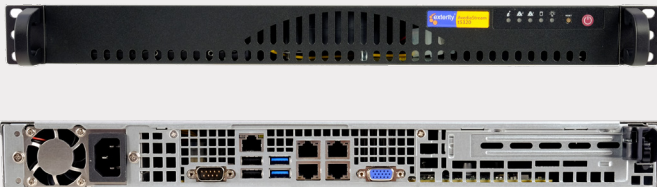
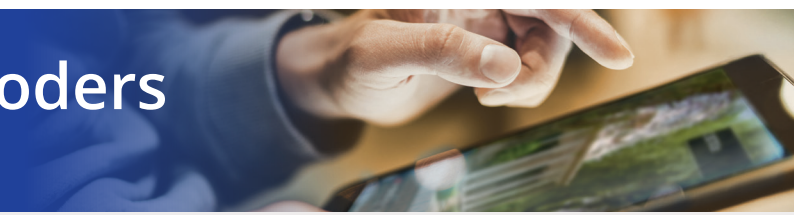


# AvediaStream® Transcoders

Datasheet | avstr-t5320-xx



Delivering high quality TV and video to an unlimited number of users has never been easier. The AvediaStream t5320 transcoder receives and processes 4K UHD, HD and SD content and converts it for direct delivery to IPTV equipment or ongoing delivery to mobile devices through an origin server or CDN.

## Interfaces

- Four 802.3 100/1000 Ethernet (RJ-45) sockets plus IPMI
- Serial, VGA, 4 x USB

## Inbound Streams

- Single program MPEG-2 transport streams (ISO/IEC 13818-1)
  - RTP
  - UDP
  - IP unicast
  - IP multicast via IGMP
- RTMP/RTMPS (FLV container, pull)
- RTSP
- HLS (HTTP Live Streaming)
- HTTP (single file/video/radio)
- NewTek® NDI®

## Outbound Streams

- Single program MPEG-2 transport streams (ISO/IEC 13818-1)
  - RTP
  - UDP
  - IP unicast
  - IP multicast
  - IGMP Join Group for enhanced switch compatibility
- RTMP/RTMPS (FLV container, push)
- NewTek® NDI®

## Inbound Channel Management

- Automatic channel discovery via SAP/SDP
- User-specified channels and sources (Transport Stream UDP, Transport Stream RTP, RTMP(S) (Flash), RTSP, HLS, HTTP, Custom URL)

## Outbound Channel Management

- Channel announcement via SAP/SDP
- Multicast/unicast address selection (automatic/manual)
- Configurable name, number and group membership

## Channel Redundancy

- Specify primary and secondary channel sources
- Select inputs of any stream type

## High Availability

- Two transcoders can be configured in a cluster to provide high availability of live stream transcodes using a failover mechanism

## Management

- Flexible network port configuration enables streaming and administration interfaces to be on separate networks
- Fully integrated with VITEC management tools:
  - Admin level management using AvediaServer Director and Site Manager applications
  - HTTP/HTTPS device interface: recommended browser: Chrome®
- SNMP
- SSDP device discovery
- RESTful API
- Serial RS232 Admin Port
- Event logging via Syslog (local and remote)
- Firmware upgrade & configuration backup/restore via TFTP
- Access via VGA monitor and USB keyboard/mouse
- Activity Monitor enables more efficient transcode setup and monitoring and prevents overloading

## Network

- Linux dual IPv4/IPv6 stack
- DHCP/DHCPv6 or Static IP addressing
- Supports HTTP proxy
- 4 x IEEE 802.3u 100/1000Mbps MDIX Ethernet interface
- Ethernet link aggregation
- Ethernet link redundancy
- Firewall enables separate streaming and administration interfaces

## System

- Based on CentOS 7

## Video Input Standards

- MPEG-2, H.264 (AVC), H.265 (HEVC), VC-1, Theora, WebM (VP8), Google (VP9), H.263, MPEG-4 Part 2, MJPEG, JPEG2000, WMV7/9, raw video (YUV4MPEG2), NDI
- Up to 4K UHD (4096 x 2304)

## Audio Input Standards

- MPEG-1 L2, WMA, MPEG-2 AAC, MPEG-4 AAC, HE-AAC, Vorbis

## Input Container Formats

- MPEG-2 Transport Stream (TS), MPEG Program Streams (.m2p, .ps), MP4, FLASH Video (F4V, FLV), Quicktime (.mov, .qt), WMA, WMV, Ogg, WebM, NDI

## Input Streaming Formats

- UDP, RTP, RTSP, RTMP, RTMPS, HLS, HTTP, NDI

## Video Output Standards

- MPEG-2
- H.264 (AVC)
- H.265 (HEVC)
- Up to 4K UHD (4096 x 2304)
- NDI

## Audio Output Standards

- AAC

## Output Container Formats

- MPEG-2 Transport Stream (TS) or Flash Video (FLV)
- NDI

## Output Streaming Formats

- UDP, RTP, RTMP, RTMPS, NDI

## Transcoding Functions

- Live streams and files: scale, transcode, transrate, transpose, transcast
- Configure: output resolution, bit rate, interlacing, aspect ratio, frame rate, GOP length and structure
- Transcode 8 to 40 video channels, depending on format
- Change audio sample rate
- Pass through video or audio
- Output only video or audio from a stream containing both
- Preserve or drop subtitles, closed captions or data streams
- Watch folder support with configurable email alert and dedicated log on failed transcode

## Watermarking

- Up to 15 overlay elements per stream
- Images: JPG, GIF (static) and PNG images burned into output stream (Transparency supported on PNG alpha channel)
- Text: Single line text strings using any uploaded TrueType font (TTF) burned into output stream with configurable size, color and transparency
- Clock: Single line day/date/time text string defined by <strftime> variables, display configuration same as text

## 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), Syslog (RFC 3164), NTPv3 (RFC 1305), NTPv4 (RFC 5905), SAP (RFC 2974), SDP (RFC 4566), RTP (RFC 3550), SNMP (v1, v2c -RFC 1901)

## Regulatory

- CE:
  - IEC 62368-1: 2014
  - EN 62368-1:2014+A11:2017
  - EN55032:2012 + corrigenda Aug 2012 & Dec 2012
  - EN55024:2010 + A1:2015
  - EN 61000-3-2:2014
  - EN 61000-3-3:2013
- UL/CSA:
  - UL62368-1:2014
  - CSA C22.2 No. 62368-1, Rev. February 17, 2012
- FCC:
  - 47CFR:2011 Part 15, Sub Part B
  - ANSI C63-4:2014
- ACMA:
  - AS/NZS 62368.1:2018

## Environment

- Operating temperature range: 5° - 35°C (41° to 95°F)
- Non-operating temperature range: -40° to 60°C (-40° to 140°F)
- Operating humidity range: 8% to 90% (non-condensing)
- Non-operating humidity range: 5% to 95% (non-condensing)

## Physical Format

- Compact 1U rack-mounted standard 19" chassis
- Dimensions: W: 426mm x D: 370mm x H: 43mm (chassis only)
- Weight: 5.65kg

## Power

- Internal power supply
- AC input: 100-240V, 60-50Hz, 3-1.5A Max
- Typical power consumption: Typical 55W, 90W max

## Power Cords

- avstr-t5320-au = Australia and New Zealand
- avstr-t5320-uk = UK
- avstr-t5320-eu = Europe
- avstr-t5320-sa = South Africa
- avstr-t5320-us = North America

## In the Box

- AvediaStream t5320 4K/HD/SD Transcoder 1U
- Power cord
- Product Safety Brochure (hard copy)
- Product Information Bulletin