

## Interception Overview

### Forewarned is forearmed

Interception of communications has become the most crucial task in intelligence and surveillance. Reliable, portable, robust solutions are critical to the success of any operation.

That is why ABILITY has created industry leading integrated solutions to cover the many facets of communications interception.

Ability provides industry leading solutions for many types of needs, with off the shelf and customized systems that have been field proven around the globe.

On the cellular side, we can provide turn-key integrated solutions that cover all GSM and CDMA networks, providing real time off-air interception, robust, ultra-portable design and user-friendly operation.

On the satellite side, ABILITY can provide field-proven, cutting-edge solutions for IRIDIUM and Thuraya as well as for various global and regional satellite communication operators ("Intelsat", "Eutelsat", "Arabsat", "Domsat", "Indosat", etc.) including VSAT and DCME.

## Satellite Interception

Ability has developed advanced systems to cover satellite interception for major mobile satellite communication systems: [Iridium](#) and [Thuraya](#).

The systems can be installed on various platforms, such as vehicles, vans, shelters, fixed installations, ships, helicopters etc.

They can be used either as portable stand-alone tactical systems or as front-ends integrated with larger scale systems.

In addition, Ability has developed [SLIS](#) – Satellite Link Interception System for interception of global and regional satellite communication operators ("Intelsat", "Eutelsat", "Arabsat", "Domsat", "Indosat", etc.) including VSAT and DCME.

## Cellular Interception

Our fully passive cellular interception solutions are based on state of the art technology and extensive field experience. Active GSM interception systems and IMSI/IMEI catchers are also available. **We currently offer five types of solutions:** [Passive GSM Interceptor](#) GTReS – GSM Traffic Recording System [Active GSM Interceptor](#) IBIS – In-Between Interception System [Active GSM IMSI/IMEI catcher](#) IICat – IMSI/IMEI Catcher

[3G-Cat](#) Long-awaited solution for 3G (UMTS) networks [Passive CDMA Interceptor](#) ACIS – Advanced CDMA Intercepted System

## Passive GSM Interceptor

### GTReS – GSM Traffic Recording System

GTReS is a multi-band fully passive GSM interception system designed to record the entire traffic occurring between Base Transmitting Stations (BTS) and Mobile Stations (MS) located within the system's operational range. This means literally tens or even hundreds of simultaneous calls.

#### “Fully passive” means that:

- ← GTReS does not have any transmitting parts;
- ← GTReS does not interfere with GSM networks and mobile phones;
- ← GTReS' operation is completely undetectable.

Recorded information can be processed either on-line or off-line.

#### GTReS can intercept:

- ← Voice communication;
- ← SMS messages;
- ← Primary and secondary DTMF tones;
- ← Call related information

[Read more](#)

### Deciphering capabilities

The system supports both types of encryption implemented in GSM networks – A5/1 and A5/2.

**A5/2** real-time decipher is a software based solution; it works as a background application. Average deciphering time is 15 msec.

[Read more](#)

**A5/1** decipher is a separate device connected directly or remotely to the GTReS. For more information about A5/1 deciphering, please refer to the RTDM51 description.

[Read more](#)

## Active GSM Interceptor

### IBIS II - In-Between Interception System - 2<sup>nd</sup> Generation

The IBIS-II is the most advanced and newest GSM interception system in the market. The system was designed and developed according to the vast experience gathered in the last 10 years, while deploying worldwide hundreds of GSM interception systems, listening to customer's feedback and analyzing customer's operational requirements. The IBIS-II is an advanced integrated active solution that includes all relevant subsystems in a single unit, allows the user to scan, analyze, intercept, monitor, record and track GSM mobiles, regardless if they

are encrypted by A5.1 or A5.2 encryption (monitoring is not done by forcing the mobile to use A5.0 or A5.2 but rather by an integrated deciphering capability). The IBIS-II is a stand-alone solution for off the air interrogation / interception / monitoring / deception of tactical GSM communication, in a seamless way, without any cooperation with the network provider. The IBIS-II is restricted for Law Enforcement Agencies and Authorized Governmental Agencies and it offers them a powerful tool to intercept and track GSM communication of all types.

The IBIS-II extracts easily and in short time the mobiles ID's such as IMEI, IMSI & TMSI and allows the user in no time to identify his target mobiles and to monitor them. The IBIS-II offers a complete set of capabilities and advance features to allow the user to control the GSM environment and GSM communication. The user can control the level of service to the target mobiles, selectively Jam specific mobiles, perform silent calls, call or SMS on behalf of target mobile, change SMS messages "on the fly", detect change of SIM card or change of handset, and support Direction Finding system and many additional operational features.

### **The IBIS-II main capabilities:**

- ← **All GSM in One Single Unit** the IBISII includes all required modules for dual band simultaneous interception in A5.2 and A5.1 environment. No need for any additional hardware.
- ← **Instant Set Up Time** without need for external modules, setup is within few minutes only.
- ← **Dual Band Solution** any of the required frequencies 850, 900, 1800, 1900MHz.
- ← **Real Time Interception** for voice and SMS, Incoming and Outgoing, in A5/1 and A5/2 networks.
- ← **Semi Passive** Invisible & undetectable operation, no need for cooperation with network providers.
- ← **Data Extracting** system detects mobile identities including IMSI, IMEI, TMSI, MSISDN (phone number), Kc etc.
- ← **Presence verification** user can detect presence of specific target mobile.
- ← **Concurrent Calls** system Intercepts up to 6 concurrent duplex calls by default.
- ← **Selective jamming of communication** user can block communication of GSM phones defined as targets or specific network service (voice, SMS).
- ← **Direction Finding Support** by using silent call, target mobile is activated and can be traced by external DF / Homing system.
- ← **Manipulation** user can make fake calls and send fake SMS to / from target.

- ← **Remote Control** IBIS-II can be operated locally by the system laptop, by LAN connection and remote laptop or via WiFi, by a remote laptop.

System can operate with variety of power sources such as AC supply, batteries, car supply etc and by that, it can be installed and operated in many types of applications and environments (fixed installation, remote control configuration, transportable, vehicular, man pack).

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## IMSI/IMEI Catcher

### IICat – IMSI/IMEI catcher

IICat is a modular system that detects the identities of GSM phones within its operational range.

Thanks to unique sophisticated algorithms implemented in the system, the IICat uses relatively low power (usually less than 1W) to attract mobile phones and force them to introduce themselves.

It makes the system very lightweight, portable, virtually undetectable and highly efficient with mobile phones located very close to the BTS.

Another great advantage of IICat is that the system can be easily upgraded to a full GSM Interception System (IBIS).

[Read more](#)

## 3G-Cat

### Smallest & Smartest 3G IMSI/IMEI/TMSI Catcher

- ← Automatically scans and detects parameters of all 3G networks
- ← Detects all 3G phones and collect all their identities (IMSI, IMEI and TMSI)
- ← Displays phone model, country of origin and name of network provider
- ← Measures distance to all 3G phones with accuracy of less than 30 m
- ← Selectively force only target's phones to migrate to GSM mode. Rest of the phones stays in 3G-mode. Being pushed into GSM mode, 3G phones stay there until reboot. It makes possible interception of such

phones by GSM passive interception systems. Active systems, after finishing interception, can send them back to 3G-mode.

← Selectively blocks communication of 3G target's phones.

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3G-Cat can be used either as a stand-alone device or integrated with Ability's [IBIS](#) or [GTReS systems](#) . It can also be integrated with [GSM interception systems](#) of other vendors.

[Home](#) [Interception](#) [Cellular Interception](#) Passive CDMA ACIS

## Passive CDMA Interceptor

### ACIS – Advanced CDMA Interception System

The ACIS is notable for its fast, reliable and undetectable interception of CDMA traffic and excels in: accuracy, usability and portability. The ACIS CDMA INTERCEPTOR is a passive monitoring system that intercepts voice and SMS traffic in cellular CDMA networks. Extremely user friendly, no collaboration is needed with the network operator and interception is completely transparent. The system will work in all CDMAone and CDMA 2000 networks and supports all CDMA frequency bands: 450 MHz, 800 MHz and 1900 MHz. [Read more](#)