

## BE7200/7400 Multi-Channel SD Encoders

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 at bitrates as low as 2 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.



## BE7200/7400 MultiChannel Economy SD Encoders

### Applications

The Telairity BE7200/7400 encoder platforms offer state of the art 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 or -HE option for high audio quality at very low compressed bit rates; Dolby Digital (AC-3) and Dolby E pass-through also supported

"Instant on" startup times

Non-stop design includes dual redundant power supplies.

### Options

Breakout cables for external audio inputs (digital and analog);

Composite input

Transcoding (MPEG-2, etc.)

G.703/E3 or DS3 output

**Orion DVB-S/S2, DSNG modulator**

### Other Models

Single channel available in **BE7110**  
1U x 19" x 18" with front panel control

## 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
  - Optional Composite input module
- H.264/AVC - High or Main Profile; 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 10.0 Mbps; Constant or Variable Bit Rate (CBR, VBR)
- GOP Mode: selectable fixed length or adaptive
- 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: 64 to 384 Kbps
  - MPEG-4 AAC-LC & -HEv2 options for better quality or lower bit rates (to 12 Kbps)
- Dolby Digital (AC-3) and Dolby E 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 over 10/100 Base-T (1 or 2/channel)

## Ordering Information

Part Numbers:

**BE7200, BE7400**

## 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 H.264/AVC and other advanced encoding and transcoding solutions for broadcast and professional video applications. Telairity's breakthrough video architecture (Telairity-1™) is the foundation for all its real time encoding products, which combine outstanding video quality with state-of-the-art, video compression based on the AVC (H.264 / MPEG-4.10) standard to achieve the lowest possible bitrates.

## 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 analog inputs (option)
Video Input Formats:	4:2:2 for 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 Option: 1 BNC/channel with adaptor for RCA
SDI Loop Out:	Output BNC per SDI input (only)

## Audio Input

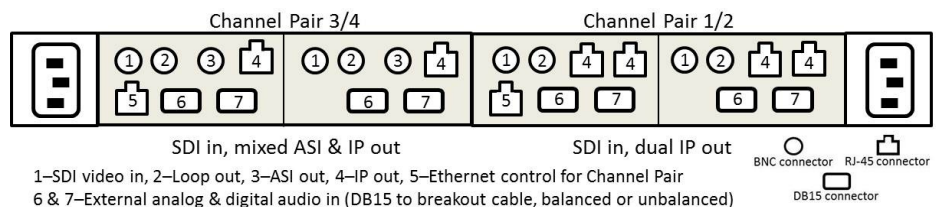
Input Format:	Embedded in SD-SDI per SMPTE 272M Dolby Digital (AC-3) and Dolby E pass-through External Audio: 2 digital AES + 2 analog L/R stereo pairs per channel (cables optional)
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## Compressed A/V Output

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 High or Main Profile; 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)

## System

Interface:	1 Ethernet control interface per channel pair with RJ-45 connector via hub (or switch) to Web browser controller
Control Application:	Web browser Interface over Ethernet
Network Management:	Telairity NMS or standard SNMP
Input voltage:	100 to 240 VAC (Auto sensing)
Line frequency, Power:	47 to 63 Hz; 61 Watts/channel
Dimensions:	1RU (H) x 19" / 48cm (W) x 28" / 71cm (D) rack mountable
Weight:	25 lbs / 11.3 kgs
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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