IMSI/IMEI
Catching & Localization System

(IMSI/IMEI Catcher + Direction Finder)
Our intelligent, integrated and highly mobile IMSI/IMEI Catching & Localization system is used for identifying the IMSI and IMEI of Mobile Terminals (MTs) and tracking their location data, without mobile number identification and traffic interception.

The device supports all main cellular standards:
Benefits

We don’t sell boxes, we sell solutions.

Here are some key aspects of our work:

- The unique technical innovations.
- Operational efficiency and high durability with cost-effective maintenance.
- Proven quality.
- Individual approach to each customer.
- Qualified technical support.
Key Features

Why Do You Need Exactly This Catcher?

Here are some key points of vast monitoring and evaluating functionality:

- Catching Mobile Terminal Identifiers (IMSI, IMEI, TMSI).
- Performing network environment test in the necessary cellular network standards.
- Providing analysis of the areas covered by the other cellular base stations.
- Preliminary analysis of the MT’s search area.
- Each “fake” base station can be set up independently of each other.
- Detecting “fake” base stations in controlled area.
Key Features

- Depending on the goals set, you may perform the following actions:

  ✓ To bring the cell phone back to the cellular base station.

  ✓ To hold on the cell phone on the catcher’s base station.

  ✓ Suppress cell phone communications, up to its reset.
Key Features

- Once the phone is being connected to the device’s base station, you may:
  - monitor the phone’s operations: the messages being sent, the voice calls being placed (GSM).
  - send false SMS from false phone numbers (GSM).
  - **Bulk messaging to all cell phones in the covered area.**
  - Silent call option (while making silent call, you may track MT’s location to within a meter using a **Direction Finder**; the data gathered by the direction finder is automatically synchronized with the catcher’s data).

- **SIM replacement detection** (once the catcher detects SIM replacement, the Target is duplicated with the appropriate mark).
- Real-time database storage for further replay and analysis.
- Intelligent **cell phone jamming** option in the area covered by the catcher.
- Analysis of MT’s data by time registered to detect the Target IMSI.
- User-friendly GUI & powerful admin panel.
- Can be used as a stationary system (on a fixed monitoring station or vehicle mounted), as well as a fully portable system.
Specifications

- 2G/ GSM (850/900, 1900/1800) support.
- 3G/UMTS (850, 900, 1800, 1900, 2100, 2600) support.
- 4G/LTE (800, 850, 900, 1800, 1900, 2100, 2600) support.
- CDMA (450, 800, 1900) support.
- Output power: 25…30 W
- Wi-Fi: 2,4 GHz and 5 GHz
- Input voltage: 14...30 V
- Power consumption: 250…450 W
- Adjustable power system.
- Hardware versions: Rack mounted Unit or Portable device
Customization

The IMSI catcher can be used for both stationary and mobile applications. That’s why the ultimate customer solutions may differ and are subject to modification.

You’ve got:

❖ an opportunity to “build up” the system by purchasing necessary components/blocks in future.

❖ an opportunity to create a complex multi-band solution using the IMSI/IMEI catcher along with the other similar devices sharing a single software platform.
Installation on a Fixed Monitoring Station

- The system can be installed at checkpoints in the airports, railway stations, customs, etc.

- The device can be used as a part of the network with a central monitoring station.
Installation on a Mobile Monitoring Station

The system can be optimized for integration on vehicle chassis, providing maximum operational flexibility, safety and control.

Operators work in an ergonomically designed environment that has been set up due to client’s requirements and the International Labor and Sanitary Standards.

The securely hidden antennas provide effective complex operation.
Quick Installation at the Point of Data Collection

Fully portable installation with wired/wireless connection and antennas

- Operation from tablet or PC (included).
- Installation time – up to 5 minutes.
- The device is equipped with several antennas (magnet basis antenna, shark fin antenna, directional antenna).
- Supplied in the impact-resistant case made of polypropylene (PP).
Hardware Component

Vehicle mounted system

IMSI/IMEI Mini Catcher MX2
PA 3/1
PA 4/2
PA 2/3
Modifications

PA 3/1

- Provides operation for one frequency range of one cellular standard: GSM, UMTS, LTE or CDMA.
- The number of simultaneously controlled frequencies – 3.
- The unit consists of one power amplifier providing operation in the required frequency band (by pre-order).

PA 4/2

- Provides simultaneous operation for two frequency ranges of the standards: GSM, UMTS, LTE, CDMA.
- The number of simultaneously controlled frequencies – 4.
- The unit consists of two power amplifiers providing operation in the required frequency bands (by pre-order).

PA 2/3

- Provides simultaneous operation for three frequency ranges of the standards: GSM, UMTS, LTE, CDMA.
- The number of simultaneously controlled frequencies – 2.
- The unit consists of three power amplifiers providing operation in the required frequency bands (by pre-order).
Multiband IMEI/IMSI *Mini* Catcher

The unit has compact dimensions what makes it ideal for backpack operation.

Combined with a laptop included, you have a truly portable and powerful IMSI/IMEI capturing and localization kit ready to use at any location.
Features & Benefits

- Works with Bands 1, 3, 5, 7, 8, 20; with all cell network standards: GSM, UMTS, LTE, CDMA.
- Area monitoring (collecting and storing cell phone identifiers (IMEI, IMSI, TMSI).
- Silent call feature, jamming option, SMS sending.
- Two independent channels of virtual base stations.
- Can be controlled through PC, tablet or smart phone. Microsoft Surface Pro laptop is included in standard set.
- Wi-Fi: 2,4 GHz and 5 GHz.
- Automatic cooling system.
- Maximum frequency output power of the unit: 3 - 5W.
- Working and emergency status indication.
- Input voltage: 14...30 V.
- Max. power consumption: 70 W.
- The standard battery run-time – up to 2,5 hours, the high capacity battery run-time – up to 4 hours.
- Unit weight (excluding the battery): 2.8 kg
- Size: 235 x 228 x 72 cm.
2G/3G/4G Direction Finder

The IMSI/IMEI catcher is coupled with a special compact direction finder for precise Target identification.

The device is meant to:

- to measure the MT’s signal strength.
- to transmit data via BlueTooth to the control device.
- to track MT’s location to within a meter.

- The data gathered by the direction finder is automatically synchronized with the catcher’s data
- Supports all cell network standards: GSM, UMTS, CDMA, LTE.
2G/3G/4G Direction Finder. Features

Features

- The device is created in the form of a plastic monoblock and equipped with the built-in antennas from two sides with high and low range value.
- The software is developed for Android operating system.
- Synchronization of Target’s parameters with the device.
- The device is being used in the carryall bag of civil (non-military) nature.
- Wireless productivity – up to 7 hours.
- Wide operating temperature range.
- Weight: up to 1.2 kg.
- Size: 157x158x45 mm.
Intelligent Power System

The IMSI/IMEI Catching & Localization system is equipped with an intelligent power system that provides autonomous operation over several hours. It can be installed on a fixed monitoring station or on the basis of a vehicle.
Here is a sneak peek of some other power system advantages:

- The system supports “hot” switching between voltage sources.
- It provides uninterrupted power supply of the whole system.
- It can be operated wirelessly via remote control or PC.
- Battery parameters can be monitored via remote control or PC.
- Battery type recommended - LiFePO4 (supports all battery types).
- Can be used as a standalone mode to supply the necessary equipment.
- Can be used for both stationary and mobile applications.

Versions available: minimal, standard and premium.
How does the IMSI Catcher work?
The IMSI/IMEI catcher monitoring software is an intelligent solution for detecting, classifying and processing cell phone network signals.

- Controlling and monitoring the mobile identifiers
- Storing and analyzing data delivered by the equipment
- Multifunctional interface that serves for all cellular standards: GSM, UMTS, CDMA, LTE.
- Intuitive GUI & powerful admin panel.
- Smart reports & statistics
Graphical User Interface

GUI. General Layout
Our device provides the following information on the nearby base stations:

- **MCC** – Mobile Country Code
- **MNC** – Mobile Network Code
- **LAC** – Local Area Code
- **CID** – Cell ID
- **ARFCN** – absolute radio-frequency channel number, channel number, CH (UARFCN in UMTS/LTE);
- **PSC** (UMTS, LTE);
- **BAND** (UMTS, LTE);
- **RxLev** – signal level;
- **C1/C2 value** (GSM)
- **CN (BCCH)** – channel number of the nearby base stations (GSM);
- **Address-coordinates-azimuth** position of base stations, by reference to MCC-MNC-LAC-CID (if the necessary database is available).
Carrier’s Base Stations

The database of carrier’s base stations provides the following functionality:

- To define a base station address, coordinates and azimuth position by reference to MCC+MNC+LAC+CellID.
- To define carrier’s base station location on the map.
- To calculate carrier’s base station coverage in precisely specified position.
- To estimate MT’s search area according to the data received from the cell phone carrier.
If you have a database of cell base stations, you can make preliminary analysis of the MT’s search area.
Base Station Frequency Channel Analysis (GSM)
Base Station Frequency Channel Analysis (UMTS, LTE)
Target Lists:

- White List (Targets list to capture)
- Black List (Targets of no interest to being captured)
- Grey List ("fake" IMEI numbers)

Target’s Profile:

- IMSI
- IMEI
- TMSI
- Name
- Picture
- Note

Unlimited number of registered Targets.
Base Station Operational Modes (GSM)

- **Gathering IMEI/IMSI without registration** – The Mobile Terminal, after being attached to the catcher's base station and receiving its IMSI/IMEI/TSMI, will get back to the carrier's network whether it's on the Targets List or not. The MT will add LAC used by the catcher in its blacklist and will “remember” it from several hours to several days.

- **Catching Mobile Terminals listed** (mode by default) – Non-Targets (IMSI/IMEI numbers off the lists) and blacklist Targets will get back to the carrier's network. White list Targets will be captured, i.e. registered on a virtual base station. Later you will be able to make a Silent call to the “captured” mobile terminals, send them SMS, get them back to the carrier's network (GSM) and intercept their activity (SMS, calls) (GSM).

- **Catching all Mobile Terminals (GSM)** – Blacklist Targets will get back to its carrier's network. Non-Targets and white list Targets will be captured.

- **Downgrading Targets from UMTS/LTE to GSM** – Non-Targets and blacklist Targets will get back to the carrier's network. White list Targets will be forced to downgrade UMTS/LTE to 2G network service, then after being registered on a catcher’s base station will lose the connection until reboot.

- **Cell phone jamming option** – Blacklist Targets will get back to the carrier's network. Non-Targets and White list Targets will lose connection and won't try to connect to the carrier's network until reboot.
The Information You Get About the MT

- IMSI.
- IMEI (GSM и UMTS).
- TMSI.
- RX\TX levels when registered on a virtual base station.
- The voice calls being placed (GSM).
- The messages being sent and their recipients (GSM).
- Sending fake SMS from false phone numbers (GSM).
- Bulk messaging to all cell phones in the area covered (GSM);
- Silent call option.
Collecting IMSI/IMEI in GSM/UMTS modules
Silent Call

During the Silent call you may perform the following actions:

- To measure the MT’s signal strength.
- To change TX level of the MT.
- to track MT’s location to within a meter using a portable direction finding homing device.
- To synchronize the data gathered by the direction finder with the catcher’s data. (RF channel, RX\TX levels, Silent call status).

On the map you can see the precise location of the complex and the supposed location of the MT.
Database

**Database Records correlation**

- Working sessions replay;
- Working sessions comparison;
- Import data to Excel.
Analyzing the IMSI/IMEI

You are able to:

- search for all data gathered (IMSI-IMEI) to locate the Target’s position.
- define the Target’s IMSI-IMEI by comparing different working sessions run at different times;

**If you know the Target’s current location, you may define the IMSI-IMEI of the Target by comparing data gathered during different working sessions. The more sessions you have, the more chances are to find out the proper information.**
Analyzing the IMSI/IMEI

You may perform the MT’s data analysis by time registered to detect the Target IMSI.
Searching for MT in the Database

Using a filter you may scan/search for mobile terminals in the database.

![Search in databases](image)

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Defining the IMSI Catcher Coordinates

The database provides the capability to search for a MT that has been attached to the catcher earlier, and to get the catcher’s coordinates.
SUMMARY

1. The Catcher has full set of functions with flexible configuration options
2. There are three models for customer choice: Rack mounted, Portable device and mini-Catcher.
3. Catcher has additional functions:
   a) multiple SMS transmission to all phones in controlled area
   b) detection of the ‘fake’ BTS stations
4. Vehicle installation provided by customer request