AVP 2000 CONTRIBUTION ENCODER

The Ericsson AVP 2000 Contribution Encoder 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), making it an ideal solution for the whole spectrum of high resilience to high density requirements. The AVP 2000 supports a comprehensive range of processing options in the form of hot-swappable modules. These include the CE-x range of encoding modules, the most flexible and future-proof compression solution for contribution and distribution (C&D) applications.

The platform's modular design allows service providers to upgrade functionality incrementally, avoiding costly upgrades. Already proven as part of Ericsson's deployed 3DTV contribution system, its multi-channel capabilities and variety of I/O options provide the most flexible and configurable solution for high quality content delivery. MPEG-2, MPEG-4 AVC and JPEG 2000 are all supported.

The AVP 2000 features an ergonomic front panel with integral monitor, giving instant user feedback, meeting the demands of the contribution environment, including ease of operations, quick menu access and effective monitoring.

The AVP 2000 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 AVP 2000 Contribution Encoder 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 AVP 2000 allows in-field serviceability, portability and system reconfiguration to address the widest range of C&D applications.

Leading High Quality Compression

The AVP 2000 Contribution Encoder supports Ericsson's range of CE-x Series encoder modules.

The CE-x Series 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, while maintaining compatibility with the existing generation of MPEG-2 based networks. The CE-x Series 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 AVP 2000 Contribution Encoder pushes encoding efficiency, serviceability and upgradeability to new levels of excellence.

BASE UNIT FEATURES

AVP 2000 Contribution Encoder

- Six slot single PSU AVP2000/BAS/1AC, FAZ 101 0196/2
- Four slot dual PSU AVP2000/BAS/2AC, FAZ 101 0196/28
- Six slot dual PSU with Flying Leads AVP2000/BAS/2ACFL, FAZ 101 0196/33

Base Chassis Functionality Includes:

- Control via 2x electrical Ethernet (100/1000BaseT)
- Data I/O via 4x electrical Ethernet (100/1000BaseT)
- License keys stored with option cards for maximum portability
- Multiplexing and MPEG-2 Transport Stream generation
- SI table generation

Platform Processing Capacities

- Up to two CE-x, CExA encoders or six CE-a, CE-aJ2K encoders
- Multiple concurrent I/O options
- SMPTE 2022 (ProMPEG) FEC
- BISS 1/E encryption

Fully Functional Front Panel Operations

A new fully-functional front panel provides complete unit control in mobile environments. Its unique ergonomic new design is the result of development based on industry feedback and includes:

- Rotary control for fast item selection and key-pad for easy value insertion
- High-resolution display for video confidence monitoring
- Audio metering
- Quick access menus specifically designed for mobile operations with customizable shortcuts and ample configuration storage

SOFTWARE OPTIONS

SMPTE 2022 Forward Error Correction (FEC)

(CE/SWO/PROFEC, FAZ 101 0119/12)

- SMPTE 2022-1/-2 (Pro-MPEG) FEC on a single SPTS/ MPTS output only

BISS 1/E Encryption

(CE/SWO/BISS, FAZ 101 0119/9)

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

HARDWARE OPTIONS

CE-x Series Encoder Modules

(CE/HWO/CE-x, FAZ 101 0196/10)

(CE/HWO/CE-xA, FAZ 101 0196/12)

- 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[1]
- 4:2:2 and 4:2:0 chroma sampling modes
- Up to 10-bit precision
- 1 Mbps to 80 Mbps video bit-rate[1]
- Multiple low latency modes
- 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)
- Analoge/SDI switchable input (CE-xA only)

[1] Exact capabilities depend on module and licensing; please refer to CE-x Series datasheet for a more detailed description.

CE-x Series Encoder Licenses

(CE/SWO/CE-x/H264, FAZ 101 0196/16)

(CE/SWO/CE-x/HD, FAZ 101 0196/21)

(CE/SWO/CE-x/422, FAZ 101 0196/17)

Not all Encoder licenses listed, please refer to individual datasheets

CE-aJ2K Series Encoder Modules

(CE/HWO/CE-a/J2k, FAZ 101 0119/79)

- Single slot per module. Up to six modules per chassis depending on configuration
- 3G/HD/SD-SDI, video input
- JPEG 2000 encoding capabilities
- 4:2:2 10-bit operation

CE-aJ2K Series Encoder Licenses

(CE/SWO/CE-a/HDJ2K, FAZ 101 0119/85)

CE-a Series Encoder Modules

(CE/HWO/CE-a, FAZ 101 0196/11)

- Single slot per module. Up to six modules per chassis depending on configuration
- HD/SD-SDI, video input
- MPEG-2 Video and MPEG-4 AVC encoding capabilities[2]
- 4:2:0 chroma sampling modes
- 1 Mbps to 50 Mbps video bit-rate[2]
- 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)

[2] Exact capabilities depend on module and licensing; please refer to CE-a Series datasheet for a more detailed description.

CE-a Series Encoder Licenses

(CE/SWO/CE-a/H264, FAZ 101 0196/22)

(CE/SWO/CE-a/HD, FAZ 101 0196/20)

Not all Encoder licenses listed, please refer to individual datasheets

External Synchronisation Module

(CE/HWO/EXTSYNC, FAZ 101 0119/7)

- 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, FAZ 101 0119/2)

- One slot per module
- 2 x ASI MPEG-2 Transport Stream outputs configured as mirrored or independent
- 2 x ASI inputs for Transport Stream pass-through to SatMod

G703 Module

(CE/HWO/G703, FAZ 101 0119/76)

- One slot per module
- Supports E3 and DS3 output connectivity

GPI/RS-232 Module

(CE/HWO/GPI, FAZ 101 0119/80)

- One slot per module
- Supports GPO relay triggers for “Alarm” and “Failure” modes

NOTE: RS-232 is a future option.

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

Support for nCompass Control by Ericsson

Physical and Power

Dimensions (H x W x D)

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

Weight

8.0 kg (17.6 lbs) unpopulated

Input Voltage

100-240 VAC 50/60 Hz

Input Power

50W (chassis only)
Up to 350W (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, IE60950

Americas
Ericsson Television Inc.

Tel: +1 (678) 812 6300
Email: tvsalesamericas@ericsson.com

Asia Pacific
Ericsson Television Limited

Tel: +852 2590 2388
Email: tvsalesapac@ericsson.com

Australasia
Ericsson Television Pty Limited

Tel: +61 2 9111 4999
Email: tvsalesanz@ericsson.com

EMEA
Ericsson Television Limited

Tel: +44 (0)23 8048 4000
Email: tvsalesemea@ericsson.com

© Ericsson AB. All rights reserved.
Ericsson maintains a policy of product improvement and reserves the right to modify the specifications without prior notice.