

Passive GSM Interception System

MODEL CPI 1890



General Description

Building an overall intelligence picture is a daunting task which usually takes time and consumed many efforts. Whilst conducting collection intelligence picture there is a growing risk of exposure and sometimes, the ability to collect intelligence is dependent on the support of other entities, making the secrecy of the collection operation, a main issue. Furthermore, for many years, passive interception has been a main capability of large national organizations that collected mass data of information over large areas.

The solution

Phantom Technologies own a fully in house manufactured off the air passive tactical interception system for GSM bands. The system main design is for mass interception of SMS and voice calls. The system's passiveness assures that it will leave zero electromagnetic signatures in the cellular network and furthermore, it can be easily deployed by tactical teams and most importantly, tactical units can operate the passive interception system independently without need for any outside support. The system is designed to be deployed in fixed installations and or in a mobile deployment possibility such as an SUV.

The CPI is suitable for the following operational scenarios:

- a. Cross the border intelligence collection
- b. Mass interception in predefined Area of Interest (AOI)
- c. For Military operations
- d. For general collection of information by an intelligence agency when there is no intelligence
- e. Long term collection mission

Solution Description

The system supports monitoring and recording of 24 to 32 GSM channels simultaneously. Using high-sensitivity digital receivers, the CPI 1890 monitors' network traffic over the BTS channels.

Standard system includes:

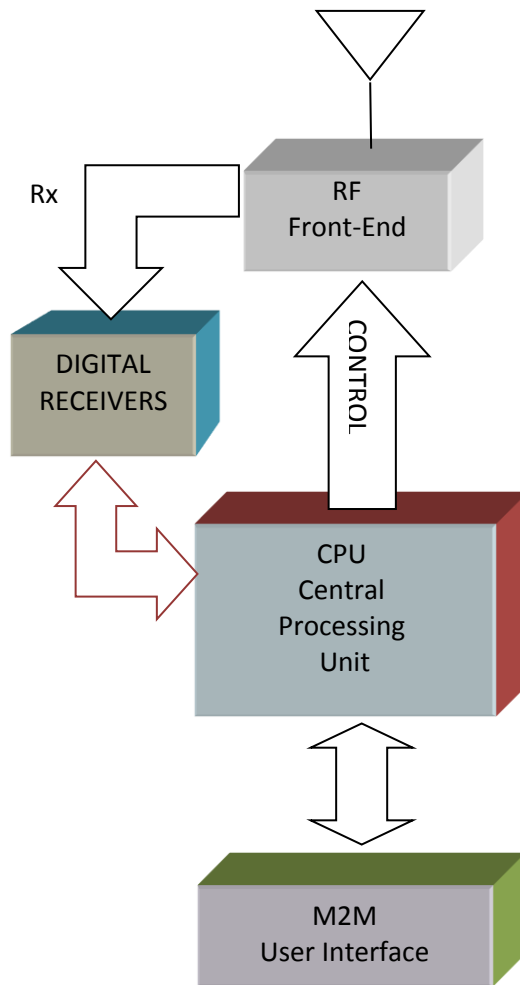
- SDR – Software Defined Radio Receiver
- Laptop
- Interception Software

The system has a Built-In PHANTOM Front-End LNA, an increased system sensitivity and selectivity, and is able to reach long-distance targets.

System Features

- Fully Passive real-time ARFCN forward and reverse monitoring
- Monitoring and Recording Voice, SMS and Traffic
- Compatible for all GSM bands – 850/900/1800/1900 Bands
- Supports A5/0 & A5/1 & A5/2
- Fast Deciphering Time - Less than 1 Second in A5/1
- Compact & Robust Design
- Installation in different platforms
- Automatic scan for active GSM networks around
- Detection of Location of real-network BTS around
- Target identification by IMSI
- Random/Target Mode
- Silent SMS for "target-hunting"
- Fully display of network traffic including Paging, Requests etc.
- All channels recording for later inspection and data analysis

System General Block Diagram



Technical Specifications

RF Characteristics	
Frequency Bands	925.0 – 960.0 Mhz 1805.2 – 1879.8 MHz *GSM frequencies can be calibrated according to customer request
Maximum Number of Receivers	Up to 32
Receiver Sensitivity	-103 dBm
Frequency Accuracy	±0.25 ppm
Channel Band Width	200 KHz
Communication Protocol	UDP
Antenna	Omni-Directional / High-Gain Directional Antenna
Power Supply	10.8-14 VDC
Physical Data	
Dimensions	19" x 3U Drawer or Ruggedize Pelican Case
Weight	Approx. 8 Kg for 19" / 12 Kg for Pelican Version
Environment of Operation	
Operating Temperature	-10°C - +65°C
Humidity	5% - 95% non-condensing
Optional Accessories	
Rechargeable Battery	13.8V/42AH