

Professional HD/SD/One-Seg SDI Encoder

IMPULSE 310E



The Impulse 310E is a professional versatile MPEG2, H.264/AVC and H.265/HEVC encoder for acquiring, compressing and delivering baseband video and audio content. Via flexible encoding mechanism, it can encode either 4 SDI input channels or 1 SDI input channel with multiple profiles output. With streaming protocols such as UDP, RTP, SRT and RIST, its even easier to deliver broadcast content from remote sites or feed existing systems. Equipped with 2 ASI input, 2 ASI output and 5 gigabit Ethernet ports plus its powerful multiplexing engine, it can achieve all different stream processing requirements. An intuitive web interface is secured by HTTPS and all network services are user-configurable to ensure security on the open internet.

The Impulse 310E is ideally suited for digital cable/terrestrial/satellite TV system, IPTV/OTT system and video delivery system, which requires the high-quality video encoding and reliable video delivery. With enhanced video/audio encoding algorithm, it will bring unprecedented video/audio experience to our target users.

Key Features

- Encode up to 4-CH SD/HD-SDI inputs
- Support the simultaneous HD, SD and one-seg stream output with only one SDI input
- Closed captioning compliant with ARIB STD-824/ ABNT NBR 15606-1 standard
- Powerful multiplexing capability with 2 ASI input, 2 ASI output and 5 gigabit ports
- Support for all of today's most common internet delivery protocols, including SRT and RIST
- Simple and intuitive webUI for configuration and monitoring
- Automation and remote configuration ready

Applications

High-quality video encoding for digital terrestrial system

The Impulse 310E supports all the major video and audio encoding standard and has a good encoding efficiency, so it can well suited for the encoding of video/audio content in digital terrestrial transmission system such as ISDB-T/Tb, DVB-T/T2, 8VSB and DTMB, where the RF spectrum and bandwidth is very limited.

Massive video encoding for Digital Cable and Satellite System

For Digital Cable TV or Satellite TV System, massive video content might be encoded for further delivery. Besides, a lot of legacy equipments have already deployed, so an encoder with powerful multiplexing capability and ASI/IP connectors is ideally suited for such complicated environment.

Multiple profile encoding for IPTV/OTT application

For the IPTV/OTT applications, typically one TV channel will have to be converted into multiples for streaming, so it can be adapted to different size of screen while saving the entire network bandwidth for the service provider.

Reliable content delivery via public Internet

Nowadays more and more content providers start to deliver the video content via public Internet replacing the traditional way of transmission via expensive satellite link. Such reliable Internet transport protocols as SRT/RIST embedded on the Impulse 310E can help transmit the precious video content reliably via public Internet.

SPECIFICATIONS

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Input Interfaces

SD/HD-SDI:	4x 75Ω BNC SDI SMPTE 259M SMPTE 292M SMPTE 424M
ASI:	
Physical Interface:	2x 75Ω BNC
Mode:	Burst, Continuous
TS Bitrate:	250Kbps to 150Mbps
IP:	
Physical Interface:	2x RJ45, 10/100/1000 Auto-Negotiate
Input Format:	UDP or RTP Constant Bitrate(CBR) or Variable Bitrate (VBR)

Output Interfaces

ASI:	
Physical Interface:	2x 75Ω BNC
Mode:	Burst, Continuous
TS Bitrate:	250Kbps to 150Mbps
IP:	
Physical Interface:	5x RJ45, 10/100/1000 Auto-Negotiate (2 ports shared with IP input)
Output Format:	UDP, RTP SRT, RIST (Optional) Constant Bitrate(CBR) or Variable Bitrate (VBR)
IP Encapsulation: Protocols:	1 to 7 TS Packets per IP Packet Unicast & Multicast SRT RIST
IGMP compatibility:	Version 1, 2 & 3
TS Bitrate:	250 Kbps to 50 Mbps (SRT, RIST) 250 Kbps to 150 Mbps (UDP, RTP)

Video Processing

Resolutions:	1080p@23.98, 24, 25, 29.97, 30 1080i@25, 29.97, 30 720p@23.98, 24, 25, 29.97, 30, 50, 59.94, 60 576p@50 576i@25 480p@30, 60 480i@29.97, 30
Low resolution:	320x240P30, 320*180P30
Video Bitrate:	0.25 to 30Mbps
Output Codec/Profile:	MPEG-2 Simple, Main, High Profiles H.264/Mpeg-4 AVC Baseline, Main, High Profiles H.265/HEVC Main Profile

Chroma format:	4:2:0
Sample depth:	8 bit
Audio Processing Codecs:	Dolby Digital (AC-3) Dolby Digital Plus (E-AC-3) LC-AAC HE-AAC MPEG-1 L2
Number of Services:	4x audio pairs/PIDs
Ancillary Data:	Closed Captions (ARIB STD-824/ ABNT NBR 15606-1)
Number of profiles:	up to 3 profiles (HD+SD+one-seg)

TS Manipulation

Regeneration:	PAT, PMT, SDT, NIT, BAT
Passthrough:	TDT/TOT, NIT, SDT, CAT, NIT, BAT Service multiplexing Other PID filtering

Management:

Connector:	1x RJ-45 10/100M Auto Negotiating
Protocols:	HTTP(S), SNMP and Web API
User Interfaces:	Full control via web GU Full control via intuitive front panel
Automation Interfaces:	Full status and control via SNMP Configurable SNMP traps Web services API Syslog message logging
Firmware Updates:	Via Web GUI

Dimensions/Power

Height:	1 RU, 1.72" (44mm)
Width:	19" (482mm)
Depth:	15.9" (404mm)
Power:	100-240 VAC 50/60 Hz
Supplies:	1x AC Internal Connector: IEC 320 C14

Environmental Conditions

Operating Temperature:	32° to 122° F (0° to 50° C)
Cooling:	Software regulated fan
Storage Temperature:	-40° to 149° F (-40° to 65° C)
Relative Operating Humidity:	<95% (non-condensing)

Ordering Information

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