

# Helio Quad™ HD-SDI/ASI+IP

**Real Time Multichannel SD-SDI and HD-SDI MPEG-2/MPEG-4 AVC/H.264 4:2:0 Audio and Video Encoder with SDI/HD-SDI Input. Simultaneous IP (UDP/RTP) and Mirrored DVB-ASI Outputs, MPTS or SPTS. Supports 1080p, 1080i, and 720p. Audio Output is Dolby® Digital® AC-3, MPEG-1 Layer II, LC-AAC, and HE-AAC. Web-based NMS Remote Management plus Front Panel Controls. Option for HDMI Inputs. Cost Effective Broadcast Encoder.**



## Features

- Inputs – 1 to 4 SD-SDI or HD-SDI inputs
- Outputs – Multiplexes transport streams into:
  - Two identical ASI outputs
  - One muxed IP output (one MPTS or 4 SPTS, UDP or RTP)
- Support Static PSIP
- Option for 1 to 4 HDMI inputs instead of SDI/HD-SDI inputs
- Encodes HD-SDI or HDMI to a high-definition 720p or 1080 MPEG-2 or H.264 stream
- Audio Encoding: Dolby Digital® AC-3, MPEG-1 Layer II, LC-AAC, and HE-AAC
- Supports VBR/CBR rate control mode
- Supports EIA 608 & EIA 708 closed captioning in MPEG-2 mode
- Supports PSI/SI editing and inserting
- Supports IP null packet filter
- Dual power supply
- LCD display and front-panel buttons
- Web-based NMS management for remote control
- Firmware updates via web
- Inner drawer-type structural design allows encoding modules to be changed if needed

## Applications

- Backhaul applications
- Send HD or SD video via private IP networks
- Broadcast with subchannels
- Electronic News Gathering (ENG)

## Overview

MPEG-2 is the codec standard used in many parts of the world for broadcast. It is cost effective and very efficient. H.264 is the latest manifestation of video codecs as they evolved from MPEG-1 and MPEG-2. H.264 is a more advanced codec and uses less than 60% of the bandwidth of MPEG-2 for similar resolution and quality. It is now the preferred codec for delivering standard and high definition video for cable, satellite and Telco TV.

DVEO's new MPEG-2/H.264 HD audio & video encoder, the Helio Quad™ HD-SDI/ASI+IP, accepts up to four SDI/HD-SDI inputs. It multiplexes the transport streams into simultaneous MPTS outputs – two mirrored ASI outputs and one IP output.

Audio encoding includes Dolby Digital® AC-3, MPEG-1 Layer II, LC-AAC, and HE-AAC.

The system features NMS Web-based remote management and front panel controls.

An optional version is available with HDMI inputs in place of SDI/HD-SDI inputs.

This product makes a perfect multichannel encoder for budget conscious IP or ASI video delivery, whether you need MPEG-2 or H.264.



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# Inputs/Outputs



# Specifications

## Video Encoding

Inputs:	4 simultaneous HD-SDI inputs (Optional HDMI inputs instead of HD-SDI)
Encoding:	MPEG-2 and MPEG-4 AVC/H.264
Resolutions:	1920x1080 60p, 1920x1080 50p (for MPEG-4 AVC/H.264 only), 1920x1080 60i, 1920x1080 50i, 1280x720 60p, 1280x720 50p, 720x480 60i, 720x576 50i
Bit Rates:	0.5~19.5 Mbps for H.264 encoding 1~19.5 Mbps for MPEG-2 encoding
Rate Control Mode	CBR/VBR
Chroma Sample	4:2:0
Aspect Ratio	16:9, 4:3

## Audio Encoding

Encoding:	Dolby® Digital® AC-3, MPEG-1 Layer II, MPEG-2-AAC, MPEG-4-AAC
Sample Rate:	48 KHz
Bit Rates:	64 kbps, 96 kbps, 128 kbps, 192 kbps, 256 kbps, 320 kbps

## System

Local Interface:	LCD Front Panel plus control buttons
Remote Management:	Web NMS
Low Latency Mode:	Normal, Mode 1, Mode 2
Output:	2 ASI out (BNC type) IP (1 MPTS & 4 SPTS) over UDP, RTP (RJ45, 100M)
NMS Interface:	RJ45, 100M

## Physical and Power

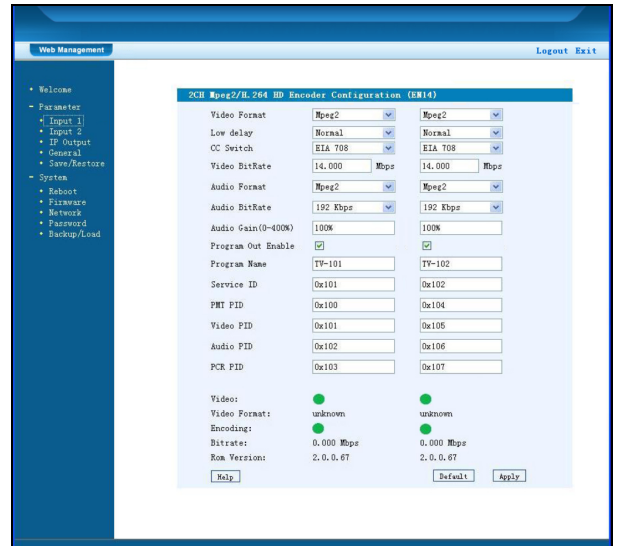
Dimensions:	18.98 x 15.75 x 1.73 inches (W x D x H) 482 x 400 x 44 mm (W x D x H)
Weight:	9.92 lbs (4.5 kg)
Dual Power Supply:	AC 100V~240V, 45W
Power Consumption:	45W
Operating Temperature:	0°C ~ +45°C (32°F ~ 113°F)
Conformities:	FCC, CE, RoHS

# Ordering Info

Helio Quad™ HD-SDI/ASI+IP  
Helio Quad™ HDMI/ASI+IP

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# Sample GUI

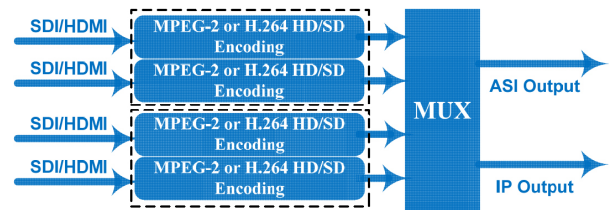


Configuration

# STATIC PSIP Table Supported

PSIP	Program Output
PSIP	Program Name
PSIP	Service Name
PSIP	Program Number
PSIP	PMT PID
PSIP	PCR PID
PSIP	Video PID
PSIP	Audio PID

# Block Diagram



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