

BT Sport uses AIT Recommended Matrix KVM Switch at the Heart of its Network



KVM matrix switch enables a highly flexible tapeless workflow within BT Sport's new broadcast complex.

Part of the former International Broadcast Centre at the Queen Elizabeth Olympic Park in London has been transformed into the new home of BT Sport with state-of-the-art production and broadcasting systems.



BT Sport has developed rapidly. Less than two years ago, the organisation did not exist, but is now a fully-fledged and respected sports channel boasting viewing figures in excess of 1.1 million. BT-Sport's new studios show live action from the Barclays Premier League, FA Cup matches, UEFA Europa League, and a wide range of other sports, including Rugby Union, MotoGP, WTA tennis and NBA basketball.

The Challenge



The master control room manages over 150 incoming and outgoing HD vision lines as well as inbound satellite traffic from BT's Madley earth station, one of Europe's biggest satellite earth stations, making the BT Sport Production Hub one of the most connected buildings in Europe. The centre houses three large flexible TV studios, sports production galleries, a master control room, 20 edit suites, dubbing theatres and an audience holding area.

Paramount to the tapeless workflow in the centre is the ability to connect any user, anywhere in the building to any service or application running on machines in the central apparatus room (CAR). "From the outset BT Sport was clear

on their objectives to deploy a system that would allow complete flexibility to interconnect hundreds of workstations throughout the building to banks of remotely-located electronic equipment," explained Ian Martin, Broadcast Solution Consultant for AIT Partnership Group Limited.

"Edit suites, galleries and office spaces could operate without needing to install noisy and heat-producing equipment locally; any workstation has to be able to connect to any source device, under user control but subject to administrator restrictions. Pre-configured and stored connection paths allow the production teams to move suites from day-to-day. The system had to be ready to handle (4K and 8K broadcasting formats), with no video latency; a crucial parameter within the broadcasting industry."

"To complicate the situation further, the whole project was set against a tight schedule, with an unmovable launch date less than 6 months from the project inception."

"At the core of our new studio build is a spirit of collaboration working toward a common aim: to make the BT Sport studios a world-class hub"
Jamie Hindhaugh,
Chief Operating Officer, BT Sport



The Solution

To achieve this objective, IHSE KVM matrix switches provide the critical central data switching functionality. They were selected after extensive technical evaluation by combined engineering teams. "IHSE's combination of high video resolution, low latency and instant switching, combined with comprehensive interfacing to studio control systems and stored configuration capability made it the ideal choice," said Ian Martin. "It's modular construction and upgradability cover the requirement for future growth within the broadcast centre and the adoption of new 4K and 8K formats."



Two IHSE Draco tera KVM switches, each with 288 ports, connect editors, designers and production staff to the banks of editing machines, storage devices, and production tools located in the central apparatus room. They provide the required delay-free switching between sources and workstations to create an end-to-end tapeless workflow; 32 ports of ingest allow immediate access to incoming feeds in any of the 20 edit suites or on any of the 200 producer desktops. Production staff can browse the archive and live feeds, make playlists and send the content to a variety of destinations including the edit suites for finishing, TX for play-out, or archive.

Locating the servers and computers in the CAR maximises reliability and security as well as preventing unauthorised copying of files by means of USB flash memory devices. Studios and edit suites can be built for general purpose use, rather than designated to a specific task. The application and content effectively 'follows' the user around; which means that a studio or edit suite can be used by any user, allowing the business to operate more flexibly and efficiently.

The Result

The tight installation schedule meant that there was very little time to work and absolutely no room for error. Any changes in the specification of the system had to be accommodated. "KVM equipment selection, procurement, configuration and integration to the point of live broadcast was completed in just seven months," explains Hugh Pollard, Timeline TV. "The total flexibility of the Draco tera allows us to switch between signal formats and integrate peripheral devices such as touch screen controllers over USB."

"The tight integration timescale and the size of the project made this the most challenging broadcast installation we have completed in our 15 year history." Steven Bailey, CEO AIT Partnership Group Ltd.

The Draco tera KVM switch was one of the crucial elements that enabled BT Sport to meet the tight timescale to launch a bouquet of new TV broadcast channels; on time and with a complete set of features. The original project specification was met in full and additional requirements and changes to the specification were accommodated with ease.

"At the core of our new studio build is a spirit of collaboration that brings the best of industry working together toward a common aim: to make the BT Sport studios a world-class hub for the best ideas and talent." Jamie Hindhaugh, Chief Operating Officer of BT Sport.

AIT is the leading integrator of matrix KVM switching in the UK. Timeline TV is the prime technical operations contractor for BT Sport.

