VBrick systems, inc.

MPEG-2 Codecs

VBrick
IP Address
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DVD Quality Video, Audio, and Data Networking

The VBrick™ 4000, 5000, 6000 series of video/audio products are broadcast quality MPEG-2 networked appliances that deliver one-way or two-way television over digital networks. These VBrick appliances are compact and rugged encoders and decoders that accept standard NTSC/PAL video and audio, compress the video in real time, transmit the digital signal over an IP or ATM network, and decode and display the video.

Applications

- **Interactive videoconferencing** over IP or ATM networks
- **Distance learning** and training
- High resolution **surveillance & process monitoring**
- **Telemedicine** — provide up-to-date medical information to doctors and patient rooms
- **Broadcast** DVD quality video/audio over digital networks

Product Features

- **Full motion, high resolution** DVD quality video and audio
- **NTSC**, **PAL**, composite & S-video inputs
- **IP unicast or multicast** for streaming applications
- **SDI input and output** for digital transport end to end (optional)
- **Web server** configuration and management
- **Web browser** data collaboration
- **Low delay** for interactive conferencing
- **Utilizes Layer III QoS** — Diff Serv for prioritizing video over IP networks
- **1 to 15 Mbps configurable** video encoding rates
- **IR port** for program guide and video conference operation
- **Modular design** — mix and match between MPEG-2 and MPEG-4 devices
- **End-to-end camera control** for pan, tilt & zoom
- **High reliability** — not based on PC architecture
- **LCD panel** for status and information
- **Picture-in-Picture** (PIP) for self-view
- **Closed captioning** with text insertion capability
- **Recorded content FTP** to multiple servers
- Out of order **packet handling**
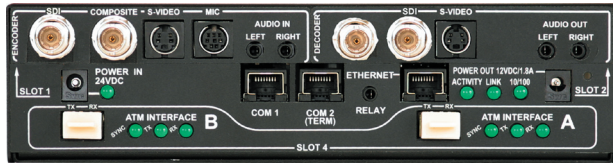- **Optional hard drive** (VBSTAR)

Models

- Single channel MPEG-2 encoder (9110-4200)
- Single channel MPEG-2 decoder (9110-5200)
- Dual channel MPEG-2 encoder (9110-4300)
- Dual channel MPEG-2 decoder (9110-5300)
- Dual channel MPEG-2/4 encoder (9130-4300)
- Dual channel MPEG-2 decoder/MPEG-4 encoder for transcoding (9130-6200)
- MPEG-2 encoder/decoder (9110-6200)
- Dual channel MPEG-2/MPEG-4 decoder (9130-5300)

Network Interfaces

- 10/100 Ethernet (standard)
- ATM155M OC-3 (optional)
- ATM Dual 155M OC-3 (optional)
- SDI Input (Optional)
- SDI Output (Optional)

Interoperability

- **EtherneTV MCS** — unified portal providing PC and set top box access to live and on-demand content
- **EtherneTV-NXG** — Video-on-Demand server captures MPEG-2 streams for future playback
- **EtherneTV-STB** — decode MPEG-2 streams from low cost set top boxes
- **VBScheduler** — schedule streaming & interactive sessions
- **VBSDS** — control DVD & VCRs through centralized management
- **StreamPlayer & StreamPlayer Plus** — software decoder for desktop PCs
- **VBXcast** — MPEG-4 encoder support

System Requirements

		Video Resolution	NTSC	PAL
Video Encoder	MPEG-2 ISO/13818-1, -2, -3			
	Main Level, Main Profile 4:2:0, SP@ML and MP@ML			
	Adjustable Intrapicture and reference distance (GOP)			
	NTSC 29.97 fps, 525 lines	Full D1	720 x 480	720 x 576
	PAL 25 fps, 625 lines, PAL-M 30 fps, 525 lines			
	Video encoding 1 Mbps to 15 Mbps	2/3 D1	480 x 480	480 x 576
	Inputs: Composite, S-Video, SDI (optional, must be ordered separately)			
	Closed Caption, Line 21 Passthrough	1/2 D1	352 x 480	352 x 576
	Adjustable PID selection			
Audio Encoder	MPEG-1 Layer II ISO/13818-3	SIF	352 x 240	352 x 288
	Stereo 48K Sample Rate, 256K, 384K Data Rate			
	Balanced or Unbalanced Inputs via mini-jacks			
Video Decoder	MPEG-2 ISO/13818-3			
	Main Level, Main Profile/Simple Profile, 4:2:0 and 4:2:2			
	Up to 20 Mbps, auto-detecting			
	Outputs: Composite, S-Video, SDI (optional, must be ordered separately)			
	Adjustable PID selection			
Audio Decoder	MPEG-1 Layer II ISO/13818-3 MPEG-2 Layer I, Layer II			
	Balanced or Unbalanced Outputs via mini-jacks			
Ethernet Network	10/100 Mbps Ethernet via RJ-45, Static or DHCP			
	Auto sense full/half duplex, UDP, Unicast/Multicast, Diff Serv (QoS)			
	Integral Routing - Static, RIP1, RIP2			
ATM Network (optional)	RFC 1483			
	H 222.1 - MPEG/ATM			
	Interface - Fiber: 155M via LC connectors for multimode/single mode fiber (OC3c)			
	Dual OC3 with VPI/VCI passthrough (switching)			
	ATM UNI: UNI 3.0/3.1, PVC, SVC, AAL5, IPOA, Traffic shaping, UBR & CBR traffic contracts			
	PVC/SVC: User Configurable VPI = 0, VCI = 0 to 31, reserved, 32 to 511 user defined			
	Tx and Rx VC may be set independently			
Maintenance Port	Serial port for local maintenance or data transport			
Control Port	Serial port for data transport			
Hard Drive (Optional)	60 Gbyte storage for recording and streaming (VBSTAR option)			
IR Remote Control	IR Remote Control for local control and configuration			
Size	5.8 cm (2.3 inches) High 22.2 cm (8.75 inches) Wide 31.7 cm (12.5 inches) Deep			
Weight	Approx. 3.2 Kg (7 lbs)			
Temperature Range	0 degrees to +70 degrees Celsius (with VBSTAR: 0 degrees to +45 degrees Celsius) operating humididty up to 90% non-condensing*			
Power Supply	Input: 100 to 240 VAC, 50/60 Hz, approx. 55 Watts Output: +24V up to 3.0A			
Regulatory	FCC Part 15, UL, CE			
Relay	Dry contact, 75mOhms, 2A @ 30VDC, .3A @ 110VDC, .5A @ 125VDC			
LCD	32 Character display (16x2), backlit			

*High temperature operation has some dependencies, please contact VBrick.

MPEG-2
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