Technology Solutions

Solutions for corporate, education, military & defense, public safety, healthcare, retail & hospitality, industrial, broadcast, and transportation.
Black Box has been a world-leading provider of premier IT infrastructure solutions for more than 40 years. Today, the company continues to design and manufacture award-winning pro AV, KVM, cabling, and networking products known for their advanced functionality, flawless performance, outstanding reliability, and fail-safe security. Black Box solutions are used every day in government, education, commercial enterprises, and any other organisation that requires the utmost quality and performance from its IT infrastructure.
Complete Connectivity
Rely on fail-safe IT networks and proven connectivity from Black Box

All Black Box products are interoperable to bring our customers comprehensive connectivity solutions that provide maximum uptime, reliability, and scalability. The above diagram provides an example of how Black Box products work together to provide a complete connectivity solution for your application.
Black Box offers the most comprehensive suite of IT solutions in the industry, including:

**AV**
- Video walls
- Digital signage
- Video splitters
- Video extenders
- AV cables and adapters

**Cabinets and Racks**
- Network and server cabinets
- Soundproof and Climate cabinets
- Freestanding, wallmount, and mobile racks
- Cable management

**Cabling and Connectivity**
- Copper network cables
- Fibre network cables

**KVM**
- NIAP 3.0-certified secure KVM
- KVM matrix switching
- KVM switches and extenders
- KVM management

**Networking**
- Ethernet switches and extenders
- Media converters
- Remote monitoring
- USB solutions

**Power**
- Uninterruptible power supplies
- Data line surge protectors
- Power distribution units

**Why Black Box?**
Black Box offers 24/7 tech support, free application engineering, service level agreements, product and marketplace expertise, warranties, and the most advanced IT solutions in the industry.
Black Box empowers businesses of all sizes by aligning IT and communications solutions to desired business outcomes. We help transform operations for the better with the most innovative technology products and solutions on the market. We guide our customers through the complex challenge of transitioning from traditional communications to dynamic and integrated IT technologies and services.
Joy Mining Machinery wanted to standardise communications, provide real-time metrics, promote plant competition, and reduce safety issues and lost-time accidents. To do this, they needed to centralise control of company branding and messaging across 55 global facilities. They turned to Black Box, who rapidly designed, configured, and provided a world-class digital signage distribution system based on the iCOMPEL platform that allowed the company to create, schedule, and manage messages site-wide from one location. As a result, Joy Mining has seen improved communications, productivity, OTD, and a reduction in safety issues and accidents.

**Featured Products**

**iCOMPEL®**
Motivate teams with real-time KPI display, save time while enhancing communication, and manage emergency response from a simple-to-use CMS with this digital signage solution.

[www.black-box.eu/icompel](http://www.black-box.eu/icompel)

**MCX Advanced AV over IP**
Deliver 4K 60 Hz 4:4:4 video and audio without sacrificing latency, video quality, or bandwidth. MCX offers advanced features like seamless switching; zero source to display latency; and video scaling options, such as multiview, picture-in-picture, split screen, and more.

[www.black-box.eu/mcx](http://www.black-box.eu/mcx)

**USB 3.0 / 2.0 / 1.1 Extenders**
Put USB devices where you need them. Connect remote USB devices such as printers, scanners, storage devices, and hard drives to a local PC or laptop anywhere from 15 metres to 10 kilometres away.

[www.black-box.eu/usbextenders](http://www.black-box.eu/usbextenders)

**Secure Console Servers**
Manage remote mission-critical IT, network, and power devices to enable 24/7 uptime. Complete redundancy and seamless reliability are provided via dual Gigabit Ethernet ports and optional dual power supplies.

[www.black-box.eu/ consoleservers](http://www.black-box.eu/ consoleservers)

**Pure Networking Media Converters**
Extend the reach of your network and provide better connectivity in your enterprise. Straightforward installation means quick, hassle-free deployment.

[www.black-box.eu/ purenetworking](http://www.black-box.eu/ purenetworking)

**4K Presentation Switcher**
Easily connect, extend, and switch any wired video source to any conference room display. This switcher’s simplicity and best-in-class features help you save time and deliver professional presentations.

[www.black-box.eu/ presentationswitchers](http://www.black-box.eu/ presentationswitchers)

**Customer Use Case: Joy Mining**

Joy Mining Machinery wanted to standardise communications, provide real-time metrics, promote plant competition, and reduce safety issues and lost-time accidents. To do this, they needed to centralise control of company branding and messaging across 55 global facilities. They turned to Black Box, who rapidly designed, configured, and provided a world-class digital signage distribution system based on the iCOMPEL platform that allowed the company to create, schedule, and manage messages site-wide from one location. As a result, Joy Mining has seen improved communications, productivity, OTD, and a reduction in safety issues and accidents.
Today’s classrooms require reliable real-time collaboration to be successful. Black Box offers innovative solutions that transform the way students and faculty work together. Allow group discussions, posing questions to the class, and student presentations to occur without barriers with our complete education connectivity solutions.

**Solutions**

- **Room Scheduling**
- **Emergency Messaging and Information Sharing**
- **Video Switching and Distribution**
- **Infrastructure**
La Roche College wanted a digital signage system that could display news, events, emergency notifications, Twitter feeds, and other social media sites to engage students and staff. Their challenge was finding an intricate networked digital signage system that could display live student- and user-generated content in real time. They decided on a world-class digital signage system based on the iCOMPEL platform from Black Box. The system met all their requirements while keeping them on budget and enhanced communications for students, faculty, and other staff.

Featured Products

iCOMPEL®
Maximise student, staff, and faculty participation with this easy-to-use digital signage solution that supports every type of content. Integrate it with your emergency system to enhance school safety.

IN-SESSION
Booking a meeting room shouldn’t be a hassle. The IN-SESSION room scheduling system allows you to easily locate and instantly reserve meeting rooms with the tap of a button or the swipe of a touch panel.

VideoPlex 4000 Video Wall Controller
Standalone display wall controller/scaler that outputs high-resolution DVI video up to 4K to multiple monitors. Display content that informs your students, faculty, and staff of school events, emergencies, and more.

4K Presentation Switcher
Easily connect, extend, and switch any wired video source to any conference room display. This switcher’s simplicity and best-in-class features help you save time and deliver professional presentations.

Active Optical Cables
Active Optical Cables extend 4K HDMI video hundreds of metres without any additional software or devices. They are ideal for displaying high-quality images to students during lectures.

GigaTrue CAT6 Lockable Patch Cable
Get premium network connectivity, performance, and security in your school system. This cable stays locked in place until you decide to take it out.

Customer Use Case: La Roche College

La Roche College wanted a digital signage system that could display news, events, emergency notifications, Twitter feeds, and other social media sites to engage students and staff. Their challenge was finding an intricate networked digital signage system that could display live student- and user-generated content in real time. They decided on a world-class digital signage system based on the iCOMPEL platform from Black Box. The system met all their requirements while keeping them on budget and enhanced communications for students, faculty, and other staff.
Black Box understands federal agencies’ requirements for secure, compliant technology solutions. We design advanced products that meet the latest and most rigid security standards to help you achieve your objectives, meet your budget, and optimise your productivity without sacrificing your safety.

Solutions

Secure Desktop  Fibre to the Desktop  Command and Control  Data Centre and Infrastructure
A new U.S. Government land base data centre needed to roll out a complete data centre, including infrastructure for KVM, to support deployed naval ships. Additionally, they wanted to reduce data centre noise, cool sensitive equipment, and reduce space. They contacted Black Box, who designed a high-performance data centre with climate-controlled cabinets that kept server noise to a minimum, cooled mission-critical IT equipment, and didn’t clutter the workspace. For the required KVM functionality, Black Box installed a high-performance KVM-over-IP matrix switching system that met the customer’s needs for command and control, and improved naval ship support and operations.
Every emergency operations centre (EOC), 112 or 911 call centre, and public-safety answering point (PSAP) relies on critical information visualisation and communication. Black Box control room solutions enable real-time video and information sharing between field and operations centres, resulting in improved situational awareness and faster response times. When lives are on the line and communication is critically important, trust our extensive portfolio that showcases more than 40 years of technical expertise.

Solutions

- KVM Switching and Extension
- Collaboration and Control
- Video Switching and Extension
- Real-Time Data Visualisation
The Miami Dade E911 Centre required an easy-to-use real-time KVM switching system to improve response times, eliminate inefficiencies, minimise system delay, and end complex new user training. They asked Black Box to implement a complete KVM solution. Black Box deployed an easy-to-use KVM system with Glide and Switch functionality that allowed operators to instantaneously switch from one monitor and one server to up to four additional screens, improving operator workflows and response times, and simplifying new user training.

Customer Use Case: Miami Dade E911 Centre

Featured Products

NIAP 3.0-Certified Secure KVM Switches
Secures control centre servers and network enclaves with hardware-based data isolation, secure EDID learn and video emulation, and true isolation between device connections, making it easy to switch between networks with different classification levels. Supports resolutions up to 4K UHD.

Freedom II KM Switches
Switch between four or eight computers by moving a mouse from screen to screen. Perform functions that would normally require eight separate keyboard/mouse sets with one keyboard and mouse, freeing up desk space.

Emerald® Unified KVM
Access and manage an unlimited number of PCs from any location. Share resources such as hardware and licenses across an existing or dedicated IP network.

4Site KVM Multi-Viewer
Control four servers from one keyboard and mouse. Display video from those four servers on one monitor all at the same time and in real time.

Radian Flex
Enable faster communication and better informed decision-making with the software-based video wall system that gives you complete control over content. Display high-quality content from any source, across multi-screen display walls in any configuration.

ControlBridge®
Achieve the highest level of automated room control with this room control system. Connect and control everything in your control room through one platform.

www.black-box.eu/securekvm
www.black-box.eu/freedom
www.black-box.eu/emerald
www.black-box.eu/4site
www.black-box.eu/radianflex
www.black-box.eu/controlbridge
Healthcare operations rely on leading-edge technology to improve patient experiences, optimise workflows, and make certain no errors occur in crucial, time-sensitive situations. Black Box provides powerful KVM, digital signage, cabling, and other solutions tailor-made for large hospitals, small medical private practices, and any healthcare facility in between.

Solutions

KVM Switching and Extension
Visual Communications and Wayfinding
Infrastructure
Connectivity
Jefferson Regional Hospital asked Black Box to deliver a state-of-the-art integrated operating room video system to enhance and enable their surgical teams’ capabilities to perform the latest techniques in laparoscopic, vascular, and cardiothoracic surgery. Black Box designed, configured, and provided a master DVI Matrix Switch to connect eight sources to eight digital screens with specially-cased Wizard SRX DVI-D Plus Transmitters and Extenders. Now surgery teams at the hospital have the video system they need to successfully perform complex procedures and ensure patient well-being.

**Featured Products**

**MCX Advanced AV over IP**
Deliver 4K 60 Hz 4:4:4 video and audio without sacrificing latency, video quality, or bandwidth. MCX offers advanced features like seamless switching; zero source to display latency; and video scaling options, such as multiview, picture-in-picture, split screen, and more.

www.black-box.eu/mcx

**iCOMPEL®**
This digital signage solution lets you create a better patient experience with clear wayfinding signage and scheduling update boards. It also engages staff with easy content control.

www.black-box.eu/icompel

**Emerald® Unified KVM**
Experience pixel-perfect HD or 4K video resolution for high-quality imaging with no blurring or pixelation. Perfect for medical imaging where picture quality is crucial.

www.black-box.eu/emerald

**USB 3.0 / 2.0 Extenders**
Overcome the distance between medical imaging equipment in the imaging room and host computers in the technician room, without compromising on image quality.

www.black-box.eu/usbextenders

**Pre-Terminated Fibre**
High-quality pre-terminated fibre cable that provides maximum uptime in crucial medical environments. Plug-and-play installation means no headaches during deployment.

www.black-box.eu/pretermfibre

**Soundproof Cabinet**
Put networking equipment where you need it — without the noise, space, or cost concerns. Choose from cabinets ranging from 12U to 42U.

www.black-box.eu/soundproof

**Customer Use Case: Jefferson Regional Hospital**

Jefferson Regional Hospital asked Black Box to deliver a state-of-the-art integrated operating room video system to enhance and enable their surgical teams’ capabilities to perform the latest techniques in laparoscopic, vascular, and cardiothoracic surgery. Black Box designed, configured, and provided a master DVI Matrix Switch to connect eight sources to eight digital screens with specially-cased Wizard SRX DVI-D Plus Transmitters and Extenders. Now surgery teams at the hospital have the video system they need to successfully perform complex procedures and ensure patient well-being.
Nowhere more than in retail environments is the potential to drive revenue by serving dynamic, hyper-targeted digital signage content quite so strong. Black Box offers digital signage and video wall solutions that give you the power to display the content you want where you want in real time to improve sales and awareness. Even better, our signage solutions boast perfect picture quality that’s certain to capture any potential customer’s attention.

**Solutions**

- KVM Switching and Extension
- Visual Communications and Wayfinding
- Infrastructure
- Connectivity
Digital signage technology allows you to add creative elements to your in-store experience, keeping your brand fresh and generating excitement for customers. In one such application for a Las Vegas event centre, the technology solution displays content over box office windows, on kiosks, and in the retail space, as well as over the entrance to a theater. The Radian Flex system can provide all of this functionality and more to any space. This advanced AV extension solution enables operators to direct content to displays located all over event centres with ease.

**Featured Products**

**MediaCentro**
Create eye-catching, engaging displays with this video extender. It’s scalable so you can add transmitters and receivers as you add sources and displays.

www.black-box.eu/mediacentro

**MCX Advanced AV over IP**
Deliver 4K 60 Hz 4:4:4 video and audio without sacrificing latency, video quality or bandwidth. MCX offers advanced features like seamless switching; zero source to display latency; and video scaling options, such as multiview, picture-in-picture, split screen, and more.

www.black-box.eu/mcx

**iCOMPEL®**
Create, manage, and update digital signage content easily with this digital signage system. Customise your in-store content by location. Ideal for use with edge-blending projectors.

www.black-box.eu/icompel

**VideoPlex 4000 Video Wall Controller**
Standalone display wall controller/scaler that outputs high-resolution DVI video up to 4K to multiple monitors. Display content that informs your students, faculty, and staff of school events, emergencies, and more.

www.black-box.eu/videoplex

**Radian Flex**
This software-based video wall processing platform lets you personalise your video wall to your unique application. Easily manage what, where, when, and how content is shown to your customers.

www.black-box.eu/radianflex

**Application Scenario: Retail**

Digital signage technology allows you to add creative elements to your in-store experience, keeping your brand fresh and generating excitement for customers. In one such application for a Las Vegas event centre, the technology solution displays content over box office windows, on kiosks, and in the retail space, as well as over the entrance to a theater. The Radian Flex system can provide all of this functionality and more to any space. This advanced AV extension solution enables operators to direct content to displays located all over event centres with ease.
Industrial environments present much harsher conditions than those found in typical office environments. They have extreme temperatures, humidity, amounts of dirt and soot, and corrosive materials that can ruin IT equipment. They can also contain devices such as motors and mechanical switches, which cause a large amount of electromagnetic interference (EMI). Black Box has a large range of solutions designed to perform in the toughest environments.

**Solutions**

- Redundant and Remote Networks
- KVM Switching and Extension
- Real-Time Data Visualisation
- Video Extension
The world’s largest steel producer, ArcelorMittal, needed to upgrade their wireless infrastructure to support their growing amount of equipment. They turned to Black Box, who implemented a new wireless technology solution that did not interfere with the already crowded Wi-Fi® frequencies on-site, making full use of the 60 GHz frequency band. The solution offers a stable point-to-point wireless network connection with high bandwidth and is comprised of high-performance antennas that can operate in different distance ranges if installed in the same directional axis. Since the installation, service is operating flawlessly without interruptions even during the most unexpected heavy atmospheric conditions.

**Featured Products**

**Industrial Ethernet Switches**
This extensive range of hardened Ethernet switches provides reliable performance in demanding security/surveillance and automation applications. It includes managed, unmanaged, and PoE switches.

[www.black-box.eu/industrialswitches](http://www.black-box.eu/industrialswitches)

**Fibre Optic Cables**
Make high-density connections that are immune to EMI/RFI interferences. Choose from a wide range of bulk, patch, and pre-terminated fibre optic cables.

[www.black-box.eu/fibrecabling](http://www.black-box.eu/fibrecabling)

**Industrial Media Converters**
Choose from a wide variety of industrial media converters designed to provide the utmost performance in the toughest environments. They are ideal for extending the distance of copper devices such as IP cameras and wireless access points.

[www.black-box.eu/industrialmc](http://www.black-box.eu/industrialmc)

**iCOMPEL®**
Unique application-based digital signage player stores data locally, ensuring you’re covered if the network connection is lost due to extreme conditions.

[www.black-box.eu/icompel](http://www.black-box.eu/icompel)

**Industrial VDSL2 Bridge**
The industrial-grade VDSL2 Bridge transmits data at 100 Mbps and offers quick, economical, and high-performance broadband/multimedia services to industrial environments over 24-AWG phone wires.

[www.black-box.eu/industrialbridge](http://www.black-box.eu/industrialbridge)

**Industrial Ethernet Extenders**
Provide an easy, inexpensive way to extend Ethernet over ordinary voice-grade copper wire to remote buildings and in surveillance applications for backhauling remote IP security camera traffic.

[www.black-box.eu/industrialextenders](http://www.black-box.eu/industrialextenders)

**Customer Use Case: ArcelorMittal**

The world’s largest steel producer, ArcelorMittal, needed to upgrade their wireless infrastructure to support their growing amount of equipment. They turned to Black Box, who implemented a new wireless technology solution that did not interfere with the already crowded Wi-Fi® frequencies on-site, making full use of the 60 GHz frequency band. The solution offers a stable point-to-point wireless network connection with high bandwidth and is comprised of high-performance antennas that can operate in different distance ranges if installed in the same directional axis. Since the installation, service is operating flawlessly without interruptions even during the most unexpected heavy atmospheric conditions.
Broadcast and media companies are transitioning to cloud-based workflows and automating operations for program transmission, master control, news production, and live production. KVM technologies play a key role in this transition, allowing managers, editors, operators, and engineers to manage and reconfigure infrastructure. Black Box has extensive experience in developing KVM solutions for the broadcast industry. Prepare for the future with our complete line of KVM solutions.

Solutions

- KVM Matrix Switching and Extension
- 4K Desktop KVM Switches
- Video Wall Controllers
- AV and Room Control
World Wrestling Entertainment, Inc. (WWE) reached out to Black Box for a KVM system that could accommodate their production load in a massive facility that was prone to system breakdowns. Black Box installed a 288-port KVM switch, a 48-port KVM switch, and CAT6 cabling and connectors that gave the customer the high-performance KVM functionality and reliability they required. Since deployment, WWE has experienced significantly improved workflows, enhanced efficiency, and no system breakdowns.
Keeping transportation operations safe and on time comes down to having the right technology infrastructure in place. Black Box’s comprehensive portfolio of connectivity products help you track every issue, delay, and emergency happening in transportation environments, such as airports, railway stations, subways, bus stations, and more in real time so operators can make instant, informed decisions to keep commuters safe and satisfied.

Solutions

Remote Air Traffic Control
Railway Automation and Connectivity
Passenger Monitoring
Passenger Information
A large German airport needed a matrix switching system to extend and switch multiple video and peripheral signal sources to different multi-screen operator desks. The system had to support 24/7 operations, central management of user access rights, and both CATx and fibre cabling. They decided on the highly-reliable DKM FX HD Video and Peripheral Matrix Switching system from Black Box that was made for 24/7 operations. The DKM system met all their requirements, improved functionality for operators, and increased job satisfaction and productivity.

Customer Use Case: German Airport Operations Centre

Featured Products

Emerald® Unified KVM
The Emerald 4K KVM-over-IP solution was designed with 24/7/365 applications in mind. It provides network resilience at every level and is capable of supporting complete switchover to a backup control room for fail-safe operation with zero downtime.

Industrial PoE/PoE+ Ethernet Switches
Easily connect IP cameras, passenger information systems, and control units with these hardened PoE-enabled Ethernet switches. Choose between powerful managed switches or plug-and-play unmanaged switches.

Radian Flex
Flexible, scalable, future-proof video wall processing platform that gives you the power to control content and how it displays. Fail-safe upgrades available to ensure performance in control room environments.

Freedom II KM Switches
Switch between multiple computers by moving a mouse from screen to screen. No software or additional networking required.

DKM Modular KVM Matrix
DKM is a proprietary (non-IP) high-performance KVM matrix switching platform that allows cross-point switching and extension of up to 4K video, peripheral, audio, and serial signals. The multilevel redundancy of the DKM family offers high reliability for 24/7 operation in critical environments.

iCOMPEL®
Keep passengers informed of arrival times and delays with this easy-to-use digital signage platform. Update in real time with ease to keep content accurate.
WHY BLACK BOX

Expertise
Black Box project engineers can assist with system assessment, design, deployment, and training.

Breadth
Black Box offers the most comprehensive suite of engineered KVM, AV and infrastructure solutions in the industry.

Support
Reflecting our commitment to complete satisfaction, our dedicated team of highly trained support technicians is available by phone free of charge.

Service Level Agreements
Our service level agreements give customers access to technical support, product training, dedicated application engineers, and more.

Experience
Providing leading technology solutions since 1976, Black Box helps more than 175,000 customers in 150 countries build, manage, optimise, and secure IT infrastructures.

Warranties
Multi-year warranties with multi-year extensions and replacement options are available.

Centre of Excellence
Black Box offers a Centre of Excellence, featuring professional services and support agreements that help optimise customers’ systems and maximise uptime.