VideoMirror/ASITM 1-4 Channels

Stand Alone, Windows® Server Based, MPEG Transport Stream Archiving System for the Long Term Storage of SPTS or MPTS MPEG-2 or H.264 Streams that Includes an Easy to Use Indexing Facility for Retrieving Any Segment Quickly. For Continuous or Schedulable Playback and/or Capture of Selected Transport Streams – Includes TS Analyzer/Viewer, Remote Management, with Built-in Playout Scheduler.

Features

- Captures transport stream as segments of data configured either by size or time
- Creates number of file segments that constitute a "floating window" corresponding to the record length
- Captures and plays back HD, MPEG-2 and H.264/AVC (MPEG-4 Part 10) streams via DVB interfaces
- Captures and plays back SMPTE 125M files via SMPTE 259M (SDI Video) interfaces
- Advanced playback Scheduler for Day, Week, Month or Year
- Transport Streams can be selected by PIDs
- Plays and Captures TS from all well known Video Encoders, Decoders, and Servers including Harmonic, Tandberg, Omneon, Tektronix, Radyne, Big Band, Seachange, Scopus, TUT Systems, and many others
- Playback rates up to 213 Mbps with fast SAS hard drives
- Captures to standard IDE hard drive at 60 Mbps
- Plays back a sequence of transport streams
- Play order allows the order of file playout to be edited
- Input TS file via CD, DVD, USB Drive, Ethernet or input video stream via DVB-ASI
- Output TS file via CD, DVD, USB Drive, Ethernet or output video stream via DVB-ASI
- Includes automatic TS analysis utility with PID and PCR clock info (Needs CBR for best result)
- Automatically uses the TS PCR info to accurately calculate the rate of the transport stream
- Selectable 188/204 packet size with auto conversion
- Continuous play or single play modes
- Buffer Overrun or Underrun warnings
- Remote management via Web interface
- Option: custom transport streams can be provided

Applications

- Capture of video for VideoMirror/ASI Archive
- Capture or playback transport streams for testing
- Record and analyze transport streams
- Development labs, manufacturing shop floors, and trade shows – to capture and playback, or just continuously playback transport streams in real time
- Analyze and preview transport streams
- Program scheduler for TV stations
- Record transport streams of required data size



Overview

Archiving transport streams is desirable in any transmission facility. This archiver stores streams in easy to use segments. The segments are 10, 20, 30, 40, 50, 60, etc., minutes long. The segments are designated by date and time. This makes it easy to retrieve any segment for review.

The VideoMirror/ASI[™] will accept a single or multi program MPEG-2 or H.264 transport stream. Remarkably, it has the ability to filter out streams from MPTS's. This makes the process more efficient since only desired services are archived.

The VideoMirror/ASI was developed to allow video streams to be archived for future reference. Situations arise where a segment of broadcast video may need to be reviewed but it is not available because it was a live broadcast or that the stored file is unavailable. VideoMirror/ASI is a unique application that can solve this problem.

This application is designed to provide an easy-to-use and intuitive interface that will give you a quick way to analyze, capture, filter, play, and view single and multiprogram streams. The transport stream is stored as a series of files, with the size of each file controlled by setting the number of bytes or the length of time. After the specified number of file segments is reached, VideoMirror/ASI over-writes the first file segment, thus maintaining the floating window at a fixed size. Individual files can be accessed while the VideoMirror/ASI is capturing video to the floating window. A file of interest can be viewed using MPEG analysis tools.

Besides having capture and playback ability, VideoMirror/ASI allows you to filter out selected PIDs that you do not wish to record. This way you can capture only the PIDs desired.

In order to provide confidence to the capture process, we have included a copy of the VideoLAN VLC viewer, which allows you to decode and view any of the incoming or captured streams.

A VCR-like interface provides complete control over the capture and playback process. A recent feature is remote management capability. This allows you to record, start, stop, or play via a remote browser. This is greatly appreciated by anyone using this with an automation system.



Computer Modules, Inc. 11409 West Bernardo Court San Diego, CA 92127 Tel: (858) 613-1818 Fax: (858) 613-1815 www.dveo.com

Highlights

- Stores input transport streams as segments of files with reference to either time or bytes for future reference
- Multi-stream architecture allows *simultaneous* recording of up to 4 transport streams to four separate files with one Quad input card
- Automates capture and playback with new online remote management features
- Includes transport stream analyzer and video viewer
- Ships with transport streams for test purposes

Scheduler GUI's

File Name	Active Schedule	
		Browse
Device to use:	Analyze file	
DVB FD/R (14.4) #1		<u>•</u>
5tart Time and Date: 10:22:51 AM + 08/29/2007	Burst Mode Tx 188->204 SDI 10 Bit 204 Byte Packets	Play Size (Bytes) Play Time (hh:mm:ss)
End Time and Date: 10:22:51 AM 8/29/2007 Data of Wark	Repeat C Once Only C Daily V No Limit C Weekly or C Monthly times	Bitrate (bps): 0 PCR Pacing

Scheduler – Main GUI

S VideoMirror	Scheduler	
C Day View	<< Previous September, 2008 Next >>	Current Time & Date
C Month View	Monday, September 08	Thursday, September 11
<< Today >>		
Delete Item		
Delete All	Tuesday, September 09	Friday, September 12
Refresh page		
Ī	Wednecday, Sentember 10	Saturday September 13
Clause	weaksday, september 19	Satarday, September 13
		Sunday, September 14
Help		

Scheduler – Weekly

iew << Previn	us September, 2	009 Next >>	Currer 12-10	nt Time & Date H 1 R PM 📥 🔍	/ 8/2008 💌
Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
Septembe	er 1 2	3	4	5	6
					3
em	8 9	10	11	12	10
All					14
page	15 16	17	18	19	20
					2:
	22 23	24	25	26	27
					28
	29 30	October 1	2	3	
•					ę
	6 7	8	9	10	1:
<u></u>					11

Scheduler – Monthly

TS Analyzer Screens



Analyzer GUI – Table View (Displays the table data stored in the Transport Stream)

Analyzer					
Program View Table View			Display Option C Standard	Advanced	ł
MPEG Transport Stream MPEG-2 Video ES: MPEG-2 Video ES: MPEG-2 Audio ES: MPEG-2 Audio ES: MPEG-2 Audio ES: MPEG-2 Video ES: MPEG-2 Video ES: MPEG-2 Video ES: MPEG-2 Audio ES:	0x331 (817) 1x334 (820) 1x344 (836) 1x344 (836) 1x354 (852) 1x361 (865) 1x364 (868)	Param Packe PCR d Eleme Strean Avera Last R PCR v Total d	teter t Count ount iscontinuties ntay PID pp pp Bitate (PCR PI ange PID Bitate (PCR PI alue (PCR PID 341) Jeviation sec (PCR PI	Velue 125239 1701 1 0x0341 0x2 = (video) 1230536 1230536 1230536 10.262432031 150.377191	396)
Pid Info		Stream	m Statistics		
PID Packet Count 0x0831 252407 0x0331 125244 0x0341 125239 0x0361 125232 0x0351 114793	Percentage ▲ 29.90 % 14.83 % 14.83 % 14.83 % 13.60 % ♥	PAT PMT	00 CRC Errors: ATSC 4PEG-2 ATSC 0 MGT NIT 0 STT 0 BA' 0 RRT 0 SD VCT 0 EIT 0	DVB [0] r 0 [1] r 0 [8] r 0 [8] r 0 [8] r 0 [8]	ype VB acket Size 88 Bytes t Rate 3.292958 Mbps
Set Values Video PID: 0x0341	Audio PID: Not chos				

Analyzer GUI – Program View (Displays programs and their corresponding elementary streams in the Transport Stream, plus Bitrate, PIDs, and PCR information)

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DVEO: IP-OTT-IPTV-RF
TRANSFORMATION

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Tables Displayed

MPEG-2 PSI Tables:

- Program Association Table (PAT)
- Conditional Access Table (CAT)
- Transport Stream Description Table (TSDT)
- Program Map Table (PMT)
- Network Information Table (NIT)

ATSC PSIP Tables:

- Master Guide Table (MGT)
- Directed Channel Change Table (DCCT)
- DCC Selection Code Table (DCCSCT)
- System Time Table (STT)
- Region Rating Table (RRT)
- Terrestrial Virtual Channel Table (TVCT)
- Cable Virtual Channel Table (CVCT)
- Event Information Table (EIT)
- Extended Text Table

DVB-SI Tables:

- Bouquet Association Table (BAT)
- Network Information Table (NIT)
- Service Description Table (SDT)
- Event Information Table (EIT)
- Time and Date Table (TDT)
- Time Offset Table (TOT)
- Running Status Table (RST)
- Stuffing Table (ST)
- Discontinuity Information Table (DIT)
- Selection Information Table (SIT)

Typical Configuration

- Operating System: Windows® 7 32 or 64 bit, Windows® XP, Windows® 2003 Server, or Windows® 2008 server
- RAM: 8 Gig
- Two eSATA hard drives In addition to the system drive, a high-speed secondary drive should be installed for storing and playing the MPEG files

Ordering Info

VM/Dell PowerEdge R715 HD VM/WBTS/XXX/HD

Main GUI with Viewer



Remote Management GUI

VideoMirror Control	VideoMirror Log
Status: Stop	ped
Source/Destination File	
m_Pids=	Drive: A: 💌 Browse Clea
⊙ Time C) Bytes
Position	Limit(s or KB)
	RECORD STOP
Play Settings	Record Settings
Rate(bps) 19392658	Filter PIDs
Tx Jitter Reduce	
PCR PID(hex) 0:00:00	
Advanced Settings	
Tx Burst Mode	🗹 SDI 10 Bit Mode
Tx 188 to 204 Byte Packets	204 Byte Packets

Web Control GUI



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