SE-5100/5150

AVC Multi-Format Video Encoder

High Performance MPEG-4 AVC HD/SD Receiver Encoder for VBR and CBR Applications

Highlights Include:

- A real-time, full resolution High Definition and Standard Definition AVC video encoder

- Support for Main Profile Encoding @ Level 4 for HD services and Main Profile @ Level 3 for SD services

- Multi-pass CBR encoding

- Input flexibility
  - Baseband SDI/HD-SDI (selectable HD/SD)
  - IP and ASI inputs
  - Off air RF input (on SE-5150)

- Integrated low resolution proxy (PIP)

- Motion Compensated Noise Reduction (MCTF) in SD mode for enhanced video quality

- Constrained Fidelity (CF-CBR) capped VBR mode

- Statistical multiplexing capability

- Microsoft® Mediaroom™ conformance tested

- Monitoring thumbnail

- Ad insertion support

- Digital Turn Around for MPEG-2 inputs

- Down conversion HD to SD (AFD per S2016-1-2007)

- Transcoding AC3 to DD Plus and HE-AAC

- Trace Feature

- Closed Captioning and Parental Control monitoring

- SNMP interface with published MIB

- Web browser interface

For more information regarding any of these features contact your Motorola sales representative.

This HD/SD platform combines receiver functions with advanced encoding technology to deliver CBR and VBR video services at exceptionally low bit rates. In addition to supporting baseband video, the compact 1RU platform offers support for analog off air, ATSC digital terrestrial and direct MPEG-2 inputs.

The receiver functions dramatically enhance headend architectures, reducing box count, simplifying signal routing and redundancy support. This IP centric platform delivers flexibility, value and exceptional video quality from its advanced multi-pass encoding system. The rich feature set includes HD upgrade option, support for statistical multiplexing over an IP infrastructure, highly efficient HE-AAC audio plus Constrained Fidelity CBR, a capped VBR mode for IPTV environments.

Additionally, the platform offers a low resolution proxy output stream for program guide or monitoring applications. This Linux based platform offers an ASI option for the SE-5100 and is ideal for demanding CBR and VBR applications.

TECHNICAL SPECIFICATIONS

MPEG-4 Features

Motion Estimation:	Supports P, B & reference B frames
	16x16 and 8x8 block sizes
	1/4 Pixel motion estimation
	Weighted prediction
Noise Reduction:	SD Motion Compensated Temporal Filter (MCTF)
Rate Control:	Multi pass encoding with CBR, VBR, and CF-CBR rate control
	Dynamic GOP - adaptive B frame (SD mode)
	Selectable GOP structure
Coding:	CABAC entropy coding
Other:	De-blocking filter

Video Processing

Input:	HDSDI per SMPTE-292M
	SDI per SMPTE-259M
	MPEG-2/UDP/IP
	MPEG-2/ASI
Formats:	1080i/29.97; 720p/59.94
	1080i/25; 720p/50 (HD)
	625i/50; 525i/29.97 (SD)
Embedded Audio:	Per SMPTE-272M/-299M
	4 stereo pairs
MPEG-4 Profile:	Main; Level 4 (HD) Main; Level 3 (SD)
	Low resolution proxy (PIP)

Receiver Inputs (SE-5150 only)

	ATSC digital terrestrial
	NTSC with GCR ghost cancellation

Audio Processing

Mode:	MPEG-1 Layer 2
	HE-AAC (v2) audio encoding
	Transcoding from AC3 to DD Plus and HE-AAC
	Dolby® Digital pass-through
	Dolby Digital 2.0 (optional 2 stereo pairs)
	BTSC audio extraction and SAP from NTSC input

Ancillary Signal Support

Signals:	L21 EIA 608, EIA 708 closed captioning, Teletext

Digital Video Input

Signal:	Serial digital per SMPTE-292M (HD)
	Serial digital per SMPTE-259M (SD)
Connector:	BNC, female
Number:	1

Digital Audio Input

Signal:	Serial digital AES
Connector:	BNC, female
Number:	2

Compressed Stream Output

Ethernet:	3 Gigabit, 1 10/100, RJ-45
IP:	Unicast or Multicast
	Main plus PIP on SPTS MPEG-2/UDP/IP
ASI Output:	2 (Optional), BNC, female
H.264:	MPEG-2 Transport Stream over UDP/IP
	SCTE35 ad insertion splice points from SCTE104 inputs
	MPEG-2 input - Digital turn around over UDP/IP

Control and Status

Type:	Browser interface for single unit control
	SNMPv2 with published MIB
	Linux operating system

Physical

Width:	18.9" (48cm)
Depth:	15.5" (39.4cm)
Height:	1RU, 1.75" (5cm)
Weight:	14 lb
Packaged Weight:	20 lb
Power:	115-230V (continuous), 47-63Hz
Power Consumption:	Less than 100W
Cooling Air:	Front to rear
Temperature:	To 40C

Other

Limited Warranty:	One year
Compliance:	FCC, CE, UL, RoHS and TUV

Ordering

SE-5100	Shown below
SE-5100A	ASI output
SE-5150	RF input

Ordering Options

SE-HD2SD	HD to SD Down Conversion
SE-AC3xDD+	Transcoding AC3 to DD Plus
SE-AC3xAAC	Transcoding AC3 to HE-AAC
SE-DD2	Two stereo pairs Dolby Digital 2.0
SE-HDVBR	HD StatmuxIP support

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