



Synway Innovative Localization System

- Hi-Precision Localization in Complex Environments
- Compliance With GSM/CDMA/UMTS/LTE/More
- Fast Catching, Data Analysis, Countermeasure

Synway localization system supports a variety of mobile protocols, including 2G,3G,4G network protocols, and includes active and passive categories to adapt to different application environments and customer needs. The localization system uses the intelligent terminal as the backend controller, and features user-friendly, high security and portability, high response and accuracy, efficient localization guidance, and low power consumption in any extreme situations. It perfectly matches over-demanding needs for public security and governmental agencies worldwide.

In addition, with graphical user interface, easy localization procedure, auto-provision and auto-configuration, the system possesses multiple capabilities to auto search base station information, localize the target terminal, determine moving direction and precise location of target; there are two modes: passive localization and active localization, and the active mode adopts modular structure, including catcher and localization equipment, console, localization on-field tool. The Passive mode only receives wireless signals and does not interfere, without radiation.

Main functions

- **High Compatibility**

Support 2G,3G,4G network protocols, including active and passive mode to localize, to adapt to different environments and customer needs, and could be customized according to the personalized needs of users;

- **Active Hi-Precision Localization**

The localization system analyzes the public communication channels which around the base station and mobile phones , or the protocols transmission of SMS business, to calculate the signal emission intensity of target phone and yield the result of position;

- **Passive Hi-Precision Localization**

In-proximity Localize by magnetic field intensity, and use silent paging to find target and allure login; Even in high buildings and any complex scenes, detect terminal signal strength to realize precise positioning, without sending signals, being perceived by target, or interfering with the existing network;

- **Advanced Precise Localization**

System and in-field individual tool (active-based) to detect the possible location of the target from far to near, approach the building or space, and ultimately pinpoint the room or individual, meeting the user need of precise positioning and solving the challenges of localization;

- **Hi-Speed Data Catching**

Bluetooth wireless communication technology for command control and data transmission between backend device and master device, featuring hi-responsiveness and hi-speed; Auto-provision or manual frequency setting mode to catch mobile terminal ID information (IMSI, IMEI, time) in the coverage;

- **Value-Added Localization Aid**

Backend LBS data management system realizes localization of the target mobile phone in designated area. With individual on-field tool, the aid system possesses high positioning accuracy, perfect direction/positioning speed, and is compatible with other brandname localization system;

- **Personalized Countermeasure Technology**

System integrates diverse technical interference functionalities, including selective blocking, SMS interception, caller interception, setting random number to call or send SMS. With powerful mobile communication technology and data processing capabilities, it features user-friendly and hi-portability;

- **Powerful Data Analysis**

The console processes catching data, implements data query, data comparison in different time slots and other functionalities. The system can output the searched information, including BTS paranoia, geographic information, etc., to facilitate benchmarking of collected information and backend data;

Key advantages and values

- **Ease of Use**

One-click operation, simple control, portable, number-based to localize target, the user interface is easy to operate, and fit to a variety of complex environments and places;

- **Advanced**

Ensuring high precision and adopting active and passive localization mode, this system leverages advanced security and network technologies to localize targets, without being perceived;

- **Multifunction**

Integrated or modular design, in a hybrid network environment, multi-targets can be localized simultaneously, multi-functional integration, localization, catching, countermeasure in a single system;

- **Reliability**

Software and hardware technology ensure high reliability and 99.99% availability in a variety of complex environments, as well as high MTBF up to 100,000hrs;

- **Environmental Friendly**

The system meets the requirements of modern environmental protection, and Green security, no radiation or extremely low radiation (active mode), no or negligible impact on the human body;

- **Versatility**

Has been widely used by governments at all levels, public safety and other institutions, protocols and technical specifications match global standards, with high compatibility;

- **Intelligent**

Configure the automatic frequency-adjustable mode to realize rapid deployment; can automatically stop catching or restore catching while needed;

- **Accuracy**

Fast, accurate localization: the system's unique multi-directional reception technology and console implement fast and accurate localization after discovery of the target;



Technical Specifications

Singaling Parameter	GSM900	CDMA1x full-band	WCDMA full-band	TD-SCDMA full-band	TDD LTE/FDD LTE
Working mode	Single frequency emission, support China Telecom and GSM of CMCC	Multi- frequency emission, Support the CDMA 1x of China Unicom	Single frequency emission, support WCDMA of CMCC	Single frequency emission, support 3G network with TD-SCDMA of China Telecom	Active emission, support 4G mobiles of all China communication operators
Antenna and interface	Omnidirectional antenna				LTE full-band antenna
Usage mode	vehicle-mounted				vehicle-mounted or settled
Control mode	Laptop or Handheld terminal				Laptop
Sensitivity of reception	-100dBm	-100dBm	-100dBm	-100dBm	-100dBm
Transmitted power	10W	10W (External power amplifier, adjustable power)	20W (External power amplifier, adjustable power)	20W (External power amplifier, adjustable power)	10W(adjustable power)
Coverage	300m(common environment)	300m(actual environment)	300m(actual environment)	300m(actual environment)	400m(urban environment)
Catching speed	1000 / min(single channel)	500/min(single frequency)			
Catching ratio	Under 20km/h >90%; 20-80km/h >80%				
System interference	In standby mode, the interferential time on the normal communication of the mobile terminal: <10 s., Same one mobile terminal is not allowed to capture again in a certain period of time	Surrounding mobile terminals with CDMA would be interfered before no target found	In standby mode, the interferential time on the normal communication of the mobile terminal <5 s.,		
Localization accuracy	10m				
Reporting frequency	Customized, active paging	Configurable software	30 times / min(Configurable software)		Configurable software
Power supply	220V alternating current	48V direct current			
Rated power	80W	200W	200W	160W	160W/Band
Environment	-20~+55 °C				
Humidity	10-80%(30 °C)				
Dimension	40cm*30cm*10cm	45cmm*35cmm*17cmm			
Weight	10kg				16kg