



## DiviCom® Encoder MV 50

### Product Description

The DiviCom® family of broadcast quality video encoders from Harmonic features a compact one rack unit design, full MPEG-2 compliance, excellent picture quality, NMX Digital Service Manager™ support and the endorsement of major broadband service providers worldwide. The product line offers the efficiency, features and performance to address the needs of every service provider.

The MV 50 offers a powerful combination of MPEG-2 compression, features, and proven reliability. The MV50 encoder has a number of features, filters, and intelligent controls to consistently deliver the highest quality video in applications such as satellite and xDSL where bandwidth efficiency matters most.

The MV 50 encoder extends the use of LookAhead technology to predict video complexity and apply filter control. The LookAhead capability is key to DiviTrackXE™, Harmonic's market-leading statistical multiplexing system. New DiviTrackXE features include support for up to 24 encoders in a stat mux pool with individual channel priority control.

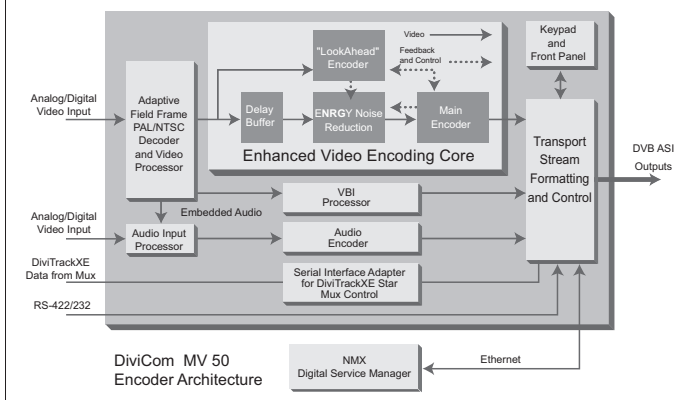
The MV 50 encoder features ENRGY™ integrated noise reduction that enhances proven techniques like Motion Compensated Temporal Filtering (MCTF) and border processing, and adds unique, new filters. These include impulse noise reduction, edge adaptive texture filtering, non-linear spatial filtering and noise level estimation, resulting in exceptional picture quality at lower bit rates.

The MV 50 encoder also supports very low bit rate, last-mile applications.

The MV 50 encoder features a number of audio options, enhanced VBI support, and is integrated with the Harmonic suite of network management tools.

Based on the industry's most widely implemented standards, Harmonic broadcast systems are easy to expand and upgrade.

### Standard Configuration



With over 17,000 encoders shipped worldwide, Harmonic has a proven reputation for outstanding performance and superior service.

### Features

- Dual-pass LookAhead CBR/VBR encoding
- Analog and digital audio/video inputs
- ENRGY integrated noise reduction
- Motion compensated temporal filtering
- Non-linear spatial filtering
- Impulse noise reduction
- Edge adaptive texture filtering
- Noise level estimation
- Border processing
- DiviTrackXE: Intelligent Priority Control
- MPEG-LII and Dolby Digital™ (AC-3) audio encoding
- Up to six stereo/twelve mono audio pairs
- NMX Digital Service Manager support
- Single rack unit chassis

**System Management**

Front Panel Support
NMX Digital Service Manager
Software upgrade via Ethernet

**Physical**

Dimension	1.75" H x 19" W x 24" D 4.45 cm H x 48.26 cm W x 61 cm D
Weight	22 lbs./10 kg

**Power**

Input Voltage Range	85-132 VAC or 170-264 VAC (48 VDC option)
Line Frequency	47-63 Hz
Typical Consumption	110 W

**Environmental**

Cooling	Dual fans; air flow front to side
Operating Temperature	32° to 122° F/0° to 50° C
Storage Temperature	-4° to 176° F/-20° to 80° C
Operating Humidity	< 95% non-condensing
Electro-Magnetic Compliance	FCC Part 15 Class A, EN 55022 Class A, EN 50082-1:1997, CE mark (89/336/EEC)
Safety	UL/cUL 1950, EN 60950, CE mark (73/23/EEC)

**Video Specifications**

Input Formats	Serial digital component or analog composite
Digitizing Resolution	10 bits A/D
SNR	> 52 dB rms
Frequency Response	> -0.3 dB at 4.2 MHz > -0.5 dB at 5.5 MHz
Differential Gain	± 1.5%
Video Input Filtering	Impulse noise reduction, motion compensated temporal filter, edge adaptive texture filter, non-linear spatial filter, noise level estimation
Aspect Ratios	4:3 and 16:9
Repeat Field Detection	On/off
Vertical Resolutions	576 (PAL), 480 (NTSC)
Horizontal Resolutions	720, 704, 640, 544, 480, 352
Encoding Rate	4:2:0 0.5 to 15 Mbps 4:2:2 1.5 to 50 Mbps
Flexible GOP Structures	Dual B-frame support and adaptive I-frame insertion

VBI Support (New VBR VBI Capability)	WINK; NABTS; WST (Teletext); WSS; VPS; AFD
Closed Captioning	ATSC Line 21 CC (EIA-608); XDS; DTVCC (External EIA-708); DiviCom Line 21 CC; DVS-157 CC; ITU-R B0.1294 CC; SAUD CC; DMV1 CC; DVS-157 + SAUD CC

**Audio Specifications**

All MV 50 Audio is based on Advanced Audio Adapter (AAA) Architecture	
Number of Channels	2, 4 or 6 stereo pairs
Input Formats	Digital (AES3/EBU or S/PDIF) or Analog (balanced/unbalanced)
Audio Formats	MPEG audio Layer II and Dolby Digital (AC-3): 2 Ch. encoding or 2/5.1 Ch. pass-through
Analog Digitizing Resolution	24 bits
Analog Input Level Adjustment	0 to +20 dBV in 0.5 dBV steps
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
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

**Ordering Options**

MV 50CBR (Two stereo pairs)
MV 50CBR-C: MV 50CBR w/one AAA (Four stereo pairs)
MV 50CBR-CC: MV 50CBR w/two AAAs (Six stereo pairs)
MV 50VBR (Two stereo pairs)
MV 50VBR-C: MV 50VBR w/one AAA (Four stereo pairs)



All product and application features and specifications are subject to change at Harmonic's sole discretion at any time and without notice.



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