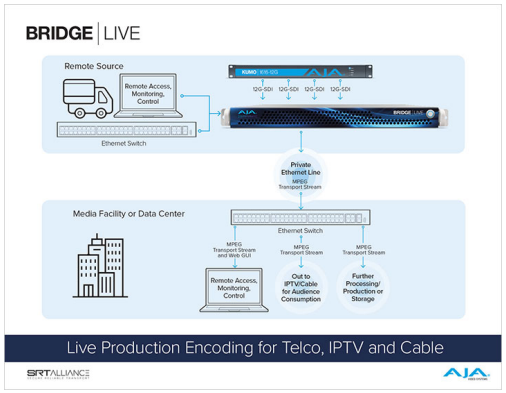
AJA BRIDGE LIVE

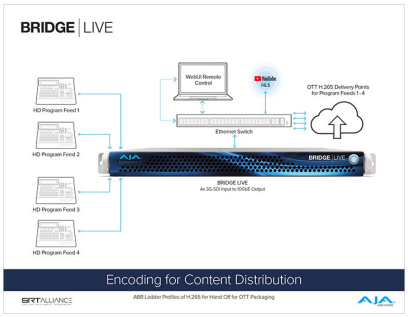
Multi-Channel Live Video for Remote Production (REMI), Contribution, Collaboration, Streaming and Delivery

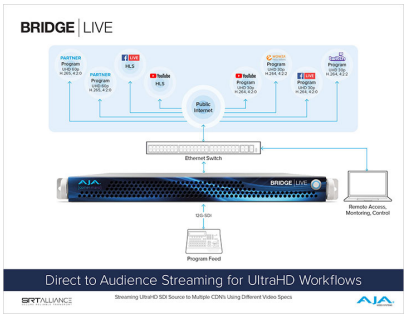


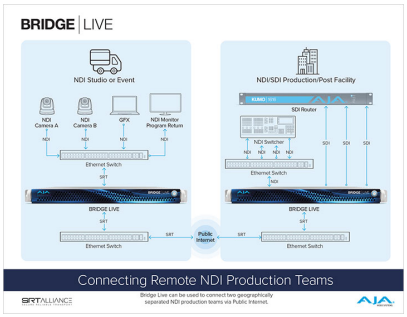
Cena:
Kategorie: Broadcast, Encodowanie i Streaming

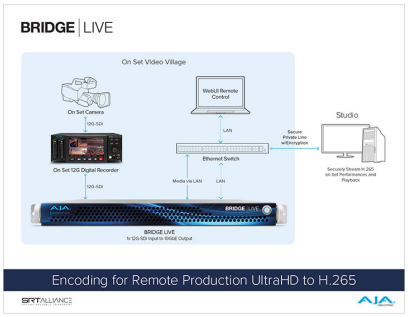


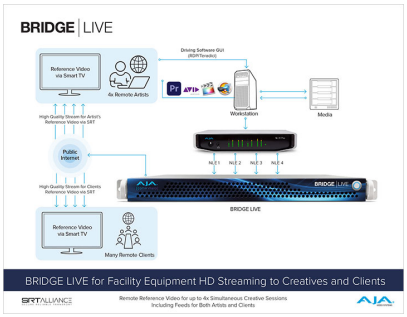
GALLERY IMAGES

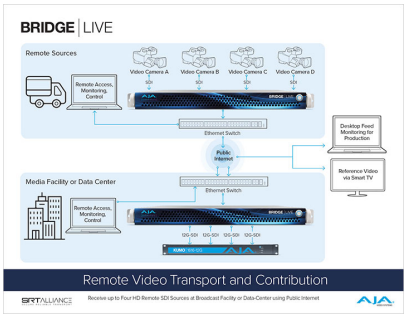


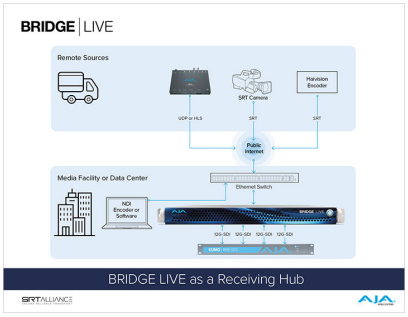














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Overview

BRIDGE LIVE is a broadcast-quality, low-latency turnkey system for Remote Production (REMI), Multi-Channel Video Contribution, Remote Collaboration, Direct to Audience Streaming and Multi Bit Rate/Format Delivery.

Equipped with 12G-SDI I/O plus the power and flexibility to enable real-time bi-directional encoding, decoding and transcoding for critical UHD and HD workflows, BRIDGE LIVE is an essential part of any modern live video production toolkit. A compact and robust 1RU form factor with redundant power supplies and a three year warranty, means peace of mind even when dealing with the most demanding applications.

Whether facilitating remote production, two-way interviews, live event streaming, multi-cam backhaul, field contribution, program return, confidence monitoring, collaborative production, ABR ladder profiles to hand-off for OTT packaging, BRIDGE LIVE ensures simultaneous, secure and stable workflows whether over private lines or the public internet.

Features

- 12G-SDI/3G-SDI I/O supports 4-channels of HD or 1-channel of UltraHD as standard
- Bi-directional Encode/Decode/Transcode; NDI, H.265 (HEVC), H.264 (AVC, MPEG-4), H.262 (MPEG-2) and JPEG 2000 (TR-01)
- Protocols; SRT, HLS, MPEG-TS, MPTS (input), RTMP/RTMPS (output), RTP, and UDP
- Multi bit rate/format content distribution, ABR Ladder Profiles for OTT hand-off
- Selectable profiles for 10-bit and 8-bit, 4:2:2 and 4:2:0
- Unmatched Metadata capabilities including Ad insertion markers (SCTE-35/SCTE-104), CC/Subtitles (EIA-608/708, Line 21, H.264 SEI), MPEG-2 ANC, SMPTE 2038
- Remote WebUI or local GUI access for easy administration, control and operation
- Monitoring, Control and Automation supported via REST API or SNMP
- Turnkey 1RU rack-mountable, enterprise-class form factor
- Dual 10GbE interface for control and transport

- Dual power supplies for critical application redundancy
- Three year warranty

Video Overview

Watch this video to learn more about BRIDGE LIVE. It includes a look at real time encode, decode, and transform capabilities of BRIDGE LIVE between 12G-SDI sources and destinations. BRIDGE LIVE codec support includes NDI, H.265 (HEVC), H.264 (AVC), H.262 (MPEG-2) and optional JPEG 2000 (TR-01) and a variety of transport protocols including SRT, HLS, RTP, UDP and MPEG TS.

AJA and Comprimato

BRIDGE LIVE represents an exciting partnership between AJA and Comprimato, both long standing industry innovators. The merging of AJA’s hardware development and video I/O expertise with Comprimato’s transcoding and internet transport know-how means customers can expect the versatility, speed and quality needed for that competitive edge. The unique fusion of company talent between AJA and Comprimato ensures that BRIDGE LIVE delivers the performance and reliability needed for live NDI, H.265 (HEVC), H.264 (AVC, MPEG-4), H.262 (MPEG-2) and JPEG 2000* encode, decode, or transcode needs.

*Full NDI, H.265, H.264, H.262 I/O functionality included with BRIDGE LIVE turnkey system, JPEG 2000 I/O license options available.

Simultaneous Bi-Directional Encoding and Decoding

BRIDGE LIVE supports simultaneous bi-directional encoding and decoding with HD and SD sources.

With a pair of BRIDGE LIVE systems, a broadcast facility can receive three incoming encoded camera sources from a remote location and decode them into SDI for editing and production, while simultaneously providing a program return to the remote location.

NDI Encode/Decode/Transcode

Starting with v1.12 software, BRIDGE LIVE includes support for NDI (Network Device Interface), the high-quality, real time, low latency live video standard developed by NewTek. BRIDGE LIVE can support up to 4 simultaneous 60p HD encodes/decodes or 1x 60p UltraHD encode/decode to/from SDI. BRIDGE LIVE's NDI functionality offers:

- SDI to NDI (encode)
- NDI to SDI (decode)
- IP Video Streams to NDI (transcode)
- NDI to IP Video Streams (transcode)

Used in conjunction with BRIDGE LIVE's broad codec and protocol support, collaboration between geographically separated (remote) NDI facilities can be realized.

BRIDGE LIVE provides broad NDI product compatibility across software and hardware transmitters and receivers.

Workflow Flexibility and Interoperability

Use BRIDGE LIVE in conjunction with multiple 3rd party systems and software to achieve your workflow requirements as they evolve.

For more details around how BRIDGE LIVE facilitates Remote Production (REMI), Contribution, Collaboration, Streaming and Delivery explore BRIDGE LIVE Workflows and Compatibilities further down this page.

SRT Ready

SRT is an open source video transport protocol and technology stack, developed and pioneered by Haivision, that optimizes streaming performance across unpredictable networks with secure streams and easy firewall traversal, bringing the best quality live video over the worst networks. The SRT Open Source Project, supported by the SRT Alliance, is a collaborative community of industry leaders and developers striving to achieve lower latency internet video transport by continuously improving open-source SRT.

BRIDGE LIVE includes SRT (plus encryption) to ensure that end users are well positioned to

deliver their streaming video content securely, with low latency and secure reliability.

Metadata and Closed Caption Support

BRIDGE LIVE fully supports both closed captioning and additional metadata which is often a neglected feature set with lower cost encoding devices.

BRIDGE LIVE supports:

- SCTE-35/SCTE-104 Ad insertion markers
- CEA-608/CEA-708 Closed Captioning
- Embedding Closed Captioning/Subtitles into H.264 SEI messages
- Metadata pass through
- MPEG-2 ancillary packet support, SMPTE 2038
- Electronic Program Guide (EPG) on input

Transport, Containers and Protocols

BRIDGE LIVE can be configured for low latency and/or high quality tasks. BRIDGE LIVE gives you the tools to move content and deliver according to your workflow needs.

BRIDGE LIVE supported Containers and Protocols:

- ABR Ladder Profiles
- HLS
- MPEG-TS
- MPTS (input)
- NDI
- RTMP/RTMPS (output)
- RTP, UDP
- SRT (including encryption)
- VSF-TR01

Supported Encodes/Decodes

BRIDGE LIVE supports the following configurations for encoding and decoding between SDI and streaming formats as standard. Multiple streams/formats/destinations can be derived from a single SDI input.

NDI:

- 8-bit or 16-bit
- 4:2:2
- Up to 4 simultaneous 60p HD encodes/decodes or 1x 60p UltraHD encode/decode to/from SDI
- NDI Inputs can be received, transcoded and output as IP Video Streams

H.265 (HEVC):

- 8-bit or 10-bit
- 4:2:0
- Up to 4 simultaneous 60p HD encodes/decodes or 1x 60p UltraHD encode/decode to/from SDI
- SRT, RTMP and MPEG-TS protocol supportH.264 (AVC):
- 8-bit or 10-bit
- 4:2:0 or 4:2:2
- Up to 2 simultaneous 60p 4:2:2, 10-bit HD encodes/decodes or 1x 30p UltraHD encode/decode to/from SDI
- Up to 4 simultaneous 60p 4:2:0, 8-bit HD encodes/decodes or 1x 60p UltraHD encode/decode to/from SDI
- SRT, RTMP and MPEG-TS protocol support

- H.262 (MPEG-2):
    - 8-bit
    - 4:2:0
    - Up to 4 simultaneous 30p/60i HD encodes/decodes or up to 2 simultaneous 60p HD encodes/decodes to/from SDI with an HQ option
    - SRT, RTMP and MPEG-TS protocol support

JPEG 2000 Encode/Decode License

BRIDGE LIVE capabilities can be optionally expanded to include high quality JPEG 2000 encoding and decoding.

JPEG 2000 (TR-01)

- 10-bit
- 4:2:2
- Up to 4 simultaneous 60p HD encodes (80-220Mbps) or 1x 60p UltraHD encode/decode (up to 800Mbs)
- SRT and MPEG-TS protocol support

Hardware

BRIDGE LIVE supports up to 4x 3G-SDI simultaneously for multi-channel HD, or 1x 12G-SDI for UltraHD I/O in 1RU. Dual 10 GigE Ethernet ports provide network connectivity and dual power supplies provide peace of mind.

Administration, monitoring and access to BRIDGE LIVE is supported via either network browser or local Display Port. Indirect agnostic monitoring and automation is supported via both REST API and SNMP.

Remote Production (REMI) BRIDGE LIVE as a Receiving Hub

BRIDGE LIVE supports workflows where it is necessary to receive contribution streams coming from various 3rd party encoders, IP cameras or AJA HELO, for conversion back/to SDI at a production facility.

For example, BRIDGE LIVE could be receiving UDP or HLS from AJA HELO, SRT from a Panasonic camera (e.g. AW-UE150, AW-UE100, AG-CX350, AJ-CX4000), SRT from a Haivision encoder (e.g. Mikito X4), and NDI (locally) from software such as an NLE, an NDI camera, or a hardware based encoder such as BirdDog (e.g. Studio NDI) or Magewell (e.g. ProConvert).

Contribution - Remote Video Transport

For Broadcast, BRIDGE LIVE provides an efficient mechanism for backhauling remote live SDI video sources to the media production facility, in order to be converted back to SDI and made available on the internal facility SDI router for ongoing production/transmission.

Traditional secure lines for remote production can be very expensive, with additional fees being levied for time before and after a production starts and ends. BRIDGE LIVE allows source cameras and local program out to be transported using publicly available internet, with no penalty for early or extended use during a production. BRIDGE LIVE also offers lower latency than traditional secure lines for time critical productions.

Collaboration - Reference Video for Remote Collaboration

Production and Post: Connecting remote artists and clients using reference quality video, or providing a high quality window into production for those who cannot be on-set.

BRIDGE LIVE means the flexibility to leave media and equipment at the secure, managed facility, and have creative talent work together remotely with reference quality video.

BRIDGE LIVE compliments existing GUI driving technologies (e.g. RDP, Teradici) by layering on the reference quality video needed for creative confidence and client/executive sign-off. Choices between H.265 (4:2:0, 10-bit), H.264 (4:2:2, 10-bit) with turnkey BRIDGE LIVE, or via optional license JPEG 2000 (4:2:2, 10-bit), mean there is choice and flexibility in how to approach your needs in terms of quality and latency.

Collaboration - Secure Window into the Remote Set or Studio

BRIDGE LIVE also offers the flexibility to tap video from on-set recording devices and stream the output of cameras (over a secure private line with encryption) providing a high quality window into production for those who cannot be on-set.

Collaboration - Connecting Remote NDI Production Teams

BRIDGE LIVE can be used to connect two geographically separated NDI production teams via

Public Internet.

For example, a studio or event location could be sending the feeds from 3x NDI cameras to an NDI production or post facility, which can distribute those sources as both NDI and SDI, while also returning a program feed back to the studio location.

Streaming - Live Direct-to-Audience

BRIDGE LIVE offers a comprehensive platform for live video streaming. Streaming support includes SRT, HLS, RTMP/S, RTP/UDP, and MPEG-TS. Using these standard protocols provides wide support for streaming services such as Twitch, YouTube Live and Facebook Live.

BRIDGE LIVE builds upon the tried and tested approach of AJA's HELO streaming device, while including flexibility for multiple inputs, broad format and bit rate support, as well as metadata and redundancy.

And, while streaming to CDNs for a direct-to-audience delivery, BRIDGE LIVE can simultaneously deliver different stream types to partners to re-transmit, transcode, or store.

Delivery - Encoding For Content Distribution

For Studios and Broadcast applications BRIDGE LIVE facilitates primary distribution of finished and mastered content to partners for subsequent streaming to audiences.

BRIDGE LIVE can provide ABR ladder profiles or hand-off for OTT packaging. For example, encoding to H.264 or H.265 for hand-off with ABR ladder profiles, including pointing the ladder profile directly to a local packager or CDN.

BRIDGE LIVE can also provide multi-format/rate/bit rate material via HLS. The combined outputs within the HLS stream are presented as a "playlist", meaning that devices (e.g. phones or tablet) or software (e.g. web browser) can pull a particular format, frame rate and bit rate based on the device characteristics and the current connectivity.

Delivery - Live Production Encoding

Telcos, IPTV and cable operators are often presented with an SDI source or a live event or live production, which is needed as a simple MPEG-Transport Stream with H.264/H.262 encode. The delivered stream may be required for further processing (storage, production), or else be streamed directly to an IPTV/Cable network.

Annual Maintenance

BRIDGE LIVE optional annual maintenance purchase provides:

- Software and Hardware Technical Support via Phone, Email and Remote Desktop.
- Advanced Replacement.
- All new software features, updates and bug fixes*.
- Priority bug fixes and feature requests.

Optional Annual Maintenance for BRIDGE LIVE is $1995 MSRP per year.

*Critical bug fixes will be provided for all BRIDGE LIVE customers.

Industry-Leading Support

AJA's technical support is recognized as among the best in the industry and together with support from Comprimato, BRIDGE LIVE Annual Maintenance customers have the best of both hardware and software expertise to ensure installations and projects are executed smoothly and with confidence.

BRIDGE LIVE hardware is also backed with a generous three year warranty as standard.