High Performance MPEG-4 AVC HD/SD Receiver Encoder for 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 SD/HD-SDI (selectable HD/SD)
  - IP and ASI inputs
  - Off air RF input (on SE-5050)
- Low power, 1RU chassis
- Motion Compensated Noise Reduction (MCTF) in SD mode for enhanced video quality
- Monitoring thumbnail
- Ad insertion support
- Four Ethernet ports
- Digital Turn Around for MPEG-2 inputs
- SNMP interface with published MIB
- Web browser interface

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

This high definition platform combines receiver functions with advanced encoding technology to deliver CBR 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. This Linux based platform is ideal for demanding CBR 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 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).

### Receiver Inputs (SE-5050 only)
- ATSC digital terrestrial, NTSC with GCR ghost cancellation.

### Audio Processing
- **Mode:** MPEG-1 Layer 2, Dolby® Digital pass-through, Dolby Digital 2.0 (optional 2 stereo pairs).

### Ancillary Signal Support
- **Signals:** L21 EIA 608, EIA 708 closed captioning, Teletext.

### Digital Video Input
- **Signal:** Serial digital per SMPTE-259M (SD), Serial digital per SMPTE-292M (HD).
- **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.
- **H.264:** MPEG-2 Transport Stream over UDP/IP.
- **SCTE35 ad insertion splice points from SCTE104 input.
- **MPEG-2 input - Digital turn around over UDP/IP.

### Control and Status
- **Type:** Browser interface, SNMPv2 with published MIB.
- **Physical:** Linux operating system.
- **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-5011:** Shown below.
- **SE-5050:** RF input.

### Ordering Options
- **SE-DD2:** Two stereo pairs Dolby Digital 2.0.