7*24 Continuous Radio Signal Detector
RS100-D

Purpose

The Radio Signal Detector RS100-D is a signal/spectrum analysis and visualization products which designed for 7*24h real-time and continuous detection within 9KHz ~ 24 GHz frequency range. It works persistently to scan the radio signals within monitoring range in working area for abnormal signal real-time discovery, intelligent identification, automatic alarm, accurate signal direction finding/positioning.

The device is dedicated to long-term intelligent monitoring and automatic early warning of regional electromagnetic security. It is an effective equipment to deal with eavesdropping, electromagnetic attack, electromagnetic leak and can be widely used in anti-reconnaissance, intelligence protection, facility protection scenarios, such as government sectors, military base, research institute, embassy, president house, etc.

It is an essential product for the next generation of occasional inspection and long-term inspection;
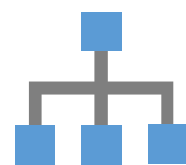
7*24h Monitoring
Increase the likelihood of detection

Graphical Display
Intuitive and simple easy to operate

Intelligent Identification & Classification
Do not miss any suspicious activities

Networking Deployment
Remote, in-place and continuous monitoring increases the likelihood of detection

200MHz Scan Bandwidth
Won't miss any suspicious special signal across frequency domains

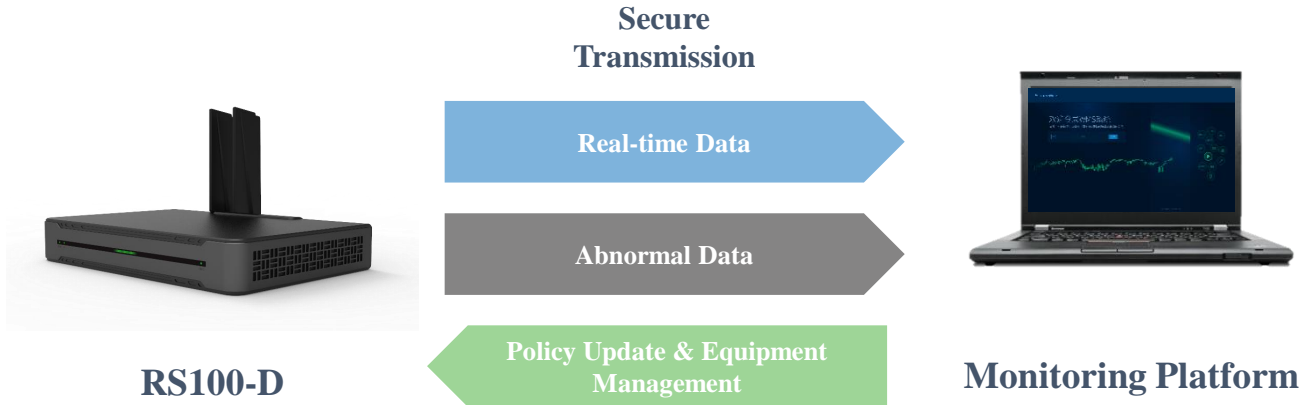**Signal Feature Display**
Not only spectrogram

Instant Signal Capture & 60GHz/s Scan Speed
Track faint or short duration signals across the time and frequency domains

Signal locator
Closed-loop for signal source sweeping

SpaceArk RS100-D

Secure Transmission

Real-time Data →

Abnormal Data →

← Policy Update & Equipment Management

RS100-D

Monitoring Platform

Features

- 7*24h persistent radio signal monitoring
- Restore audio and video with AM/FM modulation.
- Modulation system identification.
- Cellular 4G abnormal behavior analysis
- WI-FI AP&STA abnormal behavior analysis, and support positioning of a single WIFI device
- BT abnormal behavior analysis
- Visual signal list display, spectrum display and waterfall diagram display, more easier for operation

- Professional background comparison function
- Eavesdropping signal identification and alarm with built-in eavesdropping signal library.
- Detect intercom，UAV，Xbee and satellite signals.
- Supporting networking deployment for large-scale deployment.
- Local storage for long-term detection.
- Abnormal signal location and sweep

Technical Parameter

Frequency Band Range	**Tuning Resolution**
9KHz~24GHz	1 Hz
Real-time Scanning Bandwidth	**Modulation Identification**
200MHz, Dual Channel	AM, DSB, USB, LSB, FM, 2ASK, 4ASK, 8ASK, BPSK, QPSK, OQPSK, pi/4QPSK, QPSK, 8PSK, 2FSK, 4FSK, 8FSK, MSK, 16QAM, 64QAM, OFDM, COFDM, DSSS......
Detection Speed @ RBW	
60GHz/s @ 25KHz	**Audio/Video Restoration**
Noise Floor	Audio：AM、FM； Video：AM、FM（PAL、NTSC、SECAM）
-110dBm	**Power Consumption**
Identification Rate	130W
>95% when SNR>10dB	**Interface Type**
Dimension(H*W*D)	USB3.0, 1GE RJ45, 10GE SFP+
380mm*256mm*75mm	**Local Storage**
Weight(KG)	Built-in 2TB HDD or external storage
8.4KG	

Deployment Scenario

It can be fixed deployment as a monitoring station with single or multiple devices, or it can be deployed flexibly, providing temporary inspection
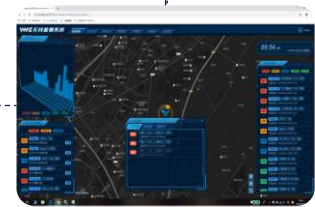

Fixed(Multiple Sites)

Fixed(signal site)

Intelligent Platform

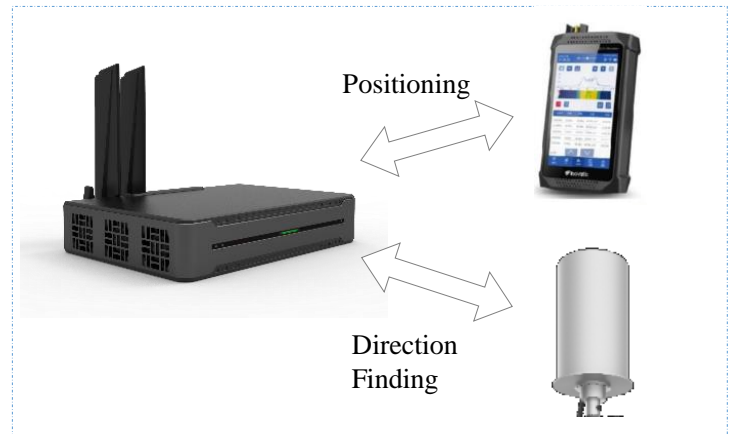**Mobile Station**

Direction finding & Positioning

Single station direction finding/positioning

- Direction Finding: The main device is connected to the antenna array, with direction finding accuracy of 3° (RMS)
- Positioning: RS100D can synchronize the parameters to hand-held positioning equipment RSHunter with one key to realize the approximate positioning quickly and easily
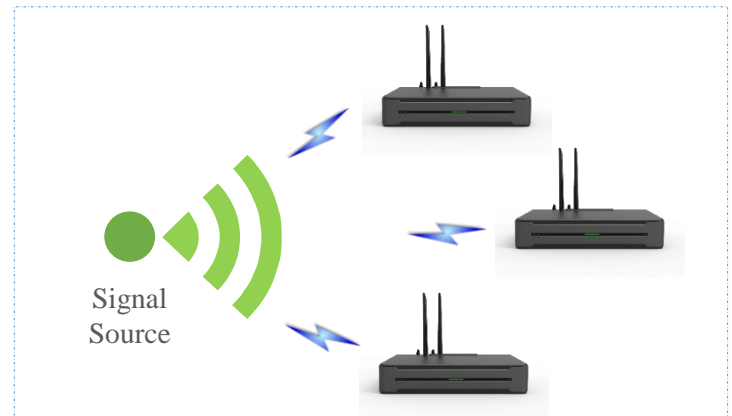

Positioning

Direction Finding

Single station direction finding/positioning

TDOA joint positioning

- Three devices can realize TDOA joint positioning. The device provides raw data (IQ data) and the background system realizes joint positioning through positioning algorithm

Signal Source

TDOA joint positioning

Signal List Visualization

Visualized Suspicious Signal Lists

Real-time spectrum graph and waterfall graph

Modulation Restoration

Real-time Alert

- ➢ 4G Video/Audio Behavior Identification Analysis
- ➢ Known Eavesdropping List
- ➢ All Signal Visual List

- ➢ WI-FI/BT Info Detect (MAC, Type)
- ➢ WI-FI Associated Terminal Identification and Traffic Behavior

- ➢ Map Overview
- ➢ Long-term List
- ➢ Distributed Device List
- ➢ Alarm List