

HIGHLIGHTS

- Native MPEG Layer II, AC-3, AAC and aacPlus audio encoding (stereo/mono)
- Up to 10 stereo or 20 mono audio channels in 1-RU
- Single PID per mono service (MPEG Layer II compression only)
- Native 100/1000 BaseT IP outputs, optional ASI outputs
- HTTP management interface

While the encoding and delivery of high-quality compressed video is paramount for digital television service providers, offering a compelling line-up of audio services is also important. Harmonic, a recognized leader in advanced digital video solutions, offers a purpose-built product focused on audio-only services, the Audio Encoder. This system delivers an efficient and high density audio encoding solution, with up to ten stereo or twenty mono channels of audio in a single rack-unit (1-RU) chassis.

Audio services—typically consisting of re-broadcasted regional “free-to-air” radio programs plus a selection of music channels grouped by genre—can be a key differentiator when competing for subscribers.

Often, these valuable audio services are provided by utilizing spare audio ports on existing video encoders. While this approach is viable, it is not ideal. As the number of audio-only services grows, the operator will likely encounter complications with cabling, redundancy schemes, and their operational staff’s ability to understand the system. In some cases, the operator may lack the necessary free audio ports to turn on new services.

The Audio Encoder solves these issues. Supporting both IP and ASI output options, as well as a plethora of compression formats, the Audio Encoder is the ideal solution for any digital services network. The Audio Encoder can be managed via a built-in HTTP interface or through Harmonic’s NMX Digital Service Manager™.

- **Future-ready technology-** Supporting native MPEG Layer II and Dolby Digital (AC-3) 2-channel native audio encoding as well as AAC and aacPlus via a license upgrade, service providers can deploy today and move to advanced codecs tomorrow without replacing any hardware.
- **Space and energy efficiency-** The Audio Encoder’s compact footprint conserves rack space, allowing operators to deploy or expand digital services without sacrificing valuable headend real estate, while low power consumption improves cooling efficiency and reduces utility bills.
- **Interoperable with DiviTrackIP™-** Harmonic’s DiviTrackIP provides significant operational advantages and cost benefits by connecting encoders and multiplexers via a switched IP network rather than port-to-port ASI interconnects. With the Audio Encoder, each individual audio service encoded can easily be part of any multiplex, essentially creating a “virtual headend”.
- **Support for all-IP infrastructure-** With native IP interfaces, the Audio Encoder makes it easy to leverage the flexibility, scalability and costeffectiveness of all-IP video transport solutions.





Back Panel View

AUDIO SPECIFICATIONS

Audio Formats	MPEG Layer II 2-channel Dolby Digital (AC-3) 2-channel AAC 2-channel aacPlus 2-channel
Analog Digitizing Resolution	24 bits
Analog Reference Level Adjustments	+4 to -18 dBU reference levels are accommodated. Adjustment places a tone at reference level at -20 db FS before compression is applied.
Operating Modes	Mono, dual channel, stereo, joint stereo
Encoding Bit-Rate	MPEG Layer II: 56 to 384 Kbps Dolby Digital (AC-3): 56 to 448 Kbps AAC: 32 to 384 Kbps aacPlus: 16 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

INPUTS AND OUTPUTS

Audio Inputs	8 to 10 stereo pairs Analog (balanced/unbalanced) Digital (AES3/EBU or S/PDIF)
Audio Outputs	
IP	Redundant 100/1000 BaseT connectors
ASI	Optional; redundant BNC connectors

SYSTEM MANAGEMENT

HTTP Configuration Manager
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	47 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

PHYSICAL

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

