KVM over IP Streamlines Broadcast Operations

Taking Broadcast Operator Collaboration to the Next Level

In modern MCR, post-production, radio, or live event production environments, technology that fosters real-time collaboration between geographically-dispersed connected workspaces is a must for distributed device and control rooms, remote and local users, and OBVs. KVM-over-IP technology has become a major contributor to facilitate this challenge.

Factors Driving KVM over IP Growth that Benefit Users and Administrators

- Fast response times
- No onsite maintenance, reduced personnel costs
- Enhanced security through authorization
- Flexibility to expand

Emerald KVM over IP

Black Box innovative Emerald® KVM-over-IP platform changes the way people collaborate. Emerald serves as an infinitely scalable universal access system, giving users the flexibility to connect to both physical and virtual machines, along with anywhere, anytime IP access over an existing IP-network, WAN, or even the Internet. Interoperability between 4K and HD video, and one-touch control room setups, combined with a high degree of automation through Emerald's APIs, gives users valuable flexibility and ease of use, while system administrators can easily control and manage the system through an intuitive and appealing KVM management dashboard.

KVM over IP Products Trending Now

The latest developments in IP-based KVM solutions include intuitive, simple, and flexible collaboration and visualization tools, such as Black Box Emerald® KVM over IP.

Factors Driving KVM over IP Growth that Benefit Users and Administrators

- Fast response times
- No onsite maintenance, reduced personnel costs
- Enhanced security through authorization
- Flexibility to expand

Emerald KVM over IP

Black Box innovative Emerald® KVM-over-IP platform changes the way people collaborate. Emerald serves as an infinitely scalable universal access system, giving users the flexibility to connect to both physical and virtual machines, along with anywhere, anytime IP access over an existing IP-network, WAN, or even the Internet. Interoperability between 4K and HD video, and one-touch control room setups, combined with a high degree of automation through Emerald's APIs, gives users valuable flexibility and ease of use, while system administrators can easily control and manage the system through an intuitive and appealing KVM management dashboard.

Global KVM OVER IP Market Size, 2028 (USD Billion)

52.6% growth 214.2 USD Billion 2022 to 326.9 USD Billion
global KVMoIP projected market value by 2028²
Choose Emerald DESKVUE to Optimize Your User Workspace

In a completely new concept in KVM over IP, the award-winning Emerald DESKVUE receiver allows users to create a personalized workspace with a simplified user experience.

How Can Emerald DESKVUE Improve Your Workspace?

- Interact with 16 systems at the same time from your own personalized workspace
- Freely size and arrange system windows in eyesight, even across single monitor borders
- Use ultra-wide 5K curved monitors or up to four 4K monitors
- Instant mouse-over switching – no more clumsy keyboard commands or OSD opens
- Get rid of multiple KVM receivers on your desktop
- No need for additional transmitters to access VM

Emerald Connectivity Concept

Virtualized Servers

- PE/SE Transmitter (HD Dual Monitor)
- Zerou Transmitter

IP Network

- 4K Transmitter
- PE PoE Receiver (Dual Head)
- Emerald DESKVUE (4K/5K Quad Monitor /16 sources)

User Workspaces

- 4K Receiver
- Remote App License (Windows® 10/11)

Virtual Machines

- Physical Systems
- Virtual Machines

Emerald GE Gateway (VM Sharing)

Boxilla KVM Manager

Sources

- Virtualized Servers
- Physical Systems
- Virtual Machines

Electrical Diagrams
Use Cases

Control Rooms
Challenges:
- Replace legacy KVM system
- Support a large campus
- Access physical & virtual machines
- Integrate systems at local desk plus KVM access

Solution: Emerald & Freedom, Why?
- Emerald scales well – bandwidth and system wise
- No single point of failure – high reliability
- Seamless integration of virtual machines in all receivers
- Excellent management – easy to analyze system

Post Production
Challenges:
- Remote access for video and graphics editors
- Campus-wide extension over existing IP network
- Pixel-perfect DisplayPort video 2560 x 1600 and 4K

Solution: Why Emerald?
- KVM over IP solution with lowest bandwidth demand
- 4K and dual link DisplayPort video with no interruptions
- Clear management dashboard, easy system handling

Studio Infrastructure
Challenges:
- New building including multiple control rooms, playout places
- Reliable platform to be operated by remote automation systems
- Full HD/4K video interoperability
- Seamless adaption to changing requirements
- Easy management, simplified user operation

Solution: Why Emerald?
- Infinitely scalable IP solution with extremely low bandwidth usage
- App for remote Windows® laptop users, full HD/4K interoperation
- Reliable system with API integration
- Excellent management – easy to analyze system

Live Events
Challenges:
- OB Vans
- Limited Staff onsite
- Work from base 2000 kilometers away

Solution: Why Emerald?
- Access to systems in OB van
- Low latency, low bandwidth
- Lightweight with small form factor

Remote Production
Challenges:
- Integration of virtual machines
- Flexible remote access with ease of use across multiple facilities and systems
- High redundancy, resiliency, and scalability

Solution: Why Emerald?
- Seamless user experience accessing VMs and physical systems
- WAN resilience with anywhere remote access
- Exceptional performance, efficient network usage, and fail-safe operation

References

Want to learn more about how you can optimize your workspace? Contact our solutions experts today.

References:

CONNECT WITH BLACK BOX