

# Matrox® Monarch™ EDGE

## High-Density Contribution Encoder



The contribution or mezzanine-level encoding capabilities of Monarch EDGE provide broadcasters with a means to easily add additional or complimentary backhaul feeds, or redundant contribution channels of their primary feeds. This small-footprint appliance with a tiny power envelope delivers quad-channel broadcast quality with 4:2:2 10-bit streams. It has enough encoding horsepower to simultaneously generate low-bitrate 4:2:0 proxy streams for each input, which can be monitored by any device on the network.

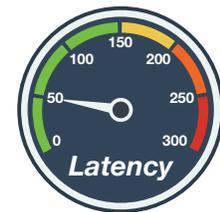


### Built for High Quality 10-bit H.264 Encoding

The optimized H.264 engine powering Monarch EDGE keeps data rates exceptionally low without sacrificing quality. I-frame-only streams reaching 150 Mbps can be delivered if quality is a high priority. Each input can be streamed at resolutions up to 1080p60 using the High 4:2:2 H.264 encoding profile. Multiple processes can be performed on each input by the scaling and de-interlacing engines. This enables each input to be streamed in multiple resolutions and bitrates simultaneously.

### Exceptionally Low Encode Latency

In live productions, long encode and transmission latencies can have adverse effects on the production. With a 50ms latency between input of uncompressed video and output of compressed stream, Monarch EDGE achieves some of the lowest compression latencies on the market.



SRT RTSP  
**SRT RTMP**  
MPEG-2 TS

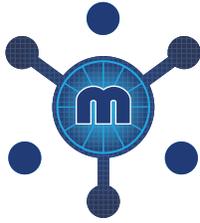
### Flexible Streaming Options

There are a variety of streaming protocols available to Monarch EDGE users. On closed networks, MPEG-2 TS or RTSP streams can be selected for delivery. For cloud-based destinations, or when the network is congested, SRT may be more appropriate. SRT is a new open-source format that provides the reliability of RTMP, while reducing latency, for use on open networks. SRT streams can also be encrypted if security is a concern.

### Connectivity for Today and Tomorrow

Monarch EDGE offers flexible, future-proof connectivity with 3G, 12G SDI, and ST 2110 over 25 GbE network connections. Inputs are auto-detectable and allow for a wide range of connectivity to devices such as cameras, switchers, vision mixers or routers. Monarch EDGE is also capable of accessing 16 channels of embedded audio per input. Up to four stereo pairs per input can be encoded. Alternatively, the professional analog stereo audio can be selected from the balanced XLR connectors.





### Convenient, Centralized Control

Monarch EDGE Control Hub is a powerful application that provides remote-control management and configuration over all network-connected encoders from a central location. This powerful software provides authorized users with high-level views of all devices on the network, and enables full access and control from a single, easy-to-use interface.

### Preview Inputs First

Allowing up to four simultaneous input previews on a single desktop monitor, Monarch EDGE ensures that videos are ready to be produced. Monarch EDGE Control Hub allows users to effortlessly configure how they would like to preview sources of input. Users can choose to view one input, cycle through inputs, or view four inputs simultaneously.



### Robust and Practical Design

Monarch EDGE was built with reliability in mind. An LCD screen on the front of the appliance allows the user to quickly access its status and configuration settings. A locking power connector safeguards against connection loss during production. Redundant Ethernet (1 GbE) ports allow users to control the device from one port while sending video from a second port. Users can opt to send the same streams from each port while taking completely separate network paths. Finally, Monarch EDGE's compact design ensures it can be installed in a fly-pack, OB van, or with a second Monarch EDGE unit in a 1RU-rack space.



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