The following are admin commands that can be issued to change configuration parameters.

* cmd:write\_mobile\_country\_code:

Writes mobile country code in EEPROM memory, which is common for all numbers. This way EEPROM memory is used more efficiently when it comes to saving many numbers in it. Maximum of 4 digits can be passed.

Example:

cmd:write\_mobile\_country\_code:9955

* cmd:write\_APN:

Writes access point name in EEPROM memory, which is necessary to open GPRS context. This name is provider dependent, therefore it is not hard coded, but can be configured by admin. Access point name can be up to 31 characters long.

Example:

cmd:write\_APN:3g.ge

* cmd:write\_server\_address:

Writes FTP server address name in EEPROM memory. This can be either IP address or domain name string. Up to 63 characters long address can be saved.

Example:

cmd:write\_server\_address:ftp.drivehq.com

* cmd:write\_username:

Writes username to be used to log into FTP server. Up to 31 characters long name can be entered.

Example:

cmd:write\_username:shbutkhuzi

* cmd:write\_password:

Writes password to be used to log into FTP server. Up to 31 characters long password can be entered.

Example:

cmd:write\_password:VeryStrongPassword

* cmd:write\_file\_name:

Writes file name of the binary file to be accessed on FTP server. File name can be up to 63 characters long string.

Example:

cmd:write\_file\_name:new\_firmware.bin

* cmd:write\_file\_path:

Writes file path in EEPROM memory which will be used to access binary file on FTP server. This can be up to 95 characters long string.

Example:

cmd:write\_file\_path:/Bootloader/

* cmd:write\_local\_file\_name:

Writes file name, under which new binary file will be saved in SIM800L internal file system storage. File name can be up to 63 characters long string.

Example:

cmd:write\_local\_file\_name:new\_firmware.bin

* cmd:write\_admin\_number:

Writes new admin number in EEPROM memory or modifies existing one. Up to 4 admins can exist simultaneously and only 1st, 2nd and 3rd admin numbers can be modified. 0th admin is permanent and cannot be changed. This command accepts admin number and the index of admin number. These values must be comma separated. Number formats that are accepted are shown in examples.

Examples:

cmd:write\_admin\_number:+995512345678,3

cmd:write\_admin\_number:995512345678,2

cmd:write\_admin\_number:512345678,1

cmd:write\_admin\_number:12345678,2

* cmd:clear\_admin\_number:

Clears specified admin number from EEPROM memory except for 0th admin.

Example:

cmd:clear\_admin\_number:2

* cmd:write\_key\_word:

Writes key words in EEPROM memory. This key word is used to identify incoming messages that must be responded to with the currently gathered information. In total 2 key words can be saved in the memory. The command accepts two comma separated parameters, first keyword and second index. Up to 31 characters long key words can be entered.

Examples:

cmd:write\_key\_word:lumindra,0

cmd:write\_key\_word:aethervel,1

* cmd:write\_provider\_identifier1:

Writes provider identifier1. This command writes only first identifier name. In total 2 identifier names can coexist. Each has its own separate command. Provider identifier name is used to identify messages coming from the provider regarding current balance, or other situations that need to be considered. These messages are automatically forwarded to admin 0. Up to 31 characters long provider identifier string can be entered.

Example:

cmd:write\_provider\_identifier1:MAGTICOM

* cmd:write\_provider\_identifier2:

Writes provider identifier2. This command writes only second identifier name. In total 2 identifier names can coexist. Each has its own separate command. Provider identifier name is used to identify messages coming from the provider regarding current balance, or other situations that need to be considered. These messages are automatically forwarded to admin 0. Up to 31 characters long provider identifier string can be entered.

Example:

cmd:write\_provider\_identifier2:w41474459434@4w4

* cmd:write\_min\_distance:

Writes minimum distance that can be read from ultrasonic sensor. This measurement is necessary to know when the tank is filled. The argument should be in millimeters.

Example:

cmd:write\_min\_distance:30

* cmd:write\_max\_distance:

Writes maximum distance that can be read from ultrasonic sensor. This measurement is necessary to know when the tank is completely emptied. The arguments should be in millimeters.

Example:

cmd:write\_max\_distance:1850

* cmd:write\_cylinder\_radius:

Writes cylinder radius in meters, as the device was designed to be used with cylindrical tank.

Example:

cmd:write\_cylinder\_radius:0.9477

* cmd:write\_cylinder\_height:

Writes cylinder height in meters.

Example:

cmd:write\_cylinder\_height:1.63

* cmd:write\_dome\_height:

Writes dome height in meters.

Example:

cmd:write\_dome\_height:0.22

* cmd:write\_request\_mode:

Enables/Disables responding to requests. Should be passed 1 to enable and 0 to disable. When disabled, all incoming messages containing key words will be discarded, but admin commands will still be executed.

Example:

cmd:write\_request\_mode:0

* cmd:write\_ds18b20\_mode:

Enables/Disables temperature readings. Should be passed 1 to enable and 0 to disable. If enabled, temperature reading is provided in response text messages, otherwise temperature is not tracked.

Example:

cmd:write\_ds18b20\_mode:1

* cmd:write\_rate\_of\_change\_mode:

Enables/Disables reporting rate of change of water volume in the tank. Should be passed 1 to enable and 0 to disable. If enabled, device predicts time left until it fills or empties based on current rate of water level change.

Example:

cmd:write\_rate\_of\_change\_mode:1

* cmd:write\_log\_requested\_num\_mode:

Enables/Disables logging of numbers that have requested.

Example:

cmd:write\_log\_requested\_num\_mode:1

* cmd:read\_req\_nums

Returns comma separated list of currently accumulated numbers that have sent requests to the device. The command does not accept arguments.

* cmd:write\_standby\_mode\_enable:

Enables/Disables entering standby mode. This feature enables the device to save battery life when there is no expectation for requests, such as during the night.

Example:

cmd:write\_standby\_mode\_enable:1

* cmd:write\_wakeup\_time:

Writes wakeup time when standby mode is enabled. Every day the device will wake up from deep sleep at this time.

Example:

cmd:write\_wakeup\_time:08:23:46

* cmd:write\_standby\_time:

Writes standby time. Every day the device will enter standby mode at this time.

Example:

cmd:write\_standby\_time:23:01:25

* cmd:SIM800L\_SMS:

Following command sends SMS to the specified number. It accepts comma separated two parameters: first phone number and second text message.

Example:

cmd:SIM800L\_SMS:+995512345678,This message will be sent to +995512345678 number, from this device

* cmd:restart\_STM

Restarts the device. Command does not accept arguments.

* cmd:read\_all\_conf

This command will return all current configuration parameters. It does not accept arguments.

* cmd:read\_sim800

This command will return connection quality and battery level reading from SIM800L module. It does not accept any arguments.

* cmd:read\_STM

This command will return following readings: battery voltage level read by STM, solar panel voltage, microcontroller temperature, ultrasonic distance sensor reading, ds18b20 temperature sensor reading and physical absence or presence statuses of solar panel and ds18b20 sensor. It does not accept any arguments.