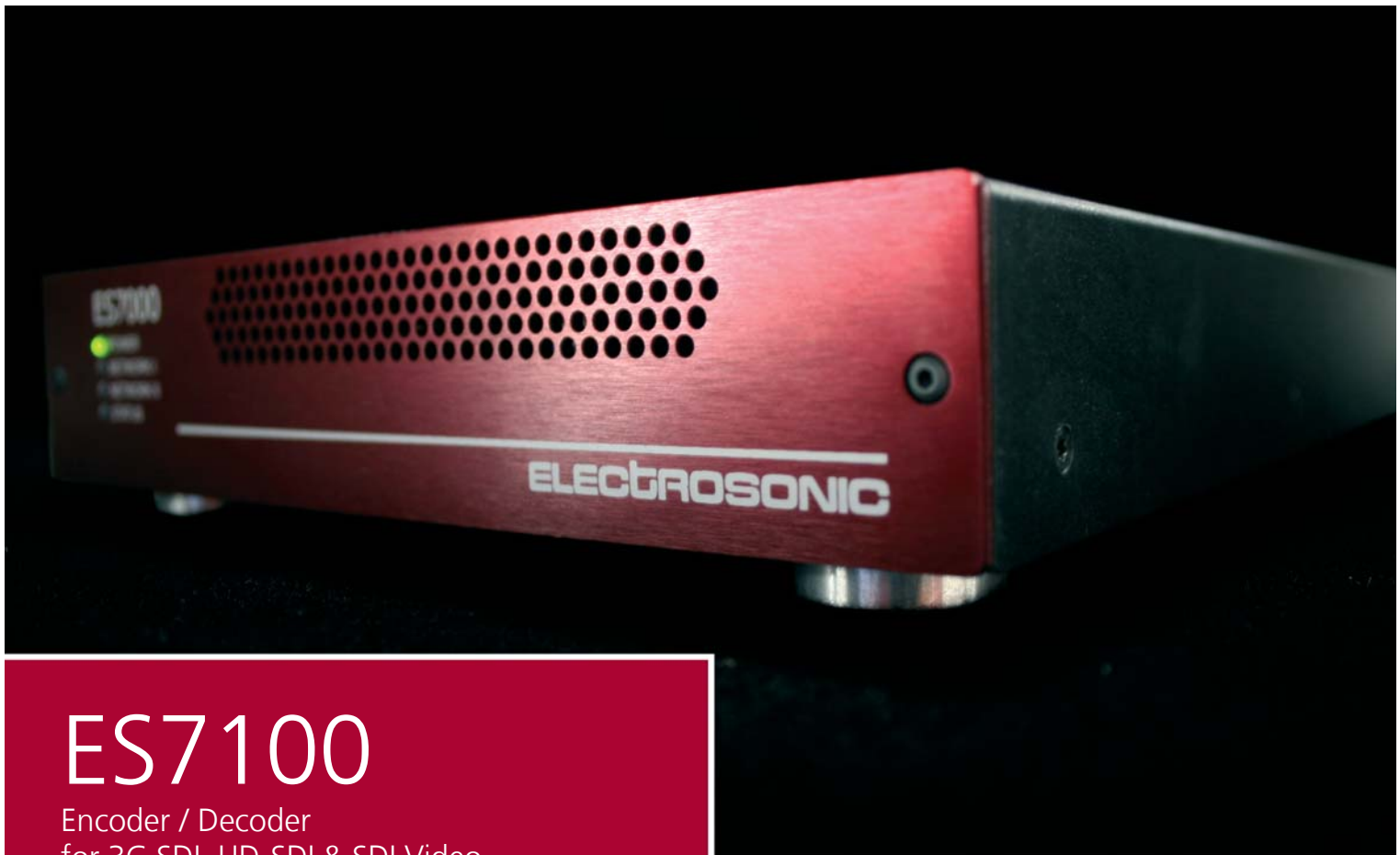


ES7100

Encoder / Decoder
for 3G SDI, HD-SDI & SDI Video

Broadcast Video over Networks





ES7100

Encoder / Decoder
for 3G SDI, HD-SDI & SDI Video

The ES7100 is a uniquely versatile encoder and decoder for streaming video over any type of IP network. It has created a new level of performance by producing excellent image quality at highly efficient bit rates and low latency. It provides exceptionally robust protection against network errors making it ideal for quality critical applications.

Applications

- Delivery of Contribution and Distribution feeds
- Studio to Studio Media Exchange
- Live Event Streaming
- Interactive Broadcasts

Highlights

- Video Over IP - 3G SDI, HD-SDI and SDI
- Video Bit Rate from 500kb/s to 300Mb/s
- 10 Bit YCrCb 4:2:2 Encoding
- Supports Resolutions up to 1080p/60Hz
- Switchable between Encode and Decode Operation
- Upgradeable from SDI to 3G SDI
- Genlockable to External Sync
- Browser Interface for Remote Management
- SNMP: Method and/or Network Monitoring
- Alarm: Relay Contact Closure on D-type Connector

Cost Effective Design

For maximum flexibility the ES7100 features switchable encode or decode operation and its multi-point distribution can be expanded by adding additional ES7100 units to the network. In addition, any ES7100 can be upgraded to HD-SDI or 3G SDI operation.

Extensive Bit Rate Management

The ES7100 provides automatic or manual bit rate controls to optimize the encoding quality and manage bandwidth use.

Controls for:

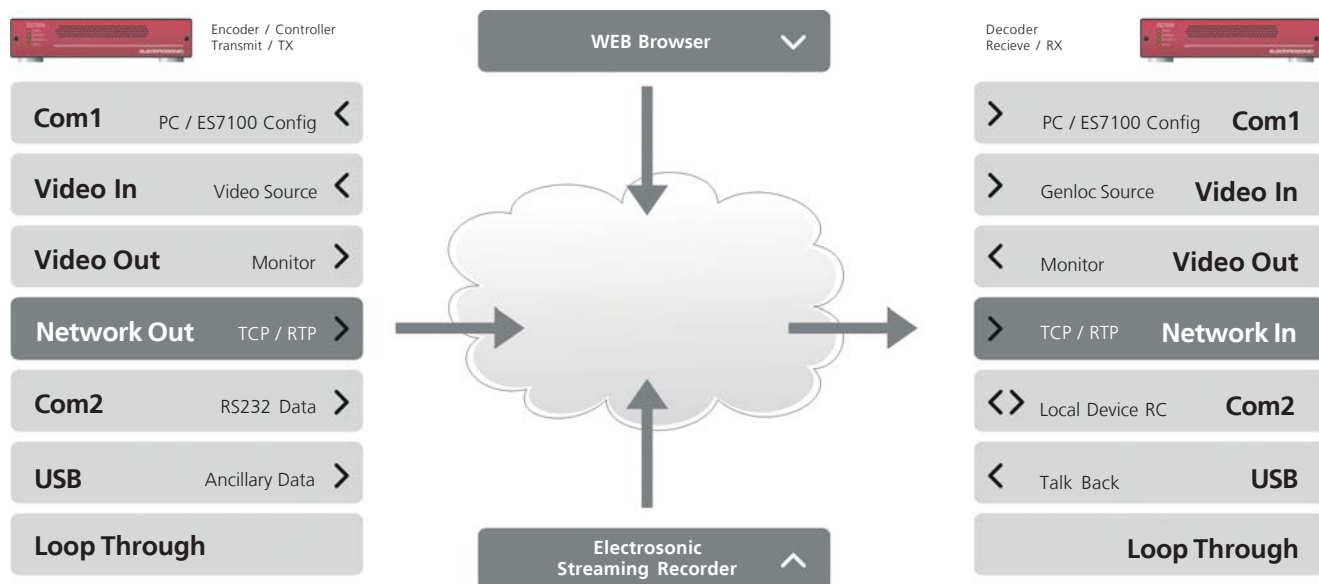
- Spatial Compression
- Temporal Processing
- Color or Motion Sensing
- VBR and CBR Bit Rates

Network Flexibility

The ES7100 does not require a dedicated network or a network that is error corrected. It supports both Unicast and Multicast transport protocols. Real-time network error concealment ensures reliable video quality.

Superior IP Transport

- High Bit Rate Efficiency
- Visually Lossless Compression
- Highly Resistant to Network Errors
- Point to Multi-Point Transport
- High Throughput - Up to 3G SDI
- Low Latency Encode and Decode – 35ms
- Constant Latency Independent of Bit Rate



Product Codes

- ES7100-SD** 1Ch. SDI video
- ES7100-HD** 1Ch. HD-SDI or SDI video
- ES7100-3G** 1Ch. 3G SDI, HD-SDI or SDI video

Standard configuration includes genlock and 4 channels of embedded audio (2 ch. matched stereo pairs).

Electrosonic's PURE³ Codec features both spatial and temporal image compression; a guarantee of transparent image quality further enhanced by 4:4:4 sampling and the lack of pre and post filtering. The PURE³ Codec eliminates the management of forward error correction while still providing robust protection against network errors.

The PURE³ codec preserves the three performance factors which regularly challenge the delivery of video over networks: low latency, low bandwidth and high image quality. The result is a pure and uncompromised image quality.



Physical

Front panel:

LED indicators for Power, Network 1 & 2 traffic, Status and Alarm test push button Back panel connections:

Mechanical

- Size:** (W/D/H) 215 x 310 x 55mm / 8.5 x 12.2 x 2.1inches; including feet
- Weight:** 1.7 kgNet
- Power:** Connection 12V DC 6A maximum; 100-240VAC 50/60 Hz
- Consumption:** 30W typical, 60W maximum
- Temperature:** Operating range 41° – 95°F (5-35°C) Relative humidity, 85% maximum (non condensing)
- Supplied Accessories:** 6 Amp Power supply
- Options:**
Video - Encode only Decode only Upgrade to HDSDI Upgrade to 3GSDI
- Audio- Embedded, uncompressed in blocks of 4 Channels up to a maximum of 8 blocks.
- Transport - SFP optical connector
SFP copper connector
- Rack Mount:** 19" x 1u(h) panels for single and dual ES7100 mounting
- Conformance:**
CE EN55022: Class B
EN55024: Class B
EN60950: Part 15 Class B
- UL: 60950
- FCC: Part 15 Class B
- Accessories:**
Audio - 4Ch audio (2 stereo pairs) for ES7100, ES7200,
- Rack Mount- ES7100 Rm1 single ES7000 series 19" x 1u rack mount front panel
ES7100 Rm2 dual ES7000 series 19" x 1u rack mount front panel



Rear panel:

- Power** 12v, 6A connector (locking)
- Network** x1 10/100/1000BaseT Ethernet connector (RJ45)
x1 1000Base-SX optical or Ethernet interface (SFP)
- Video** x1 video in (BNC)
x1 video out (BNC)
x1 loop through (BNC)
- Coms** x2 Rs232 Serial Interface (9 Pin-D)

* x2 USB 2.0 Type A host connectors are provided for future expansion

Transport & Resolution

- ES7100-SD** SMPTE 259M: 525i/59.94Hz, 625i/50Hz; SMPTE 259 M Level C 10 bit, 4:2:2 YCrCb
- ES7100-HD** SMPTE 274M: 1080i 50/59.94/60Hz 10 bit, YCrCb 1080p @23.97/24/25/29.97/30Hz 10 bit, 4:2:2, YCrCb
SMPTE 296M: 720p @ 23.97/24/25/29.97/30/50/59.94/60Hz; 10 bit, 4:2:2, YCrCb
- ES7100-3G** SMPTE 424/425M Level A SMPTE 274M: 1080p @50/59.94/60Hz; 10 bit, 4:2:2, YCrCb

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