


# FMB910 Basic Status info

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Status info enables the user to monitor real time information of FMB910 Basic. Following fields are displayed: **Device Info**, **GNSS Info**, **GSM Info**, **I/O Info**, **Maintenance** and etc. User is able to export all of the information to **.HTML** file using  icon which is at the top right corner of the **Device Info** area.

## Device Info

- Device Name
- Firmware version
- Last Start Time - last device start time.
- RTC Time - real-time clock or current device time.
- Power Voltage (mV)
- Device IMEI
- External Storage (used/total) - Internal Flash memory free space.
- Device Uptime - device uptime from last start time.
- Battery Voltage (mV)
- Internal Battery Status - Charging/Not Charging

## GNSS Info

- GNSS status
  - Module status - ON, [GPS Sleep](#), [Deep Sleep](#), [Online Deep Sleep](#), [Ultra Deep Sleep](#) mode.
  - GNSS packets - the number of GNSS packets the device received from startup.
  - Fix Status - Fix/No Fix. **(Note: Fix time strongly depends on indoor/outdoor location. To achieve best performance acquiring GNSS fix device should be used in outdoor locations)**
  - Fix Time - the last GNSS fix time.
- Satellites
  - Visible - the number and type of satellites that are visible.
  - In Use - the number of satellites used for location positioning.

- Location
  - Latitude/Longitude - shows current device coordinates and if you press them opens **Object location** window with a map.
  - Altitude, Angle
  - HDOP, PDOP
 

FMB910 Basic sends HDOP/PDOP value to the server in precision of dilution **coefficient**. HDOP/PDOP calculation depends on how many [GNSS sources](#) are selected. If configured GNSS Source options are "GPS" and "GLONASS" and HDOP/PDOP values are received from both systems, the parameters HDOP/PDOP will be calculated as shown below:

"GPS" - 1.60;  
 "GLONASS" - 1.60;  
 "Galileo" - will be 0, because it is not selected and not taken into account;  
 "BeiDou" - will be 0, because it is not selected and not taken into account;

Calculation formula - **("GPS" + "GLONASS" + "Galileo" + "BeiDou") / 4 (four GNSS systems)**.

Calculated HDOP/PDOP value according to above parameters - **(1.60 + 1.60 + 0 + 0) / 4 = 0.8** coefficient.
  - Speed - current device speed.

## HDOP/PDOP value calculation changes

Main calculations of separate HDOP/PDOP values of GPS, GLONASS, Galileo and BeiDou are made by GNSS modem. GNSS Modem already outputs average of HDOP/PDOP from 4 GNSS systems (Used satellites) with a formula below.

Calculation formula - ("GPS" + "GLONASS" + "Galileo (0-sat)" + "BeiDou (0-sat)") / 2 (four GNSS systems)\*\*

Calculation formula - ("GPS" + "GLONASS") / 2 (two GNSS systems)

HDOP/PDOP will be different if it will have 19 and i.e. other packet with 6 satellites. In parsed regular AVL packet example below all of 19 satellites are shown as in use.

Parsed NMEA Record Example:

Record GPS longitude : -14116383

Record GPS latitude : 530738950

Record GPS altitude : 356

Record GPS angle : 357

Record GPS satellites: 19

Record GPS Kmh : 102

## GSM Info

- GSM status
  - Modem Status
  - SIM State - Ready/Unknown
  - GPRS Status - Activated/Deactivated
  - Actual Operator Code
  - Signal Level
- GPRS traffic
  - Sent Data - the amount of data that has been sent by the device.
  - Received Data - the amount of data that has been received by the device.
  - Total Traffic - Sent Data + Received Data
- Sockets information:
  - Type - AVL Data Sending
  - Socket - Closed or Server domain and port which is used when sending AVL Data via TCP/UDP.
- Records
  - Sent Records count - how many records were sent to the server since the last data reset.
  - Last Record Send - date and time when the last record was sent.
  - Last Server Response Time - date and time when the last server response was.
- SMS Count
  - Received SMS - the amount of SMS messages the device has received.
  - Sent SMS - the amount of SMS responses that were sent from the device.
  - SMS Count - Received SMS + Sent SMS

## I/O Info

- I/O Data - shows the current values from all configurable I/O elements.

## Maintenance

- Log/Dump
  - Log - after button is pressed, the device starts log capturing for 10 minutes with configuration download. After this time device .log and configuration .cfg will be in compressed archive.

Archive name: YYYY\_MM\_DD\_HH\_MM\_SS\_FMB910\_Basic\_IMEI\_Log.zip

Default directory: C:\Users\<username>\Documents

GNSS Info
GSM Info
I/O Info
Maintenance

Log / Dump

Log

Dump

Accelerometer

Read

DOUT
DOUT 1 

OFF

LLS calibration

Available sensors

Analog Input 1

Fuel, L	Value, mV	
0	0	
0	0	
0	0	
0	0	

Add row

Clear rows

a0	-∞
a1	NaN
a2	NaN
a3	NaN

Calculate

Export

- Dump - after button is pressed, the device starts to download .dmp logs and configuration .cfg from device in compressed archive.

Archive name: YYYY\_MM\_DD\_HH\_MM\_SS\_FMB910\_Basic\_IMEI\_Dump.zip

Default directory: C:\Users\\Documents


Dump files can be read only with special software. If needed, provide these files to your Teltonika sales manager or Teltonika Support team.

- Open directory - this button appears near **Log** or **Dump** if one of these functions were used.
- Accelerometer - after the button is pressed, the device starts to capture accelerometer values for 1 second.

## LLS Calibration

- LLS calibration - in this section you can calculate calibration values of Analog LLS sensors for AVL server - create a polynomial which is needed to convert sensor values to liters:
  - Table is filled row by row. Each row represents one fuel tank fill. To calculate constants it is needed to select a sensor from „Available sensors“, and fill the „Fuel, L.“ column and capture the current value of a sensor by clicking the "Refresh" button. Then the next value in liters should be entered by the user and so on.
  - When a table is filled, calculated a0, a1, a2, and a3 values should be seen.
  - To add a new tank fill row click "Add row". To remove the row click the "minus" button near the row you want to clear. To Clear all the rows click "Clear rows".
  - By clicking "Export" data will be exported to .csv file.
  - To recalculate the polynomial click on "Calculate" button.



Default log capture time, accelerometer capture time and files directories can be changed by pressing  icon at the bottom right corner.