

# ENC3741

Premium HEVC H.265 4K/FULL HD Encoder



**ENC3741** content in a single slice in real-time via AVC (H.264) or HEVC (H.265), today's most advanced compression standards. Up to 12 HD video channels (4 channels in one module, up to 3 modules) can be encoded on the 1-RU chassis. It provides Simultaneous each or All encoding Channels IP outputs that meets MPEG2-TS stream standard.

**ENC3741** with its wide range of encoding tools, HEVC offers incredible compression efficiency, making distribution and delivery of live HD/4K content available for satellite, cable, terrestrial and fiber networks. All in one MPTS to Next digital TV equipment as like Multiplexer, IPQAM Networks and Push SPTS Over UDP/IP to LAN IPTV Network Simultaneously.

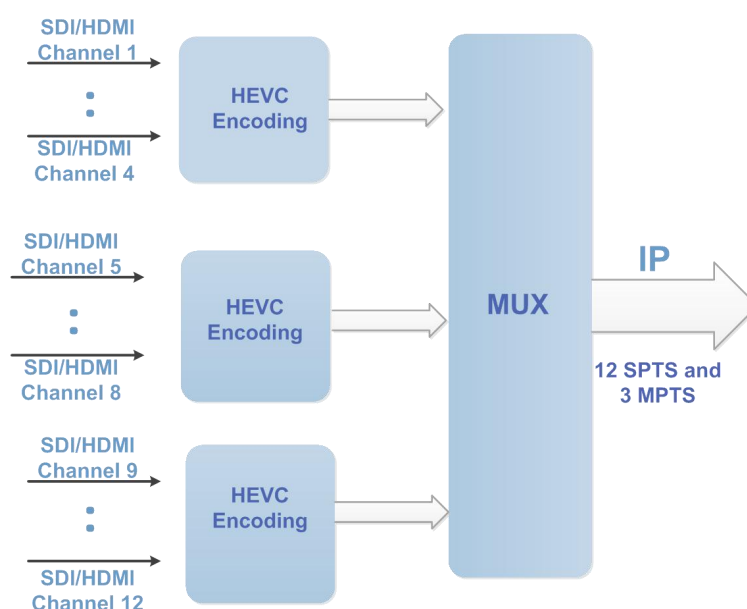
**ENC3741** Power-efficient, Full-featured HEVC/H.265, AVC/H.264 SD/HD/4K Encoder is the best choice for any operator who wants to compress high-definition video using highly efficient HEVC compression. With high density, high reliability and advanced compress arithmetic, it is equipped with the latest advances in video compression technology to deliver unsurpassed video quality at low bitrates and low latency. For Telcos and other IP-based service providers, its highly bandwidth efficient HEVC encoding and native IP output make it possible to deliver exciting and competitive HD services to broadcast operators.

## Features

- 12 HDMI video channels (4 channels in one module, up to 3 modules), SDI interface optional
- HDMI 1.4, HDCP 1.4
- HD single-slice encoding
- Superior real-time HEVC/H.264 420/422 10-bit encoding
- MPEG-1 Layer 2, LC-AAC, HE-AAC, HE-AAC V2 audio encoding
- Support 1080P @60fps input and output
- CBR/VBR video bitrate mode supported
- IP Output 3\*MPTS & 12\*SPTS (1 MPTS and 4 SPTS per module) over UDP and RTP
- Built-in time base correction and video pre-processing
- Supports SD/HD/4K formats and frames including 2160p@30/29.97p, 1080p, 1080i, 720p, 480i, 576i@50/59.94/60fps
- Real-time Transport Protocol (RTP), RTSP and User Datagram Protocol (UDP) support
- PID Remapping & Filtering
- Null Packet Filter & Insertion
- Real-time output bit-rate monitoring
- Web-based user interfaces
- Ethernet software & hardware upgrade supported
- Low power consumption and high reliability with MTBF(Mean Time Between Failure)  $\geq 87600$  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, 8, 12 Ports, 4 channels in one module, up to 3 modules<br>HDMI 1.4, HDCP 1.4, SDI interface optional |
| 4K (only for H.265/HEVC encoding, and supports two channels per module) |                                                                                                         |

### Stream Output

|                  |                                                                                                                                                                                                                                                                        |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RJ45 Port</b> | 1 MPTS and 4 SPTS (per module) output over UDP/RTP, 1000M/100M Base-T Ethernet interface<br>MPEG-2 TS over UDP, unicast, and multicast streaming<br>MPEG-2 TS over RTP, RTSP<br>7x188Bytes<br>Filter Null Packet<br>Null packet insert(SPTS setting) Bitrate 0.5-5Mbps |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### TS Multiplexing

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

### Video Encoding

|                        |                                                                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Video Compression      | HEVC/H.265, MPEG-4 AVC /H.264                                                                                                              |
| Profiles and Levels    | H.264 Main, High Up to L4.2                                                                                                                |
| Chroma                 | 4:2:0                                                                                                                                      |
| Bit rate               | 1Mbps~29Mbps                                                                                                                               |
| Encoding Schemes       | CBR/VBR                                                                                                                                    |
| GOP Structure          | IBBP, IPPP<br>Fixed/Adaptive GOP<br>Hierarchical GOP<br>Open/closed GOP                                                                    |
| Advanced Preprocessing | Noise reduction, Sharpening                                                                                                                |
| Pre-Processing         | Deblocking filter<br>Sample Adaptive Offset (SAO)<br>Asynchronous Motion Partitioning (AMP)<br>Coding Tree Block (CTB) from 16x16 to 64x64 |

### Audio Encoding

|                |                                             |
|----------------|---------------------------------------------|
| Sampling Rates | 48KHz                                       |
| Bit rate       | 64,96,112,128,160,192,224, 256, 320,384kbps |
| Audio encoding | MPEG-1 Layer 2, LC-AAC, HE-AAC, HE-AAC V2   |
| Audio gain     | 0-255                                       |
| Audio delay    | 0~50                                        |

### Resolution

|                     |                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------|
| Encoding Resolution | 1920×1080_60P, 1920×1080_59.94P, 1920×1080_50P, 1280×720_60P, 1280×720_59.94P, 1280×720_50P |
|---------------------|---------------------------------------------------------------------------------------------|

### Management

|                                                  |                                          |
|--------------------------------------------------|------------------------------------------|
| Management Port                                  | Web-GUI, RJ45, 100M                      |
| Each module has independent NMS port management. |                                          |
| Configuration                                    | Save/Restore/Facture/Backup/Load Setting |
| Language                                         | English                                  |

### CONTROL & MONITORING

|  |                                      |
|--|--------------------------------------|
|  | Ethernet software & hardware upgrade |
|  | Dual GbE interfaces for C&C          |
|  | Embedded web server                  |

### 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)     | 328 mm×482mm×44mm (1RU)          |
| Weight                     | 4kg                              |

### Products Information

| Models            | Description                                    |
|-------------------|------------------------------------------------|
| <b>ENC3741-4</b>  | 4Channels HDMI Inputs, SDI interface optional  |
| <b>ENC3741-8</b>  | 8Channels HDMI Inputs, SDI interface optional  |
| <b>ENC3741-12</b> | 12Channels HDMI Inputs, SDI interface optional |

## Ordering Information

| Product category   | Product Model                                         | Detail Description                                                                                                                                                 | Application                                                                                                  |
|--------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Related Products   | 12* HDMI h.264 FullHD Encoder<br><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<br>5 Years Warranty | -Cable TV Operator<br>-DTH, Terrestrial, Satellite Uplink<br>-TV Studio Station                              |
|                    | 24*HDMI H.264 HD Encoder<br><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<br>-Hotel, Campus<br>-Upgrade Analog to Digital TV<br><b>-Breakthrough Price !</b>        |
|                    | 8*HDMI FullHD Encoder<br><b>ENC3381</b>               | 8 HDMI/ASI MUX input ASI/IP out,H.264 Up To 1080p50/59.94/60fps, MPEG 1 L2/AAC 8*SPTS/1*MPTS<br>UDP/RTP out<br>3Years Warranty                                     | -Cable TV Operator<br>-Hotel, Campus<br>-Upgrade Analog to Digital TV<br>-DTH, Terrestrial, Satellite Uplink |
| Companion Products | Carrier-grade IP QAM Modulator<br><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<br>-Distribute video to QAM Network                                                       |
|                    | 8Chs MPEG-2/H.264 Magnus SD Encoder<br><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<br>-DTH, Terrestrial, Satellite Uplink<br>-TV Studio Station<br>-IPTV                     |