DIBVISION | DIBSYS

ENC3411

Premium MPEG-2 H.264 HD SD Encoder

SDI HDMI CVBS

H.264 MPEG-4/AVC MPEG2



ENC3411, hardware platform has been widely deployed for MPEG-2 and MPEG-4 AVC HD broadcasting applications. For telcos and other IP-based service providers, the encoder is highly bandwidth efficient VBR CBR encoding and native IP output make it possible to deliver exciting and competitive HD services.

With high-quality MPEG-2 H.264 encoding, ENC3411 delivers FULL HD for an immersive experience with high-resolution and high-framerate. It fully supports for SDI/ HD-SDI, CVBS, HD-MI, YPbPr interface inputs encoding, both IP and two identical ASI data outputs, and capable of **simultaneously delivering high and low resolution channels** for new applications. It helps DVB Operator distribute programs with 2 resolutions in one unit ENC3411.

ENC3411 is the industry's HD encoder based on ASIC processing technology and provides full 20-30% compression gain over the first generation of DSP-based MPEG-4 HD encoders.

Features

- Advanced MPEG-2 MP@ML4:2:0 and MPEG-4 AVC 4:2:0 (H.264) video encoding
- ASIC technologies which offer broadcast, video quality, generally video bitrate advised: SD about 1.2mbps, 720p about 2mbps, 1080 about 6-8mbps for lowest bitrates
- HD-MI 1.3a interface, Auto detect the HD-MI input of resolutions
- Support the importation of SDI/HD-SDI, HD-MI, CVBS, YPbPr encoding
- Audio sampling Rates: 44.1 khz, 32khz, 48KHz
- MPEG-1 Layer II, MPEG-2 AAC-LC, MPEG-4 AAC-LC, MPEG-2 HE-AAC, MPEG-4 HE-AAC audio encoding
- Supports unicast and multicast IP output UDP protocol as well as two identical ASI outputs
- WEB Management and local front panel
- Supports resolution: 1080i@50/59.94/60fps, 720p@50/59.94/60fps, 480i, 576i
- DVB compliance with 2 streams output simultaneously: high (HD) and low resolution (SD) channels
- Built-in time base correction and video pre-processing
- Easy-to-Use System Management

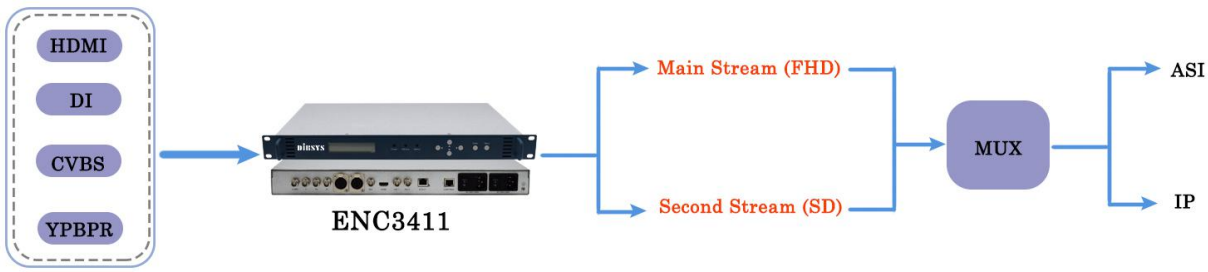
Main Application

- DVB-C Operator Distribute programs with 2 resolutions
- Point to Point video and audio over IP
- Remote live Rebroadcasts and real-time transmission
- Building, campus or metropolitan-area

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Business Benefits

- Help operator distributes 2 resolutions (HD and SD) in one program;
- Especially for DVB-C and community IPTV, Operators can charge for HD programs and free for SD programs;
- One unit ENC3411, no need additional encoding or transcoding;
- Users can choose to watch HD or SD channels;



TECHNICAL SPECIFICATIONS

Input

Video Input	1 x CVBS, 75Ω, BNC 1 x Digital SMPTE 292M (HD-SDI) digital video, BNC 1 x HD-MI 1.3a 1 x YPbPr component video interface, Connector: BNC
Audio Input	analog stereo audio, XLR interface (balanced) HD-MI/SDI embedded audio

Output

DVB Interface	Two identical ASI, Comply to EN 50083-9 ASI Standard, BNC, 75Ω
IP output	100/1000M Base-T Ethernet UDP/RTP output, 2*SPTS and 1*MPTS Simultaneously output Multicast/Unicast supported
Output Format	188 /204 bytes per UDP packet
Output Rate	0.18Mbps~20Mbps

Video Encoding

Main stream

Video format	MPEG-2/H.264 MP@ML 4:2:0
Resolution	1920 x 1080i @60/50/59.94fps, 1280 x 720P@60/50fps, 720 x 480i @60fps, 720x576i @50fps

Second stream

Video format	H.264
Resolution	720 x 480p@30fps, 720x576@25fps

In MPEG-2 encoding, only support SD output.

Bit rate mode	VBR, CBR
GOP Structure	IBBP, IPPP, IBP, IBrBBP

Audio Encoding

Sampling Rates	48KHz, 44.1Khz, 32Khz
Bit rate	64, 128, 192, 256, 320 384kbps
Audio encoding	MPEG-1 Layer II, MPEG-2 AAC-LC, MPEG-4 AAC-LC, MPEG-2 HE-AAC, MPEG-4 HE-AAC
Quantization	24bit
Audio Gain	0 ,+-6db, +-12db

Data Processing

PSI/SI Edition	PMT PID, Video Audio, PCR PID, Service ID Program Name, Service Provider TS id PCR Interval

Management

Interface	1*RJ-45, 10/100 Base-T, for equipment IP Control
Remote Control	Web management
Local Control	LCD display and keypad

Environment

	Comply to GB13837-92 & GB8898-88 standard
Power Supply	AC 100-250V 50/60Hz
Power consumption	20 W
Operation temperature	-10 - 50°C
Storage temperature	-10 - 75°C
Dimensions	450*350*44mm (1RU)
Weight	5Kg

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Related Products

	ENC3411S	ENC3411	ENC3311
video interface	1×SDI, 1×CVBS, 1×YPbPr, 1×HDMI	1×SDI, 1×CVBS, 1×YPbPr, 1×HDMI	1×SDI, 1×CVBS, 1×YPbPr, 1×HDMI
Video Encoding	MPEG-2/SD; MPEG-4 AVC/H264 HD/SD	MPEG-2/SD; MPEG-4 AVC/H264 HD/SD	H.264 HD/SD
Rate Control	CBR/VBR	CBR/VBR	CBR/VBR
GOP	IBBP, IPPP, IBP, IBrBBP	IBBP, IPPP, IBP, IBrBBP	IBBP, IPPP, IBP, IBrBBP
Bit Rate	0.18-20Mbps	0.18-20Mbps	0.25-20Mbps
Resolution	**One-seg** 352*288p/320*240p/320*180p/ 160*120p/160*90p 1920 x 1080I@50/59.94/60fps 1280x720p @50/59.94/60fps 720x480, 720x576	**Main stream** 1920 x 1080i @60/50/59.94fps, 1280 x 720P@60/50fps, 720 x 480i @60fps, 720x576i @50fps **Second stream** 720 x 480p@30fps, 720x576@25fps	1920 x 1080p@50/59.94/60fps, 1920 x 1080I@50/59.94/60fps 1280x720p @50/59.94/60fps 720x480, 720x576
Audio Interface	2*XLR(balanced) SDI/HDMI embed audio	2*XLR(balanced) SDI/HDMI embed audio	2*XLR(balanced) SDI/HDMI embed audio
Audio Encode	MPEG-1Layer2/MPEG2/AAC Audio	MPEG-1Layer2/MPEG2/AAC Audio	MPEG-1Layer2/MPEG2/AAC Audio/AC3 pass through
Audio Channel	1 Stereos	1 Stereos	1 Stereos
Chroma	4:2:0	4:2:0	4:2:0
ASI output	YES	YES	YES
IP out	MPTS/SPTS over UDP/RTP	MPTS/SPTS over UDP/RTP	MPTS/SPTS over UDP/RTP

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