



Boundless Security Systems, Inc.

sharper images with better access and easier installation

© 2006-7 Boundless Security Systems, Inc. (BSSI)
3 Simm Lane, Unit #1F • Newtown, CT 06470 USA
tel. 203-445-0562 • fax 203-445-0564
sales(at)BoundlessS.com • www.BoundlessS.com

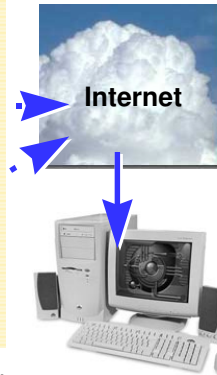
Comparison of Advanced IP-Based, Wireless, Ultra Low Bandwidth, **Boundless Security System™** Digital Video Surveillance System with IP-Camera and IP-Video Encoder Systems

INEFFICIENT, PARTIAL, EXPENSIVE, Wireless IP Cameras and Central Recording

Floods city-scale wireless network with surveillance video, crippling users' Internet access



Recorded video is only as good as Live video sent continually over wireless network, **typ. 1 to 3 Mbps per camera** for Standard Definition, a heavy network burden; much more is needed for High Definition.



Powerful PC is required to view live images from cameras. Low-end software may provide only live images -- no recording -- and handle only a small number of cameras. Servers with network attached storage are required for extensive recording. Motion searching typically relies upon parameters used by IP Cameras and IP Video Encoders at time of video capture, so new parameters cannot be used on video that has already been recorded. If video is streamed with high data rates to achieve high quality, the number of video streams that can be viewed at once is limited because a large amount of CPU power is required to decode and display the images and due to network limitations. If remote viewers require video with lower data rates than provided by the cameras, a large amount of CPU power is required to decode, scale-down, and re-encode the video. Centralized recording is subject to a single point of network or server failure.

IP cameras' image quality and sensitivity generally lag CCTV cameras, and are more expensive.

Temptation is not to use an UPS with each camera and wireless client, but lockups and service interruptions may result.

Apr. 4, 2007

EFFICIENT, COMPREHENSIVE, ECONOMICAL, Fully Distributed, **Boundless Security System™**

Maintains ability of public wireless wide area networks to provide customers' access to the Internet

Connect 4 CCTV cameras to each Boundless multi-function, IP-based, ultra low bandwidth, **Multi-Stream Video Server**. Outdoor CCTV cameras generally produce better images and are less expensive than outdoor IP cameras; the savings may pay for Boundless' **Multi-Stream Video Server**. Opt. High Definition, HDTV+ multi-mega pixel digital cameras don't add to communications burden due to multiple streams per camera and internal recording.

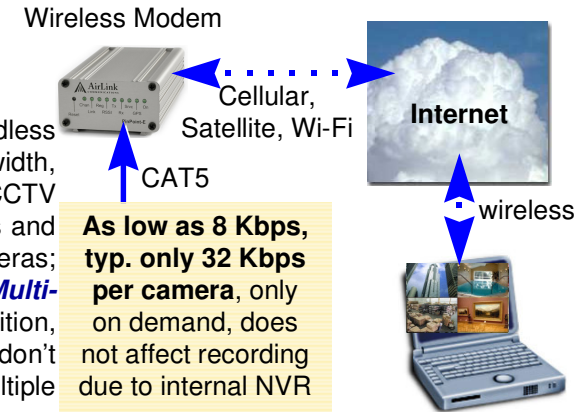


Siamese cable to 600' with coax for video and 18/2 for 12VDC / 24VAC. UPS and camera power supply are required.

Binary alarm inputs

Server's many internal functions:

- 1) digitize 4 CCTV cameras continuously
- 3) form to 10 IP-video streams / camera with different resolutions, frame rates, data rates
- 3) compress with optimized MPEG-4
- 4) tunnel out of mobile-originated networks and avoid IP network setup (opt)
- 5) send live video on demand
- 6) internal NVR records video continuously
- 7) send recorded video on demand
- 8) post-recorded search with new parameters
- 9) real-time motion zones with Instant Messaging **Live Alerts** for no e-mail delays (opt)
- 10) use *both* serial ports with modems (opt)



Laptop with Boundless' **Control Panel** provides **mobile command center**. Boundless' client software remotely views Boundless' live and recorded video and searches recorded video. View up to 63 live and/or recorded streams at once on each laptop.

Boundless' x86 Linux-based, **Multi-Stream Video Server** combines a software-based, IP-video encoder bank with internal NVR. It continuously creates and internally records multiple IP-video streams for each camera, with different resolutions, frame rates and data rates to satisfy competing needs for **investigations, monitoring situation assessment**, and 2D and 3D video analytics.

