Boundless Security Systems, Inc.
the communications bandwidth experts

Covert cellular IP camera
High definition, low power
Counter-terrorism, counter-drug, counter-gang, SWAT
Utility pole camera
Rugged traffic trailer camera

Low Power, Outdoor 5 MP Covert Cellular Smart µPTZ Pole Camera "Model 2"

Small, inconspicuous, low power, ultra low bandwidth, high definition, custom-preconfigured, covert cellular system is plug-and-play and intended for use at 50 to 150 yards.

Benefits

- Turnkey, set up covert outdoor **high def** digital video surveillance in minutes via cellular network and Internet for both live and recorded video
- Much smaller, less conspicuous, lower band-width, lower power, and more capable than an IP PTZ camera and cell modem in a covert housing
- Very low power dissipation for battery and solar, typ. only 3 to 5 W[3] with 3G CDMA cell service
- View natively in browser[6] on PC's and Android, view live on iOS using a media player
- 5 MP, ¼" CMOS color image sensor with back-side illumination for better low light performance
- IR-cut filter is automatically removed in low light
- Records video internally, avoiding distant net-work video recorder and constant network traffic, recording better video than could be sent to it, **reducing cellular traffic by 250+ GB/month**
- Unique concealed *Forward Pivot™* micro-PTZ camera with four-point suspension is unusually small and rugged yet provides remotely control-led mechanical pan and tilt, and optical zoom, with small window, while avoiding light loss and blurring of conventional camera concealments
- 12-33 mm optical zoom at 1920x1080, +/-22.5° mechanical pan and tilt, with focal lengths for long range use (license plate at 150 yards[5])
- Dual-stream optimization: *monitoring stream* is live and int. recorded at 960x540 @ 5 fps with high compression, PLUS much sharper, *eviden-tiary stream*: 1920x1080 @ 5 fps is int. recorded
- Rapid access video file system greatly reduces time to access and view desired video segments
- 256GB (2+ wk[4]) internal solid state video storage
- Optional *Rapid Review™* for reviewing each hour's recorded video *over the air* at **120X speed**
- Patented *Stranger Detector™* locating system detects *patterns of presence* of persons whose identities are unknown, using WiFi signals broad-cast by their mobile devices, within approx. 50 yards (longer with opt. dir. antenna) and sends alerts when particular devices are detected
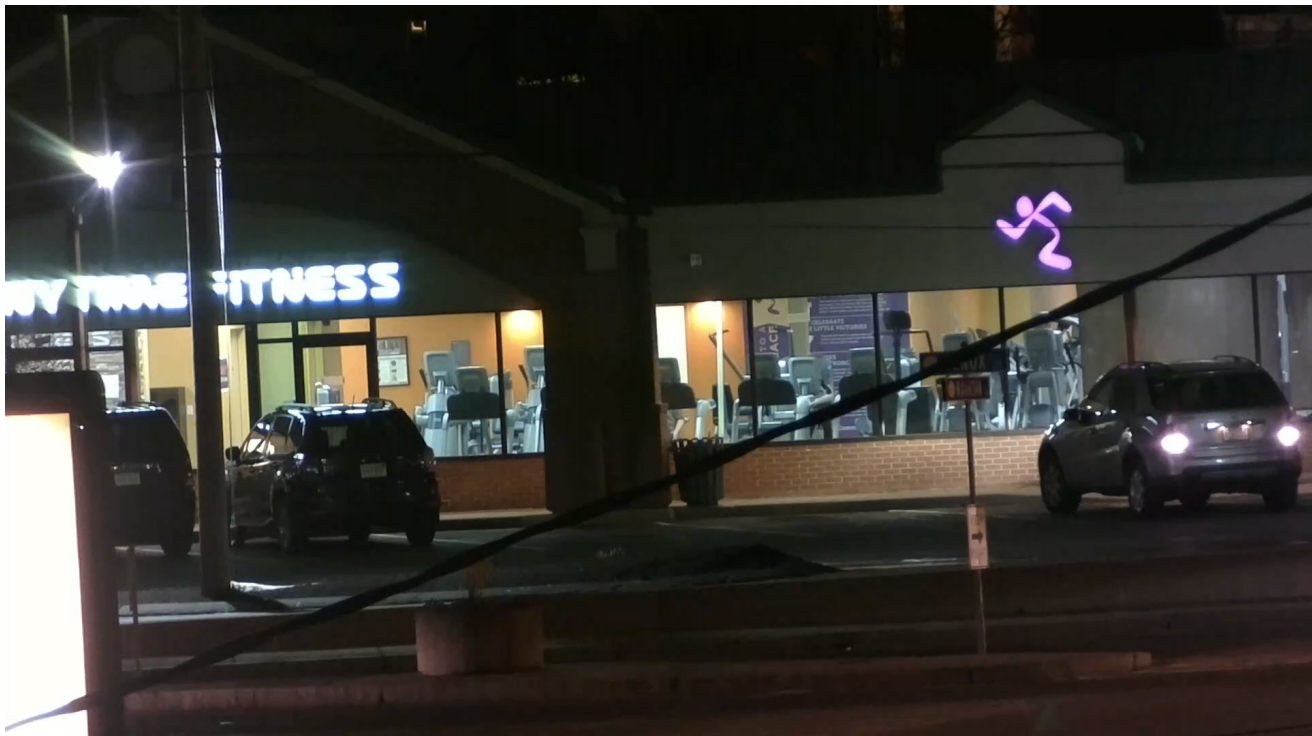
High definition yet ultra low bandwidth; very low power; very small and innocuous

Cellular Network Antenna

Custom built and configured in USA

Small, innocuous, outdoor telecom housing only 6"H x 8"W x 3.5"D

Stranger Detector™ **WiFi Antenna (directional recommended)**

Small, 1" (1.5" shown) clear, scratch and abrasion resistant, polycarbonate plastic window for concealed 5 mega-pixel *Forward Pivot™* micro PTZ color camera, optional numerals not shown

- 12 VDC nominal, wide range input (11.5 to 15V) with low voltage shut down (opt. 24 VDC model)
- "Smart" battery monitoring with estimated run time remaining
- Internal battery-free shutdown UPS bridges brief power failures and provides clean shutdowns
- Watchdog timer and remote power management
- Dual-network: cellular and tunneling through wired LAN (allows chaining of multiple units)
- Industrial grade cell modem[1,2] (svc. not incl.)
- Totally sealed avoids ingress of dust & moisture
- Cloud-based *Portal* for flexible user interface and ability to tunnel through cellular firewalls; large customers can operate their own Portal
- Very easy to use, one-page instruction sheet
- Custom built and configured

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Vehicle license plate can be read at a distance of approx. 150 yards in daylight at max. zoom

Vehicles approx. 200 yards from camera at night at maximum optical zoom

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Optional *Rapid Review™ / Integrated Timelapse* speeds up reviewing of recorded video 120X.

BSSI-8 Low Power, 5 MP Covert Cellular Smart Micro-PTZ Camera with Stranger Detector(TM)

This *Smart Camera™* was accessible when this page loaded. This page updates every 30 minutes or right-click it to update.
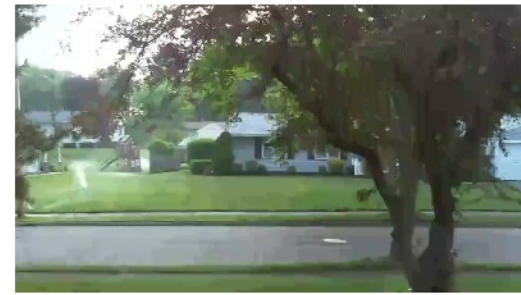
This page has a demo version of our optional, patent-pending, *Integrated Timelapse Software* that runs within our *Smart uPTZ Camera™* and **reduces time reviewing recorded video 100x.** Contact us for more information.

Status: Playing delayed live video
Date: 5/27/16, 09:44:51
Data rate: low

[View/Refresh live video] [Copy time to time selector]

Year: [2016 ▼] **Month:** [May ▼] **Day:** [27 ▼]
H(24): [09 ▼] **M:** [44 ▼] **S:** [15 ▼]
[View recorded video] **Data rate:** [low ▼] **Speed:** [1x ▼]
Type: [Normal ▼]

[Download files] **Duration:** [1 minute ▼] **Data rate:** [low ▼]
Type: [Normal ▼]

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BSSI-8 Low Power, 5 MP Covert Cellular Smart Micro-PTZ Camera with Stranger Detector(TM)

This *Smart Camera™* was accessible when this page loaded. This page updates every 30 minutes or right-click it to update.
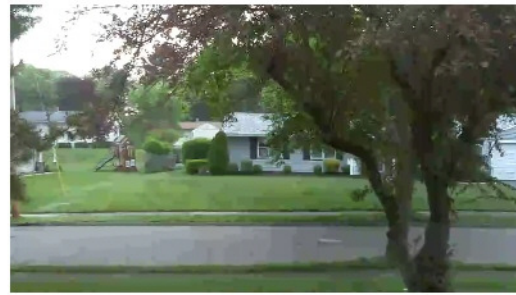
This page has a demo version of our optional, patent-pending, *Integrated Timelapse Software* that runs within our *Smart uPTZ Camera™* and **reduces time reviewing recorded video 100x.** Contact us for more information.

Status: Playing recorded video
Date: 5/27/16, 06:44:17
Data rate: low

[View/Refresh live video] [Copy time to time selector]

Year: [2016 ▼] **Month:** [May ▼] **Day:** [27 ▼]
H(24): [06 ▼] **M:** [44 ▼] **S:** [15 ▼]
[View recorded video] **Data rate:** [low ▼] **Speed:** [1x ▼]
Type: [Normal ▼]

[Download files] **Duration:** [1 minute ▼] **Data rate:** [low ▼]
Type: [Normal ▼]

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This page has a demo version of our optional, patent-pending, *Integrated Timelapse Software* that runs within our *Smart uPTZ Camera™* and **reduces time reviewing recorded video 100x.** Contact us for more information.

Status: Playing timelapse video, 1-hour files
Date: 5/27/16, 06:04:00
Data rate: low

[View/Refresh live video] [Copy time to time selector]

Year: [2016 ▼] **Month:** [May ▼] **Day:** [27 ▼]
H(24): [06 ▼] **M:** [44 ▼] **S:** [15 ▼]
[View recorded video] **Data rate:** [low ▼] **Speed:** [120x ▼]
Type: [Timelapse ▼] **File Duration:** [Hour ▼]

[Download files] **Duration:** [1 minute ▼] **Data rate:** [low ▼]
Type: [Normal ▼]

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Initial view from page, showing **delayed live video**.

View from page showing **Normal recorded video** being viewed over the air.

View from page showing optional, **Timelapse recorded video**, being viewed over the air, speeding up the reviewing of recorded video **120X** when you don't know when something happened. Click over to **Normal recorded video** for more details once you know when something occurred.

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Stranger Detector™ *Sortable Table* User Interface

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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)

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

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

Video and Alerts integration

Search within one location or across multiple

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

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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, 3G cellular data networks with appropriate modem built-in. 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. Power dissipation and run time on a battery charge depend on many factors. Figures are not guaranteed.
4. Storage duration is typical but not guaranteed.
5. Distance for reading a license plate from the best quality, recorded video at maximum zoom is typical but not guaranteed.
6. Chrome is the recommended browser on a PC. FireFox may also be used.