

# AvediaStream Encoders



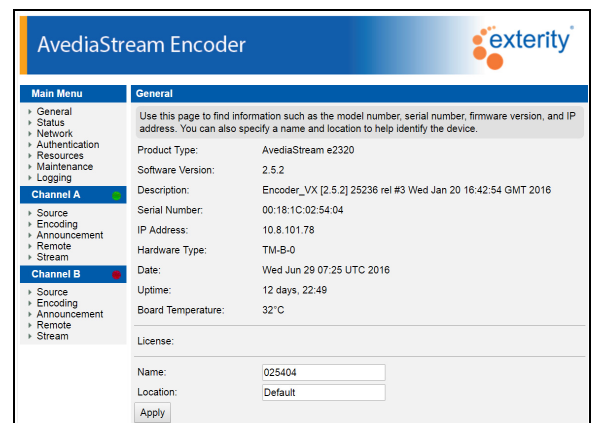
## Datasheet (avstr-e2320)

### AvediaStream e2320 Encoder

Create

The AvediaStream e2320 encoder streams video (e.g. news, sports, entertainment, educational) channels over your existing network. It encodes and distributes content from a wide range of sources such as DVD Players, set-top boxes and digital cameras to an IP network. The e2320 is a dual encoder so can stream simultaneously from two independent video sources.

- Outputs MPEG-2 Transport Streams over UDP or RTP as IP multicast or unicast
- Dual encoder in single blade for cost-effective installations
- MPEG-2 or H.264 video encoding
- SD or Sub-SD encoding
- MPEG-1 Layer II audio encoding
- Video input options: Composite, SD Component, RGBS, S-Video (adaptor required)
- Audio Input Unbalanced Stereo
- Hot swap blade allows quick and non-intrusive upgrade to existing installations using Exterity chassis options (c1101, c1103, c1210)
- Embedded system for high reliability and low power consumption



## Technical Specification

### Interfaces

#### Video Input:

- Dual inputs providing Composite, Component, S-Video and RGBS
- RCA 1V p-p 75Ω

#### Audio Input:

- Dual Unbalanced Line Level stereo (3.5mm jack socket)
- 2V p-p 75Ω

Dual IR out (3.5mm jack sockets)

802.3 10/100BaseT Ethernet (RJ45 chassis socket)

Serial RS232 Port for local administration (RJ45 chassis socket)

### Streaming

- Single program MPEG-2 transport streams (ISO/IEC 13818-1)
- RTP
- UDP
- IP unicast
- IP multicast
- IGMP Join Group for enhanced switch compatibility
- Up to 80Mbps total stream output

## Management

- Fully integrated with Exterity management tools
- Network administration via SSH, Telnet and SNMP
- Serial RS232 Admin Port
- Terminal Control Interface (TCI)
- HTTP web interface (supported browsers: Firefox, Internet Explorer and Chrome, check with support@exterity.com for version information)
- Event logging via Syslog (local and remote)
- Firmware upgrade via TFTP
- Configuration backup/restore via TFTP

## Channel Management

- Channel announcement via SAP/SDP
- Up to ten simultaneous stream destinations
- Multicast/unicast address selection (automatic/manual)
- Configurable name, number and group membership

## Video Input

- PAL, SECAM, NTSC auto-switching
- Resolutions supported: 525i (480i) 59.94Hz & 625i (576i) 50Hz
- 4:3 / 16:9 aspect ratio
- Wide Screen signaling for automatic aspect ratio switching

## Video Encoding

MPEG-4 part 10 H.264 (ISO/IEC 14496-10)

- High Profile @ Level 3 (profile user configurable)
- Configurable GOP structure

MPEG-2 (ISO/IEC 13818-2)

- Main Profile @ Main Level
- Configurable GOP structure

Closed Captions

Output Video Resolution:

- 525i input: SQCIF (128x96p), QVGA (320x240p), SIF (352x240p), 525i (720x480i)
- 625i input: SQCIF (128x96p), QVGA (320x240p), CIF/SIF (352x288p), 625i (720x576i)
- Bit rate: 128kbps – 15Mbps
- Frame rate: 25Hz – 60Hz
- Constant or variable bit rate

## Audio Encoding

- MPEG-1 Layer II (ISO/IEC 11172-3)
- Stereo encoding bit rate 64kbps – 384kbps
- Mono encoding bit rate 48kbps
- Audio sampling rate 48kHz

## System

- CPU: ARC 500MHz
- RAM: 256MB
- Flash: 128MB (for firmware and configuration)
- OS: Linux 2.6

## Protocols

IP (RFC 791), UDP (RFC 768), TCP (RFC 793), ARP (RFC 826), DNS (RFC 1035), DHCP (RFC 2131), ICMP (RFC 792), IGMP (RFC 3376), TFTP (RFC 1350), HTTP (RFC 2616), Telnet (RFC 318) Syslog (RFC 3164), NTP (RFC 1305), SAP (RFC 2974), SDP (RFC 4566), RTP (RFC 3550), SNMP (v1, v2c -RFC 1901)

## Network

- Linux IPv4 stack
- DHCP or Static IP addressing
- IEEE 802.3u 10/100Mbps MDIX Ethernet

## Dimensions

- L: 275mm x W: 130mm x H: 40mm; weight 0.5kg

## Regulatory

CE:

- EN55022:2010, EN55024:2010
- EN61000-3-2: 2006 +A1: 2009 + A2: 2009
- EN61000-3-3: 2008
- IEC 60950-1:2005 (Second Edition) + Am 1: 2009 + Am 2:2013
- EN 60950-1:2006 + A11:2009 +A1:2010 + A12:2011 + A2:2013

FCC/UL/CSA:

- 47CFR:2011 Part 15, Sub Part B
- ANSI C63-4:2003
- UL60950-1/CSA C22.2 No. 60950-1, Second Edition. Rev. October 14, 2014

## Physical Format

Modular hot swap blade for Exterity chassis

- AvediaStream c1101 providing 1 input
- AvediaStream c1103 providing up to 3 inputs
- AvediaStream c1210 providing up to 10 inputs

## Environment

- Operating: 0 ...+40°C / +32 ... +104°F
- Storage: -20 ...+70°C / -4 ... +158°F
- Operating and storage Relative Humidity: 10-90% (non-condensing)

## Power

DC 24V: 10W Typical, 12W Maximum

## MTBF

Calculated to MIL-HDBK-217F, notice 2: 107677 hours (12.3 years)

## AvediaStream Encoders

			e2320	e3635-std	e3635-pro	e3535	e3655	e3555
INPUT	Source	IR Out (source control)	✓	✓	✓	✓		
		Inputs	2	1	1	1	1	1
	Video Input	Composite	✓					
		S-Video	✓					
		SD Component	✓	✓	✓	✓		
		HD Component		✓	✓	✓		
		RGBS	✓					
		RGBHV		✓	✓	✓		
		HD AV		✓	✓	✓		
	Audio Input	SDI(SD,HD,3G)					✓	✓
		Line Level Stereo Audio	✓	✓	✓	✓		
		Embedded Audio		✓	✓	✓	✓	✓
	OUTPUT	Encoding	PCM Digital Audio		✓	✓	✓	✓
HD 1080p						✓		✓
HD 1080i/720p				✓	✓	✓	✓	✓
SD			✓	✓	✓	✓	✓	✓
H.264			✓	✓	✓	✓	✓	✓
MPEG-2			✓	✓	✓		✓	
HDCPv2 Content Protection					✓		✓	
Video Scaler			✓		✓	✓	✓	✓
MPEG-1 Layer II Audio			✓	✓	✓	✓	✓	✓
Stereo AAC Audio				✓	✓	✓	✓	✓
Streaming		UDP/RTP multicast	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
		UDP/RTP unicast	10	1	10	10	10	10
		HLS			10		10	
	RTSP			✓		✓		

AvediaStream Encoder blades must be installed in an AvediaStream Chassis.