Connection of Galileosky Base Block Hard Wi-Fi

User Manual

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Necessary Tools, Equipment and Materials

To connect the tracking device, you should have:

1. Electrical-installation tools.
2. A set of connecting wire.
3. Galileosky Base Block Hard Wi-Fi tracking device (hereinafter – tracking device)
4. A computer with Windows-based operating system and an installed configuration program for Galileosky tracking devices— «Configurator». It is recommended to install the last version from the site https://galileosky.com/podderzhka/programmyi.html
General Information

Galileosky tracking devices determine mobile object location, recording the time and route as points with geographical coordinates and send the data to the server to be further processed and displayed at the traffic controller panel.

In addition, a number of other vehicle parameters are recorded: the state of analog and discrete inputs of the tracking device and the state of digital interfaces.

The tracking devices can be used in any vehicle.

Technical and functional capabilities of the tracking device allow to carry out:

- real-time monitoring of vehicle location;
- monitoring of vehicle parameters via discrete-analog inputs or RS485, RS232 digital interfaces or CAN-bus;
- recording of monitoring data to internal nonvolatile flash-memory, in case of no GSM communication;
- detailed turning drawing without extra points on a straight part of the road;
- remote configuring via SMS or GPRS;
- remote software updating of the tracking device via GPRS;
- securing mobile or stationary objects.

Hard Wi-Fi modification is intended to reduce costs on GPRS-communication and increase speed of data transmission. The examples of implementation of such modification are the following:

- use of the tracking device at stationary objects with Wi-Fi access to the Internet;
- use of the tracking device in vehicles that are often located in the areas with poor GSM cellular communication or its complete absence. In such a case, telemetrical data are saved into the tracking device’s memory, and uploaded via Wi-Fi to the server, when the vehicle enters the area with an authorized Wi-Fi network.

The algorithm of data transmission by the tracking device is the following:

- as soon as the tracking device enters the area with Wi-Fi network, it establishes connection with Wi-Fi access point and starts transmitting telemetrical data via this access point to the monitoring server. In such a case, GSM-module cuts off.
- In case connection with Wi-Fi access point is broken, the tracking device activates GSM-module, establishes GPRS connection and continues transmitting telemetrical data to the monitoring server. In addition, the tracking device is constantly searching for Wi-Fi network.
Tracking device connection

Preparing tracking device’s connector, SIM-card installation, tracking device’s connection are carried out in accordance with recommendations given in the manual “Installation and connection of Galileosky tracking devices”. You can download it here https://galileosky.com/podderzhka/dokumentaciya.html
Antennas Connection

Tracking device’s package includes GSM-antenna, GLONASS/GPS-antenna and Wi-Fi antenna. Antennas produced by different manufacturers may differ in appearance (Pic. 1).

GSM-antenna, GLONASS/GPS-antennas are connected up to locking to corresponding Fakra connectors, Wi-Fi antenna is screwed into SMA-connector as shown in Picture 6.

**ATTENTION!** In order not to mix types of antennas, Wi-Fi antennas have a correspondent marking on the connector (Pic. 1).
The order of mounting antennas in a vehicle and connecting them to the tracking device is the following:

- place GSM-antenna close to a windscreen or on the roof of a vehicle as shown in Picture 3;
- place GLONASS/GPS-antenna close to a windscreen or on the roof of a vehicle as shown in Picture 3;
- place Wi-Fi-antenna close to a windscreen or on the roof of a vehicle as shown in Picture 3;
- pull wires of GSM, GLONASS/GPS and Wi-Fi antennas to a place of tracking device’s location and connect them to the corresponding connectors, as shown in Pic. 2.
Setting of the Tracking device

Before operating with Galileosky Base Block Hard Wi-Fi you should carry out its setting in service program “Configurator” (hereinafter-Configurator). Perform the following actions:

1. apply operating voltage to the tracking device, connect it to a computer via USB-cable;
   ATTENTION! The tracking device cannot be charged via USB. It should be connected to external power supply.

2. run “Configurator” and make sure that the tracking device is detected by Configurator (Pic. 4);

3. go to tab “Settings” -> “Data transmission” (Pic. 5)
   - enter the name of Wi-Fi network in “SSID” field, select authentication type depending on the settings of router safety (if you set the router independently, WPA/WPA2 is recommended, as it is a more secure technology), enter the password, if you have one;
   - set access point of selected service provider; if the fields are not filled, the tracking device will automatically select a provider from the list in tracking device’s archive and will apply corresponding settings;
   - set data server and port, which it operates through;
   - select data transmission protocol, it is recommended to use Galileosky protocol, as it allows to transmit more data;
   - click “Apply” button.
4. go to tab “Settings” -> “Protocol” (Pic. 6)
   
   - select tags for the head packet (it is recommended not to tick optional tags, as head packet provides setting of communication between the tracking device and the monitoring server);
   - select necessary tags for the main packet;
   - click “Apply” button;
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Setting of Monitoring Software

To receive data from Galileosky tracking devices, monitoring server software should be
developed in accordance with Galileosky protocol. You can see it here
https://galileosky.com/podderzhka/dokumentacziya.html

Create a monitoring object and set it in accordance with recommendations of your monitoring
software. If it is needed, edit settings of track parameters on tab “Settings” -> “Track” (Pic.11)
in accordance with the manual “Setting of track by means of the tracking device”
https://galileosky.com/podderzhka/dokumentacziya.html

Setting of Galileosky Base Block Hard Wi-Fi for data transmission to the monitoring
server is completed, the tracking device is ready for use.

RSA “Galileosky”, LLC produces satellite monitoring equipment for GPS and GLONASS real
time vehicles monitoring. The tracking devices determine the mobile object location recording
the time and route as points with geographical coordinates and send the data to the server to
be further processed and sent to the traffic controller panel.

In addition, a number of other vehicle parameters are recorded: the state of analog and
discrete inputs of the tracking device and the state of digital interfaces.

The tracking devices can be used in any vehicle.