

»» ServSwitch™ DKM

An SFP-based modular KVM switch with high resolution DVI-D video? The ServSwitch™ DKM delivers all this and much more.

Ideal for
broadcasting,
video editing,
server management,
industrial control
and more.



Find everything you need for your server room or data centre, and more!

www.blackbox.co.uk



With more than 12,000 products, there's no need to go anywhere else!

Whether you're a small office that wants a small cabinet to house your server or a large enterprise that needs multiple data centres throughout the world, Black Box has the technology, product selection and know-how to make it happen. We're your one-company, complete-solution provider. At Black Box, you'll find everything you need to deliver end-to-end solutions. Our selection includes:

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Copper CAT5/5e/6/6a/7
Fibre
Video/Audio
USB/Serial/Data
Power
Cable Management

Testers & Tools

FLUKE Networks™
Copper Testers
Fibre Testers
Tools

Cabinets & Racks

Freestanding Cabinets
Wallmount Cabinets
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Racks
Rack Accessories
Cable Management

KVM/ServSwitch™

Desktop KVM
Rackmount KVM
KVM Extension
Enterprise KVM
Speciality KVM
KVM Drawers

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Remote Power Switches
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Cables

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Audio
Video Splitters
Video Switches
Video Extenders
Video Converters
Video Scalers
Video Accessories
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Routers
Network Security

WAN

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Interface Converters
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Testers

Peripherals

Manual Switches
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USB
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LAN
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Speak with one of our technical experts on the phone, or let us call you back by visiting our website and requesting a call back whenever it's convenient for you!



Proven Quality

Black Box is ISO9001:2008 certified and follows the same proven quality procedures that we have been practising for 17 years of ISO accreditation.



Educational Resources

As well as our FREE 24/7 Tech Support, we also have great technical resources online, including technology overviews, Black Box explains, product datasheets, videos and more.



Custom Solutions

If you can't find what you are looking for in our 12,000 off-the-shelf products, don't despair because chances are, we can build it!

ServSwitch™ DKM4-7

An SFP-based modular KVM switch with high resolution DVI-D video? The ServSwitch™ DKM delivers all this and much more. Unlike traditional analogue KVM switching systems, the ServSwitch™ DKM does not suffer from skew or attenuation problems like fuzzy or smearing images, in fact you can transmit full 1920 x 1200 video over the full distance. All that without any tweaking or compensation to improve the quality of the image, giving you perfect results every time — almost as if you were connected locally.

See pages 4 to 7 to fully understand the capabilities of the incredible ServSwitch™ DKM.



See www.blackbox.co.uk or speak to one of our Technical experts on 0118 965 6000 for more information on our complete range of KVM switches, extenders, drawers and more.

Our range features hundreds of different products to cover all our your KVM requirements both now and in the future.

ServSwitch DKM

CATx or fibre-based DVI-D and USB KVM control for up to 16 Users and 32 PCs.

- Digital Matrix allows KVM switching between DVI/USB workstations and remote user consoles with DVI-monitor and USB HID peripherals.
- Optional support for stereo audio and serial data transmission.
- Built-in extension using CATx up to 140 metres or fibre up to 10km.
- Support DVI-D video resolutions up to 1920 x 1200 at 60Hz over the full distance.
- Real-time experience of video and keyboard/mouse operation.
- Route groups of video signals while also connecting workstations with multiple video heads.
- High availability in mission critical environments with redundant power supplies.
- Module-based architecture allows flexible scalable matrix configuration with users or computer access exactly as demanded.
- Highly secure with safe user profiles and sniffing prevention.
- Multiple control options for versatile usage — not just KVM.
- Noise-free operation without fans.

DKM

The DKM is a truly unique video matrix and KVM switch with some seriously powerful features. It will allow you to switch DVI and USB for up to 16 users to up to 32 CPUs. You can even expand to 32 users (call tech support for details)

Extension is built in, meaning you can locate your users and computers up to 140m from the switch over CATx cable, or up to a massive 10km from the switch using fibre. Greater distances are supported using the optional repeater modules.

Flexible Modular Architecture

You can configure the unit to suit your application by selecting from our preconfigured CatX options, or by building your own system from the available copper and fibre modules.

Simply select one or two copper, fibre or SFP modules plus one or two OSD cards to add 8 or 16 users, and then select up to 4 additional cards to add CPU connectivity in banks of 8 ports. You can also install an optional spare hot pluggable PSU.

Next, select one transmitter for each computer you need to connect to the system, and one receiver for each monitor. Each copper transmitter must ultimately connect to a copper receiver, but using the copper to fibre repeater options, you can create a mixed media architecture with some long distance fibre links to complement your CatX switching system. You can also create a purely fibre switching system for secure or geographically spread out applications.

Crystal clear video

Digital DVI-D switching means no skew, no smearing, no attenuation — Just perfect video every time.



ServSwitch DKM (ACX1632): front.



ServSwitch DKM (ACX1632): rear.

USB HID and USB 2.0 Transparent support

For KVM switching applications, choose modules such as the ACS4001A, that support USB HIDs. Hundreds of HID devices are supported by these cards including most USB keyboards and mice, graphics tablets, barcode scanners and more.

If you need full speed transparent USB2.0 switching (a truly unique feature!) choose the ACS4002A transmitters and receivers. These will allow you to connect up to 4 full speed, full power USB 2.0 devices.

Multi-Head Support

You can switch groups of inputs and outputs together to allow multihead switching. You can also switch multiple switches together, allowing 16 user dual head or quad head matrices.

Multiple Control Options

This switch has powerful and flexible configuration and control options.

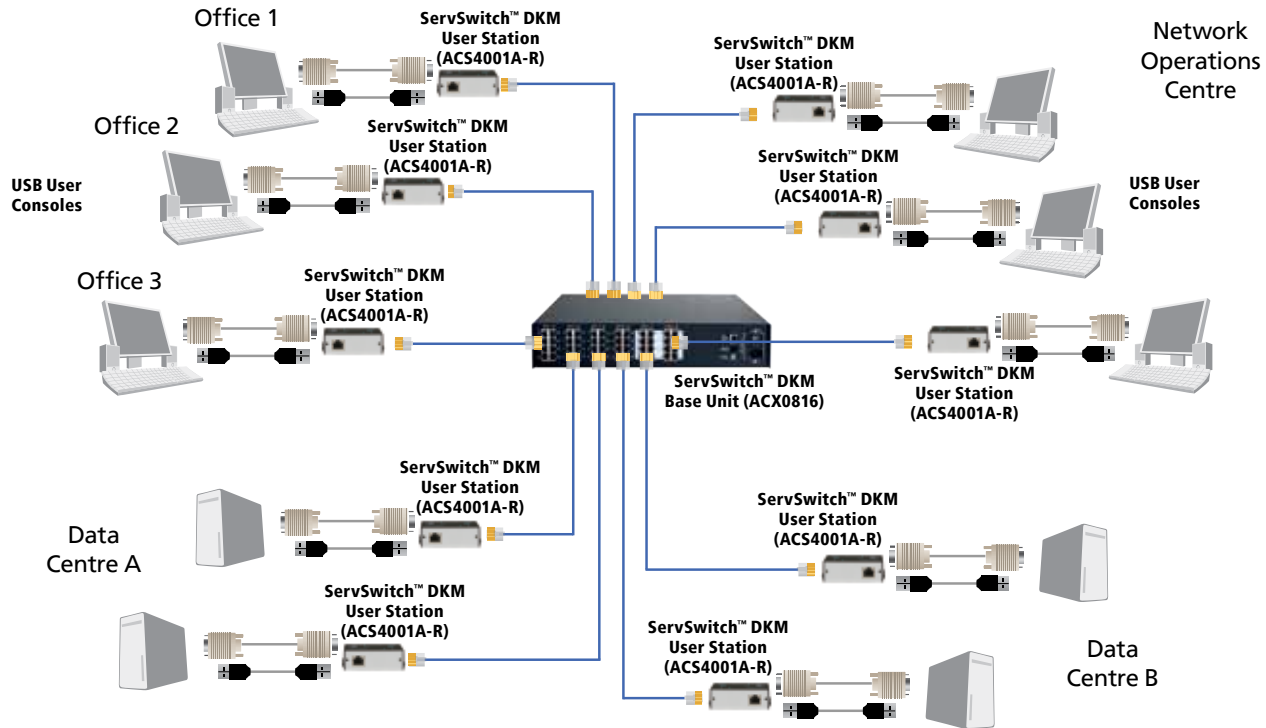
Users can switch a single user station to any computer using a hotkey command or preconfigured macro key, or an administrator can switch multiple computers at the same time using a user friendly OSD. RS232 switching is also possible, allowing the system to be integrated into existing external controllers such as Crestron and AMX controllers. The switch can also be controlled via an IP network.

Security

You can configure CPU access lists for both users and receivers to prevent unauthorised access to resources. The most restrictive policy will apply. You can even set receivers to prevent local hotkey switching, meaning that all switching must be performed by an administrator.

For very high security environments create a full fibre matrix to safeguard against sniffing.

PLATFORMS	CONNECTORS	CABLE	PERIPHERALS	SWITCHING	FEATURES
PC Sun® Mac®	USB DVI-I	CAT5, 5e, 6 Single-Mode LC Multimode LC	Touchscreen OSD Push Button	Cascadable	



Black Box Matrix Switches are far more than just server management. We are often asked for high-resolution Matrix solutions for environments that would traditionally have made use of AV only switches, rather than KVM. The high-end video connections and additional features such as USB switching and flexible expansion and control options offered by KVM mean that our Matrix switches are finding their way into studios, and other environments where video quality is key.

The flexible modular design and fibre extension options also make the DKM perfect for high security environments, lights-out data centres, as well as for industrial control and monitoring.

TECH SPECS

Distance (Maximum) — CATx: 140m
 Black Box recommends solid wire shielded CAT5e or higher CATx cables for maximum distances!
 Multimode: 200m @ 62.5/125, 400m @ 50/125
 Single-mode: 10km @ 9/125
 Resolution (Maximum) — W-UXGA 1920 x 1200 at 60Hz, up to 24-bit colour depth
 Indicators — 2.5" LCD Display

Connectors — (1) IEC-320 per Power Supply 100-240VAC; (1) USB Type B F; (1) RJ-45 F TCP/IP RJ-11 RS-232/V.24r
 Preconfigured units also have:
 ACX0808: (16) RJ-45 F;
 ACX0816: (24) RJ-45 F;
 ACX0832: (40) RJ-45 F;
 ACX1616: (32) RJ-45 F;
 ACX1632: (48) RJ-45 F
 Dimensions — 8.4(H) x 4.4(W) x 43.5(D) cm
 Weight — 8.25 kg



Ideal for:

- » Control Room Environments/NOCs
- » Computer Based Training (CBT)
- » Broadcast Operations/Broadcast Control
- » Conference facilities
- » Studio Environments
- » CAD
- » Audio Recording Studios (support for Fairlight)
- » Cross-over Conversion CATx ó Fiber (SM/MM)
- » Traffic Control
- » System Testing and Engineering
- » Industrial Process Control and Operation!

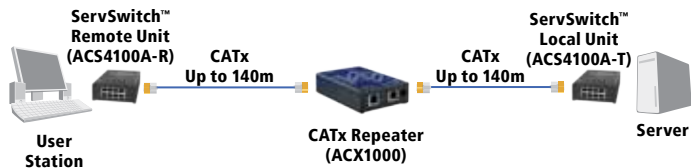
Need even greater distances? Need to converter from Fibre to Copper, or Vice Versa, as well?

All you need is a Repeater, Cross Repeater or Dual Repeater..

- Repeater: allows you to double the total distances to 250m on CATx, 400m @62.5µ, 800m @ 50µ and 20km @ 9µ.
- Fibre Cross Repeater: Converts from Multimode to Single-mode (or vice versa). The allowed distance on each single-mode connection may reach up to 10km and up to 400m on each multimode connection.
- CATx Cross Repeater: The signals can be linked from the local unit to the cross converter through a CATx cable. The Cross Repeater converts to Multimode (Single-mode). At the end of the Multimode (Single-mode) link, a second device reconverts it back to CATx, which goes back to the remote unit. Ideal for installations with heterogeneous cabling. The maximum distance on each CATx connection is 140m and 400m on each multimode connection. These devices must be used in pairs.

Repeater

Double the total distance of a regular link

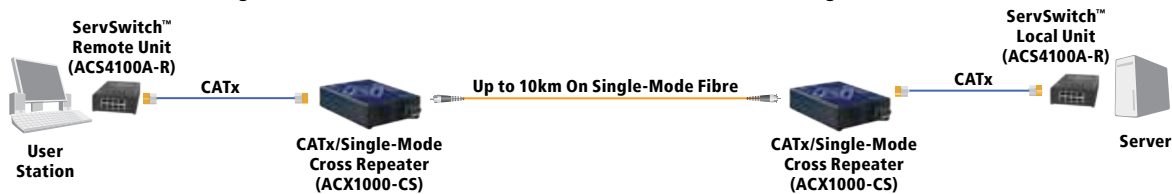


CATx Repeater (ACX1000): top;
CATx/Single-Mode Cross Repeater (ACX1000-CS): Middle;
CATx/Multimode Dual Cross Repeater (ACX1000-DM): bottom.



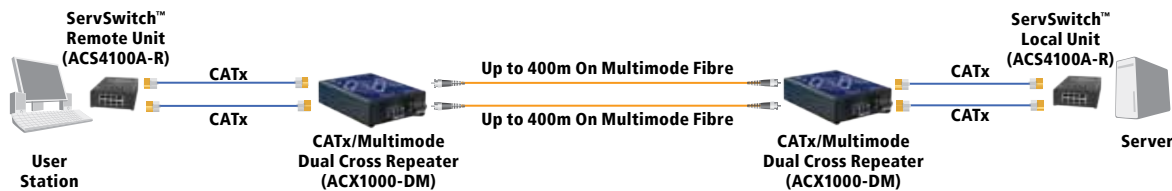
Cross Repeater

Convert from Multimode or Single-Mode to CATx (or vice versa) and extend the total distance of a regular link



Dual Cross Repeater

Convert from Multimode or Single-Mode to CATx (or vice versa) and extend the total distance of a regular link for two links simultaneously



Black Box Explains

USB.

USB's main attraction is that it makes adding peripherals to your computer incredibly easy. It enables you to connect peripherals to the outside of the computer so you don't have to open your PC.

A USB peripheral simply plugs right into the port and works. You don't need to install a card; you don't even need to turn off your computer. Because USB configuration happens automatically, built-in USB means you don't have to fiddle with drivers and software when adding most peripherals.

USB 1.1, the original USB standard, has two data rates: 12 Mbps for devices, such as disk drives, that need high-speed throughput and 1.5 Mbps for devices, such

as joysticks, that need much lower bandwidth.

In 2002, USB 2.0, Hi-Speed USB 2.0, gained wide acceptance in the industry. It increases the speed of the peripheral-to-PC connection from 12 Mbps to 480 Mbps, or 40 times faster than USB 1.1. This increase in bandwidth enhances the use of external peripherals that require high throughput, such as CD/DVD burners, scanners, digital cameras, and video equipment. USB 2.0 also supports demanding applications where multiple high-speed devices run simultaneously, such as Web publishing. A USB 2.0 host will work with both USB 2.0 and USB 1.1 peripherals. USB 2.0 also supports Windows® XP through a

Windows update.

Another USB standard, USB On-The-Go (USB OTG), has also been developed. USB OTG enables devices other than a PC to act as a host. It enables portable equipment—such as PDAs, cell phones, digital cameras, and digital music players—to connect to each other without the need for a PC host.

There are four types of USB connectors: Type A, Type B, Mini B, and Mini A.

USB 1.1 specifies the Type A and Type B. USB 2.0 specifies the Type A, Type B, and Mini B. The Mini A connector was developed as part of the USB OTG specification and is used for smaller peripherals, such as cell phones.

Item	Code	Price	Item	Code	Price
ServSwitch DKM			Single-mode USB and DVI-D Transmitters		
with CATx preconfiguration			Single Head	ACS4001A-SM-T	CALL
8 users to 8 CPUs	ACX0808	CALL	Dual Head	ACS4201A-SM-T	CALL
8 users to 16 CPUs	ACX0816	CALL	Single Head+Audio/RS-232/V.24	ACS4022A-SM-T	CALL
8 users to 24 CPUs	ACX0824	CALL	Dual Head+Audio/RS-232/V.24	ACS4222A-SM-T	CALL
8 users to 32 CPUs	ACX0832	CALL	Single-mode USB and DVI-D Receivers		
16 users to 8 CPUs	ACX1608	CALL	Single Head	ACS4001A-SM-R	CALL
16 users to 16 CPUs	ACX1616	CALL	Dual Head	ACS4201A-SM-R	CALL
16 users to 24 CPUs	ACX1624	CALL	Single Head+Audio/RS-232/V.24	ACS4022A-SM-R	CALL
16 users to 32 CPUs	ACX1632	CALL	Dual Head+Audio/RS-232/V.24	ACS4222A-SM-R	CALL
Unconfigured Chassis with power supply			Single-mode USB and DVI-D Transmitters		
8 users to 8 CPUs	ACX0000	CALL	Single Head+(4) USB HIDs	ACS4004A-SM-T	CALL
For expansion you may need...			Dual Head+(4) USB HIDs	ACS4204A-SM-T	CALL
8-Port CATx Expansion Module	ACX8CAT	CALL	Single-mode USB and DVI-D Receivers		
8-Port SFP Expansion Module	ACX8SFP	CALL	Single Head+(4) USB HIDs	ACS4004A-SM-R	CALL
8-Channel On-Screen Menu	ACX8OSD	CALL	Dual Head+(4) USB HIDs	ACS4204A-SM-R	CALL
LCD Display Board	ACXDIS	CALL	Single-mode and DVI-D Transmitter		
SFP Modules			Single Head+(4) USB 2.0	ACS4002A-SM-T	CALL
8-Port CATx Expansion Module	ACXSFPC	CALL	Single-mode USB 2.0 and DVI-D Receiver		
8-Port SFP Expansion Module	ACXSFPM	CALL	Single Head+(4) USB 2.0	ACS4002A-SM-R	CALL
8-Channel On-Screen Menu	ACXSFPS	CALL	Single-mode USB 2.0 and DVI-I/VGA Transmitter		
Spare Hot-Pluggable Power Supply	ACXPSR	CALL	Single Head+(2) USB 2.0	ACS4011A-SM-T	CALL
Transmitter and Receiver Modules			CATx DVI-D only Transmitters		
CATx USB HID and DVI-D Transmitters			Single Head	ACS4100A-T	CALL
Single Head	ACS4001A-T	CALL	Single Head+Audio/RS-232/V.24	ACS4122A-T	CALL
Dual Head	ACS4201A-T	CALL	CATx DVI-D only Receivers		
Single Head+Audio/RS-232/V.24	ACS4022A-T	CALL	Single Head	ACS4100A-R	CALL
Dual Head+Audio/RS-232/V.24	ACS4222A-T	CALL	Single Head+Audio/RS-232/V.24	ACS4122A-R	CALL
CATx USB HID and DVI-D Receivers			Multimode DVI-D Transmitters		
Single Head	ACS4001A-R	CALL	Single Head	ACS4100A-MM-T	CALL
Dual Head	ACS4201A-R	CALL	Single Head+Audio/RS-232/V.24	ACS4122A-MM-T	CALL
Single Head+Audio/RS-232/V.24	ACS4022A-R	CALL	Multimode DVI-D Receivers		
Dual Head+Audio/RS-232/V.24	ACS4222A-R	CALL	Single Head	ACS4100A-MM-R	CALL
CATx USB HID and DVI-D Transmitters			Single Head+Audio/RS-232/V.24	ACS4122A-MM-R	CALL
Single Head+(4) USB HIDs	ACS4004A-T	CALL	Single-Mode DVI-D Transmitters		
Dual Head+(4) USB HIDs	ACS4204A-T	CALL	Single Head	ACS4100A-SM-T	CALL
CATx USB HID and DVI-D Receivers			Single Head+Audio/RS-232/V.24	ACS4122A-SM-T	CALL
Single Head+(4) USB HIDs	ACS4004A-T	CALL	Single-Mode DVI-D Receivers		
Dual Head+(4) USB HIDs	ACS4204A-T	CALL	Single Head	ACS4100A-SM-R	CALL
CATx USB 2.0 and DVI-D Transmitter			Single Head+Audio/RS-232/V.24	ACS4122A-SM-R	CALL
Single Head+(4) USB 2.0	ACS4002A-T	CALL	Rackmounting Options for Transmitters and Receivers		
CATx USB 2.0 and DVI-D Receiver			For up to 4 single-head devices	ACS1009A-RMK	CALL
Single Head+(4) USB 2.0	ACS4002A-R	CALL	For up to 4 single or dual-head devices	ACS2209A-RMK	CALL
CATx USB 2.0 and DVI-I/VGA Transmitter			Rackmounting Power Supply		
Single Head+(2) USB 2.0	ACS4011A-T	CALL	For up to 3 Transmitters or Receivers in 1U	ACS2209A-PS	CALL
Multimode USB and DVI-D Transmitters			Need Greater Distances? Then order...		
Single Head	ACS4001A-MM-T	CALL	Repeaters		
Dual Head	ACS4201A-MM-T	CALL	CATx Repeater	ACX1000	CALL
Single Head+Audio/RS-232/V.24	ACS4022A-MM-T	CALL	Single-Mode Repeater	ACX1000-SM	CALL
Dual Head+Audio/RS-232/V.24	ACS4222A-MM-T	CALL	Multimode Repeater	ACX1000-MM	CALL
Multimode USB and DVI-D Receivers			Cross Repeaters		
Single Head	ACS4004A-MM-R	CALL	CATx/Single-Mode Cross Repeater	ACX1000-CS	CALL
Dual Head	ACS4201A-MM-R	CALL	CATx/Multimode Cross Repeater	ACX1000-CM	CALL
Single Head+Audio/RS-232/V.24	ACS4022A-MM-R	CALL	Multimode/Single-Mode Cross Repeater	ACX1000-MS	CALL
Dual Head+Audio/RS-232/V.24	ACS4222A-MM-R	CALL	Dual Cross Repeater		
Multimode USB and DVI-D Transmitters			CATx/Single-Mode Dual Cross Repeater	ACX1000-DS	CALL
Single Head+(4) USB HIDs	ACS4004A-MM-T	CALL	CATx/Multimode Dual Cross Repeater	ACX1000-DM	CALL
Dual Head+(4) USB HIDs	ACS4204A-MM-T	CALL	Multimode USB and DVI-D Receivers		
Multimode USB and DVI-D Receivers			Single Head+(4) USB HIDs	ACS4004A-MM-R	CALL
Single Head+(4) USB HIDs	ACS4004A-MM-R	CALL	Dual Head+(4) USB HIDs	ACS4204A-MM-R	CALL
Dual Head+(4) USB HIDs	ACS4204A-MM-R	CALL	Multimode USB 2.0 and DVI-D Transmitter		
Multimode USB 2.0 and DVI-D Transmitter			Single Head+(4) USB 2.0	ACS4002A-MM-T	CALL
Single Head+(4) USB 2.0	ACS4002A-MM-T	CALL	Multimode USB 2.0 and DVI-D Receiver		
Multimode USB 2.0 and DVI-D Receiver			Single Head+(4) USB 2.0	ACS4002A-MM-R	CALL
Single Head+(4) USB 2.0	ACS4002A-MM-R	CALL	Multimode USB 2.0 and DVI-I/VGA Transmitter		
Multimode USB 2.0 and DVI-I/VGA Transmitter			Single Head+(2) USB 2.0	ACS4011A-MM-T	CALL
Single Head+(2) USB 2.0	ACS4011A-MM-T	CALL			

Contact our Tech Support on **0118 965 6000**
to speak to one of our Technical Support
Engineers about your DKM requirements.



KVM/ServSwitch™



See our complete range of KVM switches, extenders and more at www.blackbox.co.uk.

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