



## DKM Test Bench Makes Flying the Friendly Skies Safer

### CHALLENGE

When flying an airplane, safety is of the utmost importance and the value of accurate testing cannot be overestimated. In 2012, an aerospace company needed to set up a test bench, which is a platform designed to measure and fine-tune a product's performance and safety in a secure development environment. The test bench would be used to check the safety of aircraft before flying.

The test bench installation faced many challenges. The CPUs needed to move away from the control stations, while allowing one or more users connected via VGA, DVI, HDMI, and DP interfaces with different resolutions. These stations needed to also take control of several CPUs in mono video, dual video, and even quad video. To add to the complexity, user workstations had to minimize the number of connected keyboard/mice to create a clutter-free workspace. And, the network was required to connect via RJ-45 cables.

To address these challenges, an aerospace company originally turned to Black Box in 2012. The customer first chose Black Box because a comprehensive demo provided by a Black Box engineer displayed how the system would work to meet and/or exceed all of their requirements.

Over the years, the company has been a repeat Black Box customer as their test bench installation expanded. The customer reached out to Black Box again in 2021 because they needed to broaden the deployment to accommodate testing new aircraft. The customer wanted to work with a trusted company who already understood their system requirements.

### SOLUTION

The customer leveraged their ongoing relationship with the Black Box Account Manager, who reinforced that the DKM solution addressed all of their concerns for the installation: Just as in the initial deployment in 2012, the customer also had the same outcome in 2021: users could access the CPUs – which were tucked away safely in a remote location – via their consoles with only one keyboard/mouse connection. The simplified user ergonomics enables users to control multiple VGA, DVI, HDMI, or DP displays at their workstations to visualize and control several CPUs in mono video, dual video, and even quad video modes. And the customer did

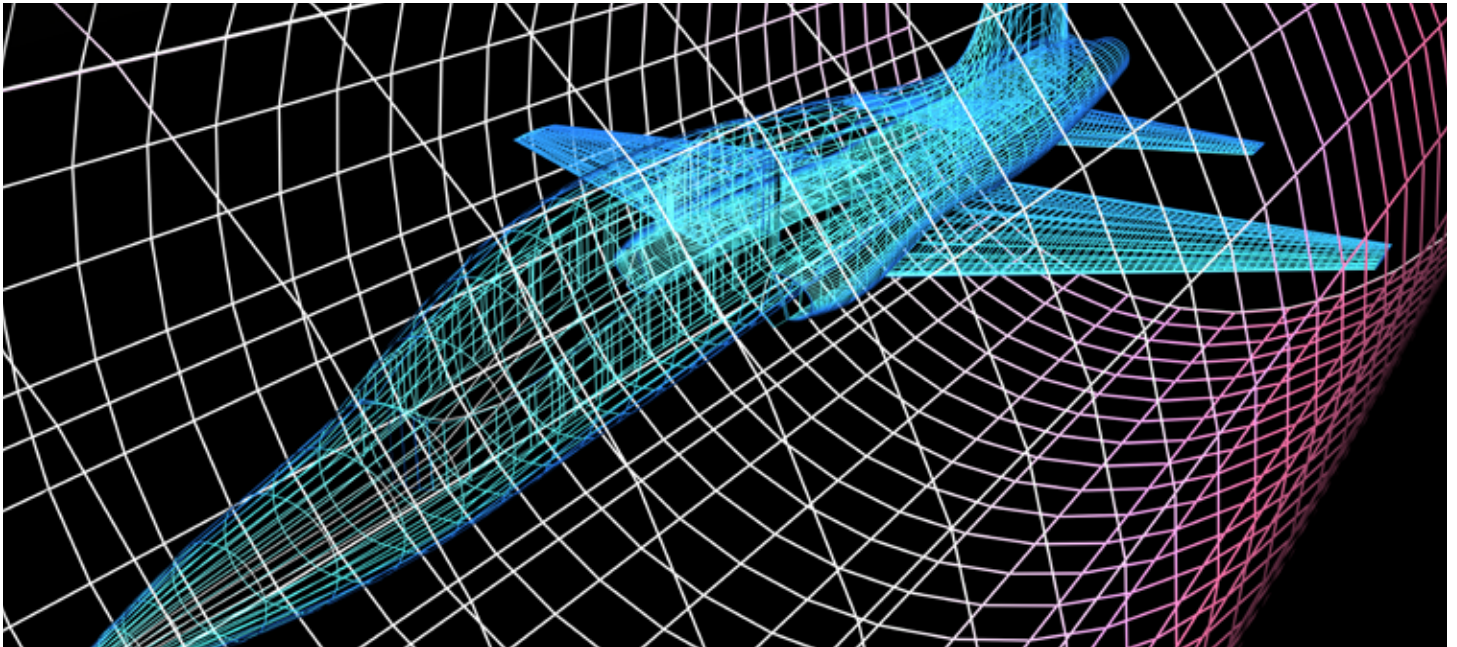
**CLIENT:**  
AEROSPACE  
COMPANY

**REGION:**  
EMEA

**INDUSTRY:**  
MANUFACTURING

**SOLUTION:**  
DKM KVM

**SERVICES :**  
PROJECT DESIGN



## SOLUTION (CONTINUED)

not have the extra expense of installing new cable since the solution used existing RJ-45 cabling to link the servers and consoles to the DKM Switching System. Building on a proven solution, the customer realized improved workflows and was confident that simulation would continue to be performed safely and completely. To top it off, the Black Box solution was within budget and less expensive than the competitor.

In 2012, the original DKM solution consisted of one modular 48-port chassis. Since 2015, Black Box has installed 13 DKM matrices offering 624 ports in total that can connect to either CPUs or user consoles.

This year the Black Box team deployed another four compact DKM Matrix Switches and the corresponding DKM KVM extenders to expand the test bench installation by another 256 flexible console/CPU ports.

## RESULTS

Today, the DKM solution continues to be an essential link in the customer's test bench. For each new bench, for each new aircraft, a matrix is systematically provided. Because the solution supports a variety of user-station video interfaces, including VGA, DVI, HDMI, and DP, and works over their existing RJ-45 cabling, the customer was able to use existing monitors located at the user stations, eliminating the cost of purchasing new equipment. Improved and streamlined workflows validate that safety testing can be performed in a timely, efficient, and comprehensive way.

This solution enables operators to manage all video and peripheral flows and thus master the objective sought, namely to remove the risks and dangers of the experiments. Used almost every day, the DKM test bench solution makes testing aircraft safety comprehensive, precise, secure, and – above all – ensures the safety of those who fly.

