



ERICSSON EN8190 MPEG-4 AVC HD ENCODER MODULE

MPEG-4 AVC High Definition System Encoder

The EN8190 MPEG-4 AVC HD encoder provides the best MPEG-4 AVC HD compression in the world using new technology, designed from the ground up. In combination with DVB-S2 satellite modulation and Ericsson's PREKOR™ dynamic pre-correction system, which enables operators to gain maximum performance from a satellite transponder, this product enables the most HDTV channels per transponder in the industry.

PRODUCT OVERVIEW

Innovation Delivers Outstanding Coding Efficiency

Based on 18 years of encoder design experience, the EN8190 option module is a radical new design. The EN8190's unique multi-point look ahead supports an iRDO (Interpolating Rate Distortion Optimization) engine that extracts the maximum efficiency possible from the MPEG-4 specification. This efficiency gain coupled with Reflex™ statistical multiplexing typically allows operators to get more HDTV channels into their transmission bandwidth than any other solution

Efficient use of Spectrum

The EN8190 option module delivers compression efficiency that allows;

- 5 HD channels in a typical digital terrestrial transmission channel using DVB-T2
- 7 to 8 HD channels on a typical satellite transponder using DVB-S2 and PREKOR™
- 8 to 9 HD channels on a typical DVB-C cable TV network

Hot Swap Support and Card level redundancy

The EN8190 option module is hot swappable allowing in-field servicing and system expansion without disrupting other on-air channels.

Redundancy management under nCompass Control can be both card and chassis based for ultimate resilience without disruption non failed channels.

OPTION MODULE FEATURES

EN8190 Encoder (VP/HWO/EN8190/ENC)

- The HD MPEG-4 encoder option module supports;
 - Hot swap
 - HD SDI video input
 - Digital AES-EBU and embedded HD SDI audio input
 - MPEG-1 Layer II Audio
 - Dolby® Digital (AC-3) 1-5.1 channel pass-through
 - Fully exhaustive motion estimation
 - Closed caption support input via HD SDI SMPTE 334
 - Conversion of EIA 608 to EIA 708 format closed captions
 - Control via nCompass Control



SOFTWARE OPTIONS

Clarus™ Noise Reduction (VP/SWO/HDMP4/NR)

- Four levels of professional-grade adaptive noise reduction to address the most demanding noisy video sources

Reflex (VP/SWO/REFLEX)

- Enables Reflex statistical multiplexing allowing the encoder to be part of a stat-mux pool of encoders that share their bit-rate using a MX8400 multiplexer
- Reflex statistical multiplexing coupled with the EN8190's unique multi-point look-ahead encoders can deliver over 25% efficiency gain for a typical 12 channel system
- One license required per encoder module

Additional MPEG-1 Layer II Encoding (VP/SWO/M1L2)

- Enables one pair of MPEG-2 Layer II audio encoding
- Up to six additional pairs of audio per encoder module can be supported to make a total of eight pairs per module.

Dolby® Digital Stereo Encoding (VP/SWO/DOLBY/AC3)

- Enables one pair of Dolby® Digital (AC-3) stereo audio encoding
- Up to two pairs per encoder module can be supported

Please contact Ericsson or an approved reseller to confirm which combinations of options are supported.

SPECIFICATIONS

HD MPEG-4 Video and Audio Encoder Option Module

1 to 2 HD MPEG-4 encoder option modules
Full support for module level Hot-Swap

HD MPEG-4 Option Module Inputs

Video

HD SDI serial digital video with EDH error detection and health monitoring

HSYNC support for single PCR operation (option)

Audio

Up to eight stereo pairs embedded on HD SDI

Up to four stereo pairs via AES EBU

Supports both balanced (AES3) and unbalanced (AES3id) digital audio inputs

Video Encoder

MPEG-4 MP@HL Encoding

1 to 20 Mbps

"Pixel Perfect" fully exhaustive motion estimation

Ericsson Reflex statistical multiplexing support (option)

HD Resolutions

1080 x 1920/1440/1280/960i 25

1080 x 1920/1440/1280/960i 29.97

720 x 1280/960/640p 50

720 x 1280/960/640p 59.94

GOP processing includes adaptive GOP structure and adaptive GOP length

Audio Encoder

8 x stereo audio channel processing

MPEG-1 Layer II audio encoding standard

Encoding rates from 32 kbps to 384 kbps

Dolby Digital® (AC-3)

Encoding rates from 56 kbps to 640 kbps (option) - maximum of two pairs

Pass through of pre-encoded Dolby® Digital (AC-3) 1 – 5.1 channel

VANC Data Extraction

SMPTE 334-1 Closed Captions

SMPTE 2016-3 AFD and Bar Data

Advanced Pre-processing

Clarus™ professional grade adaptive spatial & temporal noise reduction offering four adaptive levels (option)

Frame re-synchronization

Features

Internal test tone and test pattern generation

Auto switching on loss of input source to test pattern, last good video frame with selectable text message

Physical and Power

Approximate Weight

0.66 kg per HD MPEG-4 option module

Power Consumption per module

100W

Environmental Conditions

Operating Temperature

-10°C to 50°C (14°F to 122°F)

Operating Humidity

<95% non-condensing