BLACK BOX®

DKM Solution Brings Advanced Security to a Customer's Locked Server Room and Open-Office Workplace

- **Industry:** Server Rooms
- **Client:** Consulting Company
- **Region:** Sweden
- **Solution:** KVM Matrix Switching
- **Product:** DKM Proprietary KVM Matrix

THE CHALLENGE

Security is paramount in server rooms, and for this Swedish consulting company and their customer it was no exception. Their challenge included meeting standards that require maintaining distance or installing shielding between circuits and equipment used to handle plain text classified or sensitive information that is not encrypted (RED) and secured circuits and equipment (BLACK) that carries encrypted signals.

To solve this, the consultant needed to supply an innovative and sustainable solution that contributed to high business value for the customer. The customer needed a software solution that enabled them to improve security by locking custom-built servers in a closed, safe EMP-shielded server room while employees worked on networked PCs in an open-office environment. While the consulting company considered using thin clients, these would not be powerful enough and would have required modification. That's when the consultant turned to Black Box and his long-standing relationship with a Black Box account manager.

The customer already had some KVM extender solutions that they were happy with and wanted to use, but these only offered DisplayPort connectors and the customer's PCs were equipped with HDMI ports (2560 x 1440 resolution). Using adapters between DisplayPort and HDMI was not an option for security reasons. To add to the security challenges, the customer also required high-quality 4K HDMI KVM extension over fiber to protect against data leaks.

THE SOLUTION

Because an HDMI 4K card was not a standard product, the account manager reached out to a third-party vendor to source an HDMI 4K card that met the customer's exact connectivity requirements, including transparent support for USB card readers at the users' desktops. Black Box designed a straight-forward DKM KVM extension installation, with 24/7 durability and high resolution, pixel-perfect-quality video (2560 x 1600) to meet the customer's unique needs. Using Dual-Link HDMI and transparent USB 2.0, this pure KVM installation featured one single 4K display connected via HDMI and fiber to the remote desk of an operator. This installation scenario was repeated for all 44 operators in the open-office room, while the servers remained safely inside a locked server room.

Installing HDMI 4K cards and the USB 2.0 cards in the 21-slot Modular DKM Extender Chassis gave the customer a unique high-quality solution that went above and beyond standard product offerings. The customer benefited from this TEMPEST Secure KVM alternative that ended up being more secure and less expensive than a standard TEMPEST installation. The customer realized an extra layer of security by protecting computers from viruses and tampering via secure KVM extension.

RESULTS

The customer is now able to secure their 44 PCs in a safe EMP-shielded environment per their requirement to avoid their PCs being exposed to outside interference or tampering, resulting in improved security for their sensitive data.

Because Black Box provided and rapidly tested a pilot installation before the customer placed an order, the customer was pleased that the pilot installation worked out as expected and it did very well. The ability to test the solution before they placed larger orders like this one was very important in securing this opportunity. Not to mention, the quick-thinking account manager went out on a limb to source the HDMI DKM card that proved to be the secret ingredient in the rollout of this unique installation.

The final installed solution met each and every one of the customer's security requirements: their 44 existing HDMI workstations located in an open-floor environment are now all connected to safe and secure servers locked in a control room. The solution delivered optimum security at a lower cost than TEMPEST. Thanks to a word-of-mouth recommendation based on this project, Black Box gained an additional similar installation project.