



ERICSSON CONTRIBUTION ENCODER CHASSIS

Contribution Encoder Chassis

The Ericsson Contribution Encoder Chassis is a high density, multi-functional, video processing platform. It is designed for the evolving requirements of today's broadcasters and network operators.

The chassis has a compact 1RU form factor with up to six hot swappable option slots with a single power supply unit (PSU) or up to four hot swappable option slots with a dual PSU option, making it an ideal solution for the whole spectrum of high resilience to high density requirements. The Contribution Encoder chassis supports a comprehensive range of processing options in the form of hot-swappable modules. These include the highly flexible and future-proof 'x-series' range of encoding card.

The platform's modular design allows service providers to upgrade functionality incrementally, avoiding costly upgrades. It includes a variety of I/O options that provide a uniquely flexible and configurable solution for a plethora of contribution and distribution (C&D) applications.

The Contribution Encoder chassis offers broadcasters and network operators the most advanced video and audio compression technology available today and is part of Ericsson's portfolio of C&D products which also include receivers, decoders, descramblers and control and management software.

PRODUCT OVERVIEW

High Flexibility, Reliability and Serviceability

Ericsson Contribution Encoder 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. A standard IP interface and a wide range of separate I/O options provide interfacing to multiple hybrid networks concurrently. The chassis allows in-field serviceability, portability and system reconfiguration to address the widest range of C&D applications.

Leading High Quality Compression

The Contribution Encoder Chassis supports Ericsson range of CE-x*** (x-series) encoder modules.

The CE-x*** encoder modules unleash the power of MPEG-4 AVC Fidelity Range Extensions (FRExt) enabling broadcasters and operators to capture, archive and distribute content in the best possible quality HDTV. The encoders are built on future-proof software upgradeable platforms capable of encoding MPEG-4 AVC HD 4:2:2 with 10-bit precision up to 1080p50/60 resolutions, while maintaining compatibility with the existing generation of MPEG-2 based networks. The CE-x*** encoder modules effectively enable the full-scale migration to MPEG-4 AVC in contribution and distribution.

Based on Ericsson's own in-house design, the Contribution Encoder Chassis pushes encoding efficiency, serviceability and upgradeability to new levels of excellence.

BASE UNIT FEATURES

Contribution Encoder Chassis

CE/CHASSIS/1AC

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

CE/CHASSIS/2AC

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

Base chassis functionality includes;

- Control via 2x electrical Ethernet (100/1000BaseT)
- Data I/O via 4x electrical Ethernet (100/1000BaseT)
- 1 Gbps duplex communication to each option slot
- License key server to enable software features on option cards
- License Keys stored with processing hardware for maximum portability
- Multiplexing and MPEG-2 Transport Stream generation
- SI table generation

Platform processing capacities

- Up to two CE-x*** encoders
- Multiple concurrent I/O options
- SMPTE 2022 (Pro-MPEG) FEC
- BISS 1/E encryption

SOFTWARE OPTIONS

SMPTE 2022 Forward Error Correction (FEC)

(CE/SWO/PROFEC)

- SMPTE 2022-1/-2 (Pro-MPEG) FEC on a single SPTS/MPTS output
- Support for up to 16 independent FEC on multicast outputs

BISS 1/E encryption

(CE/SWO/BISS)

- Encryption of output MPEG-2 Transport Stream using Basic Interoperable Scrambling Scheme (BISS) for secure contribution links
- Supports BISS Modes 0, 1 and Mode E (as defined in EBU Tech 3292, May 2002)

3D Mode

(CE/SWO/3D)

- Generation of single stream multicast (MPTS) of synchronized full-resolution left and right channels for 3D contribution
- Part of the Ericsson 3D Contribution system together with Simulsync 3D enabled RX8200 receivers

HARDWARE OPTIONS

CE-x* (x-series) encoder modules**

(CE/HWO/CE-x/*)**

- Two slots per module. Up to two modules per chassis depending on configuration.
- 3G/HD/SD-SDI, video input
- MPEG-2 Video and MPEG-4 AVC encoding capabilities
- 4:2:2 and 4:2:0 Chroma sampling modes
- Up to 10-bit precision and 1080p50/60 resolution
- 1 Mbps to 80 Mbps video bit-rate
- Embedded (SDI) and AES-EBU audio input
- Up to eight stereo pairs of audio encoding and pass-through
- VANC data extraction and support for generic VANC (SMPTE 2038)

** Exact capabilities depend on module choice; please refer to CE-x*** datasheet for a more detailed description*

External Synchronisation Module

(CE/HWO/EXTSYNC)

- One slot per module. Up to one module per chassis
- Supports synchronisation of all encoders in the chassis to support single PCR operation
- 10 MHz or HSYNC input

ASI I/O Module

(CE/HWO/ASI/2IN2OUT)

- One slot per module
- 2x ASI MPEG-2 Transport Stream mirrored outputs
- Option for 2x ASI MPEG-2 Transport Stream independent inputs



SPECIFICATIONS

Transport Stream Interfacing

Input

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

Output

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

Physical port redundancy with active-active and active-standby operation

Multicast streaming

Management

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

SNMP v1/v2/v3, for alarm traps

User management via web browser and XML

Support for nCompass Control by Ericsson

Physical and Power

Dimensions (H x W x D)

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

Weight

8.0 kg (17.6 lbs) unpopulated

Input Voltage

100-240 VAC 50/60 Hz

Input Power

40 Watt (chassis only)

Up to 350 Watt (depending on option modules fitted)

Environmental Conditions

Operating Temperature

-10°C to +50°C (14°F to 122°F)

Storage Temperature

-40°C to +85°C (-40°F to 185°F)

Relative Operating Humidity

10% to 90% (Non-condensing)

Compliance

CE marked in accordance with EU Low Voltage and EMC Directives

EMC Compliance

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

Safety Compliance

EN60950, IEC60950