



# XVD™ Professional HD-TX2000 HD/SD Video and Audio Encoder

**Achieve high-quality,  
cost-effective  
transmission over  
DVB satellite, COFDM  
microwave and  
broadband IP networks.**

The HD-TX2000 provides DVB/ASI and IP network output for highly efficient, cost-effective live streaming of XVD-HD/SD data packets. Designed for DENG and other live mobile applications, it supports HD-SDI and SD-SDI as input and output (with its associated HD-RX2000 decoder), making it compatible with digital studio and post-production facilities. Users can select from HDTV (1080i or 720p) and SDTV (NTSC or PAL) standards. Compact (80% smaller than conventional HD encoders) and versatile, the HD-TX2000 offers real-time compression of HDTV data at 3-10 Mbps, and SDTV data at 500 Kbps to 5.0 Mbps. It offers full D1 performance in SDTV at as low as 1 Mbps for non-aggressive video, and 3 Mbps for very aggressive content.

The XVD codec system is comprised of the HD-TX2000 Encoder and HD-RX2000 Decoder. This high-performance system enables a substantial increase in bandwidth utilization of satellite, microwave and IP links.

In addition, the XVD Professional HD-TX2000 is built into the new second-generation NewsHound II<sup>SM</sup> backpack DENG encoder and RF transmitter.

## XVD HD-TX2000 Encoder At-A-Glance

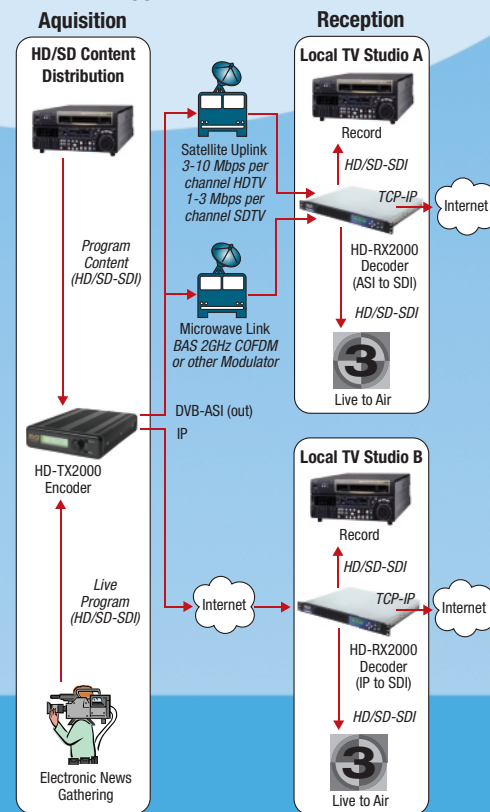
- Realtime HDTV/SDTV encoding
- HD/SD-SDI input
- DVB/ASI and IP network outputs
- 1/5th the size of conventional HD encoders
- AC/DC power options
- ProXVD FEC
- Network Analysis Tools
- Low power consumption
- Light weight (1.2 Kg/2.6 lbs)

**Lower latency, higher  
performance, more  
economical operation...**



Achieve high performance  
with an encode-decode system latency  
of only 200-300 milliseconds - without the  
burden of royalty fees!

### Application Overview



# XVD™ Professional HD-TX2000 HD/SD Video and Audio Encoder



## SPECIFICATIONS

INPUT/OUTPUT	
<b>Video Inputs</b>	HD-SDI: SMPTE 292M, supports 1080i (@ 50/60 Hz) and 720p (@ 60 Hz) SD-SDI: SMPTE 259M-C, supports PAL (625 @ 50 Hz) and NTSC (525 @ 60 Hz)
<b>Video Pre-processing</b>	Noise reduction, adaptive spatial filtering, adaptive motion-compensated temporal filtering
<b>Video Encoding</b>	Proprietary XVD video codec; automatic scene change detection; object motion estimation, CBR/VBR data-rate control
<b>Audio Input</b>	2 channels via analog balanced 600 ohm, SDI embedded (4 channels)
<b>Audio Encoding</b>	Proprietary XVD audio codec
<b>Audio Data-Rate</b>	32 Kbps – 128 Kbps for each stereo pair
<b>Network Interface</b>	One 10/100 Mbps Ethernet port (RJ45 – lockable)
<b>Network Protocol Output</b>	XVD-HD/SD over TCP, RTP, Unicast and Multicast support; real-time network analysis (RTP only); ProXVD One- or Two-Dimensional FEC
<b>DVB/ASI Output</b>	DVB/ASI stream compliant (BNC – female); configurable PID; packet size; stuffing mode
<b>Power Connector</b>	12-24 VDC (XLR 4 pin x 1)
<b>Adaptive Performance Control (APC)</b>	Improved display smoothness over complex frame sequences
<b>Power (AC adaptor)</b>	100-240 VAC @ 50/60 Hz, auto-sensing, 12 VDC output
<b>Power Consumption (typical)</b>	12 Watts (typical)

USER INTERFACE	
<b>Power Indicator</b>	LED
<b>Web-Browser Control</b>	Interface to a complete set of HTML pages for all parameters and controlling unit
<b>System Management</b>	Software upgrade via Ethernet
<b>Front Panel Display: 2 line/16 character LCD</b>	User Configurations: Video resolution, video data rate, audio data rate, source format, other advanced configurations Status Display: Video format, current data rates

VIDEO PERFORMANCE				
	Source Format	Encoding		Data-rate Range
		Resolution	Frame Rate	
Standard Definition (SD)	NTSC	D1: 720 x 480 1/2D1: 352 x 480 CIF: 352 x 240	30 Fps	500 Kbps – 5.0 Mbps 300 Kbps – 3.0 Mbps 100 Kbps – 1.0 Mbps
	PAL	D1: 720 x 576 1/2D1: 352 x 576 CIF: 352 x 288	25 Fps	500 Kbps – 5.0 Mbps 300 Kbps – 3.0 Mbps 100 Kbps – 1.0 Mbps
High Definition (HD)	1080i 59.94 Fps 1080i 60 Fps 1080i 50 Fps	1080i	59.94 Fps 60.00 Fps 50.00 Fps	3.0–10.0 Mbps
	720p 59.94 Fps 720p 60.00 Fps	720p	29.97 Fps 30.00 Fps 59.94 Fps 60.00 Fps	3.0–10.0 Mbps

ENVIRONMENTAL/PHYSICAL	
<b>Operating Temperature</b>	0°C to 60°C (32°F to 140°F)
<b>Cooling</b>	Heat sink only (fanless)
<b>Operating Humidity</b>	0–95%, RHG non-condensing
<b>Storage Temperature</b>	–20°C to 70°C (–4°F to 158°F)
<b>Weight (Installed)</b>	1.2 Kg (2.66 lb)
<b>Dimensions (W x D x H)</b>	160 x 210 x 46 mm (6.3 x 8.3 x 1.8 in)
<b>Warranty</b>	1 year limited warranty - includes up to two firmware updates

©2007 XVD Technology Holding Ltd. All rights reserved. XVD and the XVD logo are registered trademarks of XVD Technology Holding Ltd. (XVDTH) in the U.S. and other countries. All other trademarks are the property of their registered owners. All product and application features are subject to change at XVDTH's sole discretion at any time without notice.

XVD is the world's most advanced real-time video compression technology. Years of development and field testing supports the XVD codec design, providing much higher performance and efficiency than other block-based real-time video compression systems. XVD's patented video codec is optimized for the human visual system, and adds several unique features including: Automatic Scene Changing Detection; Object Motion Detection Estimation; plus CBR/VBR data rate control with configurable window size to improve video quality at dramatically lower data rates. The XVD audio codec also provides high performance at significantly lower data rates, allowing many more audio channels to be carried in any chosen bandwidth.

### LOW LATENCY

*Enjoy both high performance and encode-decode system latency of only 200-300 milliseconds.*

### BANDWIDTH EFFICIENT

*Provides a competitive alternative to VC1 and AVC for a more affordable price*

### NO ROYALTIES

*Unlike with other compression standards, users of XVD compression never pay a royalty of any kind.*



**XVD Corporation**  
10636 Scripps Summit Court  
Suite 126  
San Diego, CA 92131

Tel: +1 858 635-9363  
Fax: +1 858 635-9606  
info@xvdcorp.com  
www.xvdcorp.com