

Vbrick® 9000 Encoder

Efficiency and Performance in an H.264 Appliance

The Vbrick 9000 Encoder enables anyone to encode video from an uncompressed source - such as a camera or TV broadcast - and stream it live onto a network for viewing on PCs, MACs, tablets, televisions, or smartphones. The 9000 Encoder is the first portable device that streams 1080p60 HD video from multiple sources at the same time – and the first line of encoding appliances to support up to four channels of HD video while outputting multiple bitrates for each channel.

Building upon more than a decade of experience engineering the most widely deployed enterprise encoders, the 9000 Encoder sets the benchmark in H.264 encoding performance. Based on purpose-built hardware and running a real-time operating system, this unique appliance approach combines encoding, networking, stream serving and recording functions to deliver unmatched price-performance and ease-of-use.



PRODUCT AT A GLANCE

- ▶ Stream H.264 HD video over any network, to any device, at resolutions up to 1080p60
- ▶ Capture up to four channels of video in a single portable appliance, streaming all channels at resolutions up to 1080p
- ▶ Stream each source at multiple bitrates to deliver video over any network

MODELS

- ▶ 9000 Encoding appliance available in one, two, or four channel models
- ▶ 9000 Encoding/Decoding appliance with SD/HD/3G-SDI, Composite, HDMI and Component Video inputs and outputs

APPLICATIONS

Meeting and Event Broadcasts - Reach a large audience of customers, constituents, employees and others over the corporate network and the Internet to communicate a uniform message

IPTV - Encode selected television channels – including news and financial programming – to share across your existing LAN, WAN or IP network

Surveillance and Monitoring - Oversee roadways, seaports, factory floors and secure borders; maintain situational awareness on the battlefield

Digital Signage - Deploy signage economically by encoding the content once and distributing over your network to cost-effective set top boxes

Telemedicine - Use the highest resolution and highest frame rate available to watch intricate operations and other medical procedures

FEATURES AND BENEFITS

Integrate into a Complete Enterprise Video Platform - The 9000 Encoder works seamlessly with the Vbrick® Rev® video management platform and the Vbrick® Distributed Media Engine to support iPhones, iPads, Android devices and more.

Capture High Definition Video - Appliances encode and stream HD 720p and 1080p video at 60 frames-per-second, providing incredible video quality at bandwidths of 1 Mb/sec and up. Archive video on USB attached storage.

Simple,Secure Management- Control and monitor the appliance by leveraging Vbrick's web admin tool, standard telnet, SSH/serial port, or by internet standard SNMP.

Encryption - Protect your content by encrypting your streams with robust AES-128 or AES-256 encryption algorithms.

Support a Wide Variety of Network Transport Protocols - Compatible with Adobe Flash™ Player,Microsoft Silverlight, Microsoft Windows Media™ Player (with Vbrick components), Apple QuickTime and other players.

Serve Multicast and Unicast - Use multicast technology to reach an unlimited number of users on your LAN or push video to reach remote locations and CDNs. Serve hundreds of players directly from a single appliance.

SERVER

- ▶ H.264 Encoding
 - » Input format: 1080p25/30/50/60, 1080i, 720p50/60, 576i, 480i, 1280x1024, 1024x768
 - » 4:3 Aspect Ratio Resolutions: D1 (720x480, 720x576), SIF (NTSC), QSIF (NTSC), CIF (PAL), QCIF (PAL), 400x304, 384x288 (PAL), 640x480, 320x240,128x96, 192x144
 - » 16:9 Aspect Ratio Resolutions: 960x544, 720p (1280x720p), 1080p (1920x1080), 656x368, 512x288 (PAL), 256x144
 - » Video Frame Rates: 2, 3, 5, 6, 7.5, 10, 15, 30fps (NTSC), 2.5, 5, 12.5, 25 (PAL), 50, 60
 - » Constant Bit Rate/ Constant Frame Rate
 - » User-defined key frame interval
 - » Rates: 32Kbps - 20Mbps
 - » Baseline, Main, and High Profile

SERVER

- ▶ Live multicast server
- ▶ Live streaming server - up to 200 concurrent live streams

TEMPERATURE RANGE

- ▶ Enterprise Appliance: 0 to +50 deg Celcius
- ▶ Live streaming server - up to 200 concurrent live streams

REGULATORY

- ▶ FCC part 15, Celcius

STORAGE

- ▶ External Storage over USB
- ▶ Archiver: record encoded stream to external storage
- ▶ Automatic file transfer after record

AUDIO ENCODER

- ▶ AAC-LC and AAC-HE Encoding
 - » Sample frequency 8 Khz to 48 Khz
 - » Rates: 8 Kbps - 256 Kbps
 - » Audio Modes: Stereo, Mono
 - » Inputs: Stereo Unbalanced at line, microphone or high headroom input levels, and microphone via analog audio inputs. Digital audio can also come through the HDMI input. Stereo Balanced through optional XLR cable on SDI/Composite HDMI/Component models.
 - » Audio Processing
- ▶ Automatic Volume Control (AVC) with configurable attack and release rates and minimum/maximum levels
- ▶ Noise Gate with configurable threshold
- ▶ Configurable gain from -96dB to 10dB

MBR ENCODING

- ▶ Up to 5 simultaneous rates on single channel models
- ▶ Up to 4 simultaneous rates per channel on multi-channel models

PUSH

- ▶ RTMP to Flash Media Server
- ▶ IIS Smooth Streaming to Microsoft IIS Server
- ▶ 25 concurrent unicast and multicast destinations
- ▶ Automatic Unicast/RTSP Announce
- ▶ RTP
- ▶ Transport Stream

ENCRYPTION

- ▶ AES - 256
- ▶ AES - 128

DIMENSIONS & WEIGHT

- ▶ Appliance: 1.75" x 8.1" x 8.75"
- ▶ 2 pounds

ETHERNET NETWORK

- ▶ 10/100/1000 Mbps Ethernet via RJ-45, Static, or DHCP
- ▶ Auto sense Full/Half duplex

PROTOCOLS

- ▶ Unicast/Multicast, DiffServ (QoS), UDP/IPv4 and IPv6/RTSP/RTCP/RTP/HTTP/RTSP Interleave/IGMP / MPEG-2 Transport Stream/ Automatic Unicast (RTSP ANNOUNCE)/ HTTPS Management/SSH/ RTMP/IIS Smooth Streaming/FEC

TRAFFIC SHAPING

- ▶ RTP Metering
- ▶ CBR Transport Stream
- ▶ VBR Transport Stream with configurable latency KLV Metadata

KLV METADATA

- ▶ Two Serial ports for local maintenance and data transport
- ▶ Management Web Pages over HTTP or HTTPS
- ▶ SNMP, ssh, telnet
- ▶ soap/xml Web Service
- ▶ iPhone application
- ▶ Front panel display on Enterprise Models

POWER INPUT

- ▶ 100 to 240 VAC, 50/60 Hz, 45 Watts, 24VDC 4A