

# **TANDBERG MCU API (Dataport User Guide)**

**Software version D3**

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TANDBERG

D12930 Rev 03

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## 1. Introduction

The *TANDBERG MCU API* contains guidelines on how to use the textual command interface supported by the MCU. The API can be accessed through Telnet via the LAN interface or through RS-232 by connecting a serial cable to the serial interface connector, referred to as the *Dataport* (ref. chapter 2). Three Telnet sessions can be connected to the MCU at the same time in addition to the RS-232 connection.

If, after reading this manual, you require additional information concerning the use of the *TANDBERG MCU API*, please contact your local TANDBERG dealer who will be able to supply you with relevant information for special applications.

## 2. Connecting to the API through the RS-232 port.

The RS-232 port is a 9-pin, female, D-sub connector located on the back of the MCU. The port is configured as a DCE (Data Communications Equipment). The RS-232 port is default set to 9600 baud, 8 databits, none parity and 1 stopbit from factory.

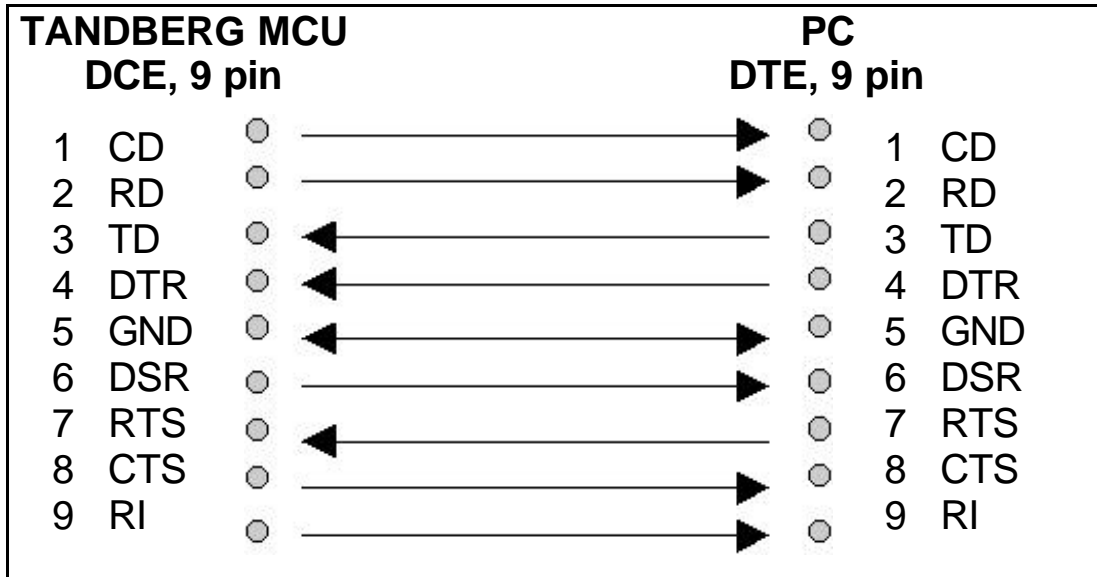
### 2.1. Hardware And Cabling

The pin outs for the RS-232 are defined in the following table (the DTE, Data Terminal Equipment, could be a PC or other device capable of serial communication).

Pin no	Signal	Description	Direction
1	CD	Carrier detect	To DTE
2	RD	Receive data	To DTE
3	TD	Transmit data	From DTE
4	DTR	Data terminal ready	From DTE
5		Ground	
6	DSR	Data set ready	To DTE
7	RTS	Ready to send	From DTE
8	CTS	Clear to send	To DTE
9	RI	Ring indicator	To DTE

*NOTE! A straight through cable should be used between the TANDBERG MCU RS-232 port and the DTE.*

The figure below illustrates the recommended cable-wiring scheme for connecting the MCU to a PC through RS-232.



DTR and RTS are ignored. DSR, CD, and CTS are always asserted, while RI is not used.

## 2.2. Configuring The Dataport From The Web Interface

Click on *System Configuration* tab and then the *Dataport* button. The Dataport can be configured by setting baudrate, parity, databits and stopbits.

## 2.3. Troubleshooting

If communication cannot be established between the PC/terminal and the TANDBERG MCU's Dataport the following should be checked:

- ?? Verify that the serial cable is a straight through 9-pin to 9-pin cable
- ?? Confirm that the configuration of the PC/terminal's serial RS-232 port is identical to the configuration of the TANDBERG MCU RS-232 port.
- ?? Verify that the PC/terminal's serial RS-232 port is working properly by connecting it back-to-back to another PC/terminal and send characters in both directions<sup>1</sup>.

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<sup>1</sup> It requires a null-modem cable to perform this test

### 3. Connecting to the API using Telnet

The TANDBERG MCU has two LAN ports. Connection to the API Command Interface via Telnet should be done through LAN port 1.

The MCU's Telnet server provides access to the API Command Interface through a 10/100 base T network interface supporting the TCP/IP protocol.

When connected to the MCU, the Telnet client will receive a welcome message similar to the following:

```
Welcome to TANDBERG
TANDBERG MCU Release D3.0
SW Release Date: 2004-01-01
```

*NOTE! If the TANDBERG MCU is protected by an IP password you will be prompted to enter this password before you can access the API Command Interface via Telnet.*

## 4. The TANDBERG MCU API Commands

### 4.1. Introduction

Typing '?' or **help** when connected to the API Command Interface will return a list of valid *API commands*. The API commands are used to control the functions of the MCU. A command may be followed by a set of *parameters* and *sub-commands*. This chapter gives a description of the valid commands for the MCU.

#### 4.1.1. Command format

Typing '?' or **help** after a command will result in a *usage text* being displayed. Usage text gives information about the command format, i.e. valid parameters, sub-commands etc. An example is shown below (the user input is shown in bold).

**prichan ?**

```
usage: prichan <PRI interface> max <number>
or:    prichan <PRI interface> high <number>
or:    prichan <PRI interface> low <number>
or:    prichan <PRI interface> search <high/low>
-
PRI interface - a/b/c/d
number : 1..23
```

*Parameters* are arguments upon which the command will operate. Required parameters are denoted by: < >, while optional parameters are denoted by: [ ]. The possible values for a given parameter are separated with slashes ( / ). For some parameters, only the parameter name is supplied within the brackets. In these cases a specific parameter value is to be substituted for the parameter name. The possible values to be substituted for a parameter name are often supplied below if it is not obvious what the possible values are.

*Sub-commands* are commands grouped together within a command. Different sub-commands within a command may have different parameter sets. In the example above: **max**, **high**, **low**, **search** are sub-commands to the command **prichan**.

*NOTE!* The API Command Interface is not case sensitive.

#### 4.1.2. Command types

The commands can be divided into three major classes:

- ?? System Commands
- ?? Parameter Setting Commands
- ?? Status Commands

*System Commands* are commands that initiate processes in the MCU. E.g.: The command **dial** initiates the process of establishing a call between the MCU and an endpoint.

If the command is not syntactically correct, the MCU returns **ERROR**. If the command is syntactically correct, but the system is not accepting the command, *\*R response feedback* is issued followed by **ERROR**. If the command is syntactically correct and the command is accepted, the MCU returns **OK**. An example of *\*R response feedback* is shown below (the user input is shown in bold).

```
confstart 1
```

```
OK
```

```
confstart 1
```

```
*R Conference already started
```

```
ERROR
```

Parameter Setting Commands are commands that set a system parameter to a specific value. E.g.: The command **ippassword** sets the valid password needed to establish an IP connection with the MCU to a specific value.

If the command is syntactically correct the MCU returns **OK**, otherwise the MCU returns **ERROR**. If *\*P parameter feedback* is activated (ref. command **feedback**), and the parameter is successfully changed, the MCU will return the command with the new value. An example of *\*P parameter feedback* is shown below (the user input is shown in bold).

```
pardial on
```

```
OK
```

```
*P pardial on
```

When issuing a Parameter Setting Command with no parameter, the MCU will return the command with the current setting. E.g.:

```
pardial
```

```
*P pardial on
```

```
OK
```

Status Commands are commands that list different sets of system parameters. If *\*S status feedback* is activated (ref. command **feedback**), status commands are automatically called when corresponding parameters are being changed.

## 4.2. The API commands

The API commands are divided into six groups: System Configuration Commands, General Conference Commands, Conference Specific Commands, System Status Commands, Debug Commands and Special Commands.

#### 4.2.1. Changed, added or removed commands from D2 software

TYPE OF COMMAND	COMMAND	ALTERATION	BACKWARDS COMPATIBLE
<b>System Configuration Commands</b>	isdnprot	Added several sub-commands	Yes
	prinumber	Removed.	No
<b>General Conference Commands</b>	conftemplate	Added several sub-commands and parameters.	Yes
	h264	New command	Not applicable
<b>Conference Specific Commands</b>	confsettings	Added several sub-commands and parameters.	Yes
	confprinumber	New command	Not applicable
<b>Status Commands</b>	confcascading-status	New command	Not applicable
	callhistory	New status parameter: billingcode	Yes
<b>Debug Commands</b>			

## 4.2.2. System Configuration Commands

Command:	Description:
<b>defvalues set</b>	<p>This command is used to restore factory default settings. Issuing this command with no parameters will restore all settings except network settings and option key. To reset all values to factory defaults the optional parameter <b>all</b> should be added. Please download the parameter file, or write down the optionkey before you execute this command (issue the command <b>optionkey</b> to view the current value of the optionkey).</p> <p><b>defvalues set [all]</b></p>
<b>h323alias</b>	<p>Used to define h.323 aliases for the various conferences. Aliases must be defined to register the MCU to a gatekeeper. <i>Note! The MCU only supports e.164 numbers as aliases.</i></p> <p><b>h323alias &lt;confid&gt; e164 &lt;e164alias&gt;</b> ---</p> <p><u>parameters</u> ?? <b>confid:</b> 1/2/3. Number identifying which conference the alias applies to.</p> <p><u>sub-commands:</u> ?? <b>e164:</b> Sets an e.164 alias number.</p> <p><u>Example of h323alias feedback:</u> *P h323alias 1 e164 "9222" *P h323alias 2 e164 "9223" *P h323alias 3 e164 "9224"</p>
<b>h323gatekeeper</b>	<p>Sets gatekeeper parameters. The MCU must be registered to a gatekeeper to receive H323 calls to conference 2 and 3. <i>NOTE! H.323 aliases must be set before the MCU can be registered to a gatekeeper, ref. command h323alias.</i></p> <p><b>h323gatekeeper &lt;on/off&gt;</b> or <b>h323gatekeeper address &lt;ipaddress&gt;</b> ---</p> <p><u>sub-commands:</u> ?? <b>address:</b> Sets the IP address of the gatekeeper</p> <p><u>Example of h323gatekeeper feedback:</u> *P h323gatekeeper on *P h323gatekeeper address 10.0.0.30</p>
<b>ipaddress</b>	<p>Configures the LAN interfaces when static IP address allocation is used (the command <b>ipassignment</b> is used to select between DHCP and static IP address allocation). <i>NOTE! The MCU needs to reboot before the changes will apply.</i></p> <p><b>ipaddress [LAN interface] static &lt;ipaddress&gt;</b> or <b>ipaddress [LAN interface] subnetmask &lt;ipaddress&gt;</b> or <b>ipaddress [LAN interface] gateway &lt;ipaddress&gt;</b> ---</p>

	<p><u>parameters:</u></p> <p>?? <b>LAN interface: 1.</b> Number identifying the LAN interface. If this parameter is omitted the command applies to all interfaces (only interface 1 is in use).</p> <p><u>sub-commands:</u></p> <p>?? <b>static:</b> Sets the static IP address for the given LAN interface.</p> <p>?? <b>subnetmask:</b> Sets the subnet mask variable for the given LAN interface. Subnet mask defines the network class. If the setting is 255.255.255.0 the local network will support up to 256 nodes, denoting a class C network. If the setting is 255.255.0.0 the local network is a class B network with 65536 addressable nodes.</p> <p>?? <b>gateway:</b> Sets the gateway IP address for the given LAN interface. If a gateway is located on the LAN and the MCU needs to reach nodes through this gateway, the gateway address can be set using the gateway variable (the IP address of the gateway will be set automatically if the MCU is in DHCP mode)</p> <p><u>Example of <b>ipaddress</b> feedback:</u></p> <p>*P ipaddress 1 static 10.0.5.98          *P ipaddress 1 subnetmask 255.255.0.0          *P ipaddress 1 gateway 10.0.0.1</p>
<p><b>ipassignment</b></p>	<p>Selects between DHCP (Dynamic Host Configuration Protocol) or static IP address allocation. When DHCP is selected the MCU will automatically receive all the necessary information from the DHCP server. This function should be used when the MCU is connected to a LAN using DHCP. When using this mode, IP-address and IP-subnet mask are not used because the DHCP server supplies these parameters.</p> <p><b>ipassignment [LAN interface] &lt;dhcp/static&gt;</b></p> <p>---</p> <p><u>parameters:</u></p> <p>?? <b>LAN interface: 1.</b> Number identifying the LAN interface. If this parameter is omitted the command applies to all interfaces (only interface 1 is in use).</p> <p><u>Example of <b>ipassignment</b> feedback:</u></p> <p>*P ipassignment 1 static</p>
<p><b>ipmtu</b></p>	<p>Sets the maximum IP packet size to be used for H.323 calls. It can be useful to reduce the packet size when packets are transmitted over links that add overlay (f.ex. VPN). Reducing the packetsize will prevent the packets from being fragmented.</p> <p><b>ipmtu &lt;1200-1400&gt;</b></p> <p><u>Example of <b>ipmtu</b> feedback:</u></p> <p>*P ipmtu 1400</p>
<p><b>ippassword</b></p>	<p>Sets a password to restrict access to the MCU's webserver, telnet and ftp resources.</p> <p><b>ippassword [LAN interface] &lt;password&gt;</b></p> <p>---</p> <p><u>parameters:</u></p> <p>?? <b>LAN interface: 1.</b> Number identifying the LAN interface. If this parameter is omitted the given value is set for all interfaces (only interface 1 is in use).</p>

	<p>?? <b>password:</b> Textstring of maximum 16 characters. If the password is forgotten it can be deleted using the command <b>ippassword ""</b> through the RS-232 port.  <i>NOTE! The default password is "TANDBERG" and it's case sensitive. The password will not survive the " defvalues set all" command.</i></p>
<p><b>ipspeed</b></p>	<p>Sets LAN port speed.  <i>NOTE! The MCU needs to reboot before the changes will apply.</i></p> <p><b>ipspeed [LAN interface] &lt;speed&gt;</b>  ---</p> <p><u>parameters:</u></p> <p>?? <b>LAN interface: 1.</b> Number identifying the LAN interface. If this parameter is omitted the given value is set for all interfaces (only interface 1 is in use).</p> <p>?? <b>speed: auto/10half/10full/100half/100full.</b> The speed is either set to auto or manually from 10mb half duplex to 100mb full duplex. When set to auto the MCU will automatically negotiate with the network and use the best available setting.</p> <p><u>Example of ipspeed feedback:</u>  <i>*P ipspeed 1 auto</i></p>
<p><b>ipqos</b></p>	<p>Configures the different Quality of Service (QoS) algorithms supported by the TANDBERG MCU. QoS are used to set priority on QoS enabled IP networks.</p> <p><b>ipqos prectlph &lt;chantype tlp&gt; &lt;precvalue&gt;</b>  or  <b>ipqos diffstlp &lt;chantype tlp&gt; &lt;diffsvalue&gt;</b>  or  <b>ipqos precvtlp &lt;chantype vtlp&gt; &lt;precvalue&gt;</b>  or  <b>ipqos diffsvtlp &lt;chantype vtlp&gt; &lt;diffsvalue&gt;</b>  or  <b>ipqos mode &lt;precedence/diffserv/off&gt;</b>  or  <b>ipqos tos &lt;delay/throughput/reliable/cost/off&gt;</b>  or  <b>ipqos rsvp &lt;auto/off&gt;</b>  ---</p> <p><u>parameters:</u></p> <p>?? <b>chantype tlp: audio/signalling.</b> Indicates which channel type the setting applies to.</p> <p>?? <b>chantype vtlp: audio/video/data/signalling.</b> Indicates which channel type the setting applies to.</p> <p>?? <b>precvalue: 1-7/auto/off.</b> The priority value to be used for IP Precedence. When set to auto the system will use the Cisco recommended values. For video telephony calls this value is 6 for signalling channels and 4 for audio channels and video channels.</p> <p>?? <b>diffsvalue: 0-63.</b> The priority value to be used for Differentiated Services (DiffServ).</p> <p>?? <b>modevalue: ipprecedence/diffserv/off.</b> Possible priority algorithms.</p> <p>?? <b>tosvalue: delay/throughput/reliable/cost/off.</b> Possible routing priority values.</p> <p><u>sub-commands:</u></p>

	<p>?? <b>prectlph</b>: Sets IP Precedence value to be used for voice over IP calls.</p> <p>?? <b>diffstlph</b>: Sets the Differentiated Services (DiffServ) value to be used for voice over IP calls. DiffServ is an extension of IP Precedence and enables division of IP traffic into 63 classes with different priority. Should be used instead of IP Precedence if possible.</p> <p>?? <b>precvtlph</b>: Sets IP Precedence value to be used for video over IP calls.</p> <p>?? <b>diffsvtlph</b>: Sets the Differentiated Services (DiffServ) value to be used for video over IP calls.</p> <p>?? <b>mode</b>: Sets which priority algorithm to be used.</p> <p>?? <b>tos</b>: Sets the routing policy the router should use when routing a call. If supported by the router, the endpoint can signal to the router to select a route that gives: “Minimum <b>delay</b>, maximum <b>throughput</b>, maximum <b>reliable</b> or minimum <b>cost</b>.”</p> <p>?? <b>rsvp</b>: Sets the Resource Reservation Protocol (RSVP) to on or off. When RSVP is set to on, the TANDBERG MCU will signal to the network the minimum bandwidth and minimum delay required to make a call. RSVP will try to reserve the resources required. If granted, Quality of Service will be ensured during the whole call.</p> <p><i>NOTE! The network has to be RSVP enabled to use this protocol</i></p> <p><u>Example of ipqos feedback:</u></p> <p>*P ipqos prectlph audio auto</p> <p>*P ipqos diffstlph audio 0</p> <p>*P ipqos precvtlph audio auto</p> <p>*P ipqos precvtlph signalling auto</p> <p>*P ipqos precvtlph video auto</p> <p>*P ipqos precvtlph data auto</p> <p>*P ipqos diffsvtlph audio 0</p> <p>*P ipqos diffsvtlph signalling 0</p> <p>*P ipqos diffsvtlph video 0</p> <p>*P ipqos diffsvtlph data 0</p> <p>*P ipqos mode precedence</p> <p>*P ipqos tos off</p> <p>*P ipqos rsvp off</p>
<b>isdnprot</b>	<p>Defines various ISDN protocol settings.</p> <p><b>isdnprot nsftel &lt;number&gt;</b> or <b>isdnprot nsfvid &lt;number&gt;</b> or <b>isdnprot sendcomplete &lt;on/off&gt;</b> or <b>isdnprot restart &lt;on/off&gt;</b> or <b>isdnprot alert &lt;on/off&gt;</b> or <b>isdnprot hlc &lt;on/off&gt;</b> ---</p> <p><u>sub-commands:</u></p> <p>?? <b>nsftel / nsfvid</b>: Selects Network Service Facility for videophony or telephony on PRI-T1. The NSF can be configured as “” (no value) or any <b>number</b> between <b>0-31</b> to describe the service facility on your PRI-T1 line. To enter the NSF value you must know the profile used for your line.</p> <p>?? <b>sendcomplete</b>: The Q.931 message "Sending complete" can be turned <b>off</b>. This is only applicable for some Australian switches, which stop outgoing calls when the message “send complete” is sent to the switch.</p>

	<p>?? <b>restart:</b> When restart is set to <b>on</b> the PRI interfaces will be reinitialized after boot.</p> <p>?? <b>alert:</b> If set to <b>on</b>, the system will respond with an alert message to all incoming setup messages. If set to <b>off</b>, the system will respond with an alert message only to the incoming setup message related to the initial channel.</p> <p>?? <b>hlc:</b> Turns sending of HLC information element in setup message <b>on</b> or <b>off</b> (video calls only).</p> <p><u>Example of <b>isdnprot</b> feedback:</u>  <i>*P isdnprot nsftel ""</i>  <i>*P isdnprot nsfvid ""</i>  <i>*P isdnprot sendcomplete off</i>  <i>*P isdnprot restart on</i>  <i>*P isdnprot alert on</i>  <i>*P isdnprot hlc on</i></p>
<b>netprofile</b>	<p>Network profiles are used to predefine a set of call prefixes.</p> <p><b>netprofile &lt;profile number&gt; &lt;call prefix&gt; [profile name] [network]</b>  ---</p> <p><u>parameters:</u>  Network profiles are used to predefine a set of call prefixes.</p> <p><b>netprofile &lt;profile number&gt; &lt;call prefix&gt; [profile name] [network]</b>  ---</p> <p><u>parameters:</u></p> <p>?? <b>profile number:</b> <b>p1/p2/p3/p4/p5/p6</b>. The MCU can hold as many as six profiles (<b>p1</b>, <b>p2</b> and <b>p3</b> are predefined and can not be changed).</p> <p>?? <b>call prefix:</b> The prefix number for this profile. The prefix is added to every dialed number using the netprofile associated with the prefix.</p> <p>?? <b>profile name:</b> The profile's name. Textstring of maximum 8 characters.</p> <p>?? <b>network:</b> <b>auto/h320/h323</b>. The dial protocol to be used for this profile. If the dial protocol is set to auto, the system will automatically select h323 if an ip address is supplied as dialstring.</p> <p><u>Example of <b>netprofile</b> feedback:</u>  <i>*P netprofile p1 "" Auto auto</i>  <i>*P netprofile p2 "" ISDN h320</i>  <i>*P netprofile p3 "" H323 h323</i>  <i>*P netprofile p4 0 Ext auto</i>  <i>*P netprofile p5 1 test auto</i>  <i>*P netprofile p6 2 test2 auto</i></p>
<b>optionkey</b>	<p>Optionkey is a textstring of 7 characters that will enable software options.</p> <p><b>optionkey &lt;key&gt;</b>  ---</p> <p><u>Example of <b>optionkey</b> feedback:</u>  <i>*P optionkey HSYRUFA</i></p>
<b>pardial</b>	<p>Sets parallel dial mode for BONDING calls. If <b>pardial</b> is set to <b>off</b> the MCU will set-up BONDING calls by dialling all channels in a sequential manner, i.e. the system will wait for a connection on the current channel before attempting to connect the next.</p> <p><b>pardial &lt;on/off&gt;</b>  ---</p>

	<p><u>Example of <b>partial</b> feedback:</u> *P <i>partial off</i></p>
<b>pricable</b>	<p>Sets PRI interface cable lengths.</p> <p><b>pricable [PRI interface] &lt;cablelength&gt;</b> ---</p> <p><u>parameters:</u></p> <p>?? <b>PRI interface: a/b/c/d.</b> Letters identifying the different PRI interfaces. If this parameter is omitted the given value is set for all interfaces.</p> <ul style="list-style-type: none"> <li>○ <b>a:</b> PRI interface 1</li> <li>○ <b>b:</b> PRI interface 2</li> <li>○ <b>c:</b> PRI interface 3</li> <li>○ <b>d:</b> PRI interface 4</li> </ul> <p>?? <b>cablelength: 1/2/3/4/5.</b></p> <ul style="list-style-type: none"> <li>○ <b>1:</b> 0-133 ft (0-40 m)</li> <li>○ <b>2:</b> 133-266 ft (40-81 m)</li> <li>○ <b>3:</b> 266-399 ft (81-122 m)</li> <li>○ <b>4:</b> 399-533 ft (122-162 m)</li> <li>○ <b>5:</b> 533-655 ft (162-200 m)</li> </ul> <p><u>Example of <b>pricable</b> feedback:</u> *P <i>pricable a 1</i> *P <i>pricable b 1</i> *P <i>pricable c 1</i> *P <i>pricable d 1</i></p>
<b>prichan</b>	<p>This command is used to configure the channel hunting strategy for the PRI interfaces.</p> <p><b>prichan &lt;PRI interface&gt; max &lt;1..23/30&gt;</b> or <b>prichan &lt;PRI interface&gt; low &lt;1..23/31&gt;</b> or <b>prichan &lt;PRI interface&gt; high &lt;1..23/31&gt;</b> or <b>prichan &lt;PRI interface&gt; search &lt;high/low&gt;</b> ---</p> <p><u>parameters:</u></p> <p>?? <b>PRI interface: a/b/c/d.</b> Letters identifying the different PRI interfaces.</p> <ul style="list-style-type: none"> <li>○ <b>a:</b> PRI interface 1</li> <li>○ <b>b:</b> PRI interface 2</li> <li>○ <b>c:</b> PRI interface 3</li> <li>○ <b>d:</b> PRI interface 4</li> </ul> <p><u>sub-commands:</u></p> <p>?? <b>max:</b> Sets a limit on the number of channels that will be available for incoming and outgoing calls. Values: 1-23 for T1 PRI, 1-30 for E1 PRI.</p> <p>?? <b>low:</b> Used together with <b>high</b> to define the line hunting strategy. The MCU will search for available channels between <b>low</b> and <b>high</b>. This allows other devices to reserve channels outside this range Values: 1-23 for T1 PRI, 1-31 for E1 PRI.</p> <p>?? <b>high:</b> ref. low</p> <p>?? <b>search:</b> Specifies if the search for available channels are to start from the</p>

	<p>lower or higher limit.</p> <p><u>Example of <b>prichan</b> feedback:</u>  <i>*P prichan a max 23</i>  <i>*P prichan a low 1</i>  <i>*P prichan a high 23</i>  <i>*P prichan a search high</i></p>
<b>prirc4</b>	<p>Turns the the CRC check for PRI-E1 <b>on/off</b>. CRC is default on and should stay on in most cases.</p> <p><b>prirc4 [PRI interface] &lt;on/off&gt;</b>  ---</p> <p><u>parameters:</u>  ?? <b>PRI interface: a/b/c/d.</b> Letters identifying the different PRI interfaces. If this parameter is omitted the given value is set for all interfaces.</p> <ul style="list-style-type: none"> <li>○ <b>a:</b> PRI interface 1</li> <li>○ <b>b:</b> PRI interface 2</li> <li>○ <b>c:</b> PRI interface 3</li> <li>○ <b>d:</b> PRI interface 4</li> </ul> <p><u>Example of <b>prirc4</b> feedback:</u>  <i>*P prirc4 a on</i>  <i>*P prirc4 b on</i>  <i>*P prirc4 c on</i>  <i>*P prirc4 d on</i></p>
<b>prinet</b>	<p>Selects ISDN PRI protocol.</p> <p><b>prinet &lt;protocol&gt;</b>  ---</p> <p><u>parameters:</u>  ?? <b>protocol: ni/att/euro.</b></p> <ul style="list-style-type: none"> <li>○ <b>ni</b> - National ISDN (North America)</li> <li>○ <b>att</b> - AT&amp;T ISDN (North America)</li> <li>○ <b>euro</b> - Euro ISDN</li> </ul> <p><u>Example of <b>prinet</b> feedback:</u>  <i>*P prinet att</i></p>
<b>services</b>	<p>Enables or disables access to various system services.  <i>NOTE! Changes become effective after reboot.</i></p> <p><b>services ftp &lt;on/off&gt;</b>  or  <b>services telnet &lt;on/off&gt;</b>  or  <b>services telnetchallenge &lt;on/off&gt; [23/57]</b>  or  <b>services http &lt;on/off&gt;</b>  or  <b>services https &lt;on/off&gt;</b>  or  <b>services h323 &lt;on/off&gt;</b>  or  <b>services snmp &lt;on/off/read-only&gt;</b>  or  <b>services peopleandcontent &lt;on/off&gt;</b></p>

	<p><u>sub-commands</u></p> <p>?? <b>ftp:</b> Sets access to the internal FTP server of the MCU on or off</p> <p>?? <b>telnet:</b> Sets access to the internal telnet server of the MCU on or off. <i>NOTE! When set to off, telnet can only be re-enabled through RS-232</i></p> <p>?? <b>telnetchallenge:</b> Telnet challenge can be enabled on either ip port 23 or ip port 57. When connecting to an ip port that has telnetchallenge set to on, an MD5 encryption challenge string are being issued instead of a password prompt. An encrypted password based on the challenge string must then be generated by an MD5 encryptor and sent back to the system as a response in order to get access to the system. <i>NOTE! Regular Telnet are using ip port 23. When Telnetchallenge are set to ip port 23, this will override regular Telnet.</i></p> <p>?? <b>http:</b> Sets access to the internal web server, via HTTP, on or off.</p> <p>?? <b>https:</b> Sets access to the internal web server, via HTTPS, on or off.</p> <p>?? <b>h323:</b> Used to enable or disable h323 calls.</p> <p>?? <b>snmp:</b> Sets access to the SNMP mib to on, off or read-only.</p> <p>?? <b>peopleandcontent:</b> Used to turn off Duo Video support from non TANDBERG systems in case of interoperability problems.</p> <p><i>NOTE! To obtain a high level of security the services FTP, telnet, HTTP and SNMP should be set to off, while HTTPS is set to on. In addition an IP password should be set, ref. command <b>ippassword</b>.</i></p> <p><u>Example of services feedback:</u></p> <p>*P services telnet on *P services telnetchallenge on 57 *P services http on *P services https on *P services h323 on *P services snmp on *P services fip on</p>
<b>sendnum</b>	<p>Enables/disables broadcast of the local unit's number during H.320 call setup. <i>NOTE! The transfer of the local number to a remote system or the prevention thereof is dependent on the feature set supported by the network or networks used to establish connection between the MCU and the endpoint.</i></p> <p><b>sendnum &lt;on/off&gt;</b></p> <p>---</p> <p><u>Example of sendnum feedback:</u></p> <p>*P sendnum on</p>
<b>snmp</b>	<p>Configures the snmp mib. <i>Note! For more information about SNMP please read the TANDBERG SNMP application note.</i></p> <p><b>snmp cn &lt;community name&gt;</b> or <b>snmp sc &lt;system contact name&gt;</b> or <b>snmp sl &lt;system location name&gt;</b> or <b>snmp hi &lt;host ip address.&gt; [host ip address] [host ip address]</b></p> <p>---</p> <p><u>parameters:</u></p> <p>?? <b>community name:</b> Textstring of maximum 16 characters. ?? <b>system contact name:</b> Textstring of maximum 50 characters ?? <b>system location name:</b> Textstring of maximum 50 characters</p>

	<p>?? <b>host ip address:</b> ip address</p> <p><u>sub-commands:</u></p> <p>?? <b>cn:</b> Used to set the <b>community name</b> parameter.          ?? <b>sc:</b> Used to set the <b>system contact name</b> parameter.          ?? <b>sl:</b> Used to set the <b>system location name</b> parameter.          ?? <b>hi:</b> Used to set the <b>host ip address</b> parameters.</p> <p><u>Example of snmp feedback:</u>  <i>*P snmp hi 10.0.2.255 "" ""</i>  <i>*P snmp sl ""</i>  <i>*P snmp sc TANDBERG</i>  <i>*P snmp cn public</i></p>
<b>sport</b>	<p>This command is used to configure the serial port by setting baudrate, parity, databits and stopbits.</p> <p><b>sport [baudrate] [parity] [databits] [stopbits]</b>          ---</p> <p><u>parameters:</u></p> <p>?? <b>baudrate:</b> 1200/2400/4800/9600/19200/38400/57600/115200          ?? <b>parity:</b> n/o/e          ?? <b>databits:</b> 7/8          ?? <b>stopbits:</b> 1/2</p> <p><u>Example of sport feedback:</u>  <i>*P sport 9600 n 8 1</i></p>
<b>systemname</b>	<p>Sets the MCU name.</p> <p><b>systemname &lt;name&gt;</b>          ---</p> <p><u>Parameters:</u></p> <p>?? <b>name:</b> Textstring of maximum 16 characters.</p> <p><u>Example of systemname feedback:</u>  <i>*P systemname TANDBERG</i></p>

### 4.2.3. General Conference Commands

Command:	Description:
<b>conftemplate</b>	<p>Defines default conference settings. When a conference is started (ref. command <b>confstart</b>), the conference will take on these values. After the conference is started the conference settings can be changed using the command <b>confsettings</b>.</p> <p><b>conftemplate confname &lt;name&gt;</b>  or  <b>conftemplate calltype &lt;calltype&gt;</b>  or  <b>conftemplate restrict &lt;on/off&gt;</b>  or  <b>conftemplate maxvidsites &lt;0-16&gt;</b>  or  <b>conftemplate maxaudsites &lt;0-16&gt;</b>  or  <b>conftemplate password &lt;password&gt;</b>  or  <b>conftemplate encryption &lt;on/off&gt;</b>  or  <b>conftemplate encmode &lt;des/aes128/auto&gt;</b>  or  <b>conftemplate picturemode &lt;picturemode&gt;</b>  or  <b>conftemplate vidformat &lt;vidformat&gt;</b>  or  <b>conftemplate customformats &lt;on/off&gt;</b>  or  <b>conftemplate agc &lt;on/off&gt;</b>  or  <b>conftemplate tlpfilter &lt;on/off&gt;</b>  or  <b>conftemplate inccalls &lt;allow/reject&gt;</b>  or  <b>conftemplate duration &lt;duration&gt;</b>  or  <b>conftemplate entryexittones &lt;on/off&gt;</b>  or  <b>conftemplate welcomemessage &lt;on/off&gt;</b>  or  <b>conftemplate legacylevel &lt;0..15&gt;</b>  or  <b>conftemplate duovideo &lt;on/off&gt;</b>  or  <b>conftemplate g728 &lt;on/off&gt;</b>  or  <b>conftemplate cascadingmode &lt;auto/master/slave&gt;</b>  or  <b>conftemplate billingcode &lt;billingcode&gt;</b>  or  <b>conftemplate floortofull &lt;on/off&gt;</b>  ---</p> <p><u>Parameters:</u></p> <p>?? <b>name:</b> Name of the conference. Textstring of maximum 30 characters.  ?? <b>calltype:</b> <b>tlph / 1xh221 / 2xh221 / 1b / 2b / 3b / 4b / 5b / 6b / 8b / 12b / 18b / 23b / 30b / h0</b>  ?? <b>password:</b> Conference password. Textstring of maximum 8 characters – digits only.</p>

	<p>?? <b>picturemode:</b> <b>cp4/cp9/cp16/cp5+1/cp7+1/vs/vsauto/cpauto/auto</b> (<i>cp</i> denotes <i>continuous presence</i> – <i>vs</i> denotes <i>voice switched</i>)</p> <p>?? <b>vidformat:</b> <b>auto/sharpness/motion.</b></p> <p><u>sub-commands:</u></p> <p>?? <b>confname:</b> Sets the name of the conference.</p> <p>?? <b>calltype:</b> Sets the <b>calltype</b> of the conference. When dialing from the MCU all sites will be connected with the <b>calltype</b> specified for the conference. <i>NOTE! Sites can join the conference with a lower callrate than the callrate specified for the conference. When dialing out, a lower callrate can be specified when issuing the <b>dial</b> command.</i></p> <p>?? <b>restrict:</b> Sets restrict to <b>on/off</b>. If restrict is set to <b>on</b>, the MCU will only utilize 56 kb of each ISDN B channel.</p> <p>?? <b>maxvidsites:</b> Sets an upper limit to how many video sites that can join the conference. <i>NOTE! This is not a reservation mechanism, i.e. the system does not gurantee that there are enough resources available to reach this limit.</i></p> <p>?? <b>maxaudiosites:</b> Sets an upper limit to how many audio sites that can join the conference. <i>NOTE! This is not a reservation mechanism, i.e. the system does not gurantee that there are enough resources available to reach this limit.</i></p> <p>?? <b>password:</b> Sets the conference password. The password is used to restrict access to the conference.</p> <p>?? <b>encryption:</b> Sets encryption to <b>on/off</b>. If <b>encryption</b> is set to <b>on</b>, only sites supporting encryption are allowed to join the conference.</p> <p>?? <b>encmode:</b> Sets encryption type. If set to <b>auto</b> the MCU will allow both sites suporting DES encryption and sites supporting 128 bit AES encryption to join the conference.</p> <p>?? <b>picturemode:</b> Sets the <b>picturemode</b> parameter. If set to <b>cp4</b>, <b>cp9</b> or <b>cp16</b>, the MCU will send a 4/9/16 split continous presence image to all the participants. This enables the participants to see 4/9/16 sites at the same time. When set to <b>cpauto</b> the MCU will change the continuous presence layout depending on the number of sites connected. When set to <b>vs</b> the conference will be voice switched, i.e. a full image of the person currently speaking will be sent to all participants. If set to <b>cp5+1</b> or <b>cp7+1</b> the MCU will send a 6 or 8 split continous presence image with the current speaker dispalyed in an enlarged window. When set to <b>vsauto</b> or <b>auto</b> the mcu will automatically choose between <b>vs</b>, <b>cp5+1</b> or <b>cp7+1</b> depending on the number of sites connected.</p> <p>?? <b>vidformat:</b> When set to <b>auto</b>, the video quality will be dynamically selected depending on what the endpoints are transmitting and what they are able to receive. If it's set to <b>sharpness</b> the MCU will try to send 4*CIF (704*576 pixels) to all participants. When set to <b>motion</b> the MCU will try to send a CIF (352*288 pixels) image to all participants.</p> <p>?? <b>customformats:</b> Turns support for custom formats (native resolutions like vga, svga, xga and sif ) <b>on</b> or <b>off</b> (some older systems may not support this).</p> <p>?? <b>agc:</b> Sets automatic gain control <b>on/off</b>. When set to <b>on</b>, the outgoing audio from all sites will be adjusted to the same volume.</p> <p>?? <b>tlphfilter:</b> Sets telephone filter to on or off. When set to on the MCU will mute telephone participants when they are not currently speaking. This is to avoid unnecessary noise from f.ex. cellular phones participating in the conference.</p> <p>?? <b>incalls:</b> If set to <b>reject</b>, incoming calls will be automatically rejected. If set to <b>allow</b>, incoming calls are allowed to join the conference.</p> <p>?? <b>duration:</b> Sets maximum conference duration in minutes. 10 minutes before the conference is set to end, a clock symbol will be broadcasted to all participants indicating that all participants will be disconnected in 10 minutes. If duration is set to 0, there will be no automatically disconnect of the participants in the conference.</p>
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	<p>?? <b>entryexittones:</b> When set to on, the MCU will send a beep to all participants when a new site enters or leaves the conference.</p> <p>?? <b>welcomemessage:</b> When set to on, participants entering the conference will hear a welcome message. This welcome message can be customized and uploaded as a WAVE file using the web interface of the MCU.</p> <p>?? <b>legacylevel:</b> To avoid interoperability problems legacy level should be set to a high value.</p> <p>?? <b>duovideo:</b> Enables or disables duovideo support.</p> <p>?? <b>g728:</b> Enables or disables the G728 audio algorithm if supported by the endpoints.</p> <p>?? <b>cascadingmode:</b> Sets the preferred cascading mode when connected to another mcu.</p> <p>?? <b>billingcode:</b> Every call in the conference will be tagged with this code when the call is transferred to the call log (<i>ref. command callhistory</i>).</p> <p>?? <b>floortofull:</b> If floor is assigned to specific site or requested by a specific site, this site will always be displayed in full screen if <b>floortofull</b> is set to <b>on</b>. If <b>floortofull</b> is set to <b>off</b> the site currently having floor will be displayed in <b>cp7+1</b> or <b>cp5+1</b> if this was the layout prior to the floor assign/request operation.</p> <p><u>Example of <b>conftemplate</b> feedback:</u></p> <pre>*P conftemplate confname Test1 *P conftemplate calltype 6b *P conftemplate restrict off *P conftemplate maxaudsites 8 *P conftemplate maxvidsites 8 *P conftemplate password "" *P conftemplate encryption off *P conftemplate encmode auto *P conftemplate picturemode auto *P conftemplate vidformat auto *P conftemplate customformats on *P conftemplate agc on *P conftemplate tlphfilter on *P conftemplate inccalls allow *P conftemplate duration 0 *P conftemplate entryexittones on *P conftemplate welcomemessage on *P conftemplate legacylevel 0 *P conftemplate duovideo on *P conftemplate g728 on *P conftemplate cascadingmode auto *P conftemplate floortofull on *P conftemplate billingcode ""</pre>
<b>directory</b>	<p>Creates a directory entry in the directory list. The directory entry list can hold as many as 99 directory entries.</p> <p><b>directory &lt;entry no&gt; [number[**2ndNumber]] [calltype[r]] [profile] [name]</b> or <b>directory add [number[**2ndNumber]] [calltype[r]] [profile] [name]</b> or <b>directory all</b> or <b>directory delete &lt;entry no&gt;</b> ---</p> <p><u>parameters:</u></p> <p>?? <b>entry no: 1..99.</b> Specifies an entry number where to add or retrieve a</p>

	<p>directory entry (only supplying the entry number will retrieve the given entry).</p> <p><i>NOTE! The user should be aware not to overwrite existing entries.</i></p> <p>?? <b>number:</b> The phone number to be stored for this entry. If the destination is a unit using H221, two numbers can be supplied separated by **.</p> <p>?? <b>calltype:</b> <b>tlph / 1xh221 / 2xh221 / 1b / 2b / 3b / 4b / 5b / 6b / 8b / 12b / 18b / 23b / 30b / h0 / auto</b>. An optional <b>r</b> can be added after the calltype parameter to denote a <i>restricted</i> call.</p> <p>?? <b>profile:</b> <b>p1/p2/p3/p4/p5/p6</b>. Selects one of the predefined netprofiles, ref. command <b>netprofile</b>.</p> <p>?? <b>name:</b> The contacts name.</p> <p><i>NOTE! If the name contains spaces the name has to be embraced by quotes, e.g. "John Johnsen"</i></p> <p><u>sub-commands:</u></p> <p>?? <b>add:</b> Adds the specified directory entry to the first vacant entry in the directory list.</p> <p>?? <b>all:</b> Lists all nonempty directory entries</p> <p>?? <b>delete:</b> Deletes a specified entry.</p> <p><u>Example of <b>directory</b> feedback:</u> *P directory 99 123456789 auto p1 TANDBERG</p>
<b>h264</b>	<p>Enables or disables the support of h264 video algorithm through the mcu.</p> <p><b>h264 &lt;enable/disable&gt;</b></p>
<b>mcudirectory</b>	<p>Creates a mcu directory entry in the mcu directory list. The mcu directory entry list can hold as many as 16 mcu directory entries.</p> <p><b>mcudirectory &lt;entry no&gt; [!&lt;n&gt;] .... [!&lt;n&gt;] [name]</b> or <b>mcudirectory add [!&lt;n&gt;] .... [!&lt;n&gt;] [name]</b> or <b>mcudirectory all</b> or <b>mcudirectory delete &lt;entry no&gt;</b> ---</p> <p><u>parameters:</u></p> <p>?? <b>entry no: 1..16.</b> Specifies an entry number where to add or retrieve a mcu directory entry (only supplying the entry number will retrieve the given entry).</p> <p><i>NOTE! The user should be aware not to overwrite existing entries.</i></p> <p>?? <b>n:</b> index referring to an entry in the directory list</p> <p>?? <b>name:</b> The mcu directory entry name.</p> <p><i>NOTE! If the name contains spaces the name has to be embraced by quotes, e.g. "TANDBERG MCU"</i></p> <p><u>sub-commands:</u></p> <p>?? <b>add:</b> adds the specified mcu directory entry to the first vacant entry in the mcu directory list.</p> <p>?? <b>all:</b> lists all nonempty mcu directory entries</p> <p>?? <b>delete:</b> deletes a specified mcu directory entry</p> <p><u>Example of <b>mcudirectory</b> feedback:</u> *P mcudirectory 1 !1 !3 !6 TANDBERG</p>

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#### 4.2.4. Conference Specific Commands

Command:	Description:
<b>assignfloor</b>	<p>Used to assign the floor to a specific site. To see status about the current picture being sent from the MCU use the status command <b>confview</b>.</p> <p><b>assignfloor</b> &lt;confid&gt; &lt;site&gt; ---</p> <p><u>parameters:</u></p> <p>?? <b>confid: 1-3</b> Identifiers referring to the conference.            ?? <b>site: mcuid,termid / off.</b> Id's referring to a given site in the conference. The id's for the sites in the conference can be found using the status command <b>confcalls</b>. Setting <b>site</b> to <b>off</b> will release the floor for the given site.</p>
<b>confprinumber</b>	<p>Defines the isdn pri number to be used when dialling in to a specific conference.</p> <p><b>confprinumber</b> &lt;confid&gt; &lt;number&gt;</p>
<b>confsettings</b>	<p>Used to change conference configurations for a started conference.</p> <p><b>confsettings</b> &lt;confid&gt; <b>conftype</b> &lt;conftype &gt;            or  <b>confsettings</b> &lt;confid&gt; <b>confname</b> &lt;name&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>calltype</b> &lt;calltype&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>restrict</b> &lt;on/off&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>maxvidsites</b> &lt;0-16&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>maxaudsites</b> &lt;0-16&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>password</b> &lt;password&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>encryption</b> &lt;on/off&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>encmode</b> &lt;des/aes128/auto&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>picturemode</b> &lt;picturemode&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>vidformat</b> &lt;vidformat&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>customformats</b> &lt;on/off&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>agc</b> &lt;on/off&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>tlphfilter</b> &lt;on/off&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>inccalls</b> &lt;allow/reject&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>duration</b> &lt;duration&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>welcomemessage</b> &lt;on/off&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>legacylevel</b> &lt;0..15&gt;            or  <b>confsettings</b> &lt;confid&gt; <b>duovideo</b> &lt;on/off&gt;            or</p>

**confsettings <confid> g728 <on/off>**  
 or  
**confsettings <confid> cascadingmode <auto/master/slave>**  
 or  
**confsettings <confid> billingcode <billingcode>**  
 or  
**confsettings <confid> floortofull <on/off>**  
 ---

parameters:

- ?? **confid: 1-3.** Identifier referring to a given conference.
- ?? **conftype: normal.** If the conference is not started, **conftype** will return **undefined**. It is not possible to set **conftype** to **undefined** - **conftype** will be set to **undefined** when the conference is stopped by the command **confstop**.  
*NOTE! To see if the conference is started – check the value of the **conftype** parameter.*
- ?? **name:** Name of the conference. Textstring of maximum 30 characters.
- ?? **calltype: tlph / 1xh221 / 2xh221 / 1b / 2b / 3b / 4b / 5b / 6b / 8b / 12b / 18b / 23b / 30b / h0**
- ?? **password:** Conference password. Textstring of maximum 8 characters – digits only.
- ?? **picturemode: cp4/cp9/cp16/cp5+1/cp7+1/vs/vsauto/cpauto/auto** (*cp* denotes *continuous presence* – *vs* denotes *voice switched*)
- ?? **vidformat: auto/sharpness/motion.**

sub-commands:

- ?? **conftype:** Used to check the value of the **conftype** parameter.
- ?? **confname:** Sets the name of the conference.
- ?? **calltype:** Sets the **calltype** of the conference. When dialing from the MCU all sites will be connected with the **calltype** specified for the conference.  
*NOTE! Sites can join the conference with a lower callrate than the callrate specified for the conference. When dialing out, a lower callrate can be specified when issuing the **dial** command.*
- ?? **restrict:** Sets restrict to **on/off**. If restrict is set to **on**, the MCU will only utilize 56 kb of each ISDN B channel.
- ?? **maxvidsites:** Sets an upper limit to how many video sites that can join the conference.  
*NOTE! This is not a reservation mechanism, i.e. the system does not guarantee that there are enough resources available to reach this limit.*
- ?? **maxaudiosites:** Sets an upper limit to how many audio sites that can join the conference.  
*NOTE! This is not a reservation mechanism, i.e. the system does not guarantee that there are enough resources available to reach this limit.*
- ?? **password:** Sets the conference password. The password is used to restrict access to the conference.
- ?? **encryption:** Sets encryption to **on/off**. If **encryption** is set to **on**, only sites supporting encryption are allowed to join the conference.
- ?? **encmode:** Sets encryption type. If set to **auto** the MCU will allow both sites supporting DES encryption and sites supporting 128 bit AES encryption to join the conference.
- ?? **picturemode:** Sets the **picturemode** parameter. If set to **cp4**, **cp9** or **cp16**, the MCU will send a 4/9/16 split continuous presence image to all the participants. This enables the participants to see 4/9/16 sites at the same time. When set to **cpauto** the MCU will change the continuous presence layout depending on the number of sites connected.  
When set to **vs** the conference will be voice switched, i.e. a full image of the person currently speaking will be sent to all participants. If set to **cp5+1** or **cp7+1** the MCU will send a 6 or 8 split continuous presence

	<p>image with the current speaker displayed in an enlarged window. When set to <b>vsauto</b> or <b>auto</b> the mcu will automatically choose between <b>vs, cp5+1</b> or <b>cp7+1</b> depending on the number of sites connected.</p> <p>?? <b>vidformat:</b> When set to <b>auto</b>, the video quality will be dynamically selected depending on what the endpoints are transmitting and what they are able to receive. If it's set to <b>sharpness</b> the TANDBERG MCU will try to send 4*CIF (704*576 pixels) to all participants. When set to <b>motion</b> the MCU will try to send a CIF (352*288 pixels) image to all participants.</p> <p>?? <b>customformats:</b> Turns support for custom formats (native resolutions like vga, svga, sif and isif) <b>on</b> or <b>off</b> (some older systems may not support this).</p> <p>?? <b>agc:</b> Sets automatic gain control <b>on/off</b>. When set to <b>on</b>, the outgoing audio from all sites will be adjusted to the same volume.</p> <p>?? <b>tlphfilter:</b> Set telephone filter <b>on/off</b>. When set to on the MCU will mute telephone participants until they start speaking. This will improve the audio in the conference.</p> <p>?? <b>inccalls:</b> If set to <b>reject</b>, incoming calls will be automatically rejected. If set to <b>allow</b>, incoming calls are allowed to join the conference.</p> <p>?? <b>duration:</b> Set maximum conference duration in minutes. 10 minutes before the conference is set to end, a clock symbol will be broadcasted to all the participants. When set to 0, call duration is not active.</p> <p>?? <b>welcomemessage:</b> When set to on, participants that enter the conference will hear a welcome message. This welcome message can be customized and uploaded as a WAVE file using the web interface of the MCU.</p> <p>?? <b>legacylevel:</b> To avoid interoperability problems legacy level should be set to a high value.</p> <p>?? <b>duovideo:</b> Enables or disables duovideo support.</p> <p>?? <b>g728:</b> Enables or disables the G728 audio algorithm if supported by the endpoints.</p> <p>?? <b>cascadingmode:</b> Sets the preferred cascading mode when connected to another mcu.</p> <p>?? <b>billingcode:</b> Every call in the conference will be tagged with this code when the call is transferred to the call log (<i>ref. command callhistory</i>).</p> <p>?? <b>floortofull:</b> If floor is assigned to specific site or requested by a specific site, this site will always be displayed in full screen if <b>floortofull</b> is set to <b>on</b>. If <b>floortofull</b> is set to <b>off</b> the site currently having floor will be displayed in <b>cp7+1</b> or <b>cp5+1</b> if this was the layout prior to the floor assign/request operation.</p> <p><u>Example of confsettings feedback:</u></p> <pre>*S confsettings 3 confname Test1 *S confsettings 3 calltype 6b *S confsettings 3 restrict off *S confsettings 3 maxaudsites 8 *S confsettings 3 maxvidsites 8 *S confsettings 3 password "" *S confsettings 3 encryption off *S confsettings 3 encmode auto *S confsettings 3 picturemode auto *S confsettings 3 vidformat auto *S confsettings 3 customformats on *S confsettings 3 agc on *S confsettings 3 tlphfilter on *S confsettings 3 inccalls allow *S confsettings 3 duration 0 *S confsettings 3 entryexittones on *S confsettings 3 welcomemessage on *S confsettings 3 legacylevel 0</pre>
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	<p>*S confsettings 3 duovideo on  *S confsettings 3 g728 on  *S confsettings 3 cascadingmode auto  *S confsettings 3 floortofull on  *S confsettings 3 billingcode ""</p> <p><i>NOTE! This command will return *R response feedback if it is not accepted by the system – ref. ch.4.1.2.</i></p>
<b>confstart</b>	<p>Starts a new conference. The conference will be configured with the current <b>conftemplate</b> settings. The conference settings can be changed by the command <b>confsettings</b> after the conference is started.</p> <p>To list the current conference settings, issue the <b>confsettings</b> command with no parameters. If <b>conftype</b> is set to <b>normal</b> the conference is said to be <i>started</i>. If the conference is <i>not started</i> <b>conftype</b> is set to <b>undefined</b>.</p> <p><b>confstart &lt;confid&gt;</b>  ---</p> <p><u>parameters:</u>  ?? <b>confid: 1-3.</b> Identifier referring to a given conference to be started.</p> <p><i>NOTE! This command will return *R response feedback if it is not accepted by the system – ref. ch.4.1.2.</i></p>
<b>confstop</b>	<p>Stops the conference. All sites have to be disconnected before the conference can be stopped.</p> <p><b>confstop &lt;confid&gt;</b>  ---</p> <p><u>parameters:</u>  ?? <b>confid: 1-3.</b> Identifier referring to a given conference to be stopped.</p> <p><i>NOTE! This command will return *R response feedback if it is not accepted by the system – ref. ch.4.1.2.</i></p>
<b>dial</b>	<p>Used to dial a specific number, directory entry or mcudirectory entry.</p> <p><b>dial &lt;confid&gt; &lt;number[**2ndNumber][*subaddress]&gt; [calltype[r]] [profile]</b>  or  <b>dial &lt;confid&gt; l&lt;n&gt;</b>  or  <b>dial &lt;confid&gt; m&lt;n&gt;</b>  ---</p> <p><u>parameters:</u>  ?? <b>confid: 1-3.</b> Identifier referring to a given conference.  ?? <b>number:</b> The phone number to be dialed. If setting up a H221 call, two numbers can be supplied separated by **. A subaddress or TCS-4 address can be added to the number string. An * should be used to separate the <b>subaddress</b> from the <b>number</b>.  ?? <b>calltype: tlph / 1xh221 / 2xh221 / 1b / 2b / 3b / 4b / 5b / 6b / 8b / 12b / 18b / 23b / 30b / h0 / auto.</b> An optional <b>r</b> can be added after the calltype parameter to denote a <i>restricted</i> call.  ?? <b>profile: p1/p2/p3/p4/p5/p6.</b> Selects one of the predefined netprofiles, ref. command <b>netprofile</b>.  ?? <b>n:</b> Refers to a directory entry number (prefix <b>l</b>) or a multi dial directory number (prefix <b>m</b>).</p>

	<p><i>NOTE! This command will return *R response feedback if it is not accepted by the system – ref. ch.4.1.2.</i></p>
<b>disc</b>	<p>Disconnects a given site from the conference.</p> <p><b>disc &lt;confid&gt; &lt;callid /all&gt;</b></p> <p>---</p> <p><u>parameters:</u></p> <p>?? <b>confid: 1-3.</b> Identifier referring to a given conference.</p> <p>?? <b>callid: 1..16/32.</b> Id referring to a given site in the conference. The id's for the sites in the conference can be found using the status command <b>confcalls</b>. The argument <b>all</b> disconnects all sites in the conference.</p>
<b>mutesite</b>	<p>Used to mute or unmute a given site in a conference</p> <p><b>mutesite &lt;confid&gt; &lt;callid&gt; &lt;on/off&gt;</b></p> <p>---</p> <p><u>parameters:</u></p> <p>?? <b>confid: 1-3.</b> Identifier referring to a given conference.</p> <p>?? <b>callid: 1..16/32.</b> Id referring to a given site in the conference. The call id's for the sites in the conference can be found using the status command <b>confcalls</b>.</p>

#### 4.2.5. System Status Commands

Command:	Description:
<b>callhistory</b>	<p>Used to list call related information for the last 20 calls.</p> <p><b>callhistory [logid]</b></p> <p>Status format:  <b>callhistory &lt;logid&gt; &lt;logtag&gt; &lt;conflogtag&gt; &lt;remote numb.&gt; &lt;call-dir&gt; &lt;chan&gt; &lt;causecode&gt; &lt;time&gt; &lt;inc. restrict&gt; &lt;outg. restrict&gt; &lt;inc. encrypt. stat&gt; &lt;outg. encrypt. stat&gt; &lt;billingcode&gt;</b>            ---</p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>logid: 1..20.</b> Id referring to a disconnected call. The last disconnected call will have id 1.</li> <li>?? <b>logtag:</b> Unique number identifying the disconnected call.</li> <li>?? <b>conflogtag:</b> Unique identifier of the corresponding conference that the call was part of – ref. <b>confhistory</b>.</li> <li>?? <b>remote numb:</b> The remote sites ISDN number.</li> <li>?? <b>call-dir: incoming/outgoing.</b></li> <li>?? <b>chan: speech / h221-&lt;chan&gt; / bonding-&lt;chan&gt; / h0-384,</b> where <b>chan</b> indicates number of B channels.</li> <li>?? <b>causecode:</b> Standard ISDN cause code. The cause codes can be used to find out why the call was disconnected (255 if no valid code).</li> <li>?? <b>time:</b> Total calltime in seconds.</li> <li>?? <b>inc. restrict: restrict / norestrict.</b> Indicates if the incoming call was restricted. Restricted calls only utilize 56kb out of an ISDN 64kb channel.</li> <li>?? <b>outg. restrict: restrict / norestrict.</b> Indicates if the outgoing call was restricted.</li> <li>?? <b>inc. encrypt. stat: off/idle/des/aes128/negotiate.</b> Indicates incoming encryption status.</li> <li>?? <b>outg. encrypt. stat: off/idle/des/aes128/negotiate.</b> Indicates outgoing encryption status.</li> <li>?? <b>billingcode:</b> The billing code defined for the conference that the call was part of.</li> </ul> <p><u>Example of callhistory feedback:</u>  <i>*S callhistory 1 42 1 6090 outgoing bonding-2b 16 39Sec norestrict norestrict off off 1</i></p>
<b>callstatus</b>	<p>Returns status of current calls</p> <p><b>callstatus [callid]</b></p> <p>Status format:  <b>callstatus &lt;callid&gt; &lt;direction&gt; &lt;type&gt; &lt;status&gt; &lt;cause&gt; &lt;time&gt;</b>            ---</p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>callid: 1..16/32.</b> Identifier referring to a call.</li> <li>?? <b>direction: incoming/outgoing.</b></li> <li>?? <b>type: idle / speech / h221 / H0 / bonding</b></li> <li>?? <b>status: idle / answering / calling / connected / disconnecting / disconnected</b></li> <li>?? <b>cause:</b> Standard ISDN cause code. The cause codes can be used to find out why the call was disconnected (255 if no valid code).</li> <li>?? <b>time:</b> connect time in seconds.</li> </ul>

	<p><u>Example of callstatus feedback:</u> *S callstatus 1 outgoing bonding connected 255 2446Sec</p>
<b>chanstat</b>	<p>Used to list channel status information for the PRI interface.</p> <p><b>chanstat [pri interface] [channel]</b></p> <p>Status format: <b>chanstat &lt;PRI interface&gt; &lt;channel&gt; &lt;channel-status&gt; &lt;calling-number&gt; &lt;causeLoc&gt;:&lt;chanCause&gt; &lt;connection-time(sec)&gt;</b> ---</p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>PRI interface: a/b/c/d.</b> Letters identifying the different PRI interfaces. <ul style="list-style-type: none"> <li>o <b>a:</b> PRI interface 1</li> <li>o <b>b:</b> PRI interface 2</li> <li>o <b>c:</b> PRI interface 3</li> <li>o <b>d:</b> PRI interface 4</li> </ul> </li> <li>?? <b>channel: 1..31(E1 -PRI), 1..24(T1 -PRI)</b></li> <li>?? <b>channel-status: idle / answering / calling / connect / disconnecting / disconnected</b></li> <li>?? <b>calling-number:</b> Remote number. (" " if no valid number)</li> <li>?? <b>causeLoc:</b> Standard ISDN cause location value (255 indicates no valid code).</li> <li>?? <b>chanCause:</b> Standard ISDN cause value (255 indicates no valid code).</li> <li>?? <b>connection-time(sec):</b> Connection time in seconds.</li> </ul> <p><u>Example of chanstat feedback:</u> *S chanstat a 28 connect 123456789 255:255 334Sec</p>
<b>confcascadingstat</b>	<p>Returns the actual cascading mode for the conference.</p> <p><b>confcascadingstatus [confid]</b></p> <p>Status format: <b>confcascadingstatus &lt;confid&gt; &lt;master/slave/standalone&gt;</b></p>
<b>confcalls</b>	<p>Lists the active calls in the conference.</p> <p><b>confcalls [confid]</b></p> <p>Status format: <b>confcalls &lt;confid&gt; &lt;callid&gt; &lt;mcuid,termid&gt; &lt;view&gt; &lt;termname&gt; &lt;termnumber&gt; &lt;mute&gt;</b> ---</p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>confid: 1/2/3.</b> Identifier referring to the conference.</li> <li>?? <b>callid: 1..16/32.</b> Identifier referring to a call.</li> <li>?? <b>mcuid:</b> Unique id identifying the MCU.</li> <li>?? <b>termid:</b> Unique id for a call connected to the MCU.</li> <li>?? <b>view: 0..16.</b> This parameter indicates which sub-picture in a continuous presence layout that the given site is displayed. If the site is currently not displayed <b>view</b> is set to <b>0</b>. In voice switched mode, floor request mode or floor assign mode, <b>view</b> is set to <b>1</b> for the current site. <i>NOTE! The sub-pictures are numbered from the upper left corner to the right.</i></li> <li>?? <b>termname:</b> The terminal's name.</li> </ul>

	<p>?? <b>termnumber:</b> The terminal's number.</p> <p>?? <b>mute: on/off.</b> Indicates if the MCU has muted the specified participant.</p> <p><u>Example of confcalls feedback:</u>  <i>*S confcalls 1 5 85,5 1 "Democodec_5" "8685" off</i></p>
<b>confhistory</b>	<p>Used to list conference related information for the last 20 conferences.</p> <p><b>confhistory [logid]</b></p> <p>Status format:  <b>confhistory &lt;logid&gt; &lt;logtag&gt; &lt;conftype&gt; &lt;calltype&gt; &lt;restrict&gt; &lt;encryption&gt;  &lt;duration&gt; &lt;name&gt; &lt;password&gt;</b>  ---</p> <p><u>Parameters:</u></p> <p>?? <b>logid: 1..20.</b> Id referring to a stopped conference. The last stopped conference will have id 1.</p> <p>?? <b>logtag:</b> Unique number identifying the conference.</p> <p>?? <b>conftype: normal</b></p> <p>?? <b>calltype: t1ph / 1xh221 / 2xh221 / 1b / 2b / 3b / 4b / 5b / 6b / 8b / 12b / 18b / 23b / 30b / h0</b></p> <p>?? <b>restrict: on/off</b></p> <p>?? <b>encryption: on/off</b></p> <p>?? <b>duration:</b> Conference duration in minutes.</p> <p>?? <b>name:</b> The stopped conference's name.</p> <p>?? <b>password:</b> The stopped conference's password.</p> <p><u>Example of confhistory feedback:</u>  <i>*S confhistory 1 1 normal 6b off off 60 "TANDBERG" "12345678"</i></p>
<b>confview</b>	<p>Gives information about the given conference view, i.e. the picture sent from the MCU.</p> <p><b>confview [confid]</b></p> <p>Status format:  <b>confview &lt;confid&gt; &lt;viewmode&gt; &lt;current&gt; &lt;previous&gt;</b>  ---</p> <p><u>Parameters:</u></p> <p>?? <b>confid: 1.</b> Identifier referring to the conference.</p> <p>?? <b>viewmode: : cp4 / cp9 / cp16 / cp5+1 / cp7+1 / vs / floor -req / floor -assign</b></p> <p>?? <b>current: mcuid,termid.</b> Indicates which site currently being displayed. <b>termid</b> is set to <b>0</b> in continuous presence mode.</p> <p>?? <b>previous: mcuid,termid.</b> Indicates the previously displayed site.</p> <p><u>Example of confview feedback:</u>  <i>*S confview 1 cp9 85,0 85,0</i></p>
<b>encstatus</b>	<p>Returns encryption status for the active calls.</p> <p><b>encstatus [callid]</b></p> <p>Status format:  <b>encstatus &lt;callid&gt; &lt;incomingstat&gt; &lt;outgoingstat&gt; &lt;check-code&gt;</b>  ---</p>

	<p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>callid:</b> 1..16/32. Identifier referring to a call.</li> <li>?? <b>incomstat:</b> off/idle/des/aes128/negotiate</li> <li>?? <b>outgoingstat:</b> off/idle/des/aes128/negotiate</li> <li>?? <b>check-code:</b> Key that can be manually presented by the participants to confirm secure connection</li> </ul> <p><u>Example of encstatus feedback:</u>  <i>*S encstatus 11 des des 9FE389C8F664F3F5</i></p>
<b>h323gkstatus</b>	<p>Returns current gatekeeper status.</p> <p><b>h323gkstatus</b></p> <p>Status format:  <b>h323gkstatus &lt;ipaddress&gt; &lt;ip port&gt; &lt;status&gt;</b>  ---</p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>ipaddress:</b> The IP address of the gatekeeper that the MCU is currently registered to.</li> <li>?? <b>port:</b> The IP port on the gatekeeper used to connect to the MCU.</li> <li>?? <b>status:</b> registered/unregistered/regfailed</li> </ul> <p><u>Example of h323gkstatus feedback:</u>  <i>*P h323gkstatus 10.0.0.30 1719 registered</i></p>
<b>ipcallchanstatus</b>	<p>Returns IP static information for all active calls.</p> <p><b>ipcallchanstatus</b></p> <p>Status format:  <b>ipcallchanstatus &lt;callid&gt; &lt;protocol&gt; &lt;chantype&gt; &lt;direction&gt;</b>  <b>&lt;remoteip:remoteport&gt; &lt;localip:localport&gt; &lt;encryption&gt; &lt;rsvp&gt; &lt;rsvp rate&gt;</b>  ... </p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>callid:</b> 1..16/32. Identifier referring to a call.</li> <li>?? <b>protocol:</b> h323.</li> <li>?? <b>chantype:</b> audio/video/data/duo.</li> <li>?? <b>direction:</b> incoming/outgoing.</li> <li>?? <b>remoteip:</b> Remote IP address.</li> <li>?? <b>remoteport:</b> Remote IP port.</li> <li>?? <b>localip:</b> Local IP address.</li> <li>?? <b>localport:</b> Local IP port.</li> <li>?? <b>encryption:</b> on/off/des/aes128</li> <li>?? <b>rsvp:</b> on/off. Indicates if resource reservation (RSVP) protocol is turned on or off</li> </ul> <p><u>Example of ipcallchanstatus feedback:</u>  <i>*P ipcallchanstatus 1 h323 audio incoming 10.0.4.191 10.0.5.222:2326 off off 0</i>  <i>*P ipcallchanstatus 1 h323 audio outgoing 10.0.4.191:49170 10.0.5.222:2334 off off 0</i>  <i>*P ipcallchanstatus 1 h323 video incoming 10.0.4.191 10.0.5.222:2328 off off 0</i>  <i>*P ipcallchanstatus 1 h323 video outgoing 10.0.4.191:49172 10.0.5.222:2336 off off 0</i>  <i>*P ipcallchanstatus 1 h323 data incoming unknown:unknown unknown:unknown off off 0</i></p>

	<p><i>*P ipcallchanstatus 1 h323 data outgoing unknown:unknown unknown:unknown off off 0</i></p> <p><i>*P ipcallchanstatus 1 h323 duo incoming unknown:unknown unknown:unknown off off 0</i></p> <p><i>*P ipcallchanstatus 1 h323 duo outgoing unknown:unknown unknown:unknown off off 0</i></p>
<b>ipcallstatistics</b>	<p>Returns IP dynamic information for all active calls.</p> <p><b>ipcallstatistics</b></p> <p>Status format:  <b>ipcallstatistics &lt;callid&gt; &lt;protocol&gt; &lt;chantype&gt; &lt;direction&gt; &lt;rate&gt; &lt;sent received&gt; &lt;loss&gt; &lt;jitterms&gt;</b>  ---</p> <p><u>Parameters:</u></p> <p>?? <b>callid: 1..16/32.</b> Identifier referring to a call.  ?? <b>protocol: h323.</b>  ?? <b>chantype: audio/video/data/duo.</b>  ?? <b>direction: incoming/outgoing.</b>  ?? <b>rate:</b> Actual call rate in kilobits.  ?? <b>sent:</b> Number of IP packets sent.  ?? <b>received:</b> Number of IP packets received.  ?? <b>loss:</b> Number of IP packets lost.  ?? <b>jitterms:</b> Jitter in milliseconds.</p> <p><u>Example of ipcallstatistics feedback:</u></p> <p><i>*P ipcallstatistics 2 h323 audio incoming 640 2736 0 1</i>  <i>*P ipcallstatistics 2 h323 audio outgoing 640 2713 0 0</i>  <i>*P ipcallstatistics 2 h323 video incoming 560 1346 0 26</i>  <i>*P ipcallstatistics 2 h323 video outgoing 2290 1830 0 0</i>  <i>*P ipcallstatistics 2 h323 data incoming 0 0 0 0</i>  <i>*P ipcallstatistics 2 h323 data outgoing 3 0 0 0</i></p>
<b>ipstat</b>	<p>Gives LAN interface information</p> <p><b>ipstat [LAN interface]</b></p> <p>Status format:  <b>ipstat &lt;LAN interface&gt; &lt;ip addr&gt; &lt;subn. mask addr&gt; &lt;gateway addr&gt; &lt;MAC addr&gt; &lt;ipspeed&gt;</b>  ---</p> <p><u>Parameters:</u></p> <p>?? <b>LAN interface: 1.</b> Number identifying the LAN interface.  ?? <b>ip addr:</b> Current ip address.  ?? <b>subn. mask addr:</b> Current subnet mask ip address.  ?? <b>gateway addr:</b> Current gateway address.  ?? <b>MAC addr:</b> Current MAC address.  ?? <b>ipspeed:</b> Current ip speed.</p> <p><u>Example of ipstat feedback:</u></p> <p><i>*S ipstat 1 10.0.5.99 255.255.0.0 10.0.0.1 00:50:60:7F:FA:5B 10full</i></p>
<b>pristatus</b>	<p>Gives PRI interface information.</p> <p><b>pristatus [PRI interface]</b></p> <p>Status format:</p>

	<p><b>pristatus</b> &lt;PRI interface&gt; &lt;status&gt; &lt;total numb. of chans&gt; &lt;B chans free&gt; &lt;H0 chans free&gt;</p> <p>---</p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>PRI interface: a/b/c/d.</b> Letters identifying the different PRI interfaces. <ul style="list-style-type: none"> <li>o a: PRI interface 1</li> <li>o b: PRI interface 2</li> <li>o c: PRI interface 3</li> <li>o d: PRI interface 4</li> </ul> </li> <li>?? <b>status: disabled / red alarm / blue alarm / yellow alarm / synced / active</b></li> <li>?? <b>total numb. of channels:</b> Total number of ISDN B channels.</li> <li>?? <b>B chans free:</b> Total number of free B channels, i.e. B channels currently not in use.</li> <li>?? <b>H0 chans free:</b> Total number of free H0 channels, i.e. H0 channels currently not in use.</li> </ul> <p><u>Example of pristatus feedback:</u>  <i>*S pristatus b active 30 24 3</i></p>
<b>statin</b>	<p>Gives status for incoming calls.</p> <p><b>statin</b> [callid]</p> <p>Status format:  <b>statin</b> &lt;callid&gt; &lt;call-dir&gt; &lt;call-state&gt; &lt;restrict&gt; &lt;chan&gt; &lt;audio&gt; &lt;vidmode&gt; &lt;vidres&gt; &lt;duores&gt;</p> <p>---</p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>callid: 1..16/32.</b> Identifier referring to a call.</li> <li>?? <b>call-dir: incoming/outgoing</b></li> <li>?? <b>call-state: idle/syncing/capex/unframed/speech/disconn/synced</b></li> <li>?? <b>restrict: idle/norestrict/restrict</b></li> <li>?? <b>chan: unknown / idle / speech / h221-&lt;chan&gt; / bonding-&lt;chan&gt; / h0-384 / h323 &lt;chan&gt;.</b> Chan indicates number of B channels.</li> <li>?? <b>audio: unknown / idle / g728 / g722 / g722.1 / g711 / auoff</b></li> <li>?? <b>vidmode: unknown / vidoff / h261 / h263 / h264</b></li> <li>?? <b>vidres: unknown / cif / qcif / sqcif / 4cif / sif / 4sif // vga / svga / xga</b></li> <li>?? <b>duores: cif / qcif / sqcif / 4cif / sif / 4sif / vga / svga / xga</b></li> </ul> <p><u>Example of statin feedback:</u>  <i>*S statin 1 outgoing sstatinynced norestrict h323-1920 g722 h263 cif unknown</i>  <i>*S statin 1 outgoing synced norestrict h323-1920 g722 h263 cif unknown</i></p>
<b>statout</b>	<p>Gives status for outgoing calls.</p> <p><b>statout</b>[callid]</p> <p>Status format:  <b>statout</b>&lt;callid&gt; &lt;call-dir&gt; &lt;call-state&gt; &lt;restrict&gt; &lt;chan&gt; &lt;audio&gt; &lt;vidmode&gt; &lt;vidres&gt; &lt;duores&gt;</p> <p>---</p> <p><u>Parameters:</u></p> <ul style="list-style-type: none"> <li>?? <b>callid: 1..16/32.</b> Identifier referring to a call.</li> <li>?? <b>call-dir: incoming/outgoing</b></li> <li>?? <b>call-state: idle/syncing/capex/unframed/speech/disconn/synced</b></li> <li>?? <b>restrict: idle/norestrict/restrict</b></li> </ul>

	<p>?? <b>chan:</b> unknown / idle / speech / h221-&lt;chan&gt; / bonding-&lt;chan&gt; / h0-384 / h323 &lt;chan&gt;, where <b>chan</b> indicates number of B channels.</p> <p>?? <b>audio:</b> unknown / idle / g728 / g722 / g722.1 / g711 / auoff</p> <p>?? <b>vidmode:</b> unknown / vidoff / h261 / h263 / h264</p> <p>?? <b>vidres:</b> unknown / cif / qcif / sqcif / 4cif / sif / 4sif / vga / svga / xga</p> <p>?? <b>duores:</b> cif / qcif / sqcif / 4cif / sif / 4sif / vga / s vga / xga</p> <p><u>Example of <b>statout</b> feedback:</u></p> <p><i>*S statout 1 outgoing synced norestrict h323-768 g722 h263 cif unknown</i></p> <p><i>*S statout 2 outgoing synced norestrict bonding-30b g722 h263 cif unknown</i></p>
<b>temp</b>	<p>Gives system temperature in Celsius and Fahrenheit.</p> <p><b>temp</b></p> <p>Status format:  <b>temp &lt;degrees Celsius&gt; &lt;degrees Fahrenheit&gt;</b></p>

#### 4.2.6. Debug Commands

Command:	Description:
<b>eventlog</b>	<p>The eventlog records every reboot done by the system. The log can be used to find out why it is rebooting. The complete eventlog can be downloaded from the embedded FTP server. In addition you can now list all the entries of the file, using this API command. If no parameter is provided, the last 20 lines are dumped.</p> <p><b>eventlog [n/all]</b></p> <p><u>Parameters</u></p> <p>?? <b>n:</b> Number of lines from the end of the eventlog to dump out on the API.          ?? <b>all:</b> List all entries in the eventlog</p> <p>The eventlog will be deleted when you physically turn off the power of the system.</p>
<b>dumph221</b>	<p>Dumps the H.221 log of the last call. Data will be dumped to the API Command Interface that issued the command.</p> <p><b>dumph221 [0..15/reset]</b></p> <p>---</p> <p><u>Parameters:</u></p> <p>?? <b>0..15:</b> id referring to a video site.          ?? <b>reset:</b> Resets the MCU's H.221 buffer. The buffer will now be filled up with new H221 data.</p>
<b>isdntrace</b>	<p>Causes D-channel information (layer 2 and 3) for the specified ISDN lines to be output to the API Command Interface that issued the command.</p> <p><b>isdntrace [PRI interface] &lt;on/off&gt;</b></p> <p>---</p> <p><u>Parameters:</u></p> <p>?? <b>PRI interface:</b> 1/2/3/4. Identifiers referring to the different PRI interfaces.</p>
<b>syslog</b>	<p>Enables a real-time log of Bonding, H.221 and H.323 activity.  <b>Note!</b> When used for H.323 activity the command must be issued through Telnet.</p> <p><b>syslog &lt;on/off&gt;</b></p>
<b>ping</b>	<p>Standard ping command. Used to check if a unit on the network is reachable.</p> <p><b>ping &lt;ipaddress&gt;</b></p> <p>Example of <b>ping</b> feedback:  <i>ping: 192.168.1.10 is alive (10 ms)</i></p>
<b>traceroute</b>	<p>Standard traceroute command. Used to find out routing information to specified IP address.</p> <p><b>traceroute &lt;ipaddress&gt;</b></p> <p><u>Example of traceroute:</u>  <i>traceroute to 12.35.161.100, 30 hops max</i>          1 10.0.0.1 (10 ms)          2 193.212.161.65 (20 ms)          3 146.172.164.129 (40 ms)          4 194.248.135.61 (40 ms)          5 146.172.206.21 (40 ms)</p>

6	146.172.254.249 (40 ms)
7	146.172.248.5 (40 ms)
8	146.172.248.9 (40 ms)
9	146.172.248.1 (40 ms)
10	146.172.248.62 (40 ms)
11	217.70.229.33 (40 ms)
12	213.248.78.1 (40 ms)
13	213.248.66.89 (40 ms)
14	213.248.65.25 (50 ms)
15	213.248.64.10 (150 ms)
16	12.122.10.49 (170 ms)
17	12.122.11.170 (170 ms)
18	213.248.80.6 (170 ms)
19	12.122.10.54 (170 ms)
20	213.248.84.70 (170 ms)
21	12.122.11.205 (170 ms)
22	12.123.194.33 (170 ms)
23	12.124.232.138 (170 ms)

### 4.2.7. Special Commands

<b>Command:</b>	<b>Description:</b>
<b>boot</b>	Reboots the system.  <b>boot</b>
<b>dispparam</b>	Lists all parameter settings.  <b>dispparam</b>
<b>feedback</b>	Turns feedback on system changes on / off.  <b>feedback [type] &lt;on/off&gt;</b> ---  <u>Parameters:</u> ?? <b>type: parameter/status</b>  <u>Example of <b>feedback</b> feedback:</u> <i>*P feedback off</i>
<b>help</b>	Displays the help menu.  <b>help</b>
<b>netstat</b>	Lists network connections and routing tables.  <b>netstat</b>

### 4.3. API Command Storage

Note that some of the API commands are pure status commands. These commands have no storage in the system. Other types like dial also have no storage in the system.

Listed below are the commands and how they are stored. The following definitions are used:

**level 0:** No storage (RAM). Does not survive boot or any of the “defvalues” combinations.

**level 1:** Normal storage (EEPROM). Survives boot, but none of the “defvalues” combinations.

**level 2:** Normal storage (EEPROM). Survives boot and “defvalues set”. Does not survive “defvalues set all”.

**level 3:** Same as level 2.

**level 4:** Survives everything, except software upgrade

Command	Storage	Command	Storage	Command	Storage
assignfloor	no storage	h264	level 1	pardial	no storage
boot	no storage	h323alias	level 3	pricable	level 1
callhistory	level 0	h323gatekeeper	level 3	prichan	level 3
callstatus	no storage	h323gkstatus	no storage	prirc4	level 3
chanstat	no storage	help	no storage	prinet	level 3
confcalls	no storage	ipaddress	level 3	pristatus	level 3
confhistory	level 0	ipassignment	level 3	sendnum	level 4
confprinumbr	level 3	ipcallchanstatus	no storage	services	level 1
confsettings	no storage	ipcallstatistic	no storage	snmp	level 1
confstart	no storage	ipmtu	level 1	sport	level 3
confstop	no storage	ippassword	level 3	statin	level 3
conftemplate	level 1	ipqos	level 3	statout	no storage
confview	no storage	ipspeed	level 2	syslog	no storage
defvalues	no storage	ipstat	no storage	systemname	no storage
dial	no storage	isdnprot	level 3*	temp	level 2
directory	level 1	isdntrace	no storage	traceroute	no storage
disc	no storage	mutesite	no storage		no storage
dispparam	no storage	mcudirectory	level 1		
dumph221	no storage	netprofile	level 3		
encstatus	no storage	netstat	no storage		
eventlog	no storage	optionkey	level 3		
feedback	no storage	ping	no storage		

\*Except sub command sendcomplete: level 1

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