>: error [err no][CR][LF][IP address]>`

Example :

Clear the 2nd entry of the multicast definition list

```
mcast_clear 2
```

Note:

It is necessary to clear an entry first before new assignments can be done.

2.6.20. Disconnect Multicast

Command to disconnect from a multicast connection

SNMP-OID : 1.3.6.1.4.1.6210.8.8

Syntax:

Com_disconnect

Response:

- disconnect
`com_disconnect: ok [CR][LF][IP address]>`
- error
`com_disconnect: error [err no][CR][LF][IP address]>`

2.6.21. SNMP trap manager

Command to set IP address of a SNMP trap manager. After configuration of this setting all traps will be send to this manager to indicate the state of the Ganymed.

SNMP-OID : 1.3.6.1.4.1.6210.6.11

Syntax:

ip_snmpmanager <param1>

Parameter:

Param1: [address, address:port, ?]

Response:

- Enable trap manager
ip_snmpmanager <param1>: ok [CR][LF][IP address]>
- Ask trap manager
ip_snmpmanager ?: <ip address:port>[CR][LF][IP address]>
- error
ip_snmpmanager <param1>: error [err no][CR][LF][IP address]>

Example :

Enable trap manager

ip_snmpmanager 192.168.16.4:162

Disable trap manager

ip_snmpmanager 0.0.0.0:0

Query setting

ip_snmpmanager ?

2.7. Decoder Commands

2.7.1. Decoder Algorithm

Command to get the Ganymed's Audio Decoder Algorithm.

SNMP-OID : 1.3.6.1.4.1.6210.3.1

Syntax:

dec_algo <param1>

Parameter:

Param1:[?]

Response:

- request decoder algorithm
dec_algo ?: [algorithm] [CR][LF][IP address]>
- error
dec_algo <param1>: error [err no][CR][LF][IP address]>

2.7.2. Decoder Channel Mode

Command to get the Ganymed's decoder channel mode.

SNMP-OID : 1.3.6.1.4.1.6210.3.2

Syntax:

dec_mode <param1>

Parameter:

Param1: [?]

Response:

- request decoder channelmode
dec_mode ?: [channelmode][CR][LF][IP address]>
- error
dec_mode <param 1>: error [err no][CR][LF][IP address]>

2.7.3. Decoder Bit Rate

Command to get the audio decoder bitrate.

SNMP-OID : 1.3.6.1.4.1.6210.3.3

Syntax:

dec_bitrate <param1>

Parameter:

Param1: [?]

Response:

- request decoder bit rate
dec_bitrate ?: [bit rate][CR][LF][IP address]>
- error
dec_bitrate <param1>: error [err no][CR][LF][IP address]>

2.7.4. Decoder Sample Rate

Command to set and get the Ganymed's audio decoder sample rate in Hz.

SNMP-OID : 1.3.6.1.4.1.6210.3.4

Syntax:

dec_srate <param1>

Parameter:

Param1: [?]

Response:

- request decoder sample rate
dec_srate ?: [sample rate][CR][LF][IP address]>
- error
dec_srate <param1>: error [err no][CR][LF][IP address]>

2.7.5. Decoder state

SNMP-OID : 1.3.6.1.4.1.6210.3.33

Syntax:

dec_state <param1>

Parameter:

Param1: [?]

Response:

- request decoder state
dec_state ?: <param1> [CR][LF][IP address]>

2.7.6. Decoder Volume

The level of audio volume can be set with this command. Parameter range is from 115 (loudest, default) to 0 (mute). Settings apply to the XLR and headphone outputs.

Syntax:

dec_volume <param1>

Parameter:

Param1: [volume, ?]

Response:

- set decoder volume
dec_volume <param1> [CR][LF][IP address]>
- query decoder volume
dec_volume ?: <param1> [CR][LF][IP address]>

Example :

Set volume to max volume

dec_volume 115

2.7.7. Audio delay

To equalize bursty data transmission and to play over gaps an audio data buffer is involved. With this command the buffer can be sized to hold more or less data before playback starts.

SNMP-OID : 1.3.6.1.4.1.6210.5.8

Syntax:

audio_delay <param1>

Parameter:

Param1: [time in ms, ?]

Response:

- set audio delay
audio_delay <param1>: ok [CR][LF][IP address]>
- query audio delay
audio_delay ?: [delay in ms][CR][LF][IP address]>
- error
audio_delay <param 1>: error [err no][CR][LF][IP address]>

Example :

Set buffer size to 2 seconds

audio_delay 2000

Note:

The optimum value for audio delay depends on the bitrate. Generally spoken the lower the bitrate the higher the audio delay should be set. This is because the audio decoder needs a certain amount of data to recognize the mpeg audio parameters from that data. This amount of data needs more time to collect at low bitrates.

If audio delay is too low the typical appearance is that the unit plays a short piece of audio and then stops. At the same time the red LED is lit. This repeats again and again.

2.8. System Commands

2.8.1. System Name

Command to set and get the name of the Ganymed. Every Ganymed should have an individual name that is transmitted to a remote during connection set up.

SNMP-OID : 1.3.6.1.4.1.6210.1.2

Syntax:

sys_name <param1>

Parameter:

Param1: [system name, ?]

Response:

- set name
sys_name <param1>: ok [CR][LF][IP address]>
- request name
sys_name ?: [system name][CR][LF][IP address]>
- error
sys_name <param1>: error [err no][CR][LF][IP address]>

2.8.2. Serial number

Command to request the serial number of the Ganymed.

SNMP-OID : 1.3.6.1.4.1.6210.1.1

Syntax:

sys_serial <param1>

Parameter:

Param1: [?]

Response:

- request serial number
sys_serial ?: [serial number][CR][LF][IP address]>

2.8.3. System version

Command to request the system software version of the Ganymed.

SNMP-OID : 1.3.6.1.4.1.6210.1.5

Syntax:

sys_version <param1>

Parameter:

Param1: [?]

Response:

- request system software version
sys_version ?: [system software version][CR][LF][IP address]>

2.8.4. System hardware

Command to query hardware configuration. The response is formatted that way like an Centauri would answer.

SNMP-OID : 1.3.6.1.4.1.6210.1.4

Syntax:

sys_hardware <param1>

Parameter:

Param1: [?]

Response:

- request hardware configuration
sys_hardware ?: [hardware configuration][CR][LF][IP address]>

2.8.5. System hardware version

This command replies the version of the hardware design for the internal FPGA

Syntax:

sys_hardwareversion <param1>

Parameter:

Param1: [?]

Response:

- request FPGA design version
sys_hardwareversion ?: [design version number][CR][LF][IP address]>

2.8.6. System hardware options

The answer of this command reflects the presence of installed jumpers at the internal spare port

Syntax:

sys_hardwareoptions <param1>

Parameter:

Param1: [?]

Response:

- request jumper settings
sys_hardware ?: [jumper settings][CR][LF][IP address]>

2.8.7. System CPU ID

With this command an ID string from the CPU design for the FPGA may be queried.

Syntax:

sys_cpuid <param1>

Parameter:

Param1: [?]

Response:

- request CPU ID
sys_cpuid ?: [id string][CR][LF][IP address]>

2.8.8. System configuration

Another command to retrieve system information. The response is formatted that way like a Centauri would answer.

SNMP-OID : 1.3.6.1.4.1.6210.1.14

Syntax:

sys_config6 <param1>

Parameter:

Param1: [?]

Response:

- Get configuration
sys_configuration ?: [system configuration][CR][LF][IP address]>

2.8.9. System reboot

This command reboots the unit. This is especially usefull after updates have been installed. This command executes immediately, all connections are dropped.

SNMP-OID : 1.3.6.1.4.1.6210.1.22

Syntax:

sys_reboot

2.8.10. Password

Remote control connections via IP may be protected with a password. If a password is defined you have to login (see `ctl_login`), otherwise all commands will be rejected. Remote control access via RS232 is not affected by a password and always possible.

The password must start with a letter and following to that may contain additional letters, numbers and underscores. Punctuation marks (like `,` or `!`) or other characters are not allowed. Passwords are case sensitive.

A password can be deleted by entering nothing as `param1`, but, of course, you have to be logged in to do so. Default is no password.

Syntax:

```
ctl_usrpwd <param1>
```

Parameter:

Param1: [`password`, [`CR`], `?`]

Response:

- set password
`ctl_usrpwd <param1>: ok [CR][LF][IP address]>`
- clear password
`ctl_usrpwd : ok [CR][LF][IP address]>`
- query password
`ctl_usrpwd ? : [password] [CR][LF][IP address]>`
- error
`ctl_usrpwd <param1>: error [err no][CR][LF][IP address]>`

Examples :

Set password

```
ctl_usrpwd Zero_Eight_15
```

Clear password

```
ctl_usrpwd
```

Query password

```
ctl_usrpwd ?
```

2.8.11. Login

If a password has been defined then remote control connections over IP have to log in. A login is valid as long as the remote control connection is established, there is no extra Logoff command.

Syntax:

```
ctl_login <param1>
```

Parameter:

Param1: [`password`]

Response:

- correct password
`ctl_login <param1>: ok [CR][LF][IP address]>`
- incorrect password
`ctl_login <param1>: error [err no][CR][LF][IP address]>`

Examples :

login

```
ctl_login Zero_Eight_15
```

Note:

If a login failed or was not issued at all, every command is rejected with error 9 (no access)

2.8.12. Remote Control Timeout

Ganymed accepts only one Remote Control Connection at a given time, further connect attempts will be rejected. To release an inactive remote control connection a timeout can be defined. This also gives the chance to cancel connections that are 'hanging' due to network problems.

Default timeout is 0, meaning no timeout.

Syntax:

```
time_remotecontrol <param1>
```

Parameter:

```
Param1: [timeout in seconds, ?]
```

Response:

- Set timeout

```
time_remotecontrol <param1>: ok [CR][LF][IP address]>
```
- Ask timeout

```
time_remotecontrol ?: [timeout][CR][LF][IP address]>
```

Examples :

Set timeout to 10 minutes

```
time_remotecontrol 600
```

Query timeout value

```
time_remotecontrol ?
```

Note:

This is a free running timer with a resolution of 10 seconds. A timeout value of 300 seconds will release an idle connection somewhere between 300 and 310 seconds.

With every command that is sent over the IP remote control connection the timeout timer is reset to it's start value again.

2.9. Software Update

Before you begin it is highly recommended that you read this section completely to have an overview and to be sure you've read the important note at the end of this chapter.

There are 2 parts of software that may need to be updated from time to time. One part is responsible for the internal hardware layout. Updates file for this section are named 'Ganymed1002.hexout'. The other part contains updates for the application software and comes in files named 'ganymed.upd'.

As of present version, updates are done via IP Network with a DOS command. Open a DOS box and enter

```
tftp -i <ip address of Ganymed> put ganymed.upd
```

where <ip address of Ganymed> should be replaced by the real ip address value, eg. 10.0.0.10

This will transfer the application software update file to the unit. If Ganymed accepts this file it performs the update, indicated by the red ALARM led switched on. Update is finished when the ALARM led is off again.

If you received an update file for the hardware (Ganymed1002.hexout) too, then transfer it in the same manner by typing

```
tftp -i <ip address of Ganymed> put Ganymed1002.hexout
```

at the DOS box. Again, the red ALARM led is on as long as the update process is active.

If all update files are transferred a reset (power off/on or sys_reboot) is necessary to have the new software running.

Important note:

- Do not cycle power when there is an update process active.
- Also, if you receive 2 update files (ganymed.upd & Ganymed1002.hexout), transfer them both, one after the other, to the unit with no reboot or power cycle in between.
- Do not make *half* updates. If an update contains 'ganymed.upd' and 'Ganymed1002.hexout', both files must be installed. If an update consist of just one file, install this one file.
- Always wait until the red ALARM led is distinguished before accessing the unit again.

If it happens that an update failes because of one of these points, chances are great that the internal Flash memory contents is corrupted. In most cases the unit will not start at all or crashes occur randomly. The unit then must be sent to MAYAH to be repaired.

Note:

As of version V1.0.1.1 only '.upd' files are accepted as application update files. The former '.srec' file format is not supported anymore.

2.10. Declaration of Conformity

Konformitätserklärung gemäß dem Gesetz über Funkanlagen und Telekommunikationsendeinrichtungen (FTEG) und der Richtlinie 1999/5/EG (R&TTE)

Declaration of Conformity in accordance with Radio and Telecommunications Terminal Equipment Act (FTEG) and Directive 1999/5/EC (R&TTE Directive)

MAYAH Communications GmbH, Am Söldnermoos 17, 85399 Hallbergmoos, Germany

erklärt, dass das Produkt

declares that the product

Ganymed 1002

Telekommunikationsendeinrichtung mit Verwendungszweck

Telecommunications terminal equipment with intended purpose

bei bestimmungsgemäßer Verwendung den grundlegenden Anforderungen des § 3 und den übrigen einschlägigen Bestimmungen des FTEG (Artikel 3 der R&TTE) entspricht.

complies with the essential requirements of § 3 and the other relevant provisions of the FTEG (Article 3 of the R&TTE Directive), when used for its intended purpose.

Gesundheit und Sicherheit gemäß §3(1)1.(Artikel 3 (1)a))

Health and safety requirements pursuant to §3(1)1.(Article3(1)a))

angewendete harmonisierte Normen

harmonised standards applied

EN 60950: 1992 + A1:1993

Schutzanforderungen in Bezug auf die elektromagnetische Verträglichkeit §3(1)2, (Artikel 3(1)b))

Protection requirements concerning electromagnetic compatibility §3(1)2, (Article 3(1)b))

angewendete harmonisierte Normen

harmonised standards applied

EN 50081-1

EN 55022:1999 Class B

EN 55024:1999

Maßnahmen zur Immunität

Measures for maintaining immunity

angewendete harmonisierte Normen

harmonised standards applied

EN 50082-1: IEC 801-2 Level 3

IEC 801-3 Level 2

IEC 801-4 Level 2

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