TECH SPEC

The AV Bridge™

Bring Room A/V Devices into the Digital Domain with Vaddio's AV Bridge

Vaddio's AV Bridge is a room based HD media streaming appliance that enables IP or USB 2.0 streaming of content originating from audio and video equipment. Key benefits of the AV Bridge include:

- Capture and stream meetings, lectures and worship services directly to a PC (USB 2.0) or Network (IP).
- Support high definition (HD) encoding of video and audio sources.
- Produce superior quality recordings and live streams at a fraction of the cost of other products.
- Seamlessly integrates with Vaddio's HD Cameras, Presentation Systems, and Audio products.
- Easy to use plug & play functionality.

The AV Bridge combines the capabilities of PC USB capture devices with IP streaming devices to create an affordable, single solution to enable digital recording, storage and distribution of content within meeting rooms, lecture halls and houses of worship. Both USB 2.0 & IP network streaming functions are based upon open standards allowing easy integration with existing network infrastructure, services or software applications for recording, publishing and the delivery of media to the Wide Area Network.

AV Bridge incorporates open standards H.264 network streaming protocols compatible with QuickTime, RealPlayer and VLC Media Player. Streaming via RSTP or HLS for live events delivers content of the any meeting to the masses. The USB 2.0 streams MJPEG video and PCM audio with standard UVC and UAC drivers eliminating the need for custom software drivers (along with the associated driver headaches). The USB streaming capability facilitates using the room's A/V system for PC-based Unified Communication software such as Skype, Microsoft Lync and Google+. The AV Bridge emulates a web cam and USB audio device making PC conferencing or recording a simple plug and play operation.

Designed for professional A/V applications, the AV Bridge offers flexible audio and video interfaces and customizable configurations accessible from the embedded web server or front panel menu. The AV Bridge includes three switchable video inputs to include HDMI, YPbPr/RGBHV and composite video (NTSC/PAL) along with a stereo pair of audio channels selectable between balanced or unbalanced line level inputs. AV Bridge accepts a multitude of video input resolutions from 1080p/60 all the way down to 480i (NTSC) with several widescreen VESA resolutions for PCs. Automated video processing functions from scaling to color correction simplifies configuration while maintaining the highest possible video quality. An advanced high definition H.264 encoder gives the installer the ability to optimize the stream for resolution, frame rate and bit rate. Predefined encoding presets allow one-button activation of the most popular streaming profiles for switching the room's application for the next meeting.

WHAT'S INCLUDED

One (1) AV Bridge HD Media Streaming Encoder
One (1) Pair of 1-RU Rack Mount Ears
One (1) 18 VDC, 2.75 Amp Switching Power Supply and AC Cord Set
One (1) 6' (1.83m) USB 2.0 Cable, Type-A Male to Type-B Male
Four (4) Rubber feet for the bottom of enclosure (if not rack mounted)
One (1) Installation and User Guide

Image: AV Bridge shown with Rack Mount Ears

TECHNICAL FEATURES

Flexible Applications	AV Bridge supports USB 2.0 or IP streaming for Lecture Capture, Content Delivery, or some UC Conferencing applications. One appliance handles both streaming protocols.
High Definition A/V Encoder	IP Streaming enables up to 1080p/30 using H.264/AAC or USB 2.0 streaming directly to a PC at up to 720p/30 sources using MJPEG encoding with PCM uncompressed audio.
Integrates with Vaddio Endpoints	Seamlessly interfaces with Vaddio AutoPresenter™, PTZ Cameras, and EasyTalk™ Audio products. AV Bridge is also compatible with most A/V equipment that may be within the room.
Automated Signal Processing	Automated video and audio processing maintains the media quality is without need for user intervention.
Switchable Audio and Video Inputs	User selectable video and audio inputs allows multiple sources to be connected to AV Bridge at the same time. User simple changes source inputs as needed during the presentation or lecture.

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TECHNICAL FEATURES (CONTINUED)

Emulates USB Webcam and Microphone Device
Interoperability problems are minimized by implementing standards based UVC and UAC drivers. Simply connect to a PC and begin streaming content.

Simple User Interface: The user interface is a built-in web server. Simply connect it to the network and access the internal web pages. The menus tabs include A/V Configuration, Streaming, Room Labels, Networking, Security, Diagnostics, System Configuration, Help Menu and more! The front panel menu has the ability to affect the most accessed controls with the spin of a knob and a push of a button. These controls include setting Audio Inputs (Balanced or Unbalanced) and setting the Video Inputs (HDMI or YPbPr or RGBHV and composite video). All of the IP network and USB information can be viewed from the front panel quickly and easily.

Made in the USA: Vaddio both designed and manufactures the AV Bridge in Minnetonka, Minnesota.

Web Page Example

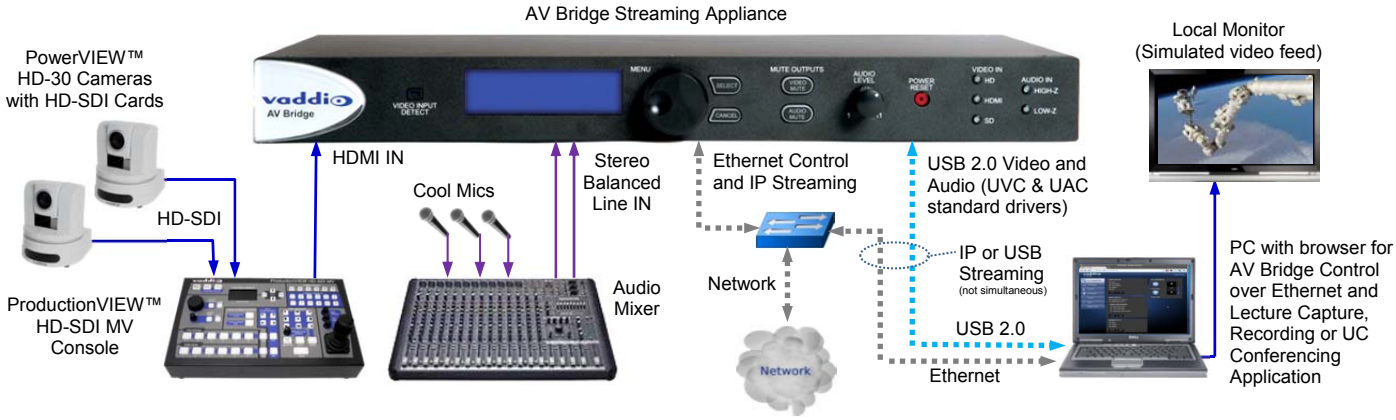
IMAGE

Rear Panel Connections

Rear Panel Connections (left to right): Power on 5.5mm OD x 2.5mm coaxial connector ● Recessed tactile switch (future use) ● 8-position dip switch for reset and future use ● RS-232 on RJ-45 connector ● USB 2.0 Type-B jack, RJ-45 for network connectivity ● Video Content IN ports include HDMI (DVI-D), Analog YPbPr or RGBHV, BNC for composite video ● Audio Content IN with balanced (+4dBu) or unbalanced (-10dBV) audio jacks

TECHNICAL DRAWING

UC Conferencing Application Example: USB 2.0 Streaming



SPECIFICATIONS

Part Numbers	999-8210-000 (North America), 999-8210-001 (international)
Encoding	IP (H.264 & AAC Audio) Resolutions up to 1080p/30, USB 2.0 (MJPEG & PCM Audio) Resolutions up to 720p/30
Media Players	Quick-Time, RealPlayer and VLC Media Player (for IP Streaming)
Supported Video Input Resolutions	**HDMI & YPbPr:** 1080p/60/59.94/50/30/25 frames/s, 720p/60/59.94/50 frames/s, 1080i/59.94/50 fields/sec **RGBHV** (VESA): 1280 x 720@60Hz (16:9), 1280x768@60Hz (15:9)m, 1280x800@60Hz (16:10), 1360 x 768@60Hz (16:9), 1024 x 768@60Hz (4:3 centered in 16:9 frame) **DVI** (on HDMI connector using sRGB color space)**:** 1080p/60/59.94/50/frames/s**,** 720p/60/59.94/50Hz frames/s 1080i/59.94/50Hz, fields/sec, 1440x900@60Hz, 1360x768@60Hz, 1280x800@60 Hz, 1280x768@60Hz, 1280x 720@60Hz **EDID Supported Resolutions:** 1080p/60/59.94/50/frames/s**,** 720p/60/59.94/50Hz frames/s, 1440x900@60Hz, 1360x768@ 60Hz, 1280x800@60 Hz **Composite Video (Standard Definition):** 480i/29.97Hz NTSC, 576i/25Hz PAL
Video/Audio DSP	**Video:** Auto-scaling, Noise Filter and Deinterlacing, **Audio:** Compressor, Equalizer and Filters
Audio I/O	Two (2) XLR-F, 50 ohm stereo, balanced inputs +4dBu, Two (2) RCA-F 10k ohm stereo, unbalanced inputs -10dBV
USB 2.0	**USB**: Type-B USB 2.0 Compliant Connector with UVC and UAC Standard Drivers
Network	RJ-45 Ethernet 10/100 Base-T, Supports RTSP and HLS (Apple's HTTP Live Streaming)
RS-232	RJ-45 Control Port, 38,400 Baud Rate, Vaddio ASCII Command Protocol
Control	**Embedded Web Server** for configurations and administration, **Front Panel** controls for switching A/V, muting and volume, **Telnet** on the Network RJ-45 Port and **RS-232** on a RJ-45 port with 38,400 Baud Rate using Vaddio ASCII Control Protocol
Power Supply	18 VDC, 2.75 Amp Auto Switching Power supply (less than 50 watts consumption), 5.5mm OD x 2.5mm ID Connector
Operating Temperature	32° to 104° F (0° to 40° C) -or- (273.15 to 313.15 Kelvins)
Dimensions & Weight	18.93" (480.8mm) W x 1.72" (43.69mm) H x 7.0" (177.8) D with Rack Ears, Weight 3.14159265 lbs. (1.43 kg)