

WI-FI DEVICE DETECTION, MONITORING AND TRACKING SYSTEM WITH GPS/GLONASS

RadioInspectorWIFI-GEO –

Reveals all running devices and their relationship with mapping the route and places of discovery. It is used for both mobile and stationary objects

THE PRINCIPLE OF WORK

The system scans all Wi-Fi channels in the 2.4 GHz and 5GHz range, determines and stores in memory MAC addresses of data source and receiver, determines the signal level and analyzes the amount of data transmitted. Fixed route (GPS tracker) and the geographical coordinates found on the route, Wi-Fi devices. The system works autonomously for data collection. It does not require a computer to work. Work begins when the power is turned on. The stored data allows to estimate the activity of each device for a long period of time (a month or more), to identify patterns and regularity of work and to estimate the amount of data transmitted at different times of the day.

STRUCTURE OF SYSTEM

The system consists of receiving modules that can operate without connecting to a computer around the clock. When you connect them to your computer, RadioInspectorWiFi software downloads data from receiving modules, analyzes and displays on the map, in graphical and tabular form data on active Wi-Fi devices, their connections with each other (who and to whom transmitted data), signal levels and the amount of data transmitted, displays the route, the location of detection of Wi-Fi devices. The software can be connected in series or in parallel to any number of hardware modules via LAN interface. The operator can receive data about Wi-Fi devices in real time when connected to the receiver module.



APPLICATION:

- Detection of illegal access points
- Wi-Fi voice recorder detection
- Wi-Fi hidden camera detection
- Detection of illegal connections to Wi-Fi networks
- Detect stolen devices with Wi-Fi
- Control over Wi-Fi disconnection in places of their limited use (sensitive facilities, prisons, administrative buildings, educational institutions, the territory of military or police operations)
- Tracking the WIFI device to determine the location of its connection to other devices
- Control Wi-Fi built into the vehicles.
- Detection of smartphones after hacking them by hackers. Allows you to identify non-standard activity of hacked devices.
- Record the route of the vehicle
- Determine the load of Wi-Fi networks (download channels, traffic volume, number of connections)

Characteristics of the complex

Wi-Fi analysis module

Frequency range	2.4 GHz, 5GHz
Analyzed standards	802.11 a, b, g, n, ac
Computer connection	LAN 10/100 Mbps
Ability to work without a computer	Around the clock
Minimum time for data storage	At least a month
Antenna	Built-in
Navigation system	Built-in GPS/Glonass receiver
Power supply	5 V, 1 A; powered by USB 2.0(3.0, 3.1) or external 5 V power supply
Dimensions (LxWxH), mm	190x100x45
Hardware module weight	Not more than 400 grams

Software

Operating system	Windows 8 and above, 32 and 64 bit
Number of Wi-Fi interception and analysis plug-ins	Unlimited (limited by computer resources)
Software analysis capabilities	<ul style="list-style-type: none"> - determination of MAC addresses of all devices, including "not visible", but to which the data is addressed - definition of network SSID, equipment manufacturer, equipment type, channels used, encryption type - determination of geographical coordinates of the place of detection of the device - evaluation of data traffic for each device - visualization of Wi-Fi devices by connecting to each other - maintain a list of legal devices - maintenance of the blacklist - filtering by time, traffic, MAC addresses, etc. - display on the terrain map (OSM) of the driving route - alarm on events

Operating modes	<ul style="list-style-type: none"> - mono server in real time - multi-server real-time - offline data collection - delayed analysis of accumulated data
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Direction Finding	At the signal level, at the coordinates of the place of discovery
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Information display	On the map, graphical, symbolic and tabular
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The screenshot displays the software's main interface. On the left, there is a table listing detected devices with columns for SSID, MAC, Type, Channel, and other details. The main area shows a map with a blue driving route and several device icons. A sidebar on the right provides additional information about the selected device.

This screenshot shows a more detailed view of the software interface. It features a table of detected devices with columns for SSID, MAC, Type, Channel, and other details. To the right, there is a network diagram showing connections between devices. The interface includes various filters and search options.