

BE7400 SD H.264 or AVS Multichannel Encoder

The Telairity BE7400 is a scalable, fully programmable, low latency broadcast quality multichannel encoder for standard definition video formats. It uses state-of-the-art compression technology (either H.264/AVC or AVS) to achieve more than twice the compression efficiency of the older MPEG-2 standard. The high-density multichannel BE7400 encoding platform addresses the needs of IPTV providers and other customers for quality SD images in as little as 1 Mbps at a highly affordable per-channel price. Like all Telairity encoders, it can be easily upgraded via software to add new or improved features and enhance performance.



Features and Options

Video Encoding Features

- 2 to 4 fully independent channels with I/O per channel pair (1 & 2, 3 & 4)
 - SDI input with option of outputs: dual DVB-ASI, dual IP, or 1 each
 - Composite or Component input with dual IP output
- H.264/AVC - Main Profile, Level 3; or AVS-P2
- Input Video Formats: 576i (PAL), 480i (NTSC)
- Output Horizontal Resolutions: 720, 640, 544, 480, 352, 240/288 (CIF)
- Rate Control – 1.0 to 8.0 Mbps
 - Constant Bit Rate (CBR), Variable Bit Rate (VBR)
- Scene change detection
- Entropy Coding: CABAC or CAVLC per AVC or AVS profiles
- Adjustable Spatial Preprocessing and Deblocking (Loop) Filters

Audio Encoding Features (per channel)

- SD-SDI embedded audio input – per SMPTE 272M
 - Four programs (stereo pairs) per channel: Stereo, Dual Mono, Mono
- MPEG-1 Layer 2 encoding, bit rates: 32 to 384 Kbps
 - MPEG-4 AAC – LC option for better quality at lower bit rates
- Dolby Digital (AC-3) pass-through

Control Features

- On-board Flash memory for fast program upload at boot
- Web browser control via Ethernet interface

Output (maximum of 2 per channel)

- MPEG-2 transport stream over DVB-ASI 75 ohm coax (1 or 2/channel)
- IP Transport stream with TOS over 10/100 Base-T (1 or 2/channel)

BE7400 Multichannel SD AVC/AVS Encoder

Applications

The Telairity BE7400 SD encoder platform offers state of the art AVC or AVS video compression for standard definition television formats in a dense and cost effective 1 RU form factor. Applications include:

- IPTV
- Live Streaming
- Surveillance / Monitoring
- Broadcast Distribution
 - Satellite / Cable / Terrestrial

Benefits

Compact 1RU system for broadcast quality video encoding

Handles up to 4 fully independent SD channels, with up to 4 stereo audio programs per video channel

Based on the fully programmable Telairity-1 video architecture; easy software upgrades to improve quality, lower bit rates, add new options, and convert between AVC or AVS codecs

MPEG-4 AAC-LC option for high audio quality at very low compressed bit rates; Dolby Digital (AC-3) pass-through also supported

“Instant on” two-second startup times

Non-stop design includes dual redundant power supplies. Price includes Telairity unconditional one year service guarantee

Models

- BE7400-2** – Two-channel system
- BE7400-3** – Three-channel system
- BE7400-4** – Four-channel system

Single channel available in

BE7110

1U x 19" x 18" with front panel control

Ordering Information

Part Numbers:

BE7400-2, BE7400-3, BE7400-4

Contents

- BE7000-series Encoding Platform
- Power Cable: IEC to USA plug; optional Euro plug
- USB flash drive with backup copy of encoder firmware and manual

Requirements

- Web browser control system
- SDI input source video
 - SD SMPTE 259M
- Input cables
 - 75 Ohm coaxial with BNC connector
- Output cables (either or both)
 - 75 Ohm coaxial with BNC connector
 - Cat5/6 Ethernet with RJ-45 connector

About Telairity

Telairity, based in Santa Clara, California designs, manufactures and markets video processing solutions for broadcast and professional video applications. Telairity's breakthrough video architecture (Telairity-1™) is the powerful foundation for its real time encoding products which provide outstanding video quality and state-of-the-art video compression to achieve the lowest possible bit rates.

Telairity

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Video Inputs (maximum of 1 per channel)

Input Format: 0, 2, 4 SD-SDI (SMPTE 259M) inputs
 0, 2, 4 Composite or Component (YPbPr) analog inputs

Video Input Formats: 4:2:2 (YCbCr): 576i (PAL), 480i (NTSC)

Frame Rates: 30, 29.97, 25, 24, 23.98 frames per second

Video In: Digital: 1 BNC/channel for 75 ohm coax
 Analog: 3 BNC/channel with adaptors for RCA YPbPr

SDI Loop Out: Matching output BNC per SDI input (only)

Audio Input

Input Format: Embedded in SD-SDI per SMPTE 272M
 Dolby Digital (AC-3) pass-through

External Audio: 2 digital AES + 2 analog L/R stereo pairs per channel (cables optional)

Compressed A/V Output

Output Interface: Digital Video Broadcast – Asynchronous Serial Interfaces (DVB-ASI), 270Mbps, buffered non-inverting
 10/100 Base-T Ethernet for IP

Packet Format: MPEG-2 188-byte Transport Stream (TS) packets in either TS/UDP/IP or TS/RTP/UDP/IP format with optional FEC

Compression Format: H.264 Main Profile, Level 3; or AVS-P2

Compressed Bitrates: User programmable, CBR or VBR, 1 to 8 Mbps/channel

ASI Stream Out: Twist-lock BNC connectors (0, 1, 2 per channel)

IP Stream Out: RJ-45 connectors (0, 1, 2 per channel)

Control

Interface: 1 Ethernet control interface per channel with RJ-45 connector via hub (or switch) to Web browser controller

Control Application: Web browser Interface over Ethernet

SNMP: Reporting Agent (option)

Power Specifications

Input voltage: 100 to 240 VAC (Auto sensing)

Line frequency, Power: 47 to 63 Hz; 61 Watts/channel

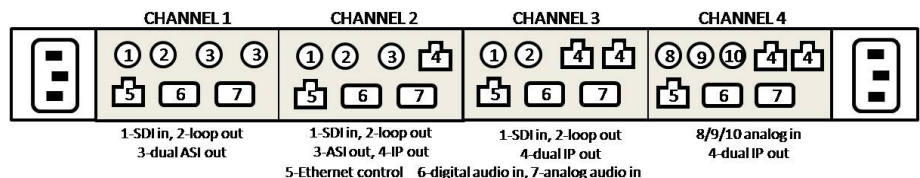
Mechanical Specifications

Dimensions & Weight: 1RU (H) x 19" (W) x 28" (D) rack mountable, 25 lbs.

Environmental Specifications

Cooling: Forced air-cooling side to side

Operating Temperature: -10° to 55°C



BE7400 Back Panel – I/O Configuration Options – Dual-redundant Power Supplies

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