

# GSMSense

## Mobile Tracer & Locator system

Data Sheet

### KEY FEATURES

- Pin-point target mobile phone to +/- 1m accuracy
- Pure 2G/UMTS (3G)/LTE(4G) mode
- GSM to GSM redirection  
UMTS to GSM redirection  
LTE to UMTS or GSM redirection
- Scanning of IMSI, IMEI, TMSI of User Equipments
- SMS to target from predefined numbers
- Hand held and body worn direction finders
- Configurable to any GSM/UMTS/LTE band across the globe
- Remote Interfacing capability
- Integrated GPS & Compass
- Upto 5W per band

GSMSense is a specialized tactical GSM Mobile Tracer & Locator system intended for Law Enforcement & National Security groups. GSMSense collects basic GSM information (IMSI, IMEI) about handsets in the local area (airport terminals, prisons etc.) and localizes it.

By utilizing GSMSense it is possible to create a special outlook system that can detect the presence of the group of handsets in the place of interest and help in locating the target.



### System Overview

- GSMSense is a compact & portable system packed in a ruggedized case. The system is compact enough to be carried on a backpack.
- It is an SDR based, Windows operable system paired with Notebook. The connectivity between the device and the control unit is through a wire/wireless.
- It is paired with hand held DirectionFinder unit to localize the GSM handset.
- The System logs all the IMSI, IMEI & TMSI identities of all mobile stations in the selected area
- Mobile terminal localization is being done with the use of service channel information sent by the mobile as a response to paging requests from GSMSense. Mobile devices location detection is performed using Direction Finder and visual real-time information on received signal strength (at display terminal) displayed to GSMSense User
- The system does not interfere with the external Cellular networks

## USAGE

- IMSI, IMEI based operation
- Localisation of Headset
- Jamming user service

## System Details

- GSMSense generates transmission output power upto 37dbm (5W) to give effective locations in open territories. The system is able to detect the transmission signal from mobile stations transmitting in the range.
- Built-in RF environment monitor assesses and monitors the number of GSM / UMTS/LTE(FDD & TDD) networks in an area, respective Base Stations and neighboring cells list.
- Identifies MSs working in UMTS/LTE. It has the ability to activate the direction finding in UMTS/LTE only mode or forced rejection of MSs to GSM 2G network.
- Supports GSM 900, DCS 1800 & UMTS2100, 900 & LTE B3(1800), B40(TDD 2300) networks.
- Full identification of IMSI, IMEI and TMSI information and dynamic control capabilities, including individual service denial.
- Configurable to any existing GSM network around the globe.
- The system is covert and undetectable.

## System Functioning

- In case approximate location of the target is known, the system captures the identities of all the mobiles in the given area, even if the specific IMEI and IMSI Number are not known.
- The system confirms the presence of specific target within a given operational area
- Depending upon the network/Mobile user density in an area, at least 400 mobiles send authorization requests within one minute.
- Automatic configuration for best network parameters (Auto-config mode) for optimal effectiveness.
- The System identifies target based on IMSI/IMEI and provides alert when the target appears while scanning.
- Display of respective "XYZ" provider logo on the mobile terminal, and indication of a sustainable received signal strength.
- Option of preventing communication from the target without the knowledge of the target/ operator and releasing to some other base station.
- Option of sending a false SMS to the Target.
- Option of Generating Mobile Terminating Call.

- It can plot time versus RSSI/RSCP/ for the blacklisted/target device.
- Correlates data collected from multiple locations, in offline mode, to narrow - down to a single target if Identities related to the Mobilephone IMEI/IMSI are not known.
- Imports the data in Windows based Offline Laptop Analyzer Unit. Separate equipment for acting as analyzer.
- Hand-held/Body-worn direction finder unit helps to locate the target up to +/- 1 meter.
- It has the facility to automatically select the best network parameters (Auto-config mode) without the user having to fill in the details manually. It also contains options like Scan, Block (ban), Hold, Allow and Release modes for operation.
- Built-in 802.11 Wireless Access point supporting full remote control
- SDR based upgradeable Technology.



#### Deliverables Options

- Mobile Tracer & Locator Unit with 37dbm amplification and inbuilt wireless connectivity with the Notebook.
- GPS logging facility.
- Ruggedized Laptop Based Analyzer Unit.
- Mobile finder unit (Handheld & Body Worn)
- A set of Omni-Directional and Directional Antennas.
- Mobile Tracer & Locator Software
- Windows based link analysis Software
- Integration with GIS Map Engine/ Google Earth

### Technical Specifications

1	Frequency Bands	GSM 450, GSM 850, E-GSM 900, DCS 1800, PCS 1900. UMTS Band 1 - Band 26.
2	LTE Frequency Range	• All FDD & TDD bands:B1.....B44
3	Radio Bearers	Signaling BCCH, AGCH, RACH, CBCH SACCH, SDCCH, T/FACCH Traffic TCH/ FACCH
4	Processing Capability	1xBCCH, 1x CBCH (CBAI.50), 19x SDCCH, 6x TCH (EFR/FR)
5	Traffic	TCH/FACCH
6	Number of monitored mobiles	Minimum 255
7	SDR Frequency	400 MHz - 3000 MHz
8	Receiver Technology	DSP based with full per-shot channel equalization (ETSI GSM05.05)
9	Transmit Power	• Manpack : 2W - 5W
10	Transmit Power Stability	Better than +/-2dB across the entire band
11	Handsets acquisition speed	up to 400 per minute across networks
12	Antenna Gain	0/3/5/8 dBi, Both omni & directional
13	Antenna Beamwidth(Directional)	65 Degree to 120 Degree or Configurable
14	OS & Connection	Windows LAN/WLAN (5 GHz)
15	Dynamic range for mobile devices	-35.....-110 dBm
16	Uplink path Sensitivity	Better than -106dBm
17	Connector Interface	SMA & N type
18	Power consumption	Less than 20 W (without amplifier module)
19	Power supply	Built-in Portable battery, 12V DC, or mains via AC adaptor
20	Dimensions & Weight	Configurable

