



OFFUTT AIR FORCE BASE ADAPTS TO SURVEILLANCE CHALLENGES WITH ADVANCED VIDEO CAPABILITIES

INTELLIGENT VIDEO SURVEILLANCE SYSTEM IS USED TO CONDUCT INVESTIGATIONS, IMPLEMENT PERFORMANCE IMPROVEMENTS, AND TRAIN PERSONNEL

Offutt Air Force Base, which celebrated its 100th anniversary in 2018, has a rich military legacy that includes more than four decades as headquarters for the former Strategic Air Command (SAC), which is now US Strategic Command (USSTRATCOM), and central roles in both World War II and the Cold War. Today, Offutt hosts combat-ready air crew and collects signals intelligence for their areas of global responsibility. The base houses multiple types of mission-ready aircraft, including those from the 55th Wing and the plane tasked with transporting the Secretary of Defense.



U.S. AIR FORCE

CUSTOMER PROFILE

Offutt Air Force Base
Bellevue, Nebraska

SOLUTIONS

- (4) 30L-H4PRO-B - 7K (30 MP) H.264 HD PRO with LightCatcher Technology
- (2) LEF247028TA2 - Tamron 24-70 mm, f/2.8, Gen 2, Auto-Iris, Vari Focal
- (2) LEF7020028CA - Canon, 70-200 mm, f/2.8, Auto-Iris Vari Focal
- Avigilon Control Center software to view and easily retrieve recorded video events.

BENEFITS

- Ability to record and monitor the entire landing and takeoff of aircraft all the way to the final turn and beyond.
- Real-time flight path recordings now available in high definition and smooth framerates, with recordings going back two months.
- Increased situational awareness during emergencies and natural disasters.
- Installation, support, and maintenance of the system provided by Motorola Solutions and Inteconex.



CHALLENGE

LIMITED SURVEILLANCE CAPABILITIES HINDER INVESTIGATORS

After a crash involving a military plane in Alaska occurred, cell phone footage proved instrumental in recreating the incident and understanding its cause: Although it was fortunate to have the cell phone footage, the poor resolution and limited range of a simple camera phone left many questions unanswered. As a result, Air Force personnel realized a more robust and reliable video and camera system was needed. What they needed was a camera system, with surveillance technology capabilities advanced enough to more thoroughly analyze takeoffs and landings.

Offutt needed a system that could record aircraft on runways during landing and take-off all the way to the final turn, which could be up to 4.5 miles away from the camera location. Crucially, the recordings needed to be clear, high-resolution quality, with no missed frames to provide smooth video for detection of minute details in milliseconds. That level of detail is critical to investigations into incidents including hard landings, fires, engine scrapes, and more.

REMOTE MONITORING CAPABILITIES COULD PREVENT ACCIDENTS, IMPROVE MISSION OUTCOMES

Moreover, remote monitoring, both in real-time and by going back to watch recorded video, offered many additional benefits. In a real-time emergency, officials could be alerted quickly to coordinate a response. By going back to watch recorded video, Offutt could also study takeoffs and landings to improve safety training. However, Offutt required a system that would let them analyze high quality video going back months. This meant that any system would need to manage bandwidth with extreme ultra-efficiency so that resolution and frame rates were not lost.

This type of flight recording for safety training had never been attempted, so Offutt would be blazing a new trail and creating a solution that others in the military may be able to benefit. For this reason, Offutt required a partnership that went beyond technology, to include top-notch consultation, installation, and ongoing support.

NEED FOR INCREASED SITUATIONAL AWARENESS

Much of the Omaha region that surrounds Offutt is prone to tornadoes and flooding. In addition to its primary safety and training needs, any camera solution would need to also offer increased overall situation awareness of the base. The increased monitoring capabilities could be beneficial during emergencies and natural disasters.



SOLUTIONS

Offutt chose a suite of Avigilon cameras because they met every one of their mission requirements. These cameras were installed on the Air Traffic Control Tower near the center point of the runway. The cameras feature 30 MP of resolution, and using Avigilon's patented High Definition Stream Management (HDSM), the video can be recorded and viewed in real time at full-frame rate of eight frames per second while using minimal bandwidth.

Avigilon's video security and video analytics are designed to provide the control and efficiency so that you get the right information at the right time. This allows accurate verification and fast response for decisive action. The base was outfitted with a number of [Avigilon H4 Pro cameras](#) that include LightCatcher™ technology to provide unparalleled image quality in low-light conditions. These high megapixel cameras can cover wide areas of a site with great detail using a single installation point. This level of detail is critical to investigations into incidents including hard landings, fires, engine scrapes and more. The system may be integrated with other base systems, such as access control, in the future. In addition, the system's breakthrough bandwidth management enables high resolution recording and crystal-clear video with storage going back two months, a critical tool for flight safety investigations and training.



THE BENEFITS

THE BIG PICTURE: TAKEOFF AND LANDING CAUGHT ON CAMERA, FROM FINAL TURN AND BEYOND

Offutt is now able to record and monitor the entire takeoff and landing of aircraft all the way to final turn and beyond. Flight path recordings are available in high definition, in real time, with recordings going back two months. The extended length of recording time is important because Offutt safety officers often look back days or weeks at previous incidents. Now, they can search for precise timing and recreate exactly what happened during an incident.

With the Avigilon system installed, Offutt receives 24/7/365 surveillance with unrivalled resolution, even in low light. With the option to swap out optical lenses, Offutt has the adaptability to upgrade sight distance and resolution even further in the future. While today the system is standalone, in the future, Offutt can choose to integrate it with other base systems, such as access control.

“Motorola Solutions and Inteconnex teamed up to get the job done. With a team dedicated to the product and installation, the level of service they provide the customer is amazing.”

INCREASED BANDWIDTH CAPABILITIES EXPAND ANALYTIC POSSIBILITIES

Offutt now has a system that can manage bandwidth extremely efficiently, allowing them to record high-resolution streams in real-time or store up to two months of recorded footage. Crucially, Avigilon’s breakthrough bandwidth management allows full frame rates of eight frames per second so Offutt can see minute details, even three miles away from the camera.

“When it comes to flight safety, fractions of seconds are critically important,” said Lt. Col. Alessandro Bruzzano. “So, it’s incredible to have high resolution video, with full frame rates, from 2-3 miles away. Plus, the low-light quality is fantastic, which is ‘icing on the cake.’”

AT A MOMENT’S NOTICE—SITUATIONAL AWARENESS MAKES THE DIFFERENCE IN EMERGENCIES

While not the primary function of the Avigilon system, Offutt’s flightpath recording system offers additional benefits such as increasing situational awareness during emergencies and natural disasters. During a recent mass flooding event at the base, water levels rose so fast and so high, that many base monitoring systems were shut down. Avigilon stayed up and running and helped base personnel monitor water levels remotely. Officials had a remote view of the base, with the ability to pan and zoom to see details. Offutt also has the ability to share real-time and recorded video with base security teams anytime access is needed.

“During the flood, even though the base was evacuated, we had a bird’s eye view of the situation and were able to effectively monitor developments,” said Lt. Col. Bruzzano. “It means no matter the situation we face, we always have eyes on the ground.”

A TRUE PARTNERSHIP

Importantly, Offutt received personalized, fast, and professional installation, support, and maintenance of the system from Motorola Solutions and its local security system integrator. Offutt only needs to undertake minimal upkeep, such as cleaning the camera lenses; the Motorola Solutions team does the rest.

GENERAL AND PRODUCT INFORMATION

For general information about Motorola Solutions, visit www.motorolasolutions.com.

For Avigilon Series and other video surveillance product information, visit [Avigilon Video Security & Analytics](#).



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