



SMS Management Commands

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Purpose

This TechNote describes the SMS management commands available in Ctek's Controller products.

Background

Short Message Service (SMS) commands offer Ctek users an alternative method of performing basic management tasks over wireless networks. Since SMS moves on the control or signaling portion of the networks air interface SMS commands can many times be used to reach units that are unable to make a bearer channel (IP) connection.

The SMS protocol was designed to move short text strings between terminal devices (handsets) on a single network. To achieve interoperability many network operators have deployed SMS gateways that bridge SMS traffic between networks. In many cases, the network's SMS gateway also provides email and Instant Messaging (IM) interfaces. Since the formatting of SMS messages to and from these alternative client programs is not defined by the SMS standards, variations in the message format and presentation should be expected. Ctek cannot guarantee the reliability of SMS (text message) commands that do not originate on a mobile handset.

Addressing

SMS traffic to and from Ctek Controllers is addressed by the unit's phone number, MDN or MSISDN depending to the network technology.

Command Format

Commands are single words, sometimes accompanied by variables or arguments. Commands may be upper or lower case. All commands should be prefaced with three equals signs.

*Example.: **===BOOT** or **===port 21 3***



Note – Prior to release 4.2 the three preceding equal signs were optional. They are **now mandatory**. All commands can be entered in upper or lower case.

Commands

BOOT

This command causes the addressed controller to perform a restart.

STATUS

This command causes the controller to return a basic level of status information. The information is returned to the sending device or client program as appropriate. Due to the vagaries of email and IM client interfaces Ctek recommends extensive testing before relying on a particular interface.

The Ctek Controller's response to a **Status** command is in the form shown below. Individual field definitions follow in italicized text.

Parameter	Description
RSSI	Signal strength
SID	Network System ID to which the unit is currently connected
CTP	Call Type – Mobile IP, Packet Relay, etc.
CST	Call Status
IP	Internet Protocol (IP) address assigned to bearer channel
RST	Ctek proprietary information

Example:

```
-90dBm  
2  
None  
Dormant  
166.139.104.35  
100000
```

WAKE

This command causes the addressed controller to update its assigned DDNS servers

RO

This command deactivates the discrete (relay) output

R1

This command activates the discrete (relay) output

ENABLE

When a device using the WAN management feature reaches its data usage threshold, and if the Disable selection has been made, the device will disable its WAN connection through the cellular network. A log entry of this event is made. To re-enable the WAN data connection a text message containing the word ENABLE may be sent to the controller. Upon receiving this command the controller will re-enable its data connection and perform a restart. This event is also logged.

PORT n t

This command opens a firewall port for a specified period of time. PORT is the command, **n** is the port number, and **t** is the length of time in minutes. Example: ===port 23 3 opens port 23 (Telnet) for 3 minutes.

GPS

This command returns latitude and longitude in a decimal format. The internal GPS must be enabled and have a usable signal in order for this command to work.



Note – The PORT and GPS commands were introduced with release CK415_4_01_06. They did not exist prior to that release.

SET i/o x y

This command can be used to set (write) a value to any I/O pin available in the Automation Control application. The format is ===SET followed by the pin type (i = input, o = output), followed by the pin number, followed by the value. Example: to set output pin 17 to a value of 3.14 the entire SMS transmission would be ===SET o 17 3.14. Spaces are used as field separators.

GET i/o x

This command can be used to get (read) the value of any I/O pin available in the Automation Control application. The format is ===GET followed by the pin type (i = input, o = output), followed by the pin number. Example: To read the value of input pin 7 the entire SMS transmission would be ===GET i 7.

ADMIN

When the TCOPlus intrusion detection feature is enabled the administrative web interface is locked after three failed login attempts. The `===ADMIN` command sent to a box with a locked *administrative interface will re-enable the admin web server.*

SMS Performance and Reliability

Messages originating from a handset operating on the same network as the Ctek Controller have proven to be highly reliable. However, SMS traffic is not guaranteed delivery and might, depending on the performance of the network, take as long as a few minutes to arrive.

Many network operators provide a SMS gateway capability between their network and other networks operating in that market. If your network operator provides this capability you will probably be able to send commands from terminals on other networks. Inter-network SMS traffic can encounter additional delays at the gateway. Ctek recommends you talk to your network provider as well as performing your own tests.

Messages originating from email clients works in many cases but you will need to conduct testing with the specific email client as formatting issues can cause problems. In addition some email interfaces are unidirectional, supporting only messaging to the wireless terminal device.

SMS traffic originated at web sites or through the various Instant Messaging clients is the least reliable mechanism since the format of these messages can vary widely and is subject to change without notification; test, test, test if you wish to use this type of messaging client.

Command Summary

Parameter	Command
Restart/Reboot unit	===BOOT
Obtain Status From unit	===STATUS
Cause unit to Register with DDNS	===WAKE
Open a firewall port <u>n</u> for <u>t</u> minutes	===PORT n t
Obtain GPS coordinates from unit	===GPS
Turn on relay	===R1
Turn off relay	===R0
Override WAN usage limit	===ENABLE
Set automation pin <u>i/o x</u> to value <u>y</u>	===SET i/o x y
Read automation pin <u>x</u>	===GET i/o x
Restore screens after Intrusion	===ADMIN