

# AvediaStream Transcoder t5600



## Datasheet

Delivering high quality TV and video to an unlimited number of users has never been easier. The AvediaStream t5600 transcoder receives and processes 4K, 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.

## Highlights

- **Convert** streams into a format suitable for streaming beyond the LAN and playing on mobile/non-IPTV devices/legacy devices
- **Deliver** streams beyond the LAN
- **Contribute** streams into an origin server or a Content Delivery Network (CDN) for ongoing delivery to very large numbers of devices
- Fully integrated with all Exterity head end and client devices



## Transcoder Functionality

### Stream beyond the LAN

- Contribute to origin servers and CDNs for delivery over WiFi, WAN and the Internet.
- Customize streams for ongoing delivery to mobile devices and thin clients.

### Extend an IPTV System

- Send streams simply through routed networks by converting Multicast to/from Unicast.
- Convert streams from non-IPTV devices such as IP CCTV or Internet radio stations into IPTV format.
- Stream across low bandwidth links and to remote locations.

- Convert to lower resolutions and bitrates to deliver to mobile clients or through restricted networks such as Wi-Fi.

### Play streams on a wide range of equipment

- Modify bit rate, preserve or remove aspect ratio information, adjust resolution and frame rate to precisely match client device requirements.
- Convert 4K, HD or SD streams to match existing IPTV equipment.

### Shape video for other parts of the IPTV solution

- File transcode video assets for use on a VoD server.
- Rotate video for use in portrait Digital Signage.

## Technical Specification

### Interfaces

- Two 802.3 10/100/1000 Ethernet (RJ-45) sockets (dual Ethernet features will be available in future firmware releases)

### Inbound Streams

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

### 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 (FLV container, push)

### Inbound Channel Management

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

### Outbound Channel Management

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

### Management

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

## Convert

### 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)
- Up to 4k (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

### Input Streaming Formats

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

## Deliver

### Video Output Standards

- H.264 (AVC)
- Up to 4k (4096 x 2304)

### Audio Output Standards

- AAC

### Output Container formats

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

### Output Streaming Formats

- UDP, RTP, RTMP

## 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 up to 40 video channels depending on format
- Change audio sample rate
- Pass through video or audio
- Output only video or audio from a stream that contains both
- Preserve or drop subtitles, closed captions or data streams

## 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), NTP (RFC 1305), SAP (RFC 2974), SDP (RFC 4566), RTP (RFC 3550), SNMP (v1, v2c -RFC 1901)

## Regulatory

- CE, FCC, C-Tick compliant
- EMC:
  - EN55022: 2010
  - EN55024: 2010
  - 47CFR: Part 15, Sub Part B (FCC). ANSI C63-4:2003

## Safety

- IEC 60950-1:2005 (Ed 2.0), AM1:2009, AM2:2013
- EN 60950-1:2006, A11:2009, A1:2010, A12:2011, A2:2013

## 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: 483mm x D: 369mm x H: 43mm
- Weight: 6.4kg

## Power

- 290W Typical, 430W Maximum

## MTBF

- Calculated to MIL-HDBK-217F, notice 2: 94858 hours (10.8 years)

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