

hero Encoder & Decoder

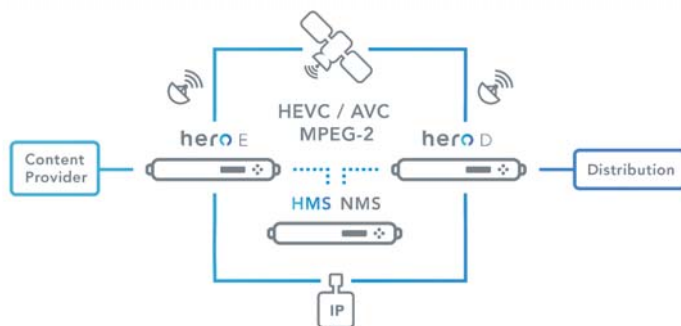


Point-to-Point Encoder / Decoder

4K



HERO Point-to-Point (P-to-P) Encoder-Decoder product line has the quality and versatility to handle the challenges broadcasters and service providers face today for contribution/distribution and point-to-point video delivery over satellite and IP networks. HERO P-to-P is the perfect solution for content gathering, head end feeds and confidence feeds. With its professional quality and proven reliability, it provides the flexibility to deliver high quality HEVC/AVC/MPEG-2 video up to 4K. HERO P-to-P leverages Media Excel's 21+ years of leadership in encoding/decoding technologies to provide an ecosystem-wide video delivery solution.



Applications

- NEWS GATHERING
- CONTENT AGGREGATION
- TELEPORT SERVICES
- DIGITAL TURN-AROUND
- IPTV & OTT CONTRIBUTION
- REGIONAL DISTRIBUTION

Key Features

- Multi-channel, multi-format enabled contribution encoder, distribution decoder for IP/ASI networks
- MPEG-2, H.264, HEVC up to 4K 4:2:2 10bit 60fps
- Live packaging: TS UDP/RTP, RTMP, SRT*
- Highest video quality end-to-end
- Enhanced error resilience and recovery
- REST API for custom integration
- Synchronized encoding from multi-camera inputs
- CPU/GPU Hybrid encoding for best performance and quality

HERO Point-to-point

Delivering exceptional quality and proven reliability, the HERO P-to-P enhances traditional applications including content gathering, head-end & confidence feeds. It has the flexibility to ACCOMMODATE LEGACY AND EMERGING VIDEO COMPRESSION STANDARDS FROM MPEG-2 TO AVC AND HEVC, CREATING A HYBRID AND UNIFIED WORKFLOW within a single encoder unit.

The HERO P-to-P supports both Satellite and IP delivery networks and ensures redundancy across multiple delivery paths to BRIDGE THE MIGRATION GAP FROM CURRENT SATELLITE DISTRIBUTION TO TOMORROW'S IP DELIVERED CDN AND CLOUD SERVICES.

The HERO P-to-P product line features a fully redundant 1RU chassis and Media Excel's state-of-the-art video processing technologies to deliver highly available services for mission-critical applications.

HERO P-to-P offers error-correction and packet-loss free delivery technologies to enable DELIVERY OVER UNRELIABLE TRANSPORTS. Combined with its exceptional encoding efficiency, bandwidth utilization is substantially decreased. The result is a significant reduction in overall operating expenditures for contribution and distribution services.

Input HERO Encoder

INTERFACE

- SD/HD/3G*/12G*-SDI

VIDEO

- SD, 720p, 1080p/i, 2160p
- 23.98, 24, 25, 50, 29.97, 30, 59.94, 60fps

AUDIO

- 8 channel PCM embedded in SDI (~32 tracks for 3G-SDI)
- 8 channel non-PCM embedded in SDI (Dolby Digital)

Output HERO Encoder

VIDEO

- MPEG-2 BL/MP/HP
- H.264 BL/MP/HP L5.2
- HEVC* Main, Main 10, Main 4:2:2 10bit*
- Bitrate 0.1 ~ 80mbps
- VBR, CBR, constant quality VBR
- Frame rate 23.98, 24, 25, 50, 29.97, 30, 59.94, 60fps
- Resolution 480/576i, 720p, 1080i/p, 2160p, custom resolution

- Progressive/interlaced
- HLG/HDR10 w/ BT.2020 WCG Signaling (forcing)

TRANSPORT

- MPEG-2 TS over RTP/UDP, unicast/multicast
- MPEG-2 TS over DVB-ASI *
- HLS, RTMP/RTMPS
- FEC ProMPEG, SRT*

Common Processing

VIDEO

- Timecode sync for multi-camera delivery
- High quality, motion compensated* frame rate up/down conversion
- Resolution up/down conversion

AUDIO

- Audio gain control
- Audio loudness normalization (EBU R128)
- Multiple audio tracks/languages

PROCESSING

- Auto/manual PID selection
- Contrast/Brightness/Gamma control
- Smoothness/Sharpness control
- Frame scaling, cropping with anti-aliasing options
- Source blocking/replacement
- Content-adaptive de-interlacing
- Graphic overlay (4 layers with alpha color), per-video profile
- Dynamic scrolling text
- Dynamic audio normalization, loudness control (EBU-R128)

- Periodic thumbnail generation
- De-blocking & noise reduction filters
- Aspect ratio adaptation

META DATA

- Timecode burn-in
- LTC, VITC, ST-2084, ST-12M
- (Encoder only) CEA 608/708, OP-47, DVB Sub pass-through & burn-in

Chassis

FORM FACTOR

- 1U 19" rack mount
- 25.6" (650mm) deep
- 20lbs (9.3kg)

POWER SUPPLY

- AC 90-264V, 47~63Hz
- 300~400W

ENVIRONMENTAL

- Temperature
- Oper: 10~35°C (50~95° F)
- Storage: -20~60°C (-5~140° F)
- Humidity: 5 ~ 90 %
- Shock: 10G / 11ms in all axis
- Vibration: 0.8G / 5 to 100 Hz

REDUNDANCIES

- Dual hot-swappable PSU
- Up to 6 Ethernet ports, bonding

DISPLAY & INTERFACE

- 32-character LCD w/ keypads for network configuration and power/reset

COMPLIANCE

- FCC Class A
- CE/RoHS 5-compliant
- WEEE-compliant
- EN61000-6-2
- EN55022/24
- EN60950:2000
- UE 89/336/EE
- UE 73/23/EEC

* Optional items: certain features are available in specific models only
NOTE: Specification is subject to change without notice

Input HERO Decoder

INTERFACE

- Dual Ethernet, DVB-ASI* input

VIDEO

- HEVC/H.265 4:2:2 8/10 bit
- MPEG-2, AVC/H.264 BL/MP/HP 4:2:0/4:2:2
- SD, 720p, 1080p/i, 2160p
- 23.98, 24, 25, 50, 29.97, 30, 59.94, 60fps

AUDIO

- Dolby DD*/DD+* (Pass-through)
- AAC-LC, AAC-HE
- MPEG-1 Layer I & II

TRANSPORT

- MPEG-2 TS RTP/UDP, unicast/multicast
- MPTS/SPTS MPEG-2 TS over DVB-ASI *
- HLS, RTMP/RTMPS
- FEC ProMPEG, SRT *
- Service/PID filtering
- On-the-fly format detection & change

Output HERO Decoder

VIDEO

- SD/HD/3G*/12G*-SDI
- SD, 720p, 1080p/i, 2160p
- 23.98, 24, 25, 50, 29.97, 30, 59.94, 60fps

AUDIO

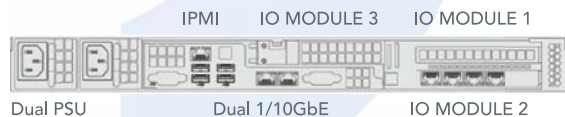
- 8 channel PCM embedded in SDI (~16 tracks for 3G-SDI)

Management

SELF-CONTAINED MANAGEMENT

- Web-based management console
- REST APIs
- Task scheduling
- Configurable audio/visual alarms and SNMP v.2 traps/alarms
- IO, source redundancy
- SDI router control
- Batch, secure remote firmware upgrade
- Import/export/backup of configuration

Product ordering options



IO/PROCESSING MODULE 1 & 2 (TWO OF FOLLOWINGS)

1. HD-SDI Q3G/12G ASI | 1 2 4 8 ports
2. 2p NIC 4p NIC | RJ-45 SFP
3. GPU/SoC HW accelerator (not user selectable)

IO MODULE 3 (ONE OF FOLLOWINGS)

1. Low Profile 2p NIC 4p NIC | RJ-45 SFP
2. Low Profile Q3G/12G-SDI ASI | 1 2 4 ports

CODEC

- MPEG-2, H.264 HP
- +HEVC Main, Main 10
- +HEVC Main 4:2:2 10

RESOLUTION

- Up to FHD 30fps
- Up to FHD 60fps
- Up to UHD 4K 60fps

CHANNEL DENSITY

- 1 2 4 8 CH

* [Contact sales@mediaexcel.com](mailto:sales@mediaexcel.com) for customizable options