ViBE **EM1000**

MULTI-CHANNEL SD ENCODER

THOMSON

▶ **VIDEO NETWORKS**

now part of **harmonic**

ViBE EM1000 IS A HIGH PERFORMANCE MULTI-CHANNEL LIVE ENCODER WITH AN IMPRESSIVE ARRAY OF FEATURES DESIGNED TO IMPROVE MPEG-2 AND MPEG-4 VIDEO DISTRIBUTION.

ViBE EM1000 Delivers

ViBE® EM1000 is equipped with a high efficiency video compression engine designed for optimal performance.

ViBE EM1000 accurately selects the appropriate encoding tool, which provides the best performance for any content type from movies to sports.

With these features it is possible to encode MPEG-4 at a greater than 50 percent efficiency rate compared to existing MPEG-2 systems.

For MPEG-2, ViBE EM1000 integrates the latest advances based on MPEG-4 experience. With ViBE EM1000, you can save up to 25 percent bandwidth with a headend renewal.

ViBE EM1000 Is Future-proof

ViBE EM1000 can be easily integrated into your current architecture with the support of legacy interfaces such as composite video input, analog audio inputs and ASI interfaces.

ViBE EM1000 offers digital inputs and GigEthernet ports for easy migration to the most recent architecture.

With its large range of interfaces and the support of MPEG-2 and MPEG-4 encoding, ViBE EM1000 is built to last.

ViBE EM1000 Is Dense

ViBE EM1000 increases headend density by combining compression efficiency with a large feature set in the same box.

On the audio side, up to 16 stereo pairs of audio can be encoded, enabling multiple languages or additional radio services.

Full IP architectures are accessible with the SD/HD decoding option, combining system cost efficiency with the video quality of a standalone encoder.

Simple logo insertion to overlay alert message, parental advisory logo or even ad is also available.

With this large feature set and with its improved video compression ViBE EM1000 delivers clearer pictures and removes the need for many additional boxes.

As a result, you can simplify delivery on your network and let your customers enjoy a first-class viewing experience.

key features

- » Four channels per 1RU
- » MPEG-4 AVC main and high profile at level 3
- » MPEG-2 main profile at main level
- » Adaptive field/frame encoding
- » CBR and VBR with Thomson Flextream
- » ASI & Gigabit Ethernet interfaces

- » SDI and analog video inputs
- » AES and analog audio inputs
- » Custom slide support
- » Control and monitoring by Web browser or mediaXsuite Management System
- » Low power consumption

- » Robust optional features, including:
  - Possibility to encode up to 16 stereo pairs
  - SD/HD decoder with professional network de-jittering
  - Automatic loudness control
  - Logo inserter with fade support
  - Dual power supply

technical specifications

Video and Audio Inputs

› SDI and CVBS (PAL, NTSC, SECAM) video input
› Embedded, digital, and balanced analog audio inputs
› ASI input for data such as DVB subtitling injection
› Dedicated ASI and dual Gigabit Ethernet for transcoding applications
› FEC-1 (SMPTE 2022) processing on IP input streams

Outputs

› Dual ASI and Gigabit Ethernet
› SPTS or MPTS format
› (built-in multiplexer)
› FEC generation (SMPTE 2022) on IP streams

Video Processing

› MPEG-4 AVC Main and High Profiles (MP at L3 and HP at L3)
› MPEG-2 MP at ML
› CBR, VBR, or capped VBR operation
› Full GOP adaptive
› Field/frame adaptive (PAFF and MBAFF)
› Multi-level hierarchical GOP structure (MPEG-4)
› PVR descriptor support
› Inverse telecine (3/2 pull down)
› 720, 704, 640, 544, 528, 480, 352 pixels per line
› Scene cut detection
› Custom slides and Logo insertion
› Expert modes for interoperability with legacy systems

Audio Processing

› MPEG-1 Layer II encoding
› Dolby Digital 2.0 encoding
› AAC (-LC & -HE, -HE v2) encoding
› AC3, E-AC3 pass-through
› Automatic loudness control (ITU BS. 1770-1/-2, EBU R. 128)
› Audio description support

VBI Processing

› CEEFAX B, WSS, VPS
› D/VITC, monochrome transparent lines
› AFD (SMPTE 2016 and RP 186)
› CC, XDS, DTVCC, EIA 608 to EIA 708 translation, NABTS, GEMSTAR, AMOL 1&2
› DVB subtitling pass-through resynchronized with video
› DVB subtitling transcoding

Control and Monitoring

› mediaXsuite Management System software (system option)
› Embedded Web server
› SNMP agent for alarm collection
› Interface with Sapphire for ingest solutions
› Insertion of digital cue-tones (SCTE 35) from GPI, Ethernet (SCTE 104), SDI (SMPTE 2010)
› Pre-defined set-ups and auto modes

Physical Characteristics

› 1 RU x 19" (44.5 mm high x 482.6 mm wide x 559 mm deep)
› Power consumption: 131 W to 169 W (configuration dependent)
  - Input voltage: 100 to 240 VAC continuous range
  - Frequency: 50 to 60 Hz
› Weight: 8.8 kg (19.4 lbs.)

Environmental Conditions

› Operating temperature: 5 to 50° C (41 to 122° F)
› Storage temperature: -25 to 70° C (-13 to 158° F)
› Maximum humidity: 95% at 35°C non-condensing

Compliance

› CE marked in accordance with the 93/68/EEC (22/07/93) directive
› Safety: IEC 60950 and EN 60950, UL 60950
› EMC: EN 55022, EN 55024, EN61000-3-2, FCC, ICES, VCCI, C-TICK
› Compatible with IPTV service platforms (tested with Microsoft Mediaroom/Huawei/Alcatel MiView/Technicolor SmartVision)

ordering information

Hardware

ViBE-EM1000
› Multi-channel SD chassis

Software Licenses

ViBE-SW-MPEG4[1]
› software license for MPEG-4 SD encoding

ViBE-SW-MPEG2[1]
› software license for MPEG-2 SD encoding

Hardware Options

VIBE-OPT-2SUPPLY
› optional dual power supply

ViBE-OPT-MPEGIN
› optional multi audio and video decoder for compressed sources

ViBE-OPT-PIP
› option to enable picture-in-picture operation

Software Options

ViBE-LIC-FLEXTRE
› option to enable Flextream integration on a unique site

ViBE-LIC-FLEXALL
› option to enable Flextream integration between remote sites

ViBE-LIC-FLEXSERV
› option to insert non video components in Flextream pools

ViBE-LIC-AAC
› option to enable AAC audio encoding

ViBE-LIC-DOLBY
› option to enable Dolby Digital audio encoding

ViBE-LIC-MPEG1L2
› option to enable MPEG-1 layer II audio encoding

ViBE-LIC-ALC
› option to enable automatic loudness control

ViBE-LIC-LOGO
› option to enable baseband logo insertion before encoding

ViBE-LIC-DVBSUB
› option to enable DVB subtitling transcoding

ViBE-LIC-FEC
› option to enable FEC generation

ViBE-LIC-SCR
› option to enable fixed key scrambling

Notes: [1] all software licenses can be simultaneously installed in the same chassis

e-mail: sales@thomson-networks.com

professional services

Our professional services offerings ensure optimal system performance and maximize uptime.
These services include call centers staffed around the clock; system planning, design, and commissioning;
professional training courses; and technical maintenance programs and service agreements.

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