



Military Bunker Security

IVC has developed and rapidly deployed security systems for US military bunkers in Iraq. The requirement was to put a combination of cameras and various sensors in the bunkers and provide real-time wireless connectivity to military monitoring stations often miles away, providing both streaming video and audible alarm notification.

The areas to be viewed and protected with alarms included entrances and dark tunnels running down the center of the bunkers as well as surrounding areas. IVC fixed-view IP cameras and intrusion detection devices were placed at each of the entrances, and infrared cameras with illuminators were used to monitor the tunnels.

The sensors used to trigger alarms are wall-mounted motion detectors and door-mounted balanced magnetic switches. The motion detectors and magnetic switches are wired to the alarm inputs on the IVC cameras. If either motion detector or magnetic switch is triggered, an alarm sounds in the monitoring station miles away.

The cameras are connected to IVC camera servers, which convert the NTSC video to M-JPEG in a TCP/IP format. The cameras are wired to Ethernet hubs, which are connected to wireless transmitters on the top of the bunkers.

IVC provided point-to-point TCP/IP wireless links with 5.7 GHz Motorola Canopy systems. The wireless transmitters at the bunkers have line-of-sight access to the wireless receivers at the monitoring facilities miles away. Both units use 10MB backhaul

reflectors to create signals strong enough signal to span the long distances.

The receiving units are placed on the buildings at the monitoring stations where US Military personnel use IVC software to view the live video on their computer monitors. Alarms in the monitoring room sound when the motion detectors are tripped and video is continuously stored on the IVC Relay Server at the monitoring station for instant local or remote review.

IVC designed and delivered the first complete system in less than two weeks.



Infrared sensitive cameras with built-in infrared illuminators emitting invisible light are used to monitor the 100-foot long hallways.