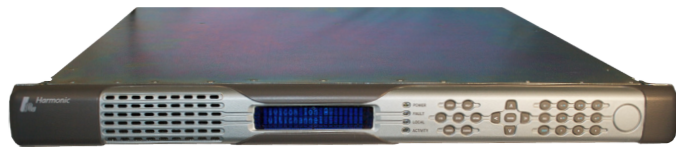


HIGHLIGHTS

- Advanced MPEG-4 AVC MP@L3 video compression
- Low resolution channels option for PiP applications
- MPEG-2 TS
- 4 - channel CBR
- Flexible GOP control with fixed, capped, variable and closed/open GOP choices
- Ultra-low bit rate encoding
- Digital video inputs with embedded audio
- Fixed capability of 12 stereo audio channels
- Dolby® AC-3, AAC/HE-AAC and MPEG1 Layer II native encoding, multi-channel pass-through

As the rollout of MPEG-4 AVC (H.264) services continues, service providers must balance the increasing demand for high-quality digital video services and ever expanding program choices with the mandate to control costs. With more features than other encoders and transcoders in its class, Harmonic's DiviCom® Ion™ AVC multi-channel MPEG-4 encoder is designed to cost-effectively address key deployment and operational issues.

The Ion AVC encoder incorporates four high-quality encoders and twelve stereo audio pairs in a single rack-unit (1-RU) chassis. Leveraging Harmonic's market-leading MPEG-2 and MPEG-4 AVC compression technology, the Ion AVC combines three generations of AVC encoding know-how with the density and cost-effectiveness of the Ion platform.



The Ion AVC's encoding flexibility allows operators to quickly expand their SD service offerings while minimizing capital and operating expenses. Able to deliver four simultaneous MPEG-4 AVC SD channels in high and low resolution formats, operators can increase revenue per program and customer satisfaction by flexibly delivering multiple services to any device.

With its standard IP interfaces, the Ion-AVC is yet another key element of Harmonic's offering of an all-IP virtual headend. Supporting constant bit-rate (CBR) encoding, the Ion AVC is designed primarily with the needs of telco and cable service providers in mind. Telco operators can quickly and efficiently launch SD services by reducing the cost per channel without sacrificing compression efficiency. The Ion AVC is also ideal for switched service delivery architectures that support long tail programming for telco and cable service providers.

BENEFITS OF THE ION AVC ENCODER

- **Performance** - Delivers broadcast-quality video for any type of content at 2.0 Mbps.
- **Software-selectable encoding flexibility** - Operators can deliver MPEG-4 channels in high or low resolution, within a given bandwidth, without compromising video quality.
- **Multiple audio formats** - Supports a large range, from MPEG-1 Layer II, AC-3, AAC/HE-AAC encoding to multi-channel pass-thru.
- **Density** - By offering a fixed configuration of four SD channels and the option for simultaneously delivering low resolution channels for picture-in-picture (PiP), operators can provide multiple, feature-rich services utilizing less space than required in a traditional headend.
- **Flexible video, audio and VBI format conversion** – The Ion AVC encoder offers unequalled flexibility to support various formats, which means that operators are not constrained by the inbound video, audio and VBI format, bit rate and resolution.
- **New applications** – The Ion AVC is well suited for switched architecture and other environments. .
- **Support for all-IP infrastructure** - The Ion platform's native IP interface seamlessly integrates into scalable, low-cost IP networks.
- **Network management** - Harmonic's NMX Digital Service Manager™ simplifies mass configuring, monitoring and automated redundancy in both centralized and distributed architectures.

VIDEO SPECIFICATIONS

Video Compression	MPEG-4 AVC MP@L3
Aspect Ratios	4:3 and 16:9
Vertical Resolutions	576, 480
Horizontal Resolutions	720, 704, 640, 544, 528, 480, 352
Low Resolution	96x96, 128x96
Encoding Bit-Rate	0.3 to 8 Mbps (4:2:0 CBR)
VBI Support	WST (Teletext), Inverted WST, WSS, VPS, AFD, VITC
Closed Captioning	EIA-608 Line 21 (fields 1 and 2) per ATSC CS/TSG-659r1

AUDIO SPECIFICATIONS

Input-type	Embedded in SDI
Number of channels	Up to 3 stereo pairs per video service
Audio Formats	MPEG Layer II, Dolby Digital (AC-3), AAC, HE-AAC native encoding, AC-3 pass-through
Operating Modes	Mono, dual channel, stereo, joint stereo
Encoding Bit-Rate	MPEG Audio Layer II: 56 to 384 kbps Dolby Digital (AC-3): 56 to 448 kbps AAC: 32 to 384 kbps HE-AAC: 32 to 128 kbps
Sampling Frequencies	32 kHz, 44.1 kHz, 48 kHz
THD + Noise	< 0.05% at 1 kHz with 48 kHz sampling
Frequency Response	< 3 dB 20 Hz to 20 kHz at 384 kbps /48 kHz

INPUTS AND OUTPUTS

Video Inputs	4 serial digital component 625-line or 525-line
Audio Inputs	Embedded; up to 3 stereo pairs per video input
Video/Audio Outputs	MPEG-2 transport stream over UDP/IP (redundant 100/1000 BaseT connectors)

SYSTEM MANAGEMENT

NMX Digital Service Manager
Front Panel Control

POWER

Input Voltage Range	85-132 VAC or 170-264 VAC 42-60 VDC
Line Frequency	47-63 Hz
Typical Consumption	60 W per channel

ENVIRONMENTAL

Cooling	9 fans; air flow front to side
Operating Temperature Range	0° to 50° C 32° to 122° F
Storage Temperature Range	-20° to +80° C -4° to +176° F
Operating Humidity	< 95% non-condensing
Electromagnetic Compliance	FCC Part 15 Class A CE Mark (EN 55022 Class A and EN 50082-1:1997)
Safety	UL 1950 and cUL C22.2#950 EN 60950
Compliant with RoHS Directive 2002/95/EC	

PHYSICAL

Dimensions (W x H x D)	48.26 cm x 4.45 cm x 60.69 cm 19" x 1.75" x 24"
Weight	24 lbs. / 11 kg