H.264 Distributed Media Engine

The VBrick H.264 Distributed Media Engine (DME) forms the backbone of an Enterprise Content Delivery Network (ECDN). It enables efficient video broadcasts to large audiences by supporting a variety of endpoints, including popular smartphones and media tablets. People in regional offices or on remote campuses can view high-definition video, either live or stored, without taxing data connections to a central site.

The DME, typically deployed at the network edge, is a single integrated platform which intelligently provides media redistribution, media transformation and the serving and storage of video-on-demand content. A single stream of media from a central site can support tens of thousands of live views and then be stored locally for on-demand access by thousands more.

The option Video Conference Streaming Gateway Module enables the DME to integrate with SIP-based video conference systems to stream conferences to thousands employees, including to their mobile devices.

The DME seamlessly integrates as a distributed element within the VBrick Enterprise Video Architecture (VEVA). Permissions and reports on content access are managed centrally; whether users are in headquarters, across campus or an ocean away. IT staff will appreciate the intuitive web browser interface for management.

Product at a Glance

Media Redistribution
Ingests and reflects media streams, unicast to unicast or unicast to multicast. Enables one stream to serve thousands of users.

Media Transformation
Converts standard H.264 RTP to Flash, Apple Adaptive and Transport Stream providing video to diverse endpoints including PCs, MACs, media tablets and smartphones.

Video-on-Demand
Local content storage and video serving allow frequent content to be access locally without burdening data connections to larger central sites.

Video Conference Extension
Optional software to enable SIP-based integration with popular video conferencing equipment. Allow thousands to watch a video conference from anywhere including popular mobile devices.

Complete Solution
Integrated with VBrick's VEMS Mystro™ management system assuring that only authorized users have secure access to content and that central reporting is available regardless of the user's location.

MODELS

Distributed Media Engine Model BPS 7530

Distributed Media Engine Model XPS 7550

Distributed Media Engine Model HPS 7570

Available as a turnkey hardware appliance or as a VMware image.

PLAYER SUPPORT

- Adobe Flash Player (including applicable Android˚ and Blackberry˚ Mobile devices)
- Apple Adaptive Player on iPhone and iPad
- Windows˚ Media Player 12 or VBrick plug-in
- QuickTime Player (Windows & Mac)

Applications

The H.264 Distributed Media Engine is deployed on the network edge to support endpoints requiring RTP, RTMP (Flash), HLS (Apple Adaptive), MPEG2TS (Transport Stream) and Smooth Streaming streams as well as firewall friendly HTTP progressive downloads.

Live Meeting and Event Broadcasting Provides ubiquitous access to highquality broadcasts and corresponding rich-media content at the network edge. Optional module enables a video conference system to be the source.

Training and Lecture Capture Supports multiple live streaming protocols as well as progressive download via HTTP for distribution of content to a wide variety of video endpoints including mobile devices.

Television Distribution Simplifies multicast distribution at remote buildings or locations that might not be connected by multicast enabled WAN connections.

On-demand Content Management & Distribution Provides local content serving and storage to reduce burden on WAN. Optional module enables recording of video conferences (requires VEMS Mystro™).

Surveillance & Security Share sensitive video content more effectively without requiring specialized equipment or cabling. The DME ingests and reflects Transport Stream including critical KLV metadata.

Features and Benefits

Bandwidth Conservation Redistribute high-quality, live or on-demand, media via RTP multicast. Leveraging multicast eliminates the need to incrementally scale network bandwidth to support more viewers.

Media Transformation Stream high-quality H.264 content once and leverage the DME at distributed locations to deliver multiple formats including Flash, HLS (Apple Adaptive), Smooth Streaming as well as Transport Stream and HTTP Progressive Download; DME delivers video to multiple types of endpoints concurrently.

Features and Benefits

Mobile Device Support Enables delivery of live H.264 content to mobile devices as Flash, Apple Adaptive and Smooth Sreaming or supports HTTP progressive download of video-on-demand content.

Intelligent Central Management Content is created once and then intelligently managed by the VBrick Enterprise Media System (VEMS), regardless of the location. Stored content is appropriately distributed to local DMEs so users have faster access to frequently viewed content without the need to contend with constrained WAN or Internet links.

Robust Appliance Design Requiring only a web browser for management, the DME eliminates the need to separately manage patches and security updates on commercial server operating systems.

Secure Designed to meet the security requirements of demanding government information assurance policies.

Enhanced User Experience Increases user adoption and impact by assuring outstanding picture quality and response from video applications. The DME easily accommodates increased user demand without degrading performance or their experience.

Product at a Glance (cont.)

PROTOCOLS

Incoming
- RTP
- RTMP
- MPEG2TS with KLV
- FTP for VOD file transfer
- Smooth Stream from IIS Server
- SIP (optional)

Outgoing
- RTP - unicast & multicast
- RTMP - unicast
- MPEG2TS with KLV - unicast & multicast
- HLS - unicast
- HTTP (Progressive Download) unicast
- Smooth Stream
- Stored Windows Media via Progressive Download

Management
- HTTP/HTTPS for management
- IGMPv3

Specifications

	Model 7530 Media Engine	Model 7550 Media Engine	Model 7570 Media Engine
Turnkey Hardware Appliance	8000-0222	8000-0223	8000-0224
VMware Image (vSphere 4.1 or 5.0)	7500-0250	7500-0251	7500-0252
Recommended Users (guidelines for typical uses)	50 to 100 concurrent users	Up to 1000 concurrent users	More than 1000 concurrent users
Maximum Throughput (in and out)	250 Mbps	500 Mbps	3 Gbps
CPU	Intel i3	Intel Xeon	Intel Xeon
Memory	4GB	32GB	32GB
Content Storage (drives)	(1) 250GB	(6) 500GB RAID 5	(6) 1TB RAID 5
Chassis	Shelf Mount	1RU - Rack Mount	1RU - Rack Mount
Network	1 Gigabit Ethernet	4 Gigabit Ethernet	4 Gigabit Ethernet
Server OS	Embedded	Embedded	Embedded
Power Supplies	102 watt power supply	Redundant 750 watt power supplies	Redundant 750 watt power supplies
Dimensions	Height: 3.8" (9.7cm) Width: 8.7" (22.1cm) Depth: 12.9" (32.8cm)	Height: 1.68" (4.26cm) Width: 8.99"(48.24cm) Depth: 30.39" (77.2cm)	Height: 1.68" (4.28cm) Width: 8.99" (48.24cm) Depth: 28.97" (73.6cm)
Weight	Weight (maximum): 10.25 lbs (4.65 Kgs)	Weight (maximum): 41lbs (18.6Kgs)	Weight (maximum): 41lbs (18.6Kgs)