



## CHARACTERISTICS

- SDTV MPEG 2 and H.264 video encoders and decoders
- H.264 Profiles:
  - Hi422P@L3, HP@L3 and MP@L3
- MPEG2 Profiles:
  - 422P@ML, MP@ML
- Video inputs:
  - 1 x SDI
  - 1 x PAL & NTSC analog
- Transport interfaces:
  - 1 x DVB-ASI
  - 2 x IP (*Multicast or Unicast*) with FEC (SMPTE 2022)
- Audio formats:
  - Up to 8 mono channels SDI embedded
  - Up to 4 stereo pairs AES/EBU (2 in analog units)
  - Up to 4 mono channels analog
  - Dolby Digital passthrough
  - Dolby Digital Plus passthrough
  - SMPTE 302M (digital units)
- Resolutions from 128 x96 up to 720x576
- 19" chassis (1RU)
- Monitor output

## SDTV H.264 / MPEG2 ENCODER & DECODER

The professional H.264 (MPEG 4 AVC ) (ISO/IEC 14496) / MPEG2 (ISO/IEC 13181) encoders and decoders from **XAVIC XV** series, is the best transmission solution for video and audio for professional markets with limited bandwidth but with high quality demands.

The equipments are in a 19" chassis (1RU), and developed for professional applications being in accordance with the MPEG, telecommunication, and other standards required by the market.

**XAVIC XV** is designed to work as MPEG2 or H.264 on the same equipment with up to Hi422P@L3 profile on H.264 and up to 422P@ML profiles on MPEG-2, providing a quick adaptation for the business needs.

The video and embedded audio signals are available through digital inputs and outputs, with SDI (625/525) supports up to 8 embedded audio in SDI, and MPEG Transport Stream over ASI and/or IP (*Unicast and Multicast*).

The **XAVIC** family of encoders (**XVE**) and decoders (**XVD**) have a configurable bitrate in excess of 50 Mbps in MPEG 2 and 10 Mbps in H.264, which makes this equipment the best solution for the highest quality for professional contribution links.

**XAVIC XVE** allows configurable resolutions from 128x96 up to 720x576 on 4:3 or 16:9 aspect ratio, and configurable GOP in length and format.

**XAVIC** with the IP 10/100/1000 BaseT connection, an integrated Webserver allows remote and local control over LAN / WAN networks with the ability to store the internal events and potential alarms.

### BUSINESS BENEFITS

**Cost Efficiency** - For applications that require MPEG2 but can change to H.264 in the future, the **XAVIC XV** has the MPEG 2 upgradable to H.264 version, ensuring the protection of the investment to upgrade from MPEG2 to H.264 environment.

**Reliability** – The feature to transmit the transport stream by ASI and IP simultaneous, provide a more secure transmission of video and audio by allowing redundant path.

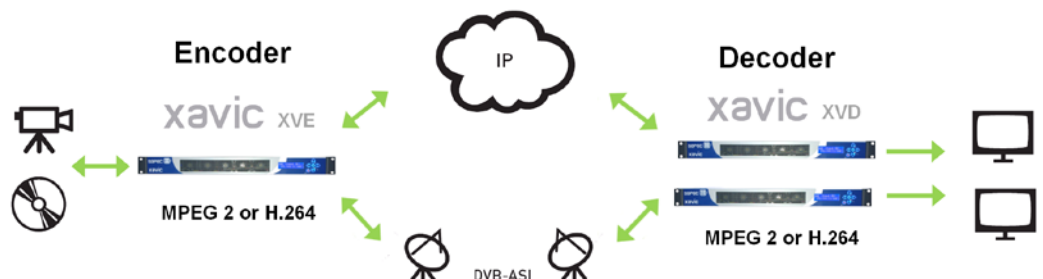
**Simplicity** – The friendly web interface allows an intuitive configuration making the learning and the deployment faster.

### APPLICATIONS

The **XAVIC XV** series delivers video and audio in highest quality in MPEG2 and H.264 compression algorithms via IP and ASI networks. These equipments are oriented for multiple applications such:

- SDTV Contributions for professional use;
- SDTV Distributions networks via IP or ASI;
- DIGITAL terrestrial and satellite applications like DVB-T, DVB-S, ATSC, etc;
- IPTV. and others applications needing video compression on MPEG2 or H.264 format;

### TYPICAL APPLICATION



# TECHNICAL SPECIFICATIONS

## XAVIC XVE encoder

### Video Input

Digital Inputs	
Number of inputs:	1 x BNC
Formats:	SDI (SMPTE 259M): 625/25Hz, 525/29.97Hz
Analog Inputs (only XVE 4000, XVE 1000 models)	
Number of inputs:	1 x BNC
Formats:	PAL (ITU624-4), NTSC (SMPTE 170M), CVBS
Impedance / Nominal Level:	75 Ω / 1Vpp
Monitor Outputs	
SDI:	1 x BNC
CVBS (XVE 4000, XVE 1000 models):	1 x BNC

### Audio Input

SDI Embedded	
Number of inputs:	Up to 8 mono channels or 4 stereo pairs SDI embedded
Analog Outputs (only XVE 4000, XVE 1000 models)	
Number of inputs:	Up to 4 mono channels or 2 stereo pairs (2 x SUB-D9)
Format:	Balanced analog audio
Sample frequency:	48kHz
A/D Resolution:	24bit

Digital Inputs	
Number of inputs:	<b>XVE 4010, XVE 1010:</b> Up to 4 stereo pairs <b>XVE 4000, XVE 1000:</b> 1 stereo pair
Format:	AES/EBU
Impedance	75 Ω
Sample frequency:	48KHz

### Video encoding

Standard and profile / level:	<b>XVE 4000, XVE 4010:</b> H.264 MP@L3 and HP@L3; 250 kbps to 10 Mbps H.264 Hi422P@L3 (**) MPEG-2 MP@ML; 1 to 15 Mbps (*) MPEG-2 422P@ML; 4 to 50 Mbps (*) <b>XVE 1000, XVE 1010:</b> MPEG-2 MP@ML; 1 to 15 Mbps MPEG-2 422P@ML; 4 to 50 Mbps (*) H.264 MP@L3 and HP@L3; 250 kbps to 10 Mbps (*) H.264 Hi422P@L3 (**)
Bitrate types:	CBR, VBR
Aspect Ratios:	4:3, 16:9, AFD, WSS
Encoding Resolutions:	<b>525 (NTSC):</b> 720 x 480, 704 x 480, 528 x 480, 640 x 480, 320 x 240, 176 x 144, 128x96 <b>625 (PAL):</b> 720 x 576, 704 x 576, 544 x 576, 352 x 576, 352 x 288, 176 x 144, 128 x 96

### Video processing

VBI (XVE 4010, XVE 1010 models):	AFD, WSS
Prefiltering:	MCTF (Temporal denoiser) Spatial denoiser Frequency denoiser

### Audio encoding

Audio formats:	<b>XVE 4000, XVE 4010:</b> MPEG-4 AAC (LC/HE v1, HE v2) MPEG-1 Layer II (ISO/IEC 11172-3) (*) Dolby Digital (AC-3) passthrough Dolby Digital Plus (EAC-3) passthrough PCM transparent passthrough SMPTE 302M (bit transparent audio passthrough) (only XVE 4010) <b>XVE 1000, XVE 1010:</b> MPEG-1 Layer II (ISO/IEC 11172-3) MPEG-4 AAC (LC/HE v1, HE v2) (*) Dolby Digital (AC-3) passthrough Dolby Digital Plus (EAC-3) passthrough PCM transparent passthrough SMPTE 302M (bit transparent audio passthrough) (only XVE 1010)
Encoding bitrates:	From 64 kbps to 384 kbps (MPEG-1 Layer II) From 24 kbps to 448 kbps (MPEG-4 AAC)

### Outputs

ASI	
Number of outputs:	1xBNC
Encapsulation:	188 byte TS
Return Loss:	> 15 dB
Max. Cable length:	300m
Ethernet	
Number of outputs:	2xRJ-45
Interface:	10/100/1000 Mbps
Encapsulation:	TS over IP: UDP, RTP, and RTP with COP3 FEC (SMPTE 2022) (Multicast / Unicast)

## System management

Web browser	Integrated web server
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## Environmental

Power	
Input Voltage Range:	AC 100 - 240 V 50/60 Hz and DC 40 - 60 V
Typical Consumption:	< 220W
Operating Temperature:	5°C to 35°C

(\*) Optional feature (\*\*) Check availability

## XAVIC XVD decoder

### Video Output

Digital Outputs	
Number of outputs:	1 x BNC
Formats:	SDI (SMPTE 259M): 625/25Hz, 525/29.97Hz
Analog Outputs (only XVD 4000, XVD 1000 models)	
Number of outputs:	1 x BNC
Formats:	PAL (ITU624-4), NTSC (SMPTE 170M)
Impedance / Nominal Level:	75 Ω / 1Vpp
Monitor Outputs	
SDI:	1 x BNC

### External Sync Input (\*)

Number of inputs:	1 x BNC
Formats:	Blackburst in SD

### Audio Output

SDI Embedded	
Number of outputs:	Up to 8 mono channels or 4 stereo pairs SDI embedded
Analog Outputs (only XVD 4000, XVD 1000 models)	
Number of outputs:	Up to 4 mono channels or 2 stereo pairs (2 x SUB-D9)
Format:	Balanced analog audio
Sample frequency:	48KHz
A/D Resolution:	24bit

Digital Outputs	
Number of outputs:	<b>XVD 4010, XVD 1010:</b> Up to 4 stereo pairs <b>XVD 4000, XVD 1000:</b> 1 stereo pair
Format:	AES/EBU
Impedance	75 Ω
Sample frequency:	48KHz

### Video decoding

Standard and profile / level:	<b>XVD 4000, XVD 4010:</b> H.264 MP@L3 y HP@L3; 250 kbps to 10 Mbps H.264 Hi422P@L3 (**) MPEG-2 MP@ML; 1 to 15 Mbps (*) MPEG-2 422P@ML; 4 to 50 Mbps (*) <b>XVD 1000, XVD 1010:</b> MPEG-2 MP@ML; 1 to 15 Mbps MPEG-2 422P@ML; 4 to 50 Mbps (*) H.264 MP@L3 and HP@L3; 250 kbps to 10 Mbps (*) H.264 Hi422P@L3 (**)
Aspect Ratios:	4:3, 16:9, AFD, WSS
Decoding Resolutions:	<b>525 (NTSC):</b> 720 x 480, 704 x 480, 528 x 480, 640 x 480, 320 x 240, 176 x 144, 128x96 <b>625 (PAL):</b> 720 x 576, 704 x 576, 544 x 576, 352 x 576, 352 x 288, 176 x 144, 128 x 96

### Audio decoding

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Interface:	10/100/1000 Mbps
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Local distributor:

