



CHARACTERISTICS

- Video inputs:
 - 1 x SDI
 - 1 x Analog (PAL/NTSC)
- Audio inputs:
 - 4 or 8 SDI embedded channels
 - 4 or 8 analog channels
 - 2 or 4 AES/EBU channels
- Transport outputs:
 - 1 x IP (RTP/UDP) with COP3 FEC SMPTE 2022
 - 2 x DVB-ASI
 - 1 x PDH (E3/DS3)
- Profiles:
 - MP@ML
 - 422P@ML
- Resolutions:
 - 352x480 to 720x480 (NTSC)
 - 352x576 to 720x576 (PAL)
- Processing of video blanking interval information: VITS, teletext, aspect ratio (AFD, WSS)
- Low encoding/decoding delay. Possibility of extra delay in order to work with mid range and low end decoders
- Internal video and audio pattern generator
- Support the standards:
 - DVB-T
 - DVB-S
 - ATSC
- Support for SI information services
- Firmware upgradable
- Multiple management and configuration interfaces:
 - Web browser
 - SNMP v2
 - Centralized management with SIVAC NMS
 - local RS-232
- Contact-closure alarms

SDTV MPEG-2 ENCODER

SIVAC 3000 MVE is SAPEC's MPEG-2 SDTV (*ISO/IEC 13181*) family of video and audio encoders with transmission over DVB-ASI, IP (RTP/UDP with COP3 FEC SMPTE 2022) and PDH (E3/DS3), that can work even simultaneously.

SIVAC 3000 MVE supports analog (PAL/NTSC) and digital (SDI) video inputs and it is capable of encoding up to 8 channels (4 stereo pairs) of embedded audio, AES/EBU or analog audio. Analog inputs can be equalized and adjusted.

SIVAC 3000 MVE allows video and audio to be encoded from different inputs, what gives great flexibility and avoids the need for external converters or embedders.

SIVAC 3000 MVE processes the vertical blanking interval inserting teletext, test signals (VITS) and aspect ratio (AFD, WSS). Teletext source may be different from video input, providing maximum flexibility and no need for external embedders.

SIVAC 3000 MVE has been designed with an internal multiplexer that can create one PMT with video, audio and VBI data, and up to other three PMT's for audio channels (radio broadcasting).

SIVAC 3000 MVE supports MP@ML (**MVE 30x0**) as well as 422P@ML (**MVE 32x0**) profiles, enabling the user to select GOP size and structure, encoding resolutions (NTSC: 352x480 to 720x480; PAL: 352x576 to 720x480) and bitrates for audio (64 kbps to 384 kbps per stereo channel) and video (MP@ML: 1 to 15 Mbps; 422P@ML: 2 to 50 Mbps) in order to meet different needs.

SIVAC 3000 MVE uses the latest breakthroughs in MPEG-2 compression technology to deliver the best image quality with minimum encoding-decoding delay (less than 180 ms over ASI and PDH in combination with **SIVAC 3000 MVD**) and due to the patented technology **FastIP_{Sync}**®, it is able to reduce jitter in IP networks, as it uses an exclusive algorithm that adapts dynamically itself to IP network conditions. It is possible, nevertheless, to add an extra-delay in order to be interoperable with mid-range and low end decoders (usually consumer set-up boxes).

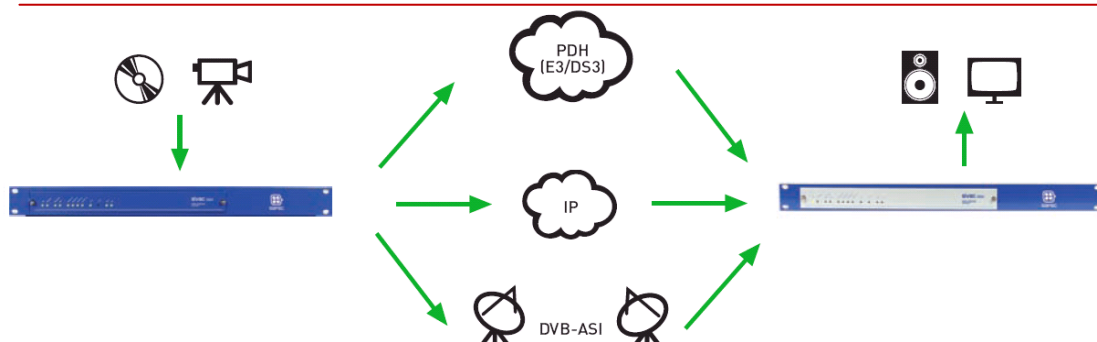
SIVAC 3000 MVE supports configuration via web browser and front panel, and also provides an SNMP agent for external monitoring. The equipment can also be managed centrally and simultaneously with **SIVAC-NMS** management system.

SIVAC 3000 MVE offers a build-in 1+1 autonomous redundancy system that provides a reliable audio and video signal transport.

SIVAC 3000 MVE power supply is AC + DC, and it has a DC output, what allows to feed another unit with only one power supply.

SIVAC 3000 MVE has low power consumption (less than 20 W), making electrical installations easier.

TYPICAL APPLICATION



TECHNICAL SPECIFICATIONS

MVE-3000 MVE-3010 MVE-3020 MVE-3200 MVE-3210 MVE-3220

Video Input

Digital Inputs		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Number of inputs:	1 x BNC						
Formats:	SDI (SMPTE 259M): 625/25Hz, 525/29.97Hz	●	●	○	●	●	○
Impedance:	75 Ω						
Automatic cable equalization:	> 250m Belden 8281						
Analog Inputs		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Number of inputs:	1 x BNC						
Formats:	PAL (ITU624-4), NTSC (SMPTE 170M)	●	○	●	●	○	●
Impedance / Nominal Level:	75 Ω / 1 Vpp						
Cable eq / level adjustment:	> 100m						
Video Input Features		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Video pattern generator:	Color bars						
Vertical interval processor:	VITS and Teletext	●	●	●	●	●	●
Aspect ratio:	4:3, 16:9, AFD, WSS						
Monitor Outputs		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Loop:	1 x BNC Analog video input	●	●	●	●	●	●
AV Monitor:	1 x BNC Analog video						

Audio Input

SDI Embedded		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Number of inputs:	4 or 8 channels	●	●	○	●	●	○
Analog Inputs		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Number of inputs:	4 or 8 channels (1 x SUB D-26 High Density)						
Format:	Balanced analog audio	●	○	●	●	○	●
Sample frequency:	32 Khz, 44.1 Khz or 48 Khz						
Impedance:	High impedance (> 22 KΩ)						
Digital Inputs		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Number of inputs:	2 or 4 AES/EBU channels (1 x SUB D-26 High Density)						
Format:	AES / EBU	●	○	○	●	○	○
Sample frequency:	32 Khz, 44.1 Khz or 48 Khz						
Impedance:	110 Ω, balanced						
Audio Input Features		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Audio pattern generator:	1 kHz tone	●	●	●	●	●	●

Video Encoding

Encoding Standard		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Standard and profile/level:	MPEG-2 MP@ML; 1 to 15 Mbps MPEG-2 422P@ML; 2 to 50 Mbps	●	●	●	●	●	●
Encoding Features		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Configurable GOP settings:	Open and Close GOP; GOP size; I,P,B Images						
Encoding resolutions:	525 (NTSC): 720 x 480, 704 x 480, 640 x 480, 544x480, 528 x 480, 480 x 480, 352 x 480 625 (PAL): 720 x 576, 704 x 576, 640 x 576, 544 x 576, 528 x 576, 480 x 576, 352 x 576	●	●	●	●	●	●
Delay Features		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Delay:	< 180 ms encoding and decoding with MVD (over ASI)						
Extra delay:	Selectable extra delay feature in order to work with mid-range and low end decoders	●	●	●	●	●	●

Audio Encoding

Formats:	MPEG-1 Layer II (ISO/IEC 11172-3)						
Encoding bitrates:	From 64 kbps to 384 kbps (per stereo channel)	●	●	●	●	●	●
Operating modes:	Stereo, Joint Stereo, Mono and Dual Mono						

Internal Multiplexer

PMT:	Up to 4 PMT (only one PMT will include video service)	●	●	●	●	●	●
PMT tables:	PID, Service Type, Service Name						

Transport Outputs

Ethernet		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Number of outputs:	1 x RJ-45						
Number of video IP streams:	2						
Interface:	10/100 Mbps						
Encapsulation:	TS over IP: UDP, RTP and RTP with COP3 FEC (SMPTE 2022) (Multicast / Unicast)						

ASI

Number of outputs:	2 x BNC						
Encapsulation:	188 byte TS						

PDH

Number of inputs:	1 x BNC						
Number of outputs:	1 x BNC						
System specifications:	E3 (G.751), DS-3 (C-bit parity)						

All units can be configured with one, two or three different transport outputs

Management

Web browser:	Web browser access						
NMS:	SIVAC NMS (optional SAPEC NMS software)	●	●	●	●	●	●
SNMP:	Support for SNMP v2						
RS-232:	Connection link (1 x RJ11) for remote control						

Environmental

Power		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Input voltage range:	AC 105 - 240 V						
Typical consumption:	< 20W	●	●	●	●	●	●
Operating temperature:	0°C to 50°C						
Physical		MVE-3000	MVE-3010	MVE-3020	MVE-3200	MVE-3210	MVE-3220
Dimensions (L x H x D):	27 x 5 x 48; 18,9" ancho x 1RU alto	●	●	●	●	●	●
Weight:	4 kg						

● Standard ○ Optional

Local Distributor:

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SAPEC reserves the right to change the specifications without notice

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