



Boundless Security Systems, Inc.

the communications bandwidth experts

Covert cellular camera
Cellular phone tower,
Electrical transmission tower
Copper theft, Break-ins
Counter-terrorism

Cell Phone Tower Digital Video Surveillance System with Stranger Detector™

5 MP μ PTZ camera, video recording, *Smartphone WiFi Monitoring* locating system, and Passive PoE



Place
downward-
facing
camera
here

Place
upward-
facing
camera
here



Window in cover for 5 MP
concealed color micro PTZ
camera. Photo varies.

Specifications

- 5 MP $\frac{1}{4}$ " CMOS color image sensor – 60X resolution of many outdoor wireless cameras – with many operating modes and video selectable from 640x480 to 1,920x1,080 at up to 15 fps, including unusual resolutions to match site layout
- Dual-stream for remote viewing H.264 live (bandwidth-permitting) and int. recorded MP4 video
- **Forward Pivot™** micro PTZ camera with 4X optical zoom, mech. pan and tilt, and four-point suspension is unusually small and rugged
- **Real-Time Time Lapse™** enables fast remote viewing of recorded video at up to 15X
- Unique window seal avoids trapping moisture
- **Stranger Detector™** locating and alerting system receives WiFi probes from mobile devices within 150 feet (further with opt. dir. ant.)
- Internal video server with wide area network friendly video communications system^{1,2} with bandwidth-saving, video on demand, not bandwidth-wasting, video streaming
- Rugged 120GB mSATA solid state disk (to 1 TB)
- 48 VDC passive PoE for single cable use
- Internal DC-UPS bridges brief power failures and provides clean, switchless shutdowns
- Cast aluminum case approx. 6"H x 8"W x 3"D

Features

- High definition "smart" PTZ camera adapted for use with towers can be placed out of harm's way
- Turnkey, set up low power, covert video surveillance with only a PoE and an Internet connection
- Concealed color μ PTZ camera with remotely controlled optical zoom, mechanical pan and tilt
- Records video internally 24/7, avoiding distant video recorder and constant network traffic
- Optical motion detection with **Rapid Alerts** avoids problems of PIR-triggered cameras
- Quickly remotely access live and recorded video, and **Stranger Detector™** data any time
- **Stranger Detector™** locating system detects presence of mobile devices, and by extension, individuals, within 150 feet via WiFi signals they broadcast, spots patterns humans can't see, sends alerts when particular mobile devices are detected, creates a data base of their presence, and presents live and recorded video in browsers
- **Rules-based Analysis System** processes internal database of smartphone signatures (WiFi MAC addresses) and spots patterns of presence of persons whose identities are unknown
- Tunnels¹ through routers and firewalls to Boundless' Portal for easy setup and use with GSM

Description

The **Covert Smart Camera** provides not only an Internet accessible, outdoor digital video surveillance system with long internal recording, but also exploits the popularity of smartphones to provide a locating system that detects the presence of persons whose identities are unknown. It determines the presence of mobile devices using WiFi signals they broadcast. These signatures can be read electronically at long range to detect and identify mobile devices, and by extension individuals, automatically, even when persons are out of sight. It records mobile devices' WiFi probes. Its video helps users match WiFi signatures with individuals. It watches for the presence of user-programmed or automatically selected WiFi signatures, and sends video alerts via the Internet.



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

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](#)

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Notes:

1. Able to use mobile-originated, GSM / HSPA and CDMA cellular data networks with appropriate router. Tunnels through mobile-originated cellular networks to Boundless' Cloud-based Portal, from which users access the system.
2. Cellular networks are not intended for continuous viewing. Live and recorded video should be viewed only as needed.
3. Recording duration depends on many factors. Video at a rate of 250 Kbps 24/7 can be recorded for approx. one month.