telairity
Real-Time HD

BE9110 1-Channel SD/Mobile Encoder

The Telairity BE9110 is a scalable, fully programmable, broadcast quality encoder for standard definition and mobile video formats. It combines Telairity's uniquely powerful hardware and software technology with leading-edge video compression (either H.264/AVC or AVS) to achieve industry-leading video quality at very low bitrates, down to 100Kbps. Featuring "instant on" for immediate availability and simple front panel control for quick and sure field operation, the premium ultra-low bit rate BE9110 encoding platform addresses the critical need for high video quality at the lowest feasible bit rates in IPTV, mobile and other applications. 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

- H.264/AVC - High (Level 4), Main (Level 3) and Baseline profiles; or AVS-P2
- Input Video Formats: 576i (PAL), 480i (NTSC)
- Output Horizontal Resolutions: 720, 640, 544, 480, 352, 240/288 (CIF)
- Rate Control
  - Constant Bit Rate (CBR), Variable Bit Rate (VBR)
  - Bit rate : 0.1 – 5.0 Mbps
- Scene change detection
- Entropy Coding: CABAC or CAVLC per AVC or AVS profiles
- GOP mode: selectable fixed length or adaptive
- Spatial Preprocessing, Deblocking (Loop) Filter

Audio Encoding Features

- SD-SDI embedded audio input – per SMPTE 272M
  - Four programs (stereo pairs)
  - Stereo, Dual Mono, Mono
- MPEG-1 Layer 2 encoding, bit rates: 64 to 384 Kbps
  - MPEG-4 AAC –LC & –HEv2 for better quality or lower bit rates (to 12 Kbps)
- 2 AES digital and 2 analog stereo pairs (cables optional)
- 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
- Rapid-reset Front Panel with "two button" selection of 4 programmable profiles

Output

- 2 MPEG-2 transport streams over DVB-ASI
- 2 IP Transport streams over 10/100 Base-T Ethernet

BE9110 High Compression
SD/Mobile Encoder

Applications

The Telairity BE9110 SD encoder platform offers state of the art AVC or AVS video compression for standard definition and mobile formats in a compact and cost effective 1 RU form factor. It excels at ultra-low bit rates, from 2Mbps to 100Kbps, and is targeted to IPTV, ITV, mobile and other applications where the lowest possible bit rates are desired.

Benefits

Compact 1RU system for broadcast-quality SD video encoding

Based on the fully programmable Telairity-1 video architecture; full software upgradeability for easy maintenance and improvements, including conversion between codecs

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

"Instant on" two-second startup

High-performance, high-reliability 9000 series Telairity technology, backed by Telairity's service & support guarantee

Options

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

Composite input

Transcoding (MPEG-2, etc.)

G.703/E3 or DS3 output

Other Models

BE9200/9400 – 2-channel/4-channel models to conserve rack space and lower per-channel costs

Ordering Information

Part Numbers:

BE9110

Contents

- BE9000-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 cable
  - 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.

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Video Inputs

Input Format:	SD-SDI (SMPTE 259M) input; Composite input option; ASI input with transcoder option
Video Input Formats:	4:2:2 for PAL and NTSC
Frame Rates:	30, 29.97, 25, 24, 23.98 frames per second
Digital Video In:	1 BNC Connector (SDI) for 75 ohm cable
SDI Loop Out:	1 BNC Connector

Audio Input

Input Format:	Embedded in SD-SDI per SMPTE 272M
	Dolby Digital (AC-3) and Dolby E pass-through
	External input: 2 AES and 2 Analog stereo pairs

Compressed A/V Output

Output Interface:	2 Digital Video Broadcast – Asynchronous Serial Interfaces (DVB-ASI), 270Mbps, buffered non-inverting
	2 10/100 Base-T Ethernet
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 (L4), Main (L3) & Baseline profiles; or AVS-P2
Compressed Bitrates:	User programmable: 0.1 to 5 Mbps, CBR or VBR
ASI Stream Out:	2 BNC Connectors
IP Stream Out:	2 RJ-45 Connectors

Control

Control Application:	Web browser interface over Ethernet
Direct Presets:	User programmable front panel control
Status Monitoring:	Temperature, Power Supply operation; Input video errors
SNMP:	Reporting Agent (option)

Power Specifications

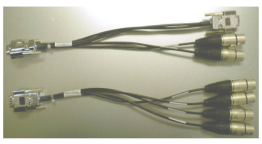
Input voltage:	100 to 240 VAC (Auto sensing)
Line frequency:	47 to 63 Hz
Power consumption:	135 Watts

Mechanical Specifications

Dimensions & Weight:	1RU (H) x 19” (W) x 18” (D) rack-mountable, 15 lbs.

Environmental Specifications

Cooling:	Forced air-cooling front to back
Operating Temperature:	-10° to 55°C



Optional breakout cables for external audio input

BE9110 back panel with Composite In option