

Beacon Configurator Manager Guide

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1 Preface

1.1 Document Purpose

This document was released to help you understand how to operate configurator manager.

1.2 Reference

This document is supposed to work with other document or program. All related document or program listed below can be found in our online document library.

- [01 Datasheet](#) – device technical specification (.pdf).
- [02 User Manual](#) – A guide to help you understand the feature of the device and command list (.pdf).
- [03 Quick start](#) – IO port connection reference and how to quick start the device(.pdf).
- [04 Protocol](#) – data string from device to server and acceptable SMS/GPRS command(.pdf).
- [04 Configuration Guide](#) – (this document) instruction on how to configure device (.pdf).
- [05 Configuration tool](#)– configurator manager to read/save preset setting to device (.exe).



Online Document Library: [Document online Library](#)

1.3 Compatibility

This document is compatible with the following Totemtek products:

- AT08 3G
- AT20 3G/4G

1.4 Term of use

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If any information you feel that is not correct, please contact our support team: support@totemtek.com;

1.5 Document History

Date	Version	Update
2019-12-25	1.0.0	First release.

2. Things before start

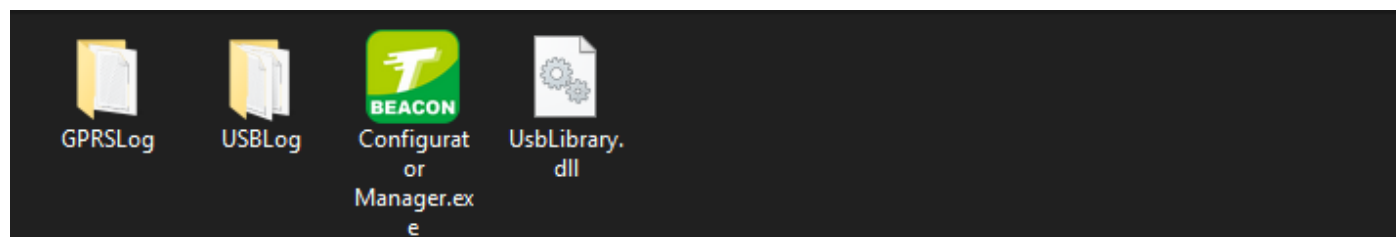
Before you start to connect the device with PC/Laptop, make sure you have below things ready.

2.1 Hardware/Software

- PC or laptop (windows based)
- Device with enough battery (check if the LED is blinking when you power on the device).
- Regulated DC power supply DC 12V/24V (in case device is in low battery).
- USB cable (Purely USB cable): USB cable for android mobile with mini USB interface.
- **.Net framework 4 or above**
The configurator Manager requires .Net framework component. If you are not sure, you can check control panel → Apps list in your Windows.
 **Download .Net framework from Microsoft:** [Download .Netframework web installer](#)
- **Configurator manager**
The configurator Manager requires .Net framework component. If you are not sure, you can check control panel → Apps list in your Windows.
 **Download from Totemtek website:** [Configurator Manager](#)

2.2. Configurator Manager folder

The content of the folder can refer as below:



GPRSLog: This folder will create automatically once the configurator manager has been set up as a TCP listener to receive data from device.

USBLog: this folder will create automatically once the configurator is running. Device running log will keep under this folder. Client can send the TXT log under this folder to our support team to diagnose the problems.

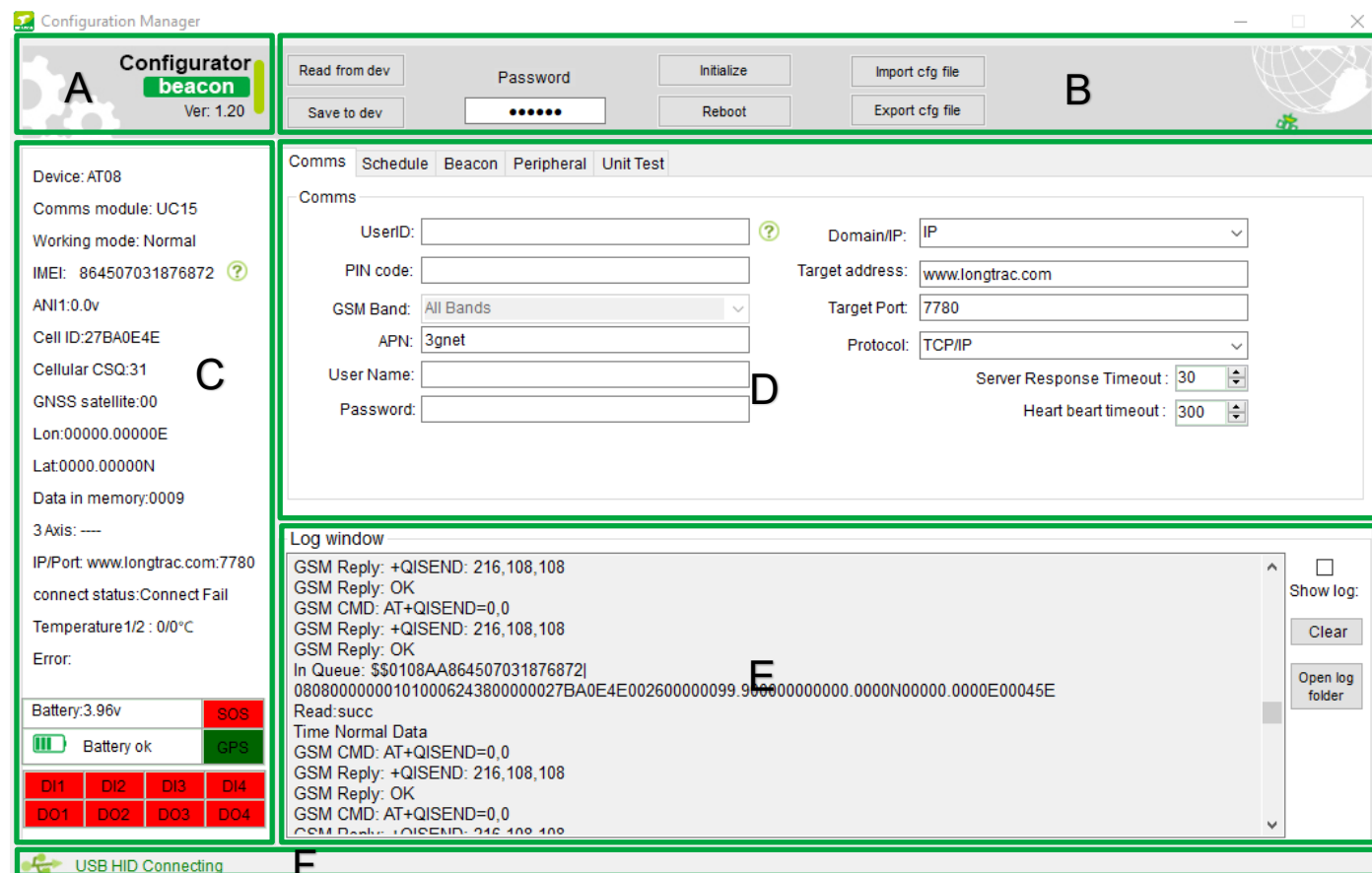
Beacon configurator Manager.exe: this is configurator of the device (windows based application).

UsbLibrary.dll: this is library of USB. It should be always kept in the same folder.

3. Interface Introduction – start up

This is the initial interface once Configurator Manager is running, if you got any error, please check as below:

- Make sure the .net framework 4 or above has been installed.
- Make sure the UsbLibrary.dll and configurator manager are in the same folder.



Section A:

This section is the window to display the configurator version (standard/beacon/COM/TP) and version number (4.02).

Section B:

This section has provided some basic operation buttons and password input window to avoid access without authorization.

Section C:

This is the device status window. It contains connectivity status, device IO status, power status, device IMEI, firmware version and module number.

Section D:

This is the most important window; it contains several sub tab in this section. All the desired parameter can be changed in this section.

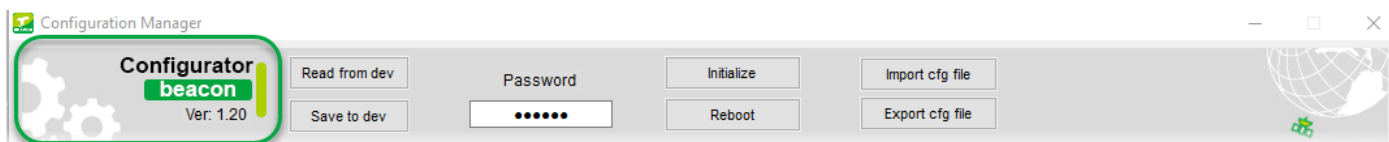
Section E:

This section a log display window. The device will save the log continuously into a txt file and also display in the log window.

Section F:

This is USB connection indicator, the communication between device and PC/laptop relies on the USB connection. So please make sure the connection has been established.

3.1 Section A: Configurator version

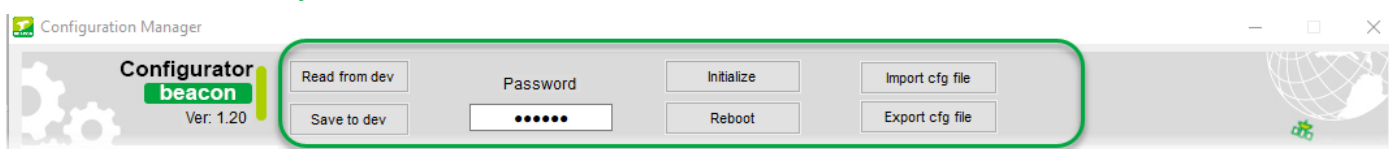


Totemtek product comes with several version of the configurator manager, each one is combining with different product, please follow below match pair.

- STD/Standard: AT07 2/ 3/4G, AT09 2G/3G/4G.
- Beacon: AT08, AT20(Solar power unit)
- TPMS: AT09 TPMS
- COM: AT04, AT05
- TP: TP08, TP09

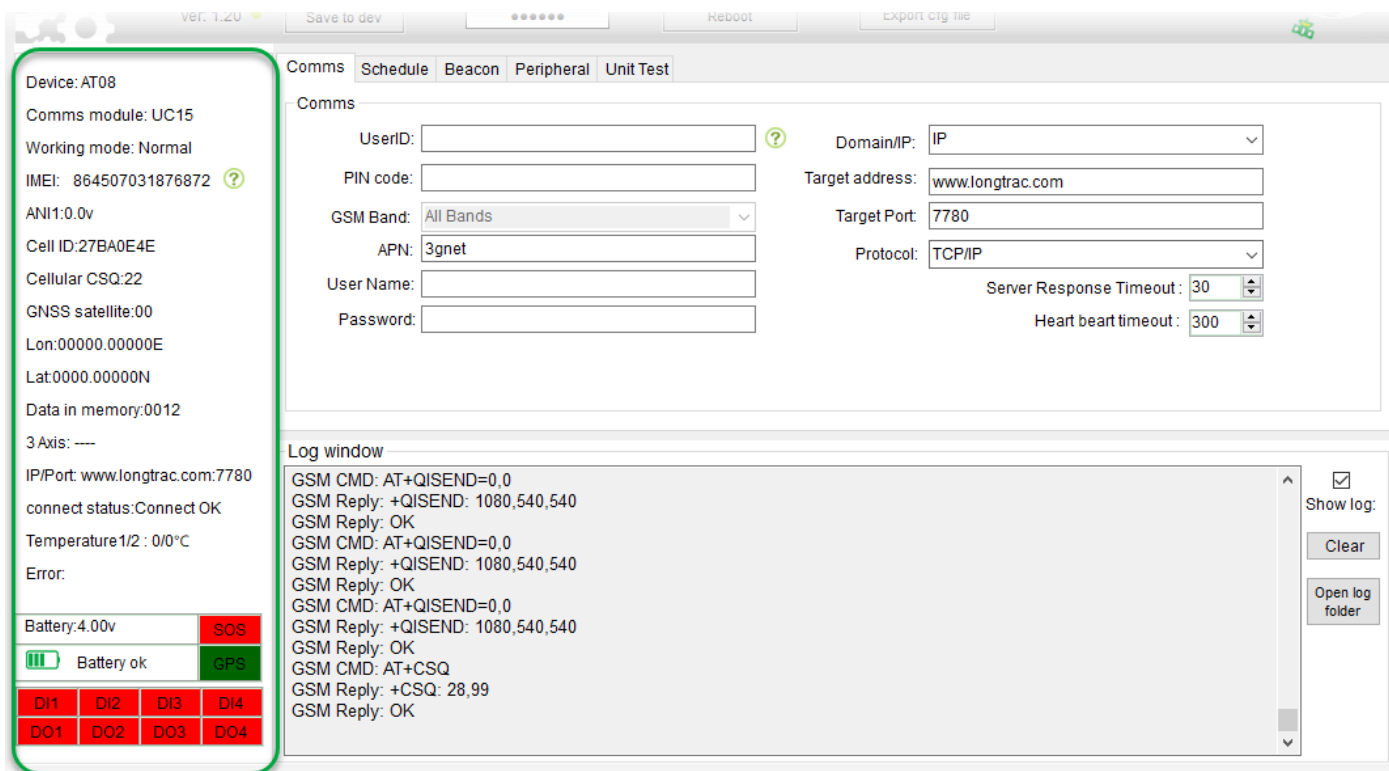
Ver:4.02: This is the configurator version.

3.2 Section B: Basic operation button



- Read from dev: read the setting from device.
- Save to dev: save the setting into device
- Password: entry the password before any operation.
- Initialize: reset to factory setting.
- Reboot: reboot device
- Import cfg file: import the device parameter from a XML file.
- Export cfg file: export current setting into a XML file.

3.3 Section C: Device status



- Device: AT08
- Comms module: GSM/3G/4G module name.
- Ver: 1.05 (device firmware version)
- Working mode: device working mode sleep/deep sleep.
- IMEI: GSM module IMEI number.
- RFID/IB: RFID ID number of IButton number.
- ANI 1 – ANI4: the voltage or percentage from analog input
- Cell ID: cell tower ID.
- Cellular CSQ: GSM signal strength (Maximum 31).
- GNSS satellite: (number of GPS/GPS/BEIDOU fixed)

- Lon: longitude
- Lat: latitude
- Data in memory: 3 Axis: (3 axis vibration strength).
- IP/Port: (current target server and port).
- Connect status: (initialize/fail/off).
- Temperature: temperature value from 1 wire interface
- Error: reserved.
- Battery: the internal battery voltage.
- DO1~DO4: digital output status of the device (red color is deactivated; green color is activated)
- DI1 ~ DI4: digital input status of the device (red color is deactivated; green color is activated);
- SOS: SOS button (red color is deactivated; green color is activated);
- GPS: GPS antenna status (red color is disconnected; green color is connected);

CAUTION: Maximum battery level is 4.2V. when battery level at 3.6V. device may not work properly.

3.4 Section D: Parameter tab

This is main section where the device settings are changed.

3.4.1 Section D_sub: Comms

- UserID: this ID will replace the IMEI in the GPRS string if it has been set. Normally leave it in blank.
- PIN code: some SIM needs a pin code/password to work normally.
- APN/User Name/Password: APN user name and password.
- Domain/IP: target is domain or IP.
- Target address: domain address or IP address.
- Protocol: TCP/IP, UDP/IP;
- Server Response Timeout: TCP/IP, ACK response time, if no response within the pre-set time, device will send same data again.
- Heart beat time out: Heart beat package (BB) time interval.

3.4.2 Section D_sub: Schedule

- Sending data by movement or ignition ON/OFF

Caution: AT08 don't have external IO interface, so it will work in by movement only.

- Movement detection

Ignition sensor: on (device in movement status once ignition on).

3 Axis Accelerometer: On (use 3 Axis to detect the movement).

Movement detection delay to wake up: X secs (after X secs vibration, device wake up).

- Sending data by movement or ignition ON/OFF

Minimum time: X seconds; (send data in X second interval).

Minimum distance: meter; (send data in Y meter interval).

Minimum veer: degree (send data in Z degree interval).

Each time/distance/veer (X, Y, Z) thread are separately, set as '0' will disable one of them.

device will start to count **when vehicle moving** and X second later will send out 1st data, and after Y meter distance, send 1pcs distance data. And if veer change Z degree, it will send out 1pcs veer data.

- Ignition OFF or Stop

Minimum time: X seconds.

device will start to count when vehicle stop and X second later will send out 1st data.

- Sleep/stop Definitions

Working mode: Normal/Sleep/Deep Sleep

Normal: Cellular module and GPS module is normal working.

Sleep: Cellular module working, GPS module shut down.

Deep sleep: Cellular module and GPS module both shut down.

Beacon: when device work in beacon mode, only MCU of device will keep working, rest peripheral power will shut down, even including the USB. So device will not able to print the USB log once device goes into beacon. At the same time, device will turn off the GPS and GSM module. It will only work in a fixed time interval. And this time interval can set in 'Beacon' tab.

Sleep delay: X seconds

When device stop, device will go to working mode (sleep/deep sleep) if no vibration.

- Time interval (wake up from sleep)

This setting only works when device in sleep or deep sleep.

Device wake up from a fixed time interval when device is in sleep/sleep, after send 1 pcs data out. Device will go to sleep and wake in next fixed time interval.

CAUTION: AT08 unit is not connecting with external power constantly, so it was not designed to use "schedule" setting for tracking unless it's just for a short time period usage. We highly suggest AT08 unit work in 'Beacon' to save more power.

3.4.3 Section D_sub: Beacon

Device: AT08
Comms module: UC15
Working mode: Normal
IMEI: 864507031876872
ANI1:0.0v
Cell ID:27BA0E4E
Cellular CSQ:30
GNSS satellite:00
Lon:00000.00000E
Lat:0000.00000N

Comms Schedule **Beacon** Peripheral Unit Test

Schedule

Sending data by Movement or Ignition ON/OFF
Combined with ignition: By Movement

Movement Detection
Ignition Sensor: ON
3 Axis Accelerometer: ON
Movement detection delay to wake up: 20 Sec

Ignition ON or Moving
Minimum time: 30 Sec
Minimum Distance: 500 meter
Minimum veer: 30 degree

Ignition OFF or Stop
Minimum Time: 30 Sec

Sleep/Stop Definitions
Working mode: Beacon
Sleep Delay: 300 Sec

Time interval (wake up from sleep)
Minimum Time: 10800 Sec

Beacon Mode
Minimum Time: 3600
Message Number: 3

For periodical beacon mode, set interval and number of messages to be sent each time when tracker wakes
Allow at least 1 message once GPS position has been gained
All intervals are set in seconds
e.g. 6 hours (6*3600 = 21600 seconds)

CAUTION: 'Beacon' tab page setting only works when working mode has been selected as 'Beacon' in 'Schedule' tab.

- Minimum Time: 3000
The time interval when device wake up in beacon mode.
- Message numbers:
The message device will send after wake up from beacon mode.

3.4.8 Section D_sub: Peripheral

Device: AT08
Comms module: UC15
Working mode: Normal
IMEI: 864507031876872
ANI1:0.0v
Cell ID:27BA0E4E
Cellular CSQ:27
GNSS satellite:00
Lon:00000.00000E

Comms Schedule Beacon **Peripheral** Unit Test

Temperature Alarms

Temperature 1: ON
Low: 0 °C
High: 50 °C

Temperature 2: ON
Low: 0 °C
High: 50 °C

- Temperature Alarms**
On/off: on/off temperature interface (1 wire interface).
Low: low temperature to trigger the events.
High: high temperature to trigger the events.

3.4.10 Section D_sub: Unit test

- New Firmware**
 Press 'load' to find the firmware (.bin file).
 And 'start' to flash device.
- TCP listener (OTA IP)**
 This is the target IP for the remote device not able to connect with USB, and flash firmware over the air.
- Command**
 In this section, you can send a command to device directly by USB. And it can also provide a complete GPRS command with checksum. It can also could be a small tool to help you calculate the checksum for different string.
- Device list**
 Disconn: disconnect the connected device
 All: select all connected device.
 Load: load the device CFG file (parameter XML file).
 Save Config: save the configurator to device over the air.
 OTA: update firmware over the air.
- USB CMD list**
 Camera: take a picture
 RFID: generate a stimulated RFID data.
 Send: send a GPRS message.
 Clear: clear the data in memory.
 OUTA~OUTB: engage OUTA ~OUTB. (make sure the output working mode is in "user define").
 Send SMS: send a SMS (fill the phone number to in the blank) to a mobile phone to get the mobile number of device.

3.5 Section E: log window

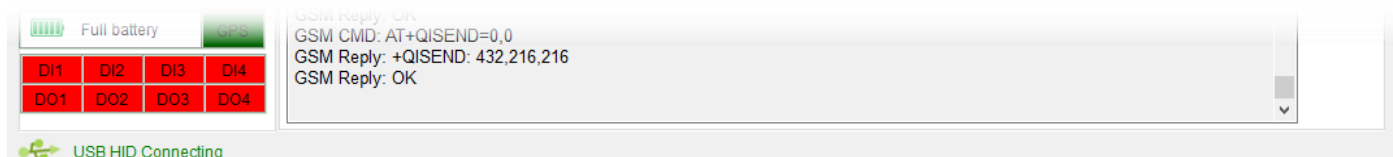
- Show log:**

Device will print the log or not.

- **Clear:**
Clear the log in the log window.
- **Open log folder:**
Device will write into a TXT automatically; the file name is current date. These logs are useful information for our support team if your device has problem.

Name	Date modified	Type	Size
20191014.txt	2019-10-14 10:04 ...	Text Document	12 KB
20191125.txt	2019-11-25 5:26 PM	Text Document	267 KB
20191126.txt	2019-11-26 11:06 ...	Text Document	11 KB
20191205.txt	2019-12-05 4:36 PM	Text Document	6 KB
20191212.txt	2019-12-12 4:17 PM	Text Document	1 KB
20191214.txt	2019-12-14 10:13 ...	Text Document	11 KB
20191217.txt	2019-12-17 10:46 ...	Text Document	46 KB

3.6 Section F: USB connectivity

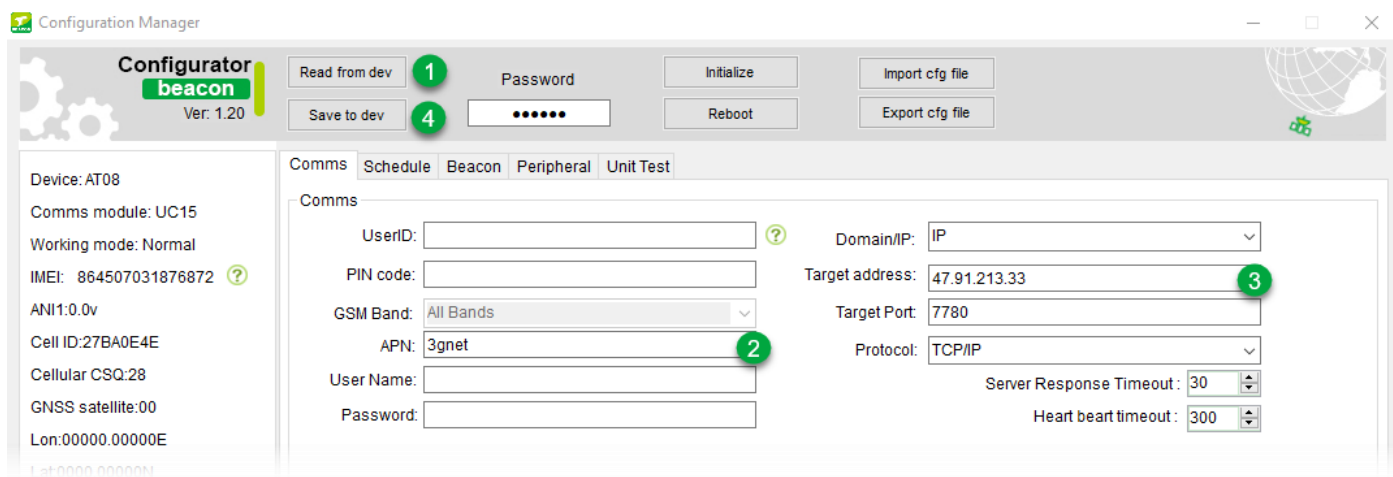


- **USB HID Disconnected**
USB icon will turn to green once the USB connection has been established.



4. Operation example

4.1 How to change APN/IP/Port to device?



1. Read from dev: read the setting from device first. Don't operate anything before you read from device.
2. APN: change the APN you want.
3. IP/Port: change the IP and port.
4. Save to dev: save the setting to device.

4.2 How to change the data time interval?

1. Read from dev: read the setting from device first. Don't operate anything before you read from device.
2. Sending data by Movement or ignition ON/OFF: select the desired trigger 'by movement' or 'by ignition'.
3. Ignition ON or moving: change the data time interval and minimum distance for data and minimum angle.
4. Ignition OFF or Stop: set the time interval when vehicle stop
5. Save to dev: save the setting to device.

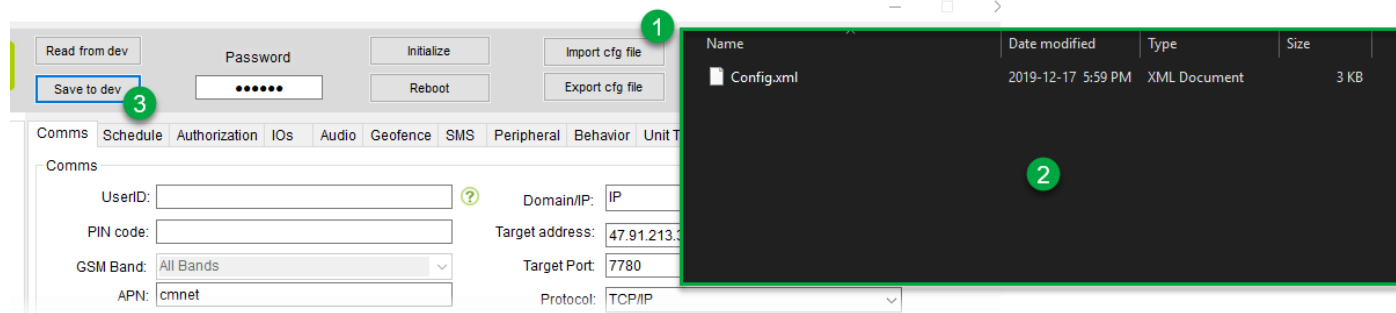
In this example, if ignition on, device will send data 1 data in 60s interval, and send 1 data if angle changes 15 degree, no distance data ('0' in the example).

if ignition off, device will only send data in 310s interval.

4.3 How to export the device parameter to an external file?

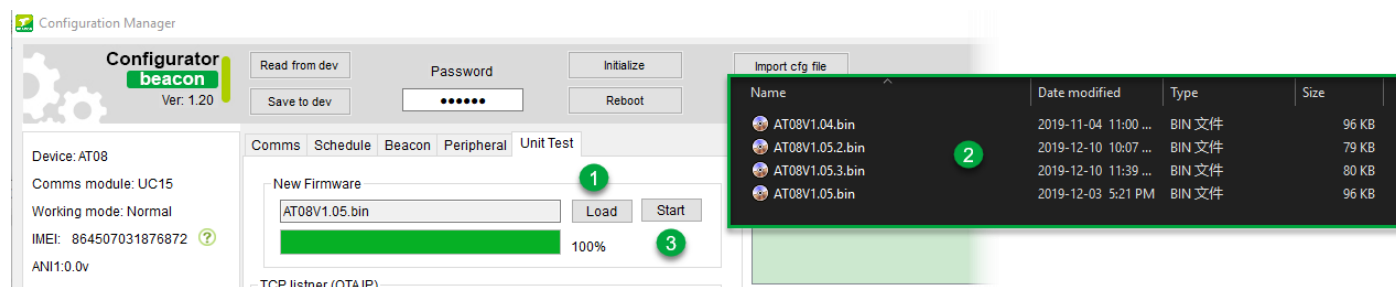
1. Read from dev: read the setting from device first. Don't operate anything before you read from device.
2. Change the desired setting.
3. Export cfg file: export the parameter setting file into a XML file.

4.4 How to quick set parameter for bath devices?



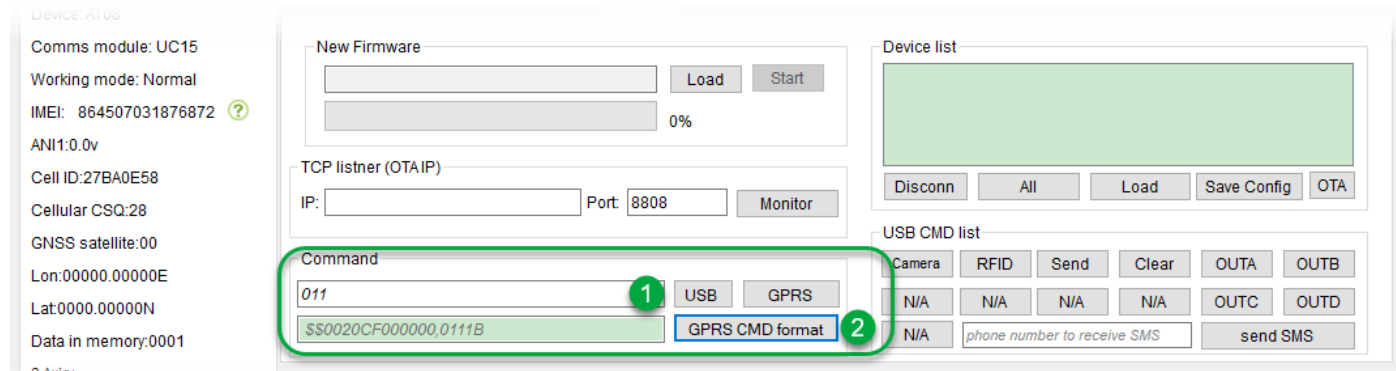
1. Import cfg file: load the setting from an external CFG file (XML file).
2. Change the desired setting.

4.5 How to flash the firmware for device?



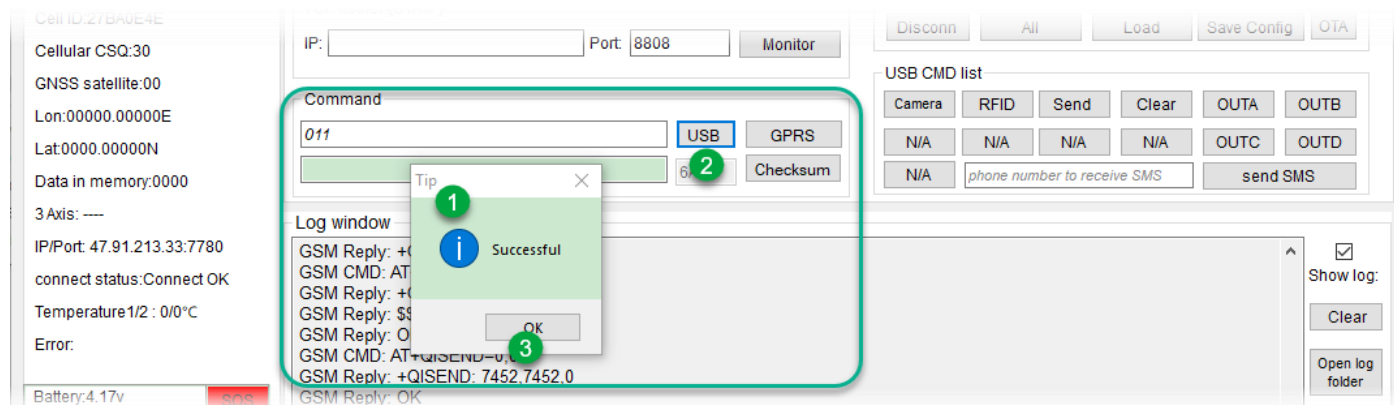
1. Load: load the firmware.
2. Select the correct firmware from folder.
3. Start: start to flash the firmware.

4.6 How to get a correct GPRS command checksum?



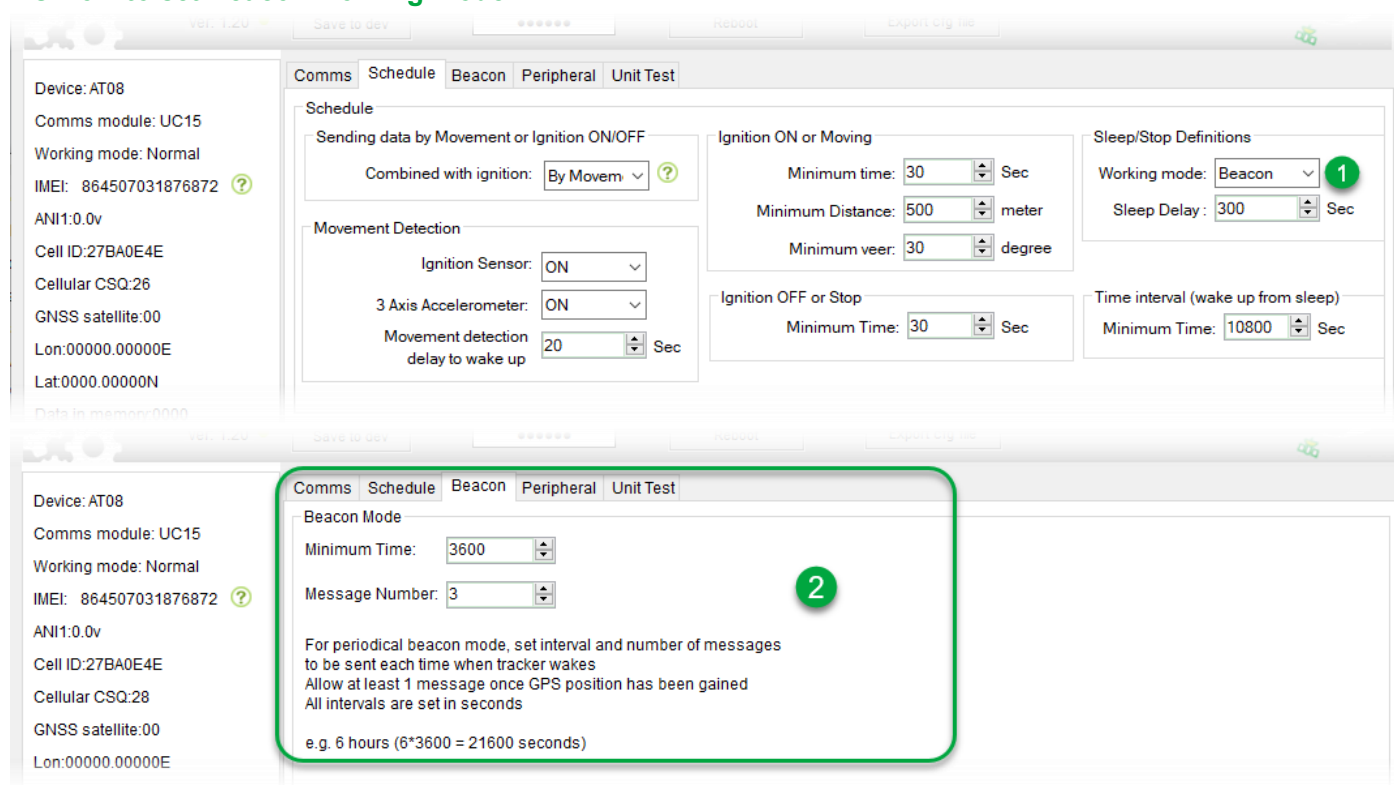
1. Entry the command (full command list can found in our user manual).
2. Click 'GPRS CMD format'
3. The one in gray color "\$\$0020CF000000,016,B,16B" (6B is the checksum) string is complete command with checksum. GPRS command format can be found in our communication protocol.

4.7 How to send a command to device in configurator?



1. Entry the command (full command list can found in our user manual).
2. Click 'USB' to send the command to device.
3. Configurator manager will pop up a successful window if the command is in correct format.

4.8 How to set Beacon working mode?



1. Select the 'beacon' working mode in 'Schedule' tab.
2. Change the desired time interval/message number in 'Beacon' tab.
3. Save setting to device.

END