

**BLACK BOX**

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**MCX**

Next-Generation AV over IP



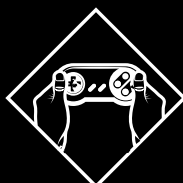
MCX G2 is the next-generation AV-over-IP solution from Black Box. As a Software Defined Video over Ethernet (SDVoE™) enabled solution, MCX utilizes the capabilities of your commonplace modern network infrastructures to deliver up to 4K 60 Hz video and audio over IP without latency or compression. MCX harnesses the power of Ethernet to deliver matrix switch quality performance, but without the limitations. Additionally, MCX can be used for video wall solutions, and to distribute a variety of control and data signals including HDMI and DisplayPort A/V, IR, RS-232, USB 2.0 and Ethernet.



Education



Government



eSports



Hospitality



Restaurants



Corporate

## Ideal for a Wide Range of Industries

Because MCX is an IP-based solution, it can be easily expanded without adding expensive chassis, multiviewers, or processors. This makes it perfect for a wide range of applications. To manage, expand, and maintain your AV network, use the MCX Controller to provide an intuitive, easy to use, and robust software interface that helps you define your AV network applications.





# Benefits of MCX Gen2

## 4K 60 Hz 4:4:4 Video plus PoE Support

MCX Gen2 delivers the video quality high-end AV applications require to present eye-catching content, extending 4K 60 Hz 4:4:4 signals to an unlimited number of displays without sacrificing video quality or bandwidth. On top of that, MCX Gen2 endpoints support Power-over-Ethernet (PoE), with no external power required when connected to a PoE network switch.

## Advanced Video Wall Capabilities

MCX Gen2 works with the MCX Gen2 Controller to display your video wall content any way you want. It offers advanced video scaling options such as multi-view, picture-in-picture, split screen and more, which increase versatility in video wall deployments.

## Zero Source to Display Latency

Overcome source to display latency with MCX Gen2. This robust video distribution system's glass-to-glass encoding and decoding happen in real time (0.03 milliseconds). This means you never deal with annoying lag that complicates your operation.

## Seamless Switching

MCX Gen2 switches between video sources in less than 100 milliseconds with no artifacts or screen blink. This means you can switch video content super-fast without any noticeable distortion to your image — a must for professional AV applications.

## Easy, Flexible Deployment

Adding other network AV solutions to your IT infrastructure can be a challenge. Not MCX Gen2. This video extension system is designed to work with any modern network, making installation simple. MCX Gen2 can be deployed on 10G networks over Ethernet.

## Complete Control

You can control MCX Gen2 with two powerful but easy-to-use tools:

- The MCX Gen2 Controller makes deployment, configuration, management and system monitoring easy.
- Take command of your MCX Gen2 AV-over-IP system with the tap of a button or the swipe of a touch panel with Black Box ControlBridge®.

## Comprehensive Connectivity

You can connect every essential AV distribution device to your MCX Gen2 through its variety of ports: discrete RS-232, IR, secondary audio channel plus a separate 1-GbE connection to independently route, embed and de-embed up to three separate audio streams.



## Developed with Industry-Leading Technologies

### SDVoE™ (Software Defined Video over Ethernet)

SDVoE technology optimizes MCX. SDVoE distributes AV over modern networks without negatively affecting performance, functionality or capability.



# Choose the MCX that Maximizes AV in Your Application

## MCX Gen2 Encoders and Decoders

Distribute and extend up to 4K 60 Hz 4:4:4 video and audio from any source to any screen over your network. Easily control how your content displays on every screen.

- Models available with 10G Cat6A Copper or SFP+ Fiber connectivity; choose the version that's right for your network.
  - Copper Network Models – MCXG2EC01 (Encoder) and MCXG2DC01 (Decoder)
  - Fiber Network Models – MCXG2EF01 (Encoder) and MCXG2DF01 (Decoder)
- Compatible with HDMI and DisplayPort Inputs, and HDMI Output
- Provides 4K60 4:4:4 AV, IR, RS-232, USB 2.0, and Ethernet extension/distribution



**MCXG2EC01**



**MCXG2EF01**



**MCXG2DC01**



**MCXG2DF01**

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## MCX Gen2 Transcoder

Distribute and extend up to 4K 60 Hz 4:4:4 video and audio from any source to any screen over your network. Easily control how your content displays on every screen.

- Configurable for use as either an encoder or decoder, giving you the ability to use a single model for all of your encoding and decoding needs
- Compatible with HDMI and DisplayPort inputs, and DisplayPort output
- Includes both Copper and Fiber ports to allow for network flexibility, as well as for failover redundancy when both network ports are connected at the same time.
- Compatible for use with all MCX G2 encoders and decoders
- Provides 4K60 4:4:4 AV, IR, RS-232, USB 2.0, and Ethernet extension/distributions



**MCXG2TD11**



MCX Encoder/Decoder Comparison Chart					
Product Code	Input Type	Connectivity	SDVoE 4K 60 Hz	Scaling	USB
MCXG2EC01	HDMI 2.0	10-GbE Copper	Yes	Yes	USB-C
MCXG2EF01	HDMI 2.0	10-GbE Fiber	Yes	Yes	USB-C
MCXG2DC01	HDMI 2.0	10-GbE Copper	Yes	Yes	USB-C
MCXG2DF01	HDMI 2.0	10-GbE Fiber	Yes	Yes	USB-C
MCXG2TD11	DisplayPort or HDMI	10-GbE Copper or Fiber	Yes	Yes	USB-B host & USB-A peripherals
MCX Gen2 Controller	N/A	1-GbE LAN Interface	Yes	Yes	USB-A/USB-C

## MCX Gen2 Controller

The MCX Controller is an advanced AV over IP manager providing an intuitive user interface for deploying and managing all connected MCX encoders and decoders. Hosted on a small form-factor computer, the software provides advanced AV network control, maintenance, and monitoring tools.

- Features advanced control for your MCX AV network including event automation, scheduling, individual browser based user interfaces and more
- Supports configuration of video walls and multiview
- Enables creation of actionable data including asset tracking, time stamped logging for SLAs and extended usage reports
- Licenses and upgrade licenses for multiple numbers of MCX endpoints available
- Annual system maintenance service required



MCX Controller Options	
Product Code	Description
MCX-G2-CTRL-x	MCX Controller NUC and software, supporting up to 24, 24, 120, 250, 500, or unlimited number of endpoints. (Replace "x" with "24", "48", "120", "250-500" or "UL" for unlimited endpoints)
MCX-G2-CTRL-EXP-x	MCX Controller Upgrade Licenses that let you add more endpoints to your AV network as it grows. (Replace "x" with "24-48", "48-120", "120-250", "250-500", or "UL" for unlimited endpoints)
MCX-CTRL-x-MAINT	Annual MCX Controller Maintenance Service. (Replace "x" with number of supported endpoints: "24", "48", "120", "250", "500", or "UL" for unlimited endpoints)

# Additional Products

## ControlBridge Control Processor and Touchscreen

ControlBridge® is a versatile control processor and touchscreen-based appliance for room automation and intuitive operations control. It allows you to control all aspects of your workspace and AV setup, including AV switching, lighting, window shutters, automated furniture position and video walls.

- Multiple control processors and touchscreen devices (7" and 12") available.
- Bidirectional control of any IP-enabled or I/O device.
- Active matrix touchscreen display offers resolutions of 1280 x 800, 32-bit (true color) images and full-motion streaming video preview.
- Includes built-in microphone, speakers and light and motion sensors.
- Set up through a standard web browser.
- Mobile device support through optional app license.
- Black Box will help you to design a custom interface for your specific requirements.

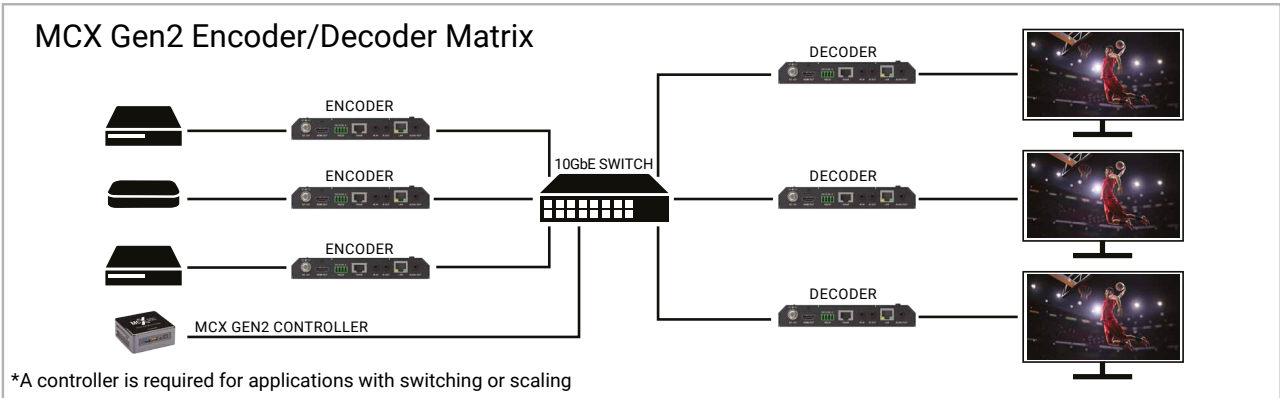
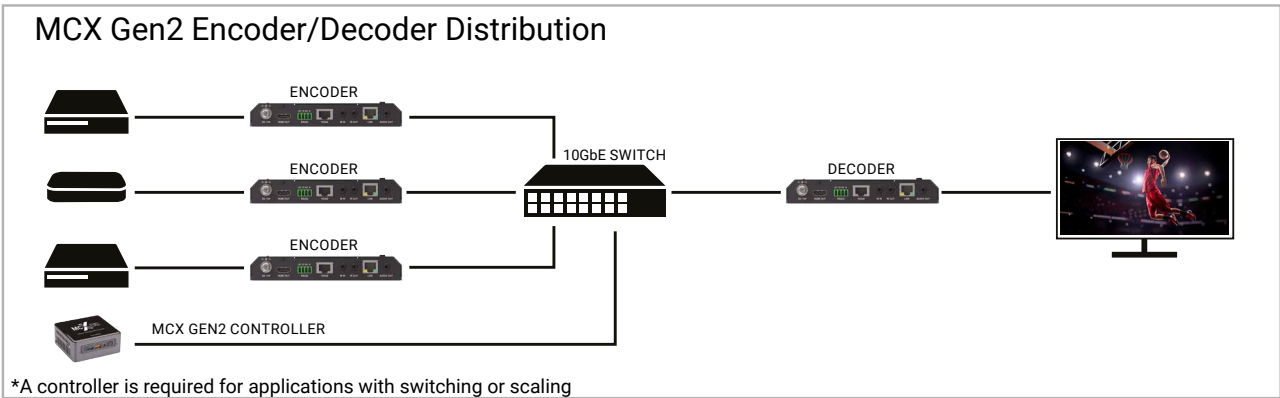


ControlBridge 12" touchscreen

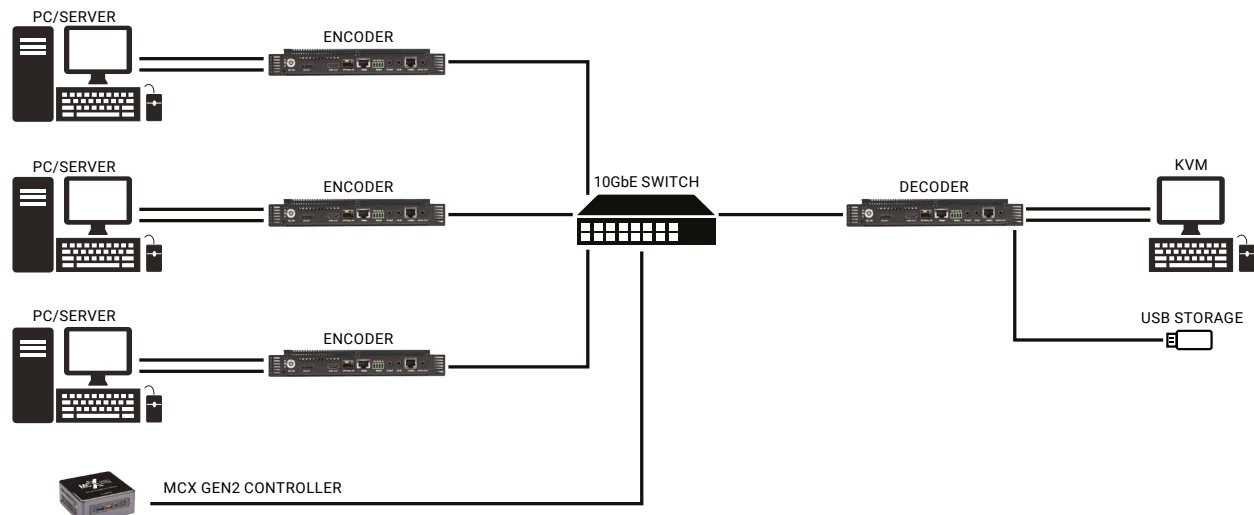
Learn more at [blackbox.com/controlbridge](http://blackbox.com/controlbridge).

Product Code	Description
CB-TOUCH7-T	ControlBridge Touch Panel, 7"
CB-TOUCH12-T	ControlBridge Touch Panel, 12"
CB-CP100	Control processor for small-sized applications
CB-CP200	Control processor for medium to large-sized applications
CB-APP-LIC	ControlBridge Single-Seat Mobile Device License

## MCX Application Diagrams

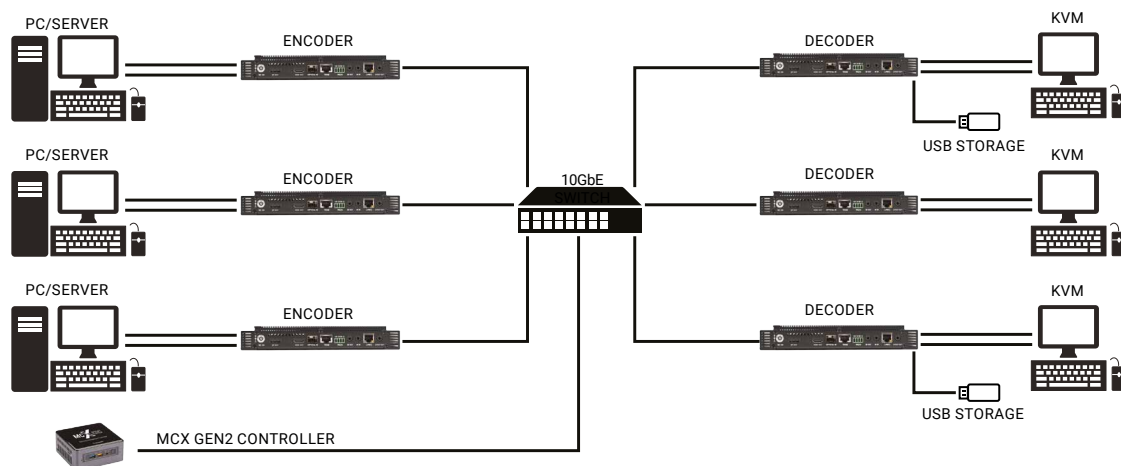


## MCX Gen2 Encoder/Decoder KVM Switching



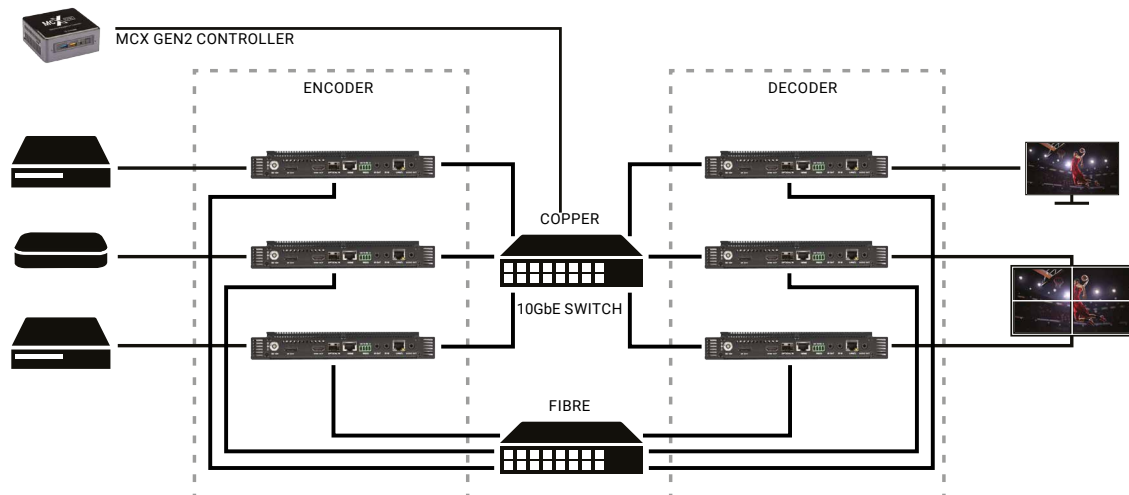
\*A controller is required for applications with switching or scaling

## MCX Gen2 Encoder/Decoder KVM Matrix



\*A controller is required for applications with switching or scaling

## MCX Gen2 Transcoder with Failover Redundancy



\*A controller is required for applications with switching or scaling



## 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 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, every day of the year.

### Warranties

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

### 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.

### Centre of Expertise

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

### Service Level Agreements

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

### Contributing Member of the SDVoE Alliance

Black Box is committed to developing AV-over-IP technology and educating end users about its advantages. That is why we have become a contributing member of the SDVoE Alliance. The alliance is bringing top AV companies together around a standardised hardware and software platform to benefit consumers.

