



CASE STUDY

BlackHawk Datacom Provides Smart Technological Solutions to Video Surveillance, Access Control, and Wireless Connectivity Challenges

BlackHawk's thorough knowledge of access control and video surveillance helps West Houston Airport create site security while ensuring compliance with the industry's critical infrastructure security guidelines.

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EXECUTIVE SUMMARY

West Houston Airport is a privately owned, exclusive general aviation airport in Harris County, Texas. Located just west of downtown Houston, West Houston Airport is a vibrant community asset producing over three hundred direct and indirect jobs and providing more than \$30,000,000 in annual airport related revenues. West Houston Airport boasts close to four hundred based aircraft and 150,000 annual operations.

Since West Houston Airport opened, initially under the name of Memorial Skyland in 1962, more scrutiny has been placed on eliminating critical infrastructure vulnerabilities and increasing security challenges.

BlackHawk Datacom met this need and has the ability to provide wireless data connectivity for Video Management (VMS), Access Control (ACS), and IP Cameras covering the interior and exterior of all buildings, as well as exterior guard house locations.

CLIENT CHALLENGES

West Houston Airport has designed and built new airport entrance/exit lanes serving as the primary land-based access in and out of the facility. The entrance to the airport (north-bound) expands from one lane to two, with traffic in each lane independently controlled through software and barrier gate arms. The exit lane (south-bound) is a single lane with similar traffic controls. Each direction of travel is separated by an 18' median. The median accommodates a new guard house where personnel and technology will manage access to the airport in both directions.

BlackHawk was asked to design and install a complete security solution for this new entrance with both human and vehicle access control as well as video security, all fully integrated with the existing airport security systems via a low latency, high bandwidth wireless network.

BLACKHAWK AS A BUSINESS PARTNER

National critical infrastructure security, under the guidance of the Department of Homeland Security, is a difficult subject to navigate. A working knowledge of the DHS Transportation Systems Sector guidelines, in addition to a mastery of the current—and future—security technologies, is critical to the design and deployment of a strategic transportation security solution.

For West Houston Airport, the BlackHawk team has been a great partner throughout this process. The project managers have been extremely accommodating, especially given the unique challenges surrounding a remote guard house deployment project. The BlackHawk team provides engineering solutions and operational efficiencies recommendations tailored to the solution West Houston Airport wants.

West Houston Airport has grown to know and trust the BlackHawk team. A consistent point of contact throughout deployments has allowed for singular and daunting challenges to be addressed confidently.

RESULTS

BlackHawk engineers designed and deployed a comprehensive security solution. Key components are the perimeter-authorized access verifications, IP cameras with recording for security and operations, and remote data connectivity.

Access to the airport from the Jet lane, the express lane for known visitors, is managed through a combination of RFID technology, access lists, and an automated barrier arm. As a driver approaches the initial lane division and drives no faster than 20 miles per hour into the Jet lane, the vehicle will trigger the RFID detection device installed near the roadway. Upon detection of a valid RFID, the vehicle access control system will determine if it is included in the approved access list. Only vehicles traveling in the Jet lane with valid, authorized RFID tags trigger the barrier arm in the Jet lane to open. Conveniently, between the RFID detection device and barrier arm, an authorized entrant is only required to slow to safe speeds rather than stop.

Airport access from the alternate entrance lane is managed through a combination of pass-code technology, access lists, human intervention, and an automated barrier arm. As a driver approaches the initial lane division and drives into the inside lane, the vehicle will be required to stop at the Guard House kiosk. The kiosk includes a keypad and a call button, as well as instructional signs. Visitors with valid personal identification (PIN) codes enter it using the keypad. Upon detection of a valid PIN code, the access control system determines if it is in the access list. Only authorized, valid PIN codes will open the barrier arm. Entrants without PIN codes are instructed to press the call button to alert West Houston Airport. The call button establishes a duplex audio communications path and live video feed between the security operator and the visitor. The security operator can control the barrier arm to allow/deny access.

The Guard House Installation includes several IP cameras for entrance surveillance, including license plate recognition (LPR). The LPR camera captures images of rear-mounted vehicle license plates approaching the Guard House in either lane. The remaining cameras capture video of the areas surrounding the Guard House. All images and video (live and recorded) are accessible through the video management software, hosted via the main equipment room at the airport.

Network connectivity to the Guard House is accomplished through the installation and commissioning of a point-to-point wireless communications radio. All data exchanged between the Guard House and the primary airport network infrastructure is routed over this system.