

Your Ideal Webcasting Appliance



Matrox® Monarch™ LCS Live Webcasting Made Simple.

Matrox Monarch LCS video encoding appliance makes live webcasting simple, delivering high-quality streams to Facebook Live, YouTube, or a favorite content delivery network (CDN) with multi-camera production value, without operator assistance. Whether webcasting house of worship services, enterprise communications, government meetings, or similar live events, the webcast process should be as easy as possible. Set the production layout and delivery settings before the event; when ready to start, simply connect live sources—camera or computer—to the inputs and begin the webcast with a single push of a button.



Variety of production modes

Effectively capturing live events no longer requires complex equipment. The operator can select a number of production modes, such as picture-in-picture (PiP) or side-by-side (SbS) configurations. If the operator prefers to dynamically change inputs during the course of the event, Monarch LCS appliances also offer Switcher mode. With very little set-up time, the Monarch LCS can be configured in many appealing layouts to suit the varying demands of enterprise, house of worship, or government settings.

Powerful, high quality H.264 encoding engine

Two independent encoding channels can be configured to either stream or record. Each channel benefits from a powerful scaling, de-interlacing, and noise reduction engine to ensure only pristine images are encoded. When the highest quality is required, each encoder can be set to encode at 1080p30 resolutions.

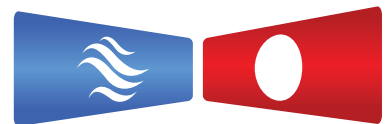


Simultaneous dual-channel streaming

Monarch LCS enables simultaneous streaming to YouTube and Facebook Live, as well as user-owned websites. The encoder appliance generates an H.264-encoded stream compliant with RTSP or RTMP protocols. Each channel can be assigned separately to ensure delivery of appropriate content, where and when needed. Similarly, each channel can stream up to 8 Mb/s, allowing for simultaneously streaming to two destinations or configuring the device to stream quality up to 16 Mb/s for a single encoding destination.

Top-quality recording while streaming

The quality of video-on-demand (VOD) downloads need not be dictated by available upload bandwidth. Monarch LCS dual encoders can live broadcast a webstream at one bitrate while simultaneously recording master-quality H.264 files, up to 10 Mb/s, for immediate availability. In the event of any network issues, there will be a recorded backup of the live stream production.



Easily webcast worldwide

Monarch LCS provides live content to CDNs such as YouTube, Facebook Live, and Ustream; media servers such as Adobe Flash and Wowza; and directly to a computer or device found on a local area network (LAN). The encoder appliance is easily configurable for YouTube and Facebook accounts with a few short steps.

Flexible inputs for SDI and HDMI

Monarch LCS supports productions with two HDMI video sources or with one SDI and one HDMI video source. Embedded or analog audio can be selected as the audio source. By supporting either SDI or HDMI video camera signals, these encoders deliver the flexibility to tailor inputs to meet production demands. SDI signals can travel more than 300 feet (100 meters) over coaxial cable, which is ideal if the camera is mounted a long distance from the encoder. When cable lengths are not an issue, HDMI cameras may prove the most affordable option, particularly in larger installations.



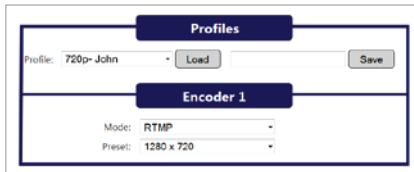


Live production preview output

Both SDI and HDMI outputs are active and can be mapped to either input, a useful feature for driving in-house projections. The HDMI output also gives operators the option to select the frame size of the encoding parameters and preview content that will be sent to the remote viewer to ensure the visuals are appropriately staged.

Easy to operate

Monarch LCS is controlled and configured via the powerful Monarch LCS Command Center using any network-connected device that supports a standard web-browsing application. Designed for operator ease-of-use, the Command Center user interface (UI) features one-click operation; drill down to configure typical streaming and recording settings, drawing from a list of preset options.



Range of available profiles and presets

Each Monarch LCS encoder ships with a number of typical streaming and recording presets that define all encoding parameters (e.g., resolution and bitrate). Whether pre-set or custom parameters are used, parameters need only be entered once and saved as a unique profile. A profile not only contains encoding parameters but also destination information detailing where the encoded video is being sent. Encoding parameters can be customized and combined with destination and operating mode settings. If the encoder appliance must be accessed by different users, profiles can be instantly recalled without having to re-enter data.

Versatile API for every environment

Houses of worship, enterprises, and governments are all likely to engage contractors or AV integrators to oversee their AV installations; these personnel can take advantage of Monarch LCS Dev Tools—which includes automatic configuration tools—and the Monarch LCS Control API to provide operators with a unified, consistently branded experience. Individuals do not need to interact with the Monarch LCS Command Center web UI, simplifying deployments.



Scan and locate appliances remotely

The Matrox Utils application allows operators to remotely scan and find all Monarch LCS appliances present on their network; this application is useful in installations with multiple units in separate locations, such as government offices or enterprise boardrooms. The Matrox Utils application will also scan the attached Monarch LCS and notify the operator if the units' installed firmware version is up-to-date; it will also update the device automatically to ensure that it has the latest software release. The Matrox Utils application can also be used to reboot Monarch LCS appliances on the network.



Flexible control

The Monarch LCS Control API is an ideal way to integrate Monarch LCS functionality into existing meeting halls, boardrooms, or other spaces equipped with a Crestron-controlled system. Monarch LCS registered users are invited to download a sample SIMPL module written to run on Crestron 2-Series® and 3-Series® Room Media Controllers.



Robust and practical design

Powerful and robust, Monarch LCS storage ports are located on the front of the encoder along with three simple one-touch buttons that offer an alternative to the web-based UI control. All connectors are located at the back, including the locking power connector, which ensures that Monarch LCS devices can just as easily be located on a desktop as in a rack. A 1RU tray can fit up to two units.



Matrox Monarch LCS connections



Front view

Back view

- | | | |
|------------------------------|---|--|
| 1. Power LED | 9. Gigabit Ethernet Port | 14. SDI Output Connector
(with embedded audio) |
| 2. Input Section Button | 10. RS-232 Connector | 15. SDI Input A Connector
(with embedded audio) |
| 3. Switch Button | 11. HDMI Input B Connector
(with embedded audio) | 16. Analog Audio Output (stereo) |
| 4. Start/Stop Encoder Button | 12. HDMI Output Connector
(with embedded audio) | 17. Analog Audio Input (stereo) |
| 5. USB Port 1 | 13. HDMI Input A Connector
(with embedded audio) | |
| 6. USB Port 2 | | |
| 7. SD Card Slot | | |
| 8. Power Connector | | |

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Matrox is a market leader in the 4K and HD digital video hardware and software fields, offering accelerated H.264 encoding, streaming, AV signal conversion, capture/payout servers, and CGs. Matrox's Emmy award-winning technology powers a range of multi-screen content creation and delivery platforms used by broadcasters, telcos, cable operators, post-production facilities, live event producers, videographers, and AV professionals worldwide. Founded in 1976, Matrox is a privately held company headquartered in Montreal, Canada.

For more information, visit www.matrox.com/video.

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