



SPECIFICATIONS KEROS SMS COMMANDS

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HISTORY

| Date | Modification | Author | Version |
|------------|--|------------------|---------|
| 2019/06/13 | - Initial release - Describe SMS previously described in DRD Wiki. - Corresponds to 4.1.2 firmware | Christophe Ronco | 0.1 |
| 2019/06/14 | - Approved - Fixed title numbering | Christophe Ronco | 0.2 |
| 2019/06/20 | - Fixed add_operator example (APN can't be empty) - Changed Validator | Christophe Ronco | 0.3 |
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TABLE OF CONTENT

| | |
|--|---|
| Specifications Keros SMS commands..... | 1 |
| History..... | 1 |
| Table of content..... | 2 |
| Reference..... | 3 |
| Glossary..... | 3 |
| Introduction..... | 4 |
| 1Command syntax..... | 4 |
| 2Response syntax..... | 4 |
| 3Special SMS..... | 5 |
| 3.1System commands..... | 5 |
| 3.2Configuration commands..... | 5 |
| 3.2.1Get value commands..... | 6 |
| 3.2.2Set value commands..... | 8 |
| End of document..... | 9 |

REFERENCE

| Reference | Document / link | Description |
|-----------|-----------------|-------------|
| | | |
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GLOSSARY

| Abbreviation | Description |
|--------------|-------------------------------------|
| SMS | Short Message Service |
| DHCP | Dynamic Configuration Host Protocol |
| IP | Internet Protocol |
| LAN | Local Area Network |
| Wi-Fi | Wireless-Fidelity |
| WLAN | Wireless LAN |

Introduction

Some SMS received by gateways with Keros firmware are interpreted as commands used to take special actions on gateway or to configure gateway. This document describes these special SMS.

1 Command syntax

SMS received by gateway are read to see if they are special SMS or just standard text SMS. All SMS command will follow the same pattern :

```
[login:password] [command_id] command field value
```

With:

- **login**: the login use for the board configuration (admin)
- **password**: the password of the configuration user (pwd4admin by default)
- **command_id**: a six characters identification for the command to be sent
- **command**: the command to be executed with '/' separated fields
- **field**: the configuration field to be set/get (optional)
- **value**: the value that has to be set to a configuration field (optional)

2 Response syntax

Each time an SMS command is received, a response is sent (by SMS, using the same modem). All SMS responses use the same syntax:

```
[command_id:command_status] value
```

With :

- **command_id**: the value of this field is equal to the value of the command_id field used in the command. The purpose of this field is to match the command with the reponse
- **command_status**: ok or error
- **value**: SMS error information (if command_status is error) or value (for get configuration commands)

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3 Special SMS

3.1 System commands

| Description | command | field | value |
|--------------------------|-----------------------|-------|-------|
| Halt the board | system/halt | N/A | N/A |
| Reboot the board | system/reboot | N/A | N/A |
| Request a board update | system/update | N/A | N/A |
| Request a backup restore | system/restore/backup | N/A | N/A |
| Request a stock restore | system/restore/stock | N/A | N/A |

Sending update, restore stock and restore backup SMS commands will only set up a flag used to record the request.

The action will only be triggered only **after a board reboot**. Reboot the board manually or by sending a reboot SMS command.

Examples:

- Reboot command:

#SMS sent to the gateway

```
[admin:pwd4admin] [reboot] system/reboot
```

#SMS response from the gateway

```
[reboot:ok]
```

- Restore stock command with wrong password:

#SMS sent to the gateway

```
[admin:badpassword] [rstock] system/restore/stock
```

#SMS response from the gateway

```
[rstock:error] login/password
```

3.2 Configuration commands

There are two kinds of configuration commands: `get_value` commands and `set_value` commands.

Value fields are used in :

- commands for set configuration commands
- responses for get configuration commands

They can be :

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- true or false when value is a boolean (in command `sysma.gsm.enable` for example)
- numbers when value is numeric (in command `statm.ram` for example)
- other types (list of several parameters, IP addresses, ...) are represented as strings. They are surrounded by double quote characters. Examples :
 - in `timem.date` : "20180710192000"
 - in `sysma.gsm.add_operator` : "124,10,myapn,user,pass"

3.2.1 Get value commands

For these SMS, command is configuration/get_value

| Description | field | Example of value in response |
|--|---|------------------------------|
| Get CPU board serial number | <code>statm.serialnumber</code> | "54020001" |
| Get Keros firmware version | <code>statm.version</code> | "4.1.2_20190610073708" |
| Get board platform type | <code>statm.platform</code> | "istation" |
| Get CPU usage (value is a string) | <code>statm.cpu</code> | "0.3%" |
| Get RAM usage (value is a string) | <code>statm.ram</code> | "32.0%" |
| Get userdisk usage (value is a string) | <code>statm.userdisk</code> | "0%" |
| Get board temperature (value is a string) | <code>statm.temperature</code> | "48°C" |
| Get ethernet connectivity state (value is a boolean) | <code>statm.lan.state</code> | true |
| Get ethernet hardware address | <code>statm.lan.hardware.address</code> | "70:76:FF:03:00:0B" |
| Get ethernet IP address | <code>statm.lan.address</code> | "192.168.4.156" |
| Get ethernet broadcast IP address | <code>statm.lan.broadcast</code> | "192.168.5.255" |
| Get ethernet netmask | <code>statm.lan.netmask</code> | "255.255.254.0" |
| Get GSM connectivity state | <code>statm.gsm.state</code> | true |

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| Description | field | Example of value in response |
|--|-----------------------------|--|
| Get GSM IP address | statm.gsm.address | "10.172.108.48" |
| Get GSM netmask | statm.gsm.netmask | "255.255.255.0" |
| Get Wifi connectivity state | statm.wlan.state | true |
| Get Wifi hardware address | statm.wlan.hardware.address | "EC:24:B8:39:50:FC" |
| Get Wifi IP address | statm.wlan.address | "192.168.3.148" |
| Get Wifi broadcast IP address | statm.wlan.broadcast | "192.168.3.255" |
| Get Wifi netmask | statm.wlan.netmask | "255.255.255.0" |
| Get ethernet configuration (if static, return static ipAddr netmask gateway dnsServerList) | sysma.lan.ipv4 | "off", "dhcp" or "static 192.168.4.10 255.255.254.0 192.168.4.1 192.168.1.1,192.168.1.3" |
| Get GSM operator list (MNC,MCC,APN,login,user) | sysma.gsm.operators | ("'208','01','orange','','') ('208','10','websfr','','')" |
| Get time synchronization mode (auto or manual) | timem.mode | "auto" or "manual" |
| Get list of NTP server address | timem.ntp | "0.pool.ntp.org,1.pool.ntp.org" |
| Get timezone use on the board | timem.timezone | "Europe/Paris" |
| Get current date (yyyymmddHHMMSS) | timem.date | "20180710192000" |

Examples:

- Get GSM IP address:

#SMS sent to the gateway

```
[admin:pwd4admin] [getgsm] configuration/get_value statm.gsm.address
```

#SMS response from the gateway

```
[getgsm:ok] "10.172.108.48"
```

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3.2.2 Set value commands

For these SMS, command is configuration/set_value

| Description | field | Example of value in command |
|-------------------------------------|---------------------------|--|
| Set admin user password | sysma.password | "mynewpassword" |
| Set ethernet connectivity state | sysma.lan.enable | true OR false |
| Set ethernet connectivity mode | sysma.lan.ipv4 | "off", "dhcp" or "static 192.168.4.10 255.255.254.0 192.168.4.1 192.168.1.1,192.168.1.3" |
| Set ethernet IP address | sysma.lan.ipv4_address | "192.168.4.10" |
| Set ethernet netmask | sysma.lan.ipv4_netmask | "255.255.254.0" |
| Set ethernet gateway IP | sysma.lan.ipv4_gateway | "192.168.4.1" |
| Set list of ethernet DNS IP address | sysma.lan.ipv4_dns | "192.168.1.1,192.168.1.2" |
| Add a GSM operator | sysma.gsm.add_operator | "124,10,myapn,user,pass" or "123,10,apn2,, " |
| Remove a GSM operator | sysma.gsm.remove_operator | "124,10" |
| Update a GSM operator | sysma.gsm.update_operator | "124,10,myapn2,, " |
| Set Wifi connectivity state | sysma.wlan.enable | true |
| Time synchronization mode | timem.mode | "auto" |
| Set List of NTP servers | timem.ntp | "0.pool.ntp.org,1.pool.ntp.org" |
| Set Timezone used on gateway | timem.timezone | "Europe/Paris" |

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| Description | field | Example of value in command |
|--------------------|-------------------------|--|
| Set date | <code>timem.date</code> | "20180710192000" |

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