



# ERICSSON VIDEO PROCESSOR CHASSIS

## Video Processor Chassis

The Ericsson TV Video Processor Chassis is a high density, multi-functional, video processing platform. It is designed for the evolving requirements of today's broadcasters.

The Video Processor has a compact 1RU form factor with up to six hot swap option slots with a single PSU or up to four option slots with a dual PSU option, making it an ideal solution for the whole spectrum of high resilience to high density requirements. The Video Processor chassis supports a comprehensive range of video processing options, including SD MPEG-2 and HD MPEG-4 AVC encoding on hot swap option modules.

The platform's modular design allows service providers to upgrade functionality and add new services incrementally, avoiding costly headend upgrades.

The Video Processor Chassis offers broadcasters the most advanced video and audio compression technology available today and is part of Ericsson TV's portfolio of products including receivers, decoders, and descramblers all seamlessly integrated into a complete headend system with nCompass Control by Ericsson.

## PRODUCT OVERVIEW

Ericsson TV's Video Processor Chassis is the basis for the most efficient video compression engines available to the broadcast market.

The platform itself is designed to address both the need for density with up to six option slots and the need for high resilience by making all the option slots hot swappable and the addition of a dual PSU version of the chassis.

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

The Video Processor Chassis supports Ericsson's latest range of encoders.

The SD MPEG-2 EN8100 is simply the most efficient SD MPEG-2 encoder available. It delivers high quality SD video at bit-rates previously unachievable with the MPEG-2 standard. The radical design of the EN8100 is aimed specifically at the most demanding low bit-rate applications. The EN8100 is the ideal MPEG-2 real-time encoder for high performance DTH applications via satellite, digital terrestrial or cable.

The EN8190 is Ericsson TV's third-generation of MPEG-4 AVC HD encoder. The EN8190 breaks new ground by implementing interpolating RDO coding technology for low bit rate high quality HD MPEG-4 compression.

Based on Ericsson's own in house design, the EN8190 pushes encoding efficiency to new levels of excellence beating the previous generation of encoders by up to 25 percent.

## BASE UNIT FEATURES

### Video Processor Chassis

#### VP/CHASSIS/1AC

- Six hot swap option slots
- Single wide ranging AC PSU

#### VP/CHASSIS/2AC

- Four hot swappable option slots
- Dual wide ranging AC PSUs

#### Base Chassis Functionality includes;

- Control via 2 x Electrical Ethernet (100/1000BaseT)
- Data i/o via 4 x Electrical Ethernet (100/1000BaseT)
- 1 Gbps duplex communication to each option slot
- License Key Server to enable software features on option cards
- Multiplexing and transport stream generation
- SI table generation

#### Platform Processing Capacities

- Up to six SD MPEG-2 encoders
- Up to six HD MPEG-2 encoders
- Up to two HD MPEG-4 AVC encoders

## HARDWARE / SOFTWARE OPTIONS

### SD MPEG-2 Encoder EN7100

#### VP/HWO/EN7100/ENC

- SDI, video input
- MPEG-2 MP@ML encoding at 0.256Mbps to 15 Mbps video bit-rate
- Pixel Perfect motion estimation
- RDO encoding for greater efficiency
- E5770 equivalent performance
- De-embedding of 4 audio groups (8 stereo pairs)
- Extensive support for VBI data formats
- Two stereo pairs MPEG-1 Layer II audio encoding
- Dolby® Digital (AC-3) 5.1 pass through with glitch suppression
- Options for up to 3 pairs of Dolby® Digital AC-3
- Options for a further 6 pairs of MPEG-1 Layer II
- Option for Dolby-E to Dolby® Digital 5.1 transcode
- Support for Closed Captions via line 21 and SMPTE 334
- VANC data extraction
- Test pattern and test tone generators
- De-embedding of 8 stereo pairs

### SD MPEG-2 Encoder EN8100

#### VP/HWO/EN8100/ENC

- SDI, video input
- MPEG-2 MP@ML encoding at 0.256 Mbps to 15 Mbps video bit-rate
- Triple pass motion estimation
- Eight point look-ahead and 33 pass interpolating RDO for optimal efficiency
- 15 percent more efficient compression over the EN7100
- De-embedding of 4 audio groups (8 stereo pairs)
- Extensive support for VBI data formats
- Two stereo pairs MPEG-1 Layer II audio encoding
- Dolby® Digital (AC-3) 5.1 pass through with glitch suppression
- Options for up to 3 pairs of Dolby® Digital AC-3
- Options for a further 6 pairs of MPEG-1 Layer II
- Option for Dolby®E to Dolby® Digital 5.1 transcode
- Support for Closed Captions via line 21 and SMPTE 334
- VANC data extraction
- Test pattern and test tone generators
- De-embedding of eight stereo pairs

### HD MPEG-2 Encoder EN8180

#### VP/HWO/EN8180/ENC

- HD SDI, video input
- MPEG-2 MP@HL encoding at 1 Mbps to 25 Mbps video bit-rate
- De-embedding of 4 audio groups (8 stereo pairs)
- Extensive support for VBI data formats
- Two stereo pairs MPEG-1 Layer II audio encoding
- Dolby® Digital (AC-3) 5.1 pass through with glitch suppression
- Options for up to 6 pairs of Dolby® Digital AC-3
- Options for a further 6 pairs of MPEG-1 Layer II
- Options for up to two Dolby-E to Dolby® Digital 5.1 transcodes
- Support for Closed Captions via SMPTE 334
- VANC data extraction
- Test pattern and test tone generators

### HD MPEG-4 Encoder EN8190

#### VP/HWO/EN8190/ENC

- HD SDI, video input
- MPEG-4 MP@HL encoding at 1 Mbps to 25 Mbps video bit-rate
- Interpolating RDO algorithm for up to 25 percent efficiency gains over previous generation of HD MPEG-4 AVC encoders
- De-embedding of 4 audio groups (8 stereo pairs)
- Extensive support for VBI data formats
- Two stereo pairs MPEG-1 Layer II audio encoding
- Dolby® Digital (AC-3) 5.1 pass through with glitch suppression
- Options for up to 6 pairs of Dolby® Digital AC-3
- Options for a further 6 pairs of MPEG-1 Layer II
- Options for up to two DolbyE to Dolby® Digital 5.1 transcodes
- Support for Closed Captions via SMPTE 334
- VANC data extraction
- Test pattern and test tone generators

### External Synchronisation Module

#### VP/HWO/EXTSYNC

- Supports synchronisation of all encoders in the chassis to support single PCR operation
- 10 MHz or HSTNC input



## SPECIFICATIONS

### Output Interfacing

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**Output**

4 x Electrical Ethernet (10/100/1000BaseT)

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### Management

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2 x Electrical Ethernet (10/100/1000BaseT)

SNMP v1/v2/v3, for alarm traps

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User management via front panel, web browser, XML

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nCompass Control by Ericsson support with device level n + m module and chassis level redundancy

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### Physical and Power

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**Dimensions (H x W x D)**

23.50 x 17.40 x 1.75 inches (59.69 x 44.20 x 4.45 cm)

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**Weight**

7.3 kg (16 lbs) with a single PSU

8.3 kg (18.3 lbs) with a dual PSU

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**Input Voltage**

100-240 V AC 50/60 Hz

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**Input Power**

Chassis only 40W

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Up to 300W depending options fitted

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### Environmental Conditions

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**Operating Temperature**

0°C to +50°C

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**Storage Temperature**

-40°C to +85°C

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**Relative Operating Humidity**

10% to 90% (non-condensing)

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### Compliance

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CE marked in accordance with EU Low Voltage and EMC Directives

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**EMC Compliance**

EN55022, EN55024, AS/NZS3548, EN61000-3-2 and FCC CFR47 Part 15B Class A

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**Safety Compliance**

EN60950, IEC60950

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