

Transport Stream Processing



TS Toolkit

Transport Stream Recorder, Player and Analysis

The TS Toolkit is a software product that combines the functionality of Transport Stream recording, playback of pre-recorded files, and analysis of file contents.

It has applications in live systems and test facilities.

The file analysis provides a full breakdown of all the PIDs in the stream including type, number and the current timestamp. PCR discontinuities are detected and Continuity Count errors are flagged.

DVB subtitles and teletext can be decoded and displayed in the user interface video window.

Starfish Stream Monitor

File Help

Windows DeKtec File

NIC Address: 192.168.36.44 Multicast Address: 239.31.60.13 Port: 5330

Start Capture

Services (5)

- Programme 1200
 - Descriptor: registration_descriptor
 - PMT PID: 1200
 - PCR PID: 1209
 - PCR: 24:30:01.650
 - PCR interval: 37.76 mS
 - SCTE-35: National
 - PES packets containing private data:
 - Audio: ISO/IEC 11172
 - Video: ITU-T Rec. H. 262 | ISO/IEC
- Programme 1210
- Programme 1220
- Programme 1230
- Programme 1240
- NULL PID
 - Bit Rate: 8648000 bps (23.40%)
- SDT Table
 - Transport Stream Id: 330
 - Original Network: 1
 - Service: 1200
 - EIT Schedule Flag: No
 - EIT Present Following Flag: No
 - Running Status: 4
 - Free CA Mode: No
 - Descriptor: service_descriptor
 - Service Type: digital television
 - Service Provider: E-Play Test F
 - Service Name: TV4 Göteborg

17:07:18.299 - Suspending CC checking for PID: 1226
17:07:18.302 - Suspending CC checking for PID: 1228
17:07:18.304 - Suspending CC checking for PID: 1229
17:07:18.307 - Suspending CC checking for PID: 1230
17:07:18.309 - Suspending CC checking for PID: 1236
17:07:18.312 - Suspending CC checking for PID: 1238
17:07:18.317 - Suspending CC checking for PID: 1239
17:07:18.320 - Suspending CC checking for PID: 1240
17:07:18.322 - Suspending CC checking for PID: 1246
17:07:18.324 - Suspending CC checking for PID: 1248
17:07:18.327 - Suspending CC checking for PID: 1249
17:07:18.485 - CC Error on PID: 17, CC: 10, Expected: 6, Packet: 6414942
17:07:18.487 - CC Error on PID: 18, CC: 14, Expected: 12, Packet: 6414946
17:07:23.381 - Restoring CC checking for PID: 1200 after 1 Errors
17:07:23.384 - Restoring CC checking for PID: 1201 after 1 Errors
17:07:23.386 - Restoring CC checking for PID: 1206 after 1 Errors
17:07:23.389 - Restoring CC checking for PID: 1208 after 1 Errors
17:07:23.391 - Restoring CC checking for PID: 1209 after 3 Errors
17:07:23.394 - Restoring CC checking for PID: 1210 after 1 Errors
17:07:23.396 - Restoring CC checking for PID: 1216 after 1 Errors
17:07:23.399 - Restoring CC checking for PID: 1219 after 2 Errors
17:07:23.401 - Restoring CC checking for PID: 1220 after 1 Errors
17:07:23.403 - Restoring CC checking for PID: 1226 after 1 Errors
17:07:23.406 - Restoring CC checking for PID: 1228 after 1 Errors
17:07:23.408 - Restoring CC checking for PID: 1229 after 3 Errors
17:07:23.411 - Restoring CC checking for PID: 1230 after 1 Errors
17:07:23.413 - Restoring CC checking for PID: 1236 after 1 Errors
17:07:23.415 - Restoring CC checking for PID: 1238 after 1 Errors
17:07:23.418 - Restoring CC checking for PID: 1239 after 3 Errors
17:07:23.420 - Restoring CC checking for PID: 1240 after 1 Errors
17:07:23.423 - Restoring CC checking for PID: 1246 after 1 Errors
17:07:23.426 - Restoring CC checking for PID: 1248 after 1 Errors
17:07:23.428 - Restoring CC checking for PID: 1249 after 3 Errors
17:07:25.834 - CC Error on PID: 16, CC: 5, Expected: 4, Packet: 6590512

Event Log DVB Subtitles Teletext

Bit Rate: 35994499 / 32493184 (87.93%)

Key features

- Operates on real-time transport streams or pre-captured files containing MPEG1 or 2, H264 or HEVC/H265 encoded media
- Input and output via IP or ASI (by utilising a DekTec card) - SPTS or MPTS and
- Supports two simultaneous inputs and outputs, can be different formats and data rates

Recorder

- Streams can be either RTP or UDP
- During recording the instantaneous file size is displayed on the user GUI

Player

- Output bit rate is determined by the file data
- PCR, PTS and DTS are automatically corrected for each programme in the file
- Output is UDP or RTP if utilising a DekTec card, or UDP only from the computer NIC

Analysis

- Detailed breakdown of the transport stream contents by PIDs and services, including analysis of tables and descriptors
- PCR analysis
- Error reporting for non-conformant input material, including PCR, PTS and Continuity Count error checking
- Offline monitoring creates an XML file containing the salient details of the monitored file
- Real-time display of DVB subtitles and teletext carried in the transport stream
- SCTE-35 monitoring (program insertion cueing messages)
- Displays instantaneous bit rate and provides an indication window which shows the overall bit rate in green, and the active bit rate in red. The difference between the two are the NULL packets sent out to pad the overall bit rate to a constant value

Hardware requirements

TS Monitor is a Windows based application and will run on any recent Windows Server or Workstation operating system.

Associated products

TS Monitor is one of a family of Transport Stream processing products available from Starfish Technologies Ltd. These products can be utilised as standalone applications, or integrated within other Starfish products and systems. Please see www.starfish.tv for more details.

All specifications and minimum requirements are subject to change without prior notice. Please check before purchase.