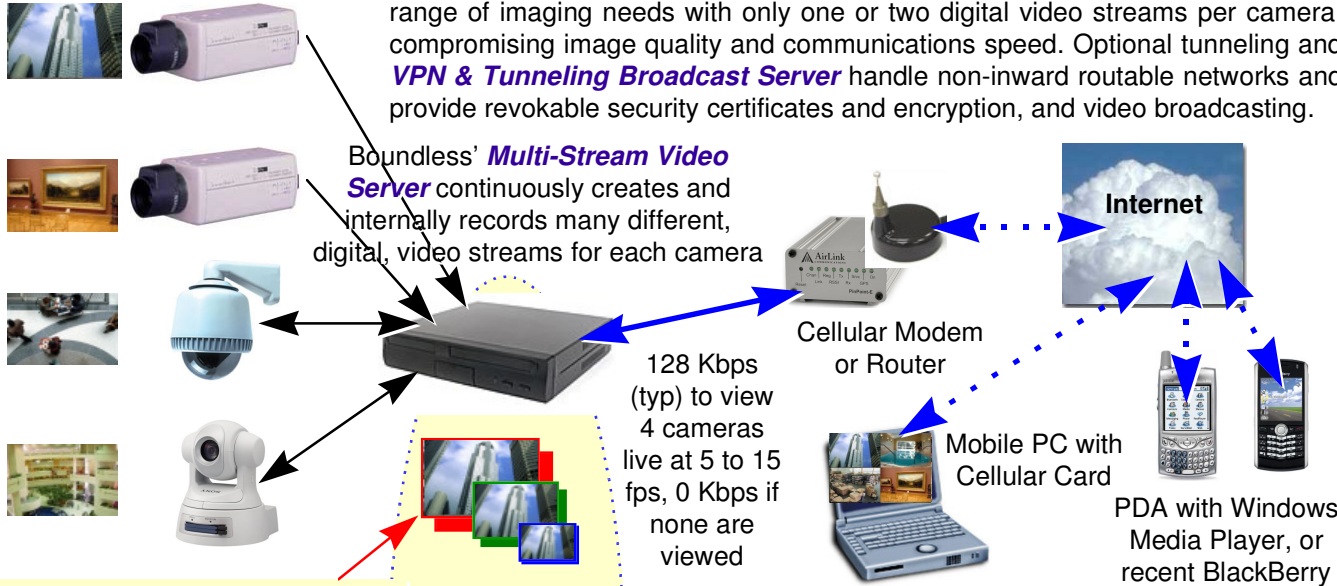


## Works where others can't

Four fixed / PTZ CCTV cameras or some IP-PTZ cameras (e.g., Sony SNC - RZ25N, RZ30N, RZ50N)

The **Boundless Security System™** is an IP-based, digital video surveillance system that is optimized for use over public wireless wide area networks. It uniquely meets competing imaging needs for investigations, monitoring and situation assessment. It continuously provides three to eight, different digital video streams *per camera* to meet competing needs for image quality and ultra low communications bandwidth. All video streams are available time-shifted and recorded, and, bandwidth-permitting, live. Other systems try to handle this wide range of imaging needs with only one or two digital video streams per camera, compromising image quality and communications speed. Optional tunneling and **VPN & Tunneling Broadcast Server** handle non-inward routable networks and provide revokable security certificates and encryption, and video broadcasting.

Boundless' **Multi-Stream Video Server** continuously creates and internally records many different, digital, video streams for each camera



**Investigation Stream** for each camera has sharpest images with highest, full-camera resolution and fewest artifacts, low to medium frame rate, and highest internal data rate (0.5 to 2 Mbps)

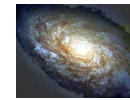
**Monitoring Stream** for each camera has medium resolution, smoothest motion at medium to high frame rate, and medium internal data rate (64 to 512 Kbps)

**Situation Assessment Stream** for each camera has lowest resolution, low to high frame rate, and ultra low internal data rate (8 to 64 Kbps)

Deeper shadow indicates higher data rate

128 Kbps (typ) to view 4 cameras live at 5 to 15 fps, 0 Kbps if none are viewed

**Boundless uses bandwidth-saving, video on demand with near-camera recording of many different digital video streams per camera, not bandwidth-wasting video streaming of a single digital video stream to central recording.** Remotely view live and recorded video from dozens of cameras simultaneously at multiple fps per camera on laptops with cellular communications at ultra low data rates. Remotely perform motion searches and review time-shifted and recorded video rapidly, even with ultra low communications speeds. Remotely view 24 cameras live simultaneously at 10 fps per camera with only 756 Kbps total bandwidth. Live and recorded video are only sent over the air when requested for viewing, minimizing the communications burden on wireless wide area networks and Internet. Optimized MPEG-4 video encoding maximizes frame rate and image quality for a given data rate. PDA requires Boundless' **Broadcast Control Panel** software on a PC. BlackBerry requires Boundless' **Transcode Server**. Dynamic IP addresses require Boundless' name service.



**Boundless Security Systems**  
the communications bandwidth experts

## Ordering Guide for the Boundless Security System™

Get Boundless'  
**Multi-Stream Advantage™:**

We put you there !






The combination of Boundless' **Multi-Stream Video Server**, a Windows PC running Boundless' **Control Panel** viewing and searching client software, and cellular or like wireless Internet connections provide live, recorded and time-shifted digital video, with ultra low bandwidth. Boundless' system:

- makes digital video surveillance via public wireless wide area networks practical
- works where other systems can't
- uses bandwidth-saving, video on demand with near-camera recording, not streaming
- continuously records better video internally than can be sent live over public networks
- enables more cameras per neighborhood
- displays live and recorded video from dozens of cameras at once on a wireless laptop
- provides motion search rapidly
- provides revokable security certificates
- used optimally, helps users avoid violating carriers' fair usage bandwidth policies and helps pay for itself in reduced telecom costs

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# Ordering Guide for the Ultra Low Bandwidth, Boundless Security System™

*Built from the ground up for digital video surveillance over wireless wide area networks*

| Model / Feature  | <i>Multi-Stream Video Server</i>   | Covert <i>Outdoor View™</i>  | Semi-Covert <i>Nail-and-Go™</i>   |
|--|--|--|---|
| <b>Video Inputs</b>  | four non-multiplexed, analog composite video, NTSC or PAL  | two built-in, fully concealed, PTZ cameras behind two-way mirror   | two built-in, mostly concealed cameras: PTZ and fixed wide angle  |
| <b>Live and Recorded Video Streams for each Camera</b>                             | All video streams are recorded internally on IP-based NVR. Up to 8 different streams can be provided for each camera at once. Typical streams include 160x120 @ 1, 5 and 15 fps, 320x240 @ 5 and 15 fps, and 640x480 @ 5 fps.  |  |   |
| <b>Options</b>   | several models; low power, IP-PTZ using RS-485 bus and Pelco-D; wide voltage range power converter...  | many: zero or one built-in cameras; lower power; industrial grade cellular modem; smaller box...   | many: 18X to 35X optical zoom PTZ; two PTZ cameras; industrial grade cellular modem...  |
| <b>Uplink Required</b>   | Bandwidth-saving video on demand with near-camera recording, not bandwidth-wasting video streaming is used. The minimal uplink is zero; a live video stream at 160x120 and 1 fps requires as little as 8 Kbps, or 32 - 64 Kbps at 15 fps.  |  |   |
| <b>Modes</b>   | live, recorded and time-shifted video via a network. Simultaneous: record multiple video streams from each of multiple cameras, live and recorded video via network, search recorded video for motion, and (opt.) <i>Live Alerts</i> .   |  |   |
| <b>Video Compression</b>   | MPEG-4 with many optimization parameters. Video is recorded continuously and is available on a network within 5 seconds of recording, providing time-shifting operation, in addition to fast, remote access to older recordings.   |  |   |
| <b>Internal Disk Storage</b>   | 160 GB 2.5" std, up to 1 TB 3.5"   | 64 GB 2.5" semiconductor std., opt. up to 2 x 500 GB 2.5" pressure-relieved  |   |
| <b>Motion Search</b>   | Hours of recorded video can be searched remotely in seconds. Has zoned searching with post-recording parameters.   |  |   |
| <b>Live Alerts</b>   | (opt) Equipment can be programmed remotely to detect motion in user-selected zones, and to send an instant-message-like message, without e-mail delays, within the Boundless system that shows a recorded video clip of the incident.  |  |   |
| <b>Public IP Address</b>   | static IP address std., dynamic IP address requires Boundless' name service or <i>Name Server</i> ; non-inward-routable / mobile-originated networks can be used with Boundless' tunneling option and <i>VPN &amp; Tunneling Broadcast Server</i>  |  |   |
| <b>Power Required</b> (varies)   | compact: 12 VDC @ 3A w/2.5" disk   | 12 VDC @ 4A (battery capable)  | 12 VDC @ 4A (battery capable)   |
| <b>Photo</b><br>(varies, not to common scale, box and case dimensions are approx.) |  2.5" H x 11.5" W x 10.5" D (Compact Model)   |  outdoor box: 16" H x 13" W x 8" D, two built-in PTZ cameras are hidden behind two-way mirror on cover |  outdoor box: 20" H x 18" W x 9" D, domes of two built-in cameras protrude from bottom |
| <b>Software</b>  | Linux and Boundless' IP-based video management system pre-installed. Boundless' <i>Control Panel</i> live and recorded viewing, and motion searching client software for Windows required for viewing. PDA and BlackBerry viewing options. Opt. OpenVPN with revokable security certificates for each unit and user, and encrypted communications. |  |   |
| <b>Notes</b>   | certain models for use in vehicles   | dual-chamber design with open-air outer chamber and sealed inner chamber   |   |
| <b>Model Number</b>  | MSVS-4A, <i>Model Name</i> with x GB   | <i>Outdoor View™</i> with <i>options</i>   | <i>Nail-and-Go™</i> with <i>options</i>   |