

KVM-TEC HELPS EXPLORING THE SPACE

REAL-TIME COMPUTER ACCESS FROM ANY WORKSTATION ON CROSS-BUILDING CAST CAMPUS

THE CUSTOMER

The China Academy of Space Technology (CAST) is China's space agency and subordinate of China Aerospace Science and Technology Corporation (CASC). Headquartered in Beijing, CAST is the leading spacecraft development and production facility in China, dedicated to space exploration, with the most advanced space technology.

Since the establishment in 1968, with more than 22.000 employees by 2023, CAST has become one of the world's leading spacecraft designers and manufacturers, providing a comprehensive range of integrated space-ground system solutions for global customers. The organization has made substantial contributions to the development of science and technology, the promotion of scientific knowledge among the public including the development of a large pool of skilled professionals, and the broader economic and social progress in China.

Besides the delivery of all kinds of spacecrafts from system level to equipment and component level, CAST also provides services for spacecraft, satellite ground applications, and tailored customer support including training, orbit, and frequency consulting.

THE CHALLENGE

A workgroup at CAST responsible for space vehicle tests, required a reliable KVM system for the transmission of signals between multiple PCs located across various test labs and remote user workstations. The system needed to enable seamless operation and control from different workstations spread across several buildings to enhance collaboration and streamline the information flow between different teams.

THE SOLUTION

After conducting a series of demo tests, CAST's IT team identified kvm-tec's MVX Masterline as the best option, meeting all the necessary requirements. A KVM switching system consisting of seven MVX Extender CON units and ten MVX Extender CPU units was installed to manage ten test PCs from seven workstations located in three different buildings, spread



across an area of one square kilometer. All extenders are integrated into a matrix switching system using a dedicated LAN network of the CAST campus.

THE BENEFIT

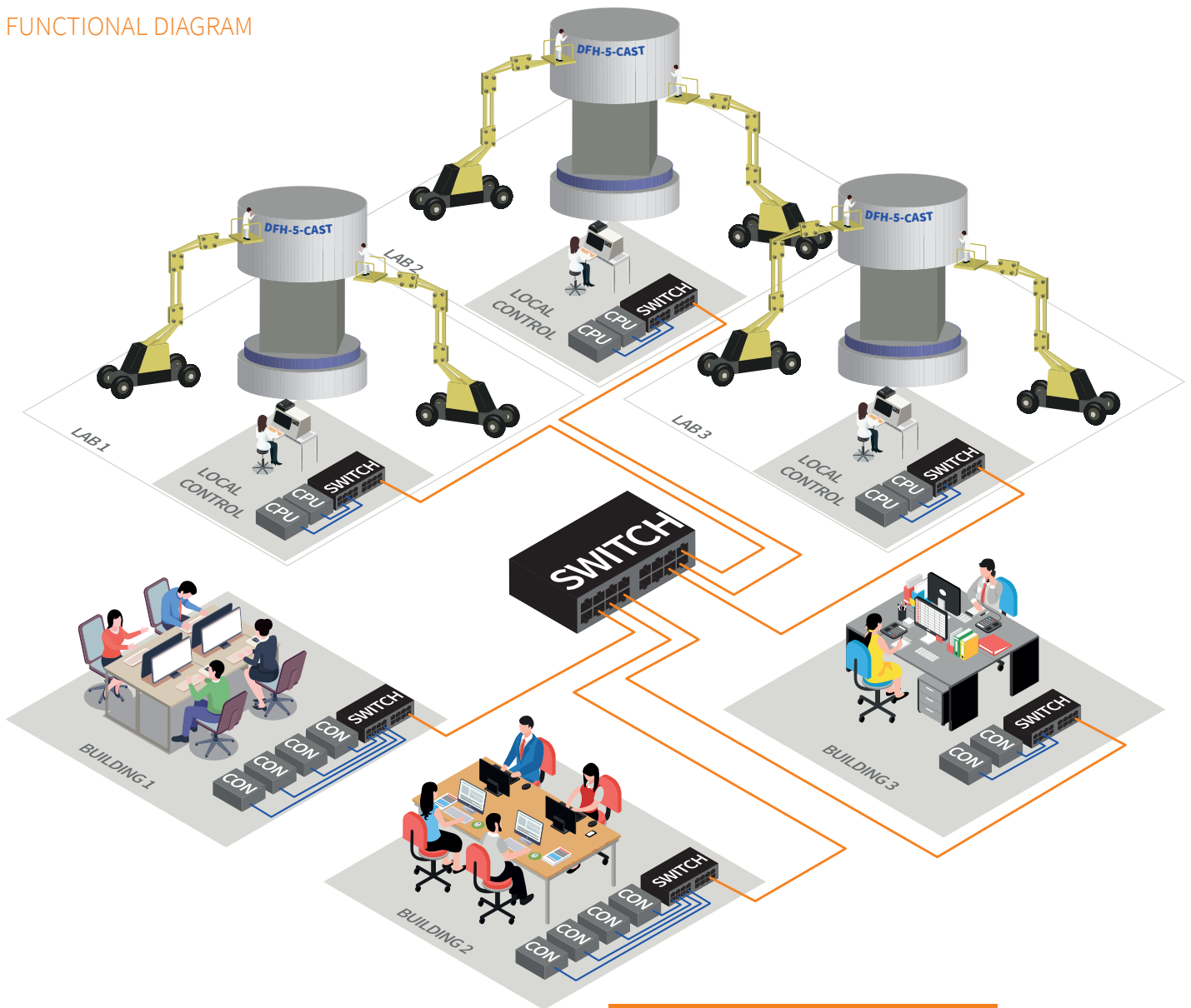
Each user's workstation, consisting of monitor, keyboard and mouse, is directly connected to a small extender box (CON Unit), mounted under the desk. The extenders are linked to the matrix switching system, providing real-time access to any of the connected computers spread across the campus. In

In addition, the extender CPU units at the source end provide local computer access to PCs, enhancing operational flexibility by adding local access to the standard remote KVM access. The testing staff benefits from the high flexibility of the KVM system. Users can freely access the required source computers, switch between them in real-time, control vehicle testing and share information and equipment.

With the MVX system, there is no need for a centralized management platform. Instead, a decentralized KVM switching system is used, which reduces the likelihood of system failures and simplifies maintenance. The KVM matrix solution also allows easy system expansions for up to 48 end points.

The KVM solution enables CAST to achieve a highly efficient and flexible workflow in the development of space vehicle of the future. The system not only improved the efficiency of the testing process but also boosted collaboration between teams across different locations.

FUNCTIONAL DIAGRAM



KVM-TEC PRODUCTS IN USE

- MVX Masterline CPU
- MVX Masterline CON

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