BLACK BOX®

Air Traffic Technical Watch Center Deploys Emerald IP KVM Solution to Ensure Safety Throughout an Airport

- **Industry:** Air Traffic Control
- **Client:** Technical Watch Center
- **Region:** Europe
- **Solution:** KVM over IP
- **Product:** Emerald® IP KVM;
  Boxilla® KVM Manager

THE CHALLENGE

In critical and dangerous situations, air traffic controllers guide aircraft pilots to a safe landing. Behind the scenes in airports around the world, a technical watch center (TWC) examines all equipment needed for traffic control. As an important layer of security, a TWC checks multiple safety factors outside air traffic, therefore going beyond the monitoring performed by air traffic controllers in a tower. A TWC is vital to prevent collisions, manage and guide the flow of air traffic and equipment, and deliver information to airport personnel on the ground and in-flight. Each TWC needs precise, reliable equipment to support the workers who ensure our safety inside and outside airport premises.

In one major airport, a busy technical watch center had been using an old KVM Matrix over CATx installation. Their existing units were end-of-life, consequently, the system needed an upgrade because the equipment is crucial to secure and reliable daily operations of the air traffic controllers.

The TWC faced with many challenges: The old solution offered poor management opportunities, the units were aging and no longer supported, and replacement of problematic units was no longer possible. Because the TWC planned to duplicate a new solution in many airports, the solution needed to be futureproof and consume low bandwidth, with full interoperability between 4K and full HD units, access to virtual machines, a limited number of single-point-of-failures, and fanless units where possible.

Without a doubt, since they were pleased with our company's track record, the TWC turned to Black Box. We already had done some small projects with this customer and they were happy with our services. Confidence in Black Box as a manufacturer and trusted solution provider was very important to the customer.

THE SOLUTION

To replace the customer's outdated KVM over CATx Matrix Switching Solution, Black Box offered a KVM-over-IP solution consisting of Emerald PE dual-head transmitters and receivers. The receivers connect to a quad-head multiviewer with USB access. Redundant Boxilla KVM managers control the system. The solution also included VM and 4K capability, reserved for future use.

Black Box sent two application engineers on-site to accompany the customer during the deployment. The engineers configured the units before arriving at the customer's site to save time on installation day. The solutions were deployed in the Technical Watch Center and the Contingency (backup).

The customer was greatly impressed by the low bandwidth required by the solution. The fanless nature of most of the units was also very important to the customer, because the previous solution regularly had problems with noisy fans. The robust, secure, scalable Boxilla gave the company results beyond their expectations: the new system is easy to manage and limits single points of failure.

RESULTS

Meeting all of the requested customer requirements, the solution is powerful, reliable, and easily to manage. Black Box helped the customer go through the validation phase before the rollout, which needed to be done in a single day. Everything was done to make the process as efficient as possible.

In the current setup that streamlines workflows and saves time, TWC operators now use a quad-view on the screens and can request USB control where needed through the soft-mouse.

Switching is also used. The customer enjoys full interoperability between 4K and full HD units, quiet operation, access to virtual machines, protection against single-points-of-failures, and fanless units where possible. Ultimately, the customer managed to equip his main and backup Technical Watching Centers with a futureproof, robust and flexible IP KVM solution, while also doubling the backup capacity. Unquestionably, the TWC can expand in the future with 4K and VMs.

This installation is a first deployment as part of a larger project that TWC plans to duplicate in other regional airports, leveraging trusted expertise and support from Black Box to bring safe, reliable, efficient, and forward-thinking technology to multiple watch centers.