

# WHEN YOU NEED TO KEEP CONTROL

## KVM EXTENSION/DATA VISUALIZATION TECHNOLOGY SOLUTIONS

Black Box designs, sources and implements high-performance solutions for the most demanding Air Traffic Control Centers and airport network applications. Our KVM (Keyboard-Video-Mouse) and Professional AV solutions help coordinate flight departures and arrivals, and control overflying traffic, which requires high operational safety and reliability of all IT systems. All of it with the focus on increasing operational efficiency, providing centralized management, and reducing manpower demands.

For more information visit [blackbox.com/transportation](http://blackbox.com/transportation)



**EMERALD® KVM over IP**



**MCX AV over IP**



**KVM Extender**



**MediaCentro IPX 4K Transmitter**



**ControlBridge®  
Control System**

## GAIN IMMEDIATE REAL-TIME REMOTE ACCESS

Access computers remotely up to 40 kilometers away from the ATC tower or even over the internet.

## DISPLAY ATC VIDEO AND RUNWAY FOOTAGE

Camera footage can be forwarded digitally from the ATC tower to an Air Traffic Control Center to be displayed on video walls; in some cases providing a 360-degree view.

## EVENT-DRIVEN VISUALIZATION WITH REAL-TIME SITUATIONAL AWARENESS

Visualize runway footage and critical status data on highly configurable video walls.

## STREAMLINING ATC FOOTAGE

Video encoding, decoding, streaming, and visualization with lossless compression provide accuracy and dependability for ATCs, training & simulation, and command & control environments.

## REMOVING HEAT, NOISE, PCS, AND CABLES FROM THE OPERATOR WORKSPACE

KVM systems ensure that controllers and supervisors are able to access different, remote and distributed computers while meeting precise requirements regarding safety, redundancy, efficiency, productivity, and cooling.

## AIR TRAFFIC & GROUND TRAFFIC CONTROL MONITORING

Real-time ATC data distribution from take-off to landing is crucial for safe air operations. For this to happen, air traffic controllers usually follow regular patterns and develop routine scans, gathering information in a structured and consistent manner from various screens. Due to large data volumes processed by multiple PCs and servers, employees face challenges in focusing on their work as they might get distracted by fan noise and heat emission.

KVM technology allows any air traffic controller to access multiple computers through one single set of keyboard/video/mouse, committing to a safer environment with increased operational efficiency and enhanced situational awareness. In addition to improving operator working ergonomics, KVM end-to-end systems securely transmit uncompressed video (pixel by pixel, no dropped frames) and peripheral signals over large distances, which can help ATC organizations to securely locate critical computing assets away from user desktops. KVM frees up space in the control room while keeping the environment undisturbed by computer emissions such as heat and noise, isolating all computing resources in a climate-controlled, secure server room.

