

# Encoder / Decoder

## Low-cost Flexible Rackmount Solution for HD Broadcasting



The Streambox 9200 HD/SD 1-RU rackmount system encodes, transmits, and plays out live HD or SD video streams. This half-duplex model supports digital input/output sources and can be used as either an encoder or decoder.



### **Deployment**

The HD/SD 9200 provides a scalable, low-cost solution for growing organizations: use a pair of units for a simple point-to-point application or add an Enterprise Server to stream from multiple units to multiple units.



#### **Infrastructure**

The HD/SD integrated 9200 system works seamlessly with other Streambox products including Streambox solutions for video management and playout such as the Streambox Enterprise Server and the globally deployed Streambox Cloud Services, for scalable local, national and global usage.



#### First / Last Mile

The Streambox 9200 provides broadcasters and video-centric organizations with a reliable way to bring in high quality live video over low bandwidth connections, such as the public Internet.

#### **Streambox 9200 features**

- · Compact 1RU system
- ·Live HD 1080i, 720p, 1080psf and SD (NTSC and PAL)
- · Unrivaled HD video quality from 512 Kbps to 35 Mbps
- Excellent SD video quality from 64 Kbps to 25 Mbps
- Seamless local or remote system management via an easy-to-use web interface
- Flexible half-duplex system works as an encoder or decoder

#### Advanced Streaming Codec & Streambox LDMP Technology



All Streambox products are powered by our proprietary codec: Advanced Compression Technology – Level 3 (ACT-L3). Streambox ACT-L3 compression allows for faster encoding with lower latency and is optimized for video transmission over any low-bandwidth IP connection. Our proprietary codec is capable of compressing higher motion, complex video at lower data rates using the new advanced motion search feature.

All Streambox products come equipped with Streambox exclusive Low Delay Multi-Path technology (LDMP). Streambox LDMP protocol allows for low latency adaptive bit-rate streaming over public and private networks. Streambox Encoders will automatically select the best possible bandwidth, latency, and resolution over multiple IP networks, thus allowing Streambox products to gracefully handle network bandwidth fluctuations and dropouts, which are often seen over public or shared network environments.



#### **Streambox 9200 Technical Specifications:**

Video Formats	HD: 1920x1080i, 1440x1080i, 1280x1080i, 960x1080i, 1280x720p, 960x720p, 800x720p, 640x720p; (SMPTE-296M, 274M); SD (NTSC): 720x480, 528x480, 480x480, 352x480, 352x240, 320x240; SD (PAL): 720x576, 528x576, 480x576, 352x576, 352x288, 320x288
Framerate	Full, 3/4, 1/2, 1/3. 1/4, 1/5, 1/10
Audio In	HD: 1, 2, 4, 6, 8 Channel embedded SDI audio, 24-bit
Audio Out	SDI, Stereo Mini-jack
Audio Encoding	8-ch, 6-ch, 4-ch, 2-ch, 1-ch. AAC, GSM or CELP; 48 or 44.1 kHz
Video In	HD-SDI (SMPTE-292M), SDI (SMPTE-259M), Genlock
Video Out	HD-SDI, SD-SDI (letterbox, crop, anamorphic)
Fixed Output	HD/SD 59.94/50 conversion, 720p to 1080i upconversion
Genlock In	Black burst (Decoder Mode)
Color Profile	4:2:0, 4:2:2
Closed Caption	Line-21, decoding/encoding (NTSC SD only)
Video Post Filtering	Advanced interlaced/progressive post filtering, including de-blocking, de-mosquito, and anti-aliasing
VANC	Pass through of VANC EIA-608/708, SMPTE-334
Encoding Latency	Adjustable from .2 seconds to 8 seconds
Bandwith	HD: Adjustable from 512 Kbps to 35 Mbps; SD: Adjustable from 64 Kbps to 25 Mbps
Networking	LAN 1+2: RJ-45, Ethernet 10/100/1000 Mbps, IEEE 802.3ab, 802.3u, 802.3
Network Protocols	Multicast, Unicast UDP for IP, one-way broadcast and multiplex modes
Forward Error Correction	Adjustable, 0% to 66%; Reed-Solomon, Parity, Shuffle
Jitter	Packet order and timing correction (Decoder Mode)
Presets	Easy preset, Network, video/audio, Interface
Remote Control	Web interface and remote desktop
OS	Windows® 7 Embedded
Front Panel	LCD, key-switches
Utility	VGA: D-SUB, VGA connection for GUI; USB: Series A, USB 1.1/2.0 3-port
Power	100-240 V AC, 90W
Dimensions	1.7" (44mm) H x 17" (433mm) W x 15.4" (392mm) D; 1.7" (44mm) H x 18.9" (480mm) W x 15.7" (398mm) D with handles
Weight	13.2 lbs, 6 kg

Streambox delivers mobile video everywhere, allowing companies to broadcast from anywhere with unlimited scalability and lower costs. Using the Streambox mobile app or compact mobile encoders coupled with cloud-based streaming, broadcasters, educators, congregations and enterprise organizations can deliver live, HD video to viewers immediately.



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