

# ENC3381

Premium FullHD/SD H.264 Encoder

**ENC3381** Power-efficient, Full-featured AVC/H.264 SD/HD Encoder is the best choice for any operator who wants to compress high-definition video using highly efficient MPEG-4 AVC compression. The video inputs can be from SDI or HDMI while the audio input can be embedded audio interface. It provides Simultaneous each or All encoding Channels IP as well as the DVB-ASI outputs that meets MPEG2-TS stream standard.

**ENC3381** is the most advanced HD encoding platform for IPTV, Satellite, Video-to-the-handheld, Cable or Terrestrial DVB-T2, ISDB-T applications available today, and it can distribute Up to 8 Channels **1080p@60fps** and SD Video Signals All in one MPTS as mirrored of ASI to Next digital TV equipment as like Multiplexer, IPQAM Networks and Push 8\*SPTS Over UDP/IP to LAN IPTV Network Simultaneously. With high density, high reliability and advanced compress arithmetic, it is equipped with the latest advances in video compression technology to deliver unsurpassed video quality at low bitrates and low latency. Moreover, it has an ASI input to multiplex the input TS with the 8 encoded SPTS to generate a MPTS output.

**ENC3381** Cable and DTH satellite operators can quickly and efficiently launch new HD services and improve service-carrying capacity by combining several MPEG-4 AVC HD channels in a single statistical multiplex. For Telcos and other IP-based service providers, its highly bandwidth efficient MPEG-4 CBR encoding and native IP output make it possible to deliver exciting and competitive HD services to broadcast operators.



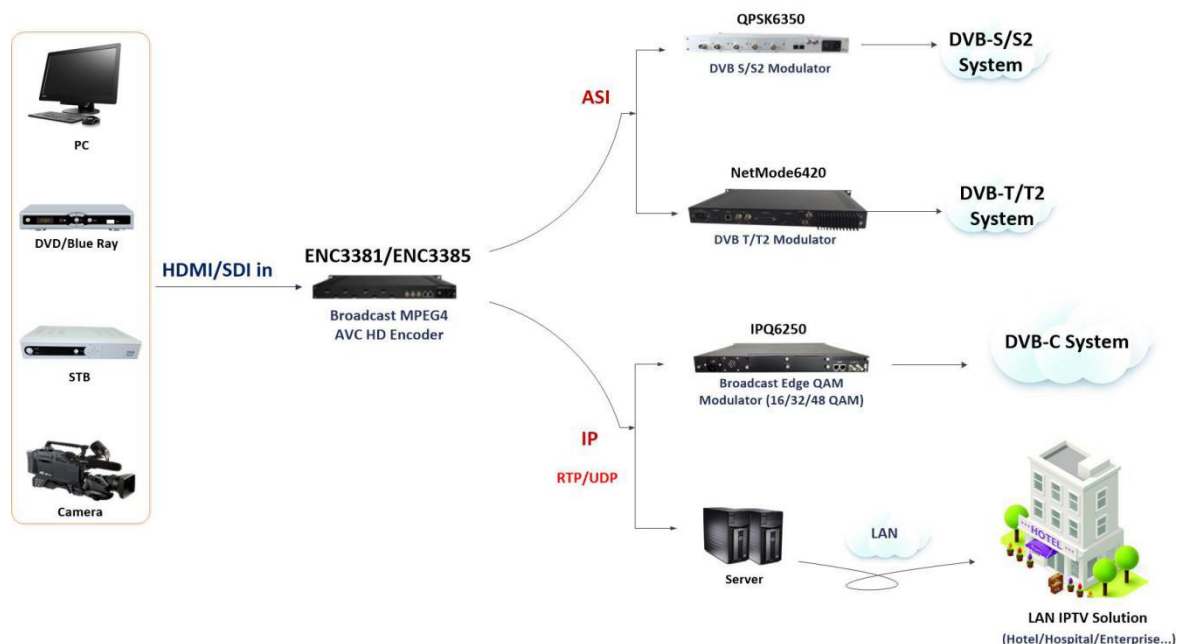
## Features

- 4/8 channels HDMI or HD-SDI per 1RU chassis
- Advanced multiplexing capabilities for cascading and multi-services through DVB-ASI input
- Advanced MPEG-4 AVC HP@L4 video compression
- ASIC technologies which offer best-in-class picture quality,
- Real-time Transport Protocol (RTP) and User Datagram Protocol (UDP) support
- Simultaneous outputs via 8\*SPTS/MPTS over GbE IP Port
- Time to Live (TTL) support
- Selectable Any One SPTS or MPTS over IP as mirrored of DVB-ASI out
- Broadcast-grade HD to SD down converter
- Supports SD/HD formats and frames including 1080p, 1080i,

- 720p, 480i, 576i@50/59.94/60fps
- MPEG-1 Layer2, (HE-AAC(V2) or LC-AAC **option**) audio encoding, AC3 Passthrough for HDMI only
- Feature to adjust the audio volume prior to encoding
- Low delay 50-500 ms available
- PID Remapping & Filtering
- Null Packet Filter & Insertion
- Easy-to-Use System Management via Web and local front panel
- Built-in time base correction and video pre-processing
- Low power consumption and high reliability with MTBF(Mean Time Between Failure)  $\cong$  87600 Hours

## Main Application

- Carrier-grade Cable TV, Satellite Up-link
- Terrestrial DVB-T/T2 and ISDB-T/Tb
- TV studio station
- Video over Coax Cable solution in Hotel, Campus, Enterprise
- 1080p@60fps FullHD Video encoding of IPTV



## TECHNICAL SPECIFICATIONS

### Input Interfaces

Number of Channels	4 or 8 Ports
SD/HD-SDI	(SMPT E 259M-C, SMPTE292M) 800 mVpp nominal, 75Ω, BNC 270Mbit/s, 1.485 Gbit/s ±10 ppm
	HDMI 1.4a, HDCP
	Embedded in SDI, HDMI (1 pairs per video)

### Stream Output

Total Bitrate	1-180Mbps (Should be More than Encoding bitrate) ASI and IP streaming simultaneously
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<b>DVB-ASI</b>	2 identical ASI output, 75Ω, BNC, 188Bytes MPEG-2 TS over DVB-ASI (EN 50083-9)
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<b>RJ45 Port</b>	8*SPTS, 1*MPTS 1000M Base-T GbE Port MPEG-2 TS over UDP, unicast, and multicast streaming MPEG-2 TS over RTP 7x188Bytes Filter Null Packet Null packet insert(SPTS setting) Bitrate 0.5-5Mbps TTL configurable values 0-255
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### TS Multiplexing

DVB-ASI Input	Built-in multiplexer for encoder cascading 75 Ω , BNC type, 188Bytes, ≅ 150Mbps
PSI/SI	PID Remap, SDT Insertion Program Number, Program Name Video/Audio/PMT/PCR PID

### Video Encoding

Video Compression	MPEG-4 AVC /H.264
Profiles and Levels	H.264 Main, High Up to L4.2
Low delay	50-500 ms
Bit rate	0.8Mbps~19Mbps
Encoding Schemes	VBR, CBR
GOP Structure	IBBP
Advanced Preprocessing	Noise reduction, Sharpening

### Audio Encoding

Sampling Rates	48KHz
Bit rate	64, 96, 112, 128, 160, 192, 224, 256, 320, 384kbps
Audio encoding	MPEG-1 Audio Layer AC3 pass through for HDMI only HE-AAC V2, LC- AAC-Option
Quantization	24bit
Audio gain	0-400

### Resolution

Downscale Resolution	1080i/720p to 576p/480p
Encoding Resolution	1920×1080_60P, 1920×1080_50P 1920×1080_60i, 1920×1080_50i 1280×720_60P, 1280×720_50P 720×576_50i, 720×480_60i

### Management

Management Port	Web-GUI, RJ45, 100M
Configuration	Save/Restore/Facture Set/Backup/Load Setting English language
Keyboard	Up, Down, Left, Right, Enter, Esc, Lock Front-panel LCD configuration LED indicate light

### Environment

Electromagnetic Compliance	Comply to GB13837-92 & GB8898-88
Power Supply	AC 100-250V ± 10%, 50/60Hz
Power consumption	25W
Operation temperature	-10 - 50°C
Storage temperature	-10 - 75°C
Dimensions (H x W x D)	440mm x 410(mm) x 44.5mm (1RU)
Weight	4kg

### Products Information

Models	Description
<b>ENC3381</b>	8Channels HDMI Inputs
<b>ENC3385</b>	8Channels SD/HD-SDI Inputs
<b>ENC3341</b>	4Channels HDMI Inputs
<b>ENC3345</b>	4Channels SD/HD-SDI Inputs

## Ordering Information

Product category	Product Model	Detail Description	Application
Related Products	12* HDMI h.264 FullHD Encoder <b>ENC3240</b>	4* HDMI/2* ASI MUX inputs and 2*ASI/1GbE RJ45 Port output per Module, Up to 3 Modules, H.264 Up to 1080p@60/59.94 / 50fps, Mpeg1 L2, SPTS/MPTS 5 Years Warranty	-Cable TV Operator -DTH, Terrestrial, Satellite Uplink -TV Studio Station
	24*HDMI H.264 HD Encoder <b>ENC3281</b>	4* HDMI input per module, up to 6 Modules, GbE RJ45 port, H.264 Up To 1080p30/25fps, MPEG 1 L2, N*SPTS/1*MPTS	-Cable TV Operator -Hotel, Campus -Upgrade Analog to Digital TV <b>-Breakthrough Price !</b>
Companion Products	Carrier-grade IP QAM Modulator <b>IPQ6250</b>	16 QAM no-adjacent/Two GbE IP per Module, 3 Modules/48QAM per 1RU, Annex A/B/C, Multiplexer/Scrambling; 5 Years Warranty	-Cable TV operator -Distribute video to QAM Network
	8Chs MPEG-2/H.264 Magnun SD Encoder <b>ENC3184</b>	Low bitrate; 8*AV(PAL, NTSC, SECAM)/ASI inputs; ASI/IP out; MPEG-2/H.264; MPEG-1 L2/LC-AAC/ HE-AAC V1/HE-AAC	-Cable TV Operator -DTH, Terrestrial, Satellite Uplink -TV Studio Station -IPTV