Synway Protector™ Cellular Locator

The Synway Cellular Locator, a cellular acquisition and positioning system, is part of the Synway Protector™ suite of products. The system provides tactical acquisition and protocol-based positioning of cellular devices active in its coverage area, as well as enabling last-mile positioning for operational activity.

Completely developed in-house the system excels with a flexible range of capabilities, features, and configurations, the Synway cellular locator supports various positioning methods, including extracting the GPS data directly from the device, and can generate high-accuracy target positioning information, which significantly improves the chances of operational success during last-mile positioning. All positioning information is updated in real-time to fine-tune the calculated location of the target and ensure that once the active stage starts, it will be as short as possible.

With add-on advanced IMSI capturing and firewall technologies, the Synway cellular locator also can capture cellular IMEI or IMSI unique identification and control cellular phone's accessibility to network. When working in “selective blocking mode”, the authorized mobiles phones can access the public mobile networks normally while the unauthorized ones can't.

Synway designs and builds all its systems in-house, and so configurations can be customized to specific customer needs upon request, Synway Protector™ cellular locator comes in various form factors and flexible configurations: 1) highly compact unit that fits into a jacket pocket; 2) ruggedized suitcase or portable backpack unit; 3) vehicle-mounted for flexible deployments; 4) fixed, rack-mounted unit for long-term operations.

This enhanced utility enables relevant **law enforcement agencies, search and rescue, correctional facility, prison, police and counter terrorism, border security, emergency service and telecommunication** to augment their intelligence on potential targets and, if required, take appropriate action.

Core Features

Tactical Acquisition & Protocol-Based Positioning

As part of the Synway Protector™ suite, it serves as a cellular acquisition and positioning system, enabling the capture and protocol-driven positioning of active cellular devices in its coverage area.

Multi-Method Positioning & High Accuracy

Developed entirely in-house, with flexible capabilities and configurations; supports various positioning methods; Generates high-accuracy target positioning information for precision requirements.

Last-Mile Efficiency

Supports last-mile positioning for operational activities, focusing on precise location tracking in the final phase of missions.

Real-Time Positioning Update

Updates all positioning information in real time, allowing for dynamic fine-tuning of the calculated target location

Core Benefits

Enhanced Operational Success Rate

Last-mile positioning and high-accuracy location data directly address the critical "final phase" positioning needs of missions (e.g., law enforcement raids, anti-terrorism operations)

Efficient Mission Execution

Real-time updates of positioning information enable continuous optimization of target location calculations, reducing the risk of target escape or mission exposure.

Strong Adaptability to Scenarios

Multiple positioning methods (including GPS data extraction) ensure effectiveness across diverse environments; allow customization to match specific operational requirements

Seamless Ecosystem Integration

As a component of the Synway Protector™ suite, it can easily integrate with other Synway products (e.g., IMSI catchers, cellular firewalls) to form a unified intelligence-gathering system.

Technical Specification

Main Functions	Cellular locator, Add-on IMSI catcher and cellular firewall	
Applications	law enforcement agencies, search and rescue, correctional facility, prison, police and counter terrorism, border security patrol, emergency service and telecommunication	
Base station	Simulates GSM/ UMTS/ LTE/5G NR base stations simultaneously. The supported network protocols can be customized.	
Bands	Support 2G, 3G, 4G, 5G, the frequency band include GSM/UMTS/LTE	
	5G	N1:uplink: 1920-1980MHz;downlink:2110-2170MHz N5:uplink: 824-849MHz;downlink:869-894MHz N8:uplink: 880-915MHz;downlink:925-960MHz N28:uplink:703-748MHz;downlink:758-803MHz N41:2496-2690MHz N77/N8:3300-3600MHz N79: 4400-5000MHzz
	4G	B1:uplink: 1920-1980MHz;downlink:2110-2170MHz B3:uplink: 1710-1785MHz;downlink:1805-1880MHz B5:uplink:824-849MHz;downlink:869-894MHz B8:uplink:880-915MHz;downlink:925-960MHz B34:2010-2025MHz B39:1880-1920MHz B40:2300-2390MHz B41(38):2496-2690MHz
	3G	WCDMA:B1:uplink: 1920-1980MHz;downlink:2110-2170MHz CDMA:B5:uplink:824-849MHz;downlink:869-894MHz
	2G	GSM900:uplink:890-915MHz;downlink:935-960MHz DCS1800:uplink:1710-1785MHz;downlink:1805-1880MHz
	Notes: The number of supported bands will continue to be updated and can be customized according to clients' need.	
Transmit Power	≤ 47 dBm (50 Watt), stepless adjustment	
Sensitivity	≤ -110 dBm	
Signal Coverage Radius	50-1000m (Typical / Ideal Environment): With distributed deployment, the coverage area can be expanded via indoor distributed antennas	
Antenna Interface	N-Type	
Software Features	Data Export Format: Excel Multi-User Permissions: Not Supported Remote Management: Web	

	Whitelist/Blacklist Capacity: Unlimited Capture Rate: 50 Entries/Sec Storage Capacity: 1 Million Records Control Platform: PC Terminal
Electrical Parameters	Input Voltage: AC 110-220V, DC Optional Power Consumption: based on function, usually less than 1,000Watt Battery Capacity: Optional or based on necessity Battery Life: based on necessity
Physical Parameters	Housing Material: ADC12 Die-Cast Part (Die-Cast Aluminum Alloy) Protection Class: IP67 Dimensions (Length × Width × Height, mm): The dimensions are related to the number of supported frequency points and coverage range; Weight: custom-made by needs
Environmental	Operating Temperature Range: -40 – 55 °C Storage Temperature Range: -40 – 55 °C Humidity: 5% – 98% RH Shock Resistance Class: IEC
Accessories List	Signal Shielding Main Unit Main Unit Power Cable Main Unit Ethernet Cable Signal Shielding Front-End Beidou Antennas Ceiling-Mounted Antenna Installation Accessories (including feeder cables and hoop accessories)
Scan and set-up	Automatically provides users with the ideal parameter for the most effective attraction of mobile phone subscribers.
Detection	Alarm can be triggered upon the presence of a specific mobile phone.
IDs	Capture and record cellular identifiers (IMSI, IMEI), which are stored in database and analyzed.
White list	Allows a predefined list of devices to work while denying service to all others.
Blacklist	Allows operation in a targeted mode where all phones are released but a predefined list of targets is held / denied.
Downgrade	Ability to downgrade target mobile phone from LTE or UMTS to GSM.
Warranty	3-Years, lifetime technical support for free

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HANGZHOU SYNWAY INFORMATION ENGINEERING CO., LTD.

Founded in 1995 in Hangzhou, SYNWAY is a leading global provider of communication solutions, offering VoIP Gateways, IP PBXs, SBCs, and IMSI Catcher systems. With reliable, innovative, and future-ready products, we deliver agile and cost-effective solutions to telecom operators, service providers, system integrators, enterprises, and government agencies in over 100 countries.