



Boundless Security Systems, Inc.

the communications bandwidth experts

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Ultra Low Bandwidth, *Boundless Security System™* Enables Mobile Task Forces to Remotely View Live and Recorded Video from Officers' Helmets, and from PTZ Cameras on Vehicles



Cellular CDMA, firewalled GSM, WiMAX or P25 96K modem

Many different digital video streams and recording internal to **Multi-Stream Video Servers** avoid heavy continuous traffic on wireless wide area networks. Live and recorded video traffic is only on demand. A 256 Kbps uplink can carry 4 live QVGA video streams at 5 fps/camera. Recorded video from only 5 seconds ago can be quickly viewed remotely. Even P25, with 96 Kbps data, can carry 4 live cameras, at lower resolution or frame rate.

Boundless' video server can share wireless connection of vehicle's MDT (if any)



Boundless' ultra low bandwidth, many-function, **Multi-Stream Video Server** provides a mobile **video base station** in each vehicle. It provides video digitizing for four CCTV cameras, decoding (opt) for IP-cameras, formation of many different video streams simultaneously for each camera, internal recording with better quality than can be sent live, MPEG-4 video compression, and communication of live and recorded video on demand. Mobile-originated / firewalled networks that block access from the Internet to others' mobile servers can be used with the aid of Boundless' **Event Broadcast Server**.

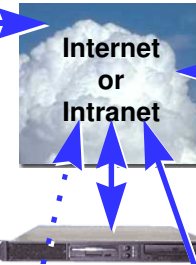
Four PTZ CCTV cameras can be used on each vehicle, providing 360° remotely controlled video surveillance. Four wireless IP-cameras on officers can give live video closeups of subjects or SWAT operations to HQ and mobile task forces. Officers can push a Help button, and HQ and mobile forces can receive rapid alert messages with live video within 5 seconds without e-mail or text message delays.

Three to eight simultaneous video streams per camera, with different resolutions, frame rates and data rates, optimize images for **situation assessment**, **monitoring** and **investigations**, and for moving and stationary cameras.

Three resolutions, each with multiple data rates, are provided simultaneously for each camera. Video is available remotely both live, bandwidth-permitting, and recorded. Video streams span more than a 100:1 range of data rates.

VGA, QVGA, QQVGA

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Boundless' **Event Broadcast Server** provides a Virtual Private Network for Boundless' **Multi-Stream Video Servers** behind firewalls, converts live and recorded video into a format for viewing in a browser by many viewers at once, and implements Boundless' **Rapid Notification System**.



Mobile Data Terminals with Boundless' **Control Panel** client viewing and searching software access Boundless' **Multi-Stream Video Servers** for live and recorded video, and search recorded video. Or, with Boundless' **Event Broadcast Server**, live and recorded video can be viewed, PTZ cameras controlled, and Rapid Alerts received, in web browsers.



Mobile forces view live or recorded video, and control PTZ cameras, on smartphones including *iPhone*, *Android* and *BlackBerry 7630* in a web browser. Handhelds do not require any special software. Rapid Alert messages with live and recorded video, not just snapshots, are pushed to viewers for fast response.



Command Centers use Boundless' **Control Panel** client live and recorded viewing, and motion search software on PC's. Dispatchers can push instant video messages to mobile forces when officers need backup.