



# Boundless Security Systems, Inc.

*the communications bandwidth experts*

Mobile Devices  
Location Tracking  
Lobby, Interview Rooms  
Virtual Fences  
Time-clock check-ins  
Banks, Retail, Office Thefts  
Break-ins

## **Indoor Stranger Detector™ Smartphone WiFi Monitor**

**Indoor Smartphone WiFi Monitoring and Rules-Based Analysis System**

**Patent Pending**



Small, unobtrusive, almond-color plastic box blends into office environments. Only connection required is ethernet with passive PoE using an external 15 VDC power supply (provided, not shown). Internal WiFi antenna. UPS not required. Appearance may vary.

### **Specifications**

- Passively receives WiFi probes from mobile devices within approx. 75 feet (varies due to building construction), and enters only publicly broadcast information into its internal database
- 802-11n WiFi wireless interface
- Covert, passive, does not solicit WiFi probes
- 32 GB solid state storage stores up to 100 million WiFi probes
- No exposed power switch or components except for ethernet jack
- Tunnels through external network to reach Boundless' portal, no setup required
- Uses Boundless' web access portal and VPN for easy remote access in a browser
- Ethernet jack with 15 VDC passive power-over-ethernet with ext. AC/DC power supply
- Internal DC-UPS bridges brief power failures and provides clean, switchless shutdowns
- Overall size approx. 6.6"L x 3.3"W x 1.6"H
- Optional cell modem and additional WiFi for Internet, and 5 MP internal **Smart Camera**

### **Features**

- Spots persons whose identities are unknown using only patterns in their presence and signals sent by default by their smartphones
- Acts like a security guard who records and monitors Vehicle Identification Numbers (VINs), adapted for the information age of smartphones
- Establishes the presence of nearby mobile devices as they search for Wi-Fi hotspots
- Sends alerts when certain mobile devices are detected, with a list of recent occurrences
- Finds **patterns of presence** in ever-growing mountain of data collected, to arm alerts
- Monitors signal strength of Wi-Fi probes, enabling estimation of distance to mobile devices
- Records Wi-Fi probes internally and organizes them into internal databases for rapid analysis
- Each probe record contains date and time, signal strength, vendor, and WiFi MAC address
- Easy to use **Sortable Table** helps spot patterns, arm alerts based on MAC address and signal strength, exclude recurring MAC addresses, and integrate with 3<sup>rd</sup>-party video
- Automatically connects to Boundless' cloud-based VPN server and Cloud-based Portal

### **Description**

The **Indoor Stranger Detector™** exploits the popularity of smartphones to provide a locating system that does not require any special software on them. It determines the presence of mobile devices using WiFi signals they broadcast. These signatures can be read electronically at long range and used to detect and identify mobile devices, and by extension individuals, automatically, even when they are out of sight. It records mobile devices' WiFi probes, assists matching WiFi signatures with individuals using external identification means, and watches for the presence of user-programmed or automatically selected WiFi signatures. These are many indoor and outdoor crime-fighting applications.



## Indoor Stranger Detector™ Smartphone WiFi Monitor

Indoor Smartphone WiFi Monitoring and Rules-Based Analysis System

# Stranger Detector™ Sortable Table User Interface



Boundless Security Systems, Inc.  
*the communications bandwidth experts*

Boundless' BSSI-8 Stranger Detector™ Sortable Table

Level 1 Sort by: Frequency  Ascending  Descending  
Level 2 Sort by: Time  Ascending  Descending  
Level 3 Sort by: None  Ascending  Descending

Number of Previous Hours to Display: 0

Number of Future Hours to Display: 0

Hide MAC Addresses in Skip List:

Hide MAC Addresses in URL List:

Update Table Clear All Selections Save as CSV

Display Skip List View Video Show/Hide Alerts

Show Unique MAC Addresses Restore All Records

Local Search Find Presence Elsewhere Wide Area Search

Many sorting functions

Choose one or more hours (previous menu selects starting time)

Color-coded groups of MAC addresses help spot patterns of presence

Self-learning exclusion of recurring MAC addresses, or manual entry

Video and Alerts integration

Search within one location or across multiple

Select	Group Select	Found	Date/Time	Vendor	MAC Address	Signal
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:42:00.940	Sercomm	00:0e:8f:3a:90:e1	-91
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:47:44.065		be:86:7a:06:a1:cc	-85
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:49:13.454	Hewlett-	00:9c:02:cb:2a:86	-87
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:59:47.406		28:9afa:ea:cd:28	-83
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:40:39.516		16:de:32:e2:8e:ab	-75
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:42:54.510		16:de:32:e2:8e:ab	-73
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:39:12.975	Apple	20:c9:d0:74:d4:25	-87
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:41:15.682	Apple	20:c9:d0:74:d4:25	-83
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:58:07.989		48:d7:05:8e:8c:62	-87
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:58:19.695		48:d7:05:8e:8c:62	-89
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:50:28.436		a6:c0:04:19:3a:e9	-77
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:54:58.421		a6:c0:04:19:3a:e9	-79
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:05:26.460	Apple	c8:bc:c8:bc:53:6b	-37
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:05:33.970	Apple	c8:bc:c8:bc:53:6b	-37
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:33:13.935		c2:4e:b2:b2:eb:34	-75
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:35:28.926		c2:4e:b2:b2:eb:34	-75
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:24:42.283		ea:a4:80:db:d6:cc	-77
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:26:57.276		ea:a4:80:db:d6:cc	-77
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jan 23 2015 07:17:40.696		fe:98:23:df:07:ed	-85

<http://boundless221.dyndns.org:9080/BSSI-8>



# Boundless Security Systems, Inc.

*the communications bandwidth experts*

Mobile Devices  
Location Tracking  
Lobby, Interview Rooms  
Virtual Fences  
Time-clock check-ins  
Banks, Retail, Office Thefts  
Break-ins

## **Indoor Stranger Detector™ Smartphone WiFi Monitor**

Indoor Smartphone WiFi Monitoring and Rules-Based Analysis System

# Stranger Detector™ Alert Messages

Please see our White Paper on *Smartphone WiFi Monitoring* integrated with outdoor video surveillance, aka *Stranger Detector™*: <http://tinyurl.com/cqycmxm>

**Example Alert push e-mail from a system that has been given the host name, *M-1* (note: *view* links are active in Alerts sent, but not in this document):**

To: M-1.alerts@BoundlessSecurity.com  
Subject: M-1 10:40:f3:56:a5:00 on Watch List detected

### **Smartphone on Watch List with WiFi Signature 10:40:f3:56:a5:00 Detected**

Click any *view* link for live video. To view recorded video: (1) click the *view* link for the desired probe and wait for live video, (2) click **REC** and wait for recent recorded video, and then (3) click **SET\_TS** to see recorded video starting 15 seconds before the probe was received.

The less negative the signal strength, the stronger the signal and the closer the smartphone or other WiFi-enabled mobile device was to the camera. Signals are received in all directions, not just where the camera views.

Probe received at Sep 6 2012 08:19:55 with signal strength -85 dBm [view](#)  
Probe received at Sep 6 2012 08:19:55 with signal strength -84 dBm [view](#)  
Probe received at Sep 20 2012 16:39:08 with signal strength -87 dBm [view](#)  
Probe received at Sep 20 2012 16:39:14 with signal strength -86 dBm [view](#)  
Probe received at Sep 21 2012 17:01:44 with signal strength -87 dBm [view](#)  
Probe received at Sep 27 2012 16:23:28 with signal strength -78 dBm [view](#)  
Probe received at Sep 28 2012 14:10:44 with signal strength -84 dBm [view](#)

©2014 by Boundless Security Systems, Inc., [www.BoundlessSecurity.com](http://www.BoundlessSecurity.com), 203-445-0562