

# AvediaStream e3655



The AvediaStream e3655 encoder delivers HD or SD, MPEG-2 or H.264, streams from the SDI outputs of broadcast video equipment over your existing IP network. Accepts video inputs up to 1080p and encodes at resolutions from 240p to 1080i.

Key features include:

- Outputs MPEG-2 Transport Stream over UDP or RTP as IP multicast or unicast stream
- MPEG-2 or H.264 video encoding
- 1080i, 720p, ED, SD or Sub-SD encoding
- MPEG-2 AAC or MPEG-1 Layer II audio encoding
- Video input options up to 3G SDI
- Audio input options: Embedded audio or S/PDIF
- SDI pass-through output for chaining devices
- Embedded system for high reliability and low power consumption
- Hot swap module allows quick and non-intrusive upgrade to existing installations



e3655 Blade

		e2310	e2320	e3522	e2635	e3635	e3535	e2655	e3655	e3555
Encoding	HD 1080p						✓			✓
	HD 1080i			✓		✓	✓		✓	✓
	SD	✓	✓	✓	✓	✓	✓	✓	✓	✓
	H.264	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MPEG-2	✓	✓		✓	✓		✓	✓	
Video Inputs	Composite	✓	✓	✓						
	S-Video	✓	✓							
	SD Component	✓	✓	✓	✓	✓	✓			
	HD Component			✓	✓	✓	✓			
	RGBS		✓							
	RGBHV				✓	✓	✓			
	HD AV				✓	✓	✓			
	SD SDI							✓	✓	✓
	HD SDI							✓	✓	✓
	3G SDI							✓	✓	✓
Audio Inputs	Line Level Stereo Audio	✓	✓	✓	✓	✓	✓			
	Balanced Audio			✓						
	Embedded Audio				✓	✓	✓	✓	✓	✓
	PCM Digital Audio			✓	✓	✓	✓	✓	✓	✓
	IR Out			✓			✓			

Table 1. Encoder Comparison Table

Chassis

- C1
- C3
- C10

Resolution

- SD
- HD

# Technical Specifications

## Interfaces

### Video Input:

3G SDI - SMPTE 424M,  
HD SDI - SMPTE 292M or  
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  
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

## Channel Management

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

## Management

Fully integrated with Exterity management tools  
Network administration via SSH, Telnet and SNMP  
HTTP web interface (Supported browsers Firefox, Internet Explorer and Chrome)  
Serial RS232 Admin Port  
Telnet Control Interface (TCI)  
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:  
3G SDI: 1080p 50Hz/59.94Hz/60Hz,  
HD SDI: 1080p 23.98Hz/24Hz,  
1080i 50Hz/59.94Hz/60Hz,  
720p 50Hz/59.94Hz/60Hz,  
SDI: 525i 60Hz and 625i 50Hz  
HD 16:9 aspect ratio  
SD 4:3/16:9 aspect ratio

## Video Encoding

MPEG-4 part 10 H.264 (ISO/IEC 14496-10)  
High Profile @ Level 4  
MPEG-2 (ISO/IEC 13818-2)  
Main Profile @ Main Level  
Video resolution: 240p, 525i, 625i, 525p, 625p, 720p, 1080i  
Bit rate: 128kbps – 20Mbps  
Frame rate: 12Hz – 60Hz  
Constant or variable bit rate

## Audio Encoding

MPEG-1 Layer II (ISO/IEC 11172-3)  
AAC  
Encoding bit rate 48kbps – 384kbps  
Audio sampling rate 48kHz

## Additional Features

Watermarking (encode customisable text and logo onto video)  
Test pattern generation  
Automatic streaming of fixed colour/test pattern on loss of video

## System

CPU: ARC 500MHz  
RAM: 512MB  
Flash: 128MB (for firmware and configuration)  
OS: Linux 2.6

## Network

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

## Protocol

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)

## Regulatory

CE:  
EN55022: 2006, EN61000: 2006, EN55024:2003  
IEC 60950-1: 2005 Second Edition /EN 60950-1: 2006  
+ A11:2009

UL/CSA:  
47CFR: 2008, ANSI C63-4: 2003  
CSA 60950-1-07, 2nd Ed. UL 60950-1, 2nd Ed.

## Power

DC 24V: 12W Typical, 14W Maximum

## Physical Format

Modular hot swap blade for Exterity chassis

- AvediaStream c1101 providing 1 input
- AvediaStream c1103 providing up to 3 inputs
- AvediaStream c1110 providing up to 10 inputs

## 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)

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