

# AvediaStream Encoders



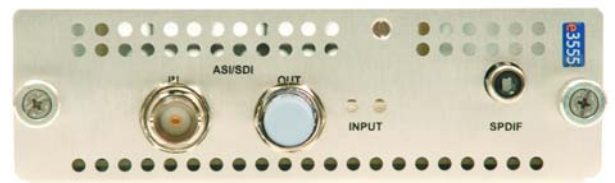
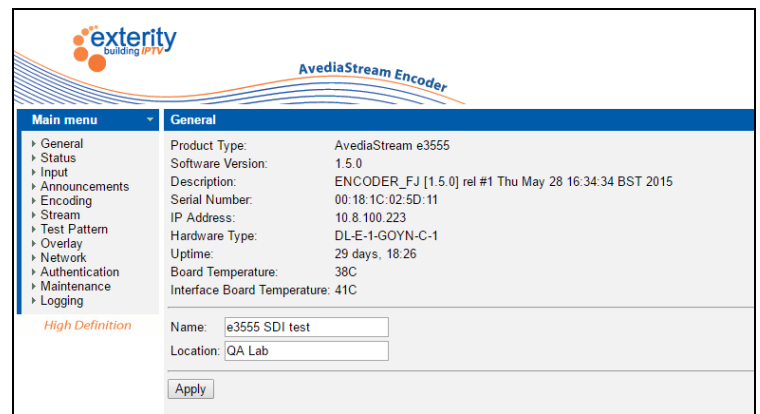
Datasheet (avstr-e3555)

## AvediaStream e3555 Encoder

Create

The AvediaStream e3555 encoder streams pre-recorded and live TV (news, sports, entertainment, educational) HD and SD channels over your existing network. It encodes and distributes content from 3G SDI, HD SDI or SDI broadcast sources such as professional cameras and recorders to an IP network. It can upscale to 1080p or downscale to SQCIF.

- Easy setup
- Accepts 3G/HD/SDI input resolutions and scales to standard TV resolutions
- 1080p, 1080i, 720p, HD, SD or Sub-SD video encoding, MPEG-2 AAC or MPEG-1 Layer II audio encoding
- Frame rate and audio sample rate conversion
- Audio input options: embedded audio or S/PDIF
- H.264 video encoding from devices such as professional cameras and recorders
- Low latency with full multicast delivery flexibility
- Pass-through output for chaining devices.
- Embedded system for high reliability and low power consumption
- Hot swap blade allows quick and non-intrusive upgrade to existing installations using Exterity chassis options, c1101, c1103, c1210. (Hardware version DL-E-x or later required for use in c1210 chassis.)



## Technical Specification

### Interfaces

#### Video Input:

- 3G SDI - SMPTE 424M - Level A only
- HD SDI - SMPTE 292M
- SDI - SMPTE 259M
- (BNC) 1.75V p-p 75Ω

#### Audio Input:

- 3G SDI, HD SDI or SDI (Embedded, single audio pair from eight available)
- S/PDIF Digital Audio (RCA). 0.5V p-p 75Ω

- Single 802.3 10/100BaseT Ethernet (RJ-45 chassis socket)
- Serial RS232 Port for local administration (RJ-45 chassis socket)

### Administration Interface

- Configurable aspect ratio override
- Multicast/unicast address selection (automatic or manual)
- Configure name, number and group membership

## Streaming

- Single program MPEG-2 transport streams (ISO/IEC 13818-1)
- UDP & RTP
- IP unicast
- IP multicast
- IGMP Join Group for enhanced switch compatibility
- Up to 80Mbps total stream output
- Low latency sub-500 msec encoder input to TV display

## Management

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

## Video Input

- HD and SD auto-switching
- Resolutions supported:  
1080p 23.98Hz/24Hz/50Hz/59.94Hz/60Hz, 1080i 50Hz/59.94Hz/60Hz, 720p 50Hz/59.94Hz/60Hz, 525i 60Hz and 625i 50Hz

HD 16:9 aspect ratio

SD 4:3/16:9 aspect ratio

## Audio Encoding

Stereo:

- MPEG-1, Layer 2 or MPEG-2 AAC (LC profile)
- Encoding bit rate 48kbps – 384kbps
- Audio sampling rate 32kHz, 44.1kHz or 48kHz
- Audio sample rate conversion

## MPEG-4 Encoding

HD: H.264 High Profile Level 4.0

SD: H.264 Main Profile Level 3.0

- Sub-SD 100kbps - 10Mbps
- 525i/625i 500kbps - 15Mbps
- 525p/625p 1Mbps - 15Mbps
- 720p 2Mbps - 20Mbps

- 1080i/1080p24 3Mbps - 24Mbps
- 1080p50/60 4Mbps - 30Mbps
- Constant or variable bitrate
- SQCIF, QCIF, CIF, DCIF, QVGA, HVGA, VGA, WVGA, FWVGA, D1, ED, 720p, 1080i, 1080p video resolutions
- Frame rate conversion

## Additional Features

- Watermarking (encode customizable text into stream)
- Test pattern generation
- Automatic streaming of fixed color/test pattern on loss of video

## Network

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

## System

- CPU: MIPS 4Kc 492MHz
- RAM: 64MB
- Flash: 16MB (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), SNMP (v1, v2c -RFC 1901)

## 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

## Power

- DC 24V: 12W Typical, 14W Maximum

## Dimensions

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

## Environment

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

## AvediaStream Encoders

			e2320	e3635 -std	e3635 -hdcp-32	e3635 -hdcp-pro	e3535	e3655	e3555	
INPUT	Source	IR Out (source control)	✓	✓	✓	✓	✓			
		Inputs	2	1	1	1	1	1	1	
	Video Input	Composite	✓							
		S-Video	✓							
		SD Component	✓	✓	✓	✓	✓			
		HD Component		✓	✓	✓	✓			
		RGBS	✓							
		RGBHV		✓	✓	✓	✓			
		HD AV		✓	✓	✓	✓			
		SDI (SD,HD,3G)							✓	✓
	Audio Input	Line Level Stereo Audio	✓	✓	✓	✓	✓	✓		
		Embedded Audio		✓	✓	✓	✓	✓	✓	✓
		PCM Digital Audio		✓	✓	✓	✓	✓	✓	✓
	OUTPUT	Encoding	HD 1080p					✓		✓
HD 1080i/720p				✓	✓	✓	✓	✓	✓	
SD			✓	✓	✓	✓	✓	✓	✓	
H.264			✓	✓	✓	✓	✓	✓	✓	
MPEG-2			✓	✓	✓	✓		✓		
HDCPv2 Content Protection					✓					
HDCP Professional Content Protection						✓				
Video Scaler			✓		✓	✓	✓	✓	✓	✓
MPEG-1 Layer II Audio			✓	✓	✓	✓	✓	✓	✓	✓
Stereo AAC Audio				✓	✓	✓	✓	✓	✓	✓
Streaming		UDP/RTP multicast	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
		UDP/RTP unicast	10	1	10	10	10	10	10	10
		HLS			10	10		10		
		RTSP			✓	✓		✓		

AvediaStream Encoder blades must be installed in an AvediaStream Chassis.