



Product Brief

Mividi® - AMR130

Mividi® Broadcast Compliance Recording System

The Mividi® Broadcast Compliance Recording System (AMR130) provides a cost-effective solution for broadcast compliance monitoring and recording. It's a software based product that runs on standard Windows servers or workstations. The software supports stream recording, compliance monitoring, file management, editing and playback. The recorder takes transport stream input from UDP over IP or ASI interfaces, as well as Internet OTT streaming input using HLS, RTMP, RTSP, and SRT formats. A single system can support continuous recording up to 40 streams simultaneously.

Introduction

TV broadcasters are often required to record broadcast programs for regulatory compliance and quality control. As broadcasters face ever increasing challenge of more programs, more transmission protocols to serve non-traditional TV viewers, their need for stream monitoring and recording also grows. To overcome these new challenges, recording systems need to process a large number of streams and support multiple streaming protocols. Additionally, it should be flexible and expandable when broadcasters add new services in the futures and require additional functions without replacing the entire systems.

The Mividi AMR130 is a newly designed stream recording and compliance monitoring system that can monitor and record broadcast streams from different sources, and provides file management, editing and playback functions. The system can record original streams with no alternation or record low bit rate proxy streams after transcoding in order to save storage space. It is a software based product that runs on standard Windows servers or workstations. It is easy to use and cheap to maintain. The cost of the system is low because it uses off-the-shelf hardware and utilizes GPU processors in computer graphic boards to do video transcoding.



Supported Streaming and Encoding Formats

The Mividi AMR130 supports the following streaming formats:

- TS over UDP including both MPTS and SPTS
- HTTP Live Stream (HLS)
- RTMP and RTSP
- Secure Reliable Transport (SRT)
- TS over ASI (with ASI PCI-e receiver board)

The AMR130 supported audio and video encoding format includes:

- Video: MPEG-2, AVC (H.264) and HEVC (H.265)
- Audio: MP-3, AAC, AAC+, AC3
- Other audio and video formats are also supported for recording original streams with no transcoding.

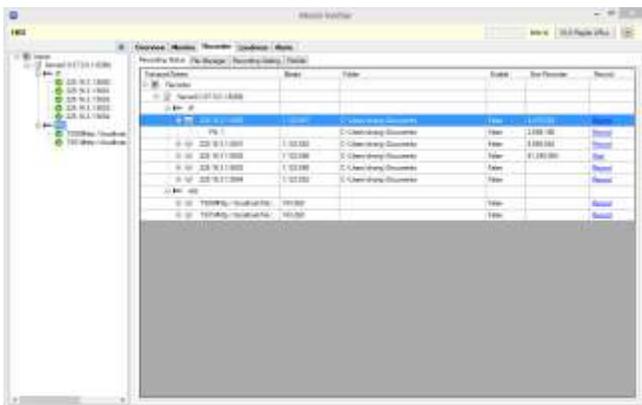
Stream Recording

A user can configure the system to record entire transport streams or selected programs automatically. The recording can also be scheduled for specified time periods that can be repeated daily, weekly, or monthly. The recorded files are in MPEG-2 TS format, and the time duration of each file clip can be pre-configured. When the recording file reaches specified duration, it will automatically roll over to a new file for recording.

The software provides a status display of all recording activities. A user can also manually start and stop the recorder. All recorded files can be saved in the computer's hard drive or a network storage device. When a recording file is created, the software will save the file metadata in the database for easier search and management.

The input stream can be recorded in original video format or as a low bitrate proxy stream after transcoding. One system can record 20-40 programs simultaneously depending on computer performance and stream bandwidth.

The software will monitor the hard drive space while recording. When the empty space in the hard drive is less than 10% of the hard drive capacity, it will automatically delete older files. Additionally, users can configure the software to delete old files older than a user-specified time.



Monitoring Recording Status

Transcoding

In order to save storage space, users may want to transcode input video streams to low bit rate proxy streams and record the proxy streams. The Mividi AMR130 supports transcoding. The transcoding will re-encode video data and keep the audio data in original format,

since re-encoding audio will not significantly alter the stream bit rate. Input video streams in MPEG-2, AVC (H.264) or HEVC are supported and the video format after transcoding will be in AVC (H.264) format. The transcoding is done by the GPU on the computer graphic boards. Multiple graphic boards can be assigned to different streams for transcoding to improve performance.

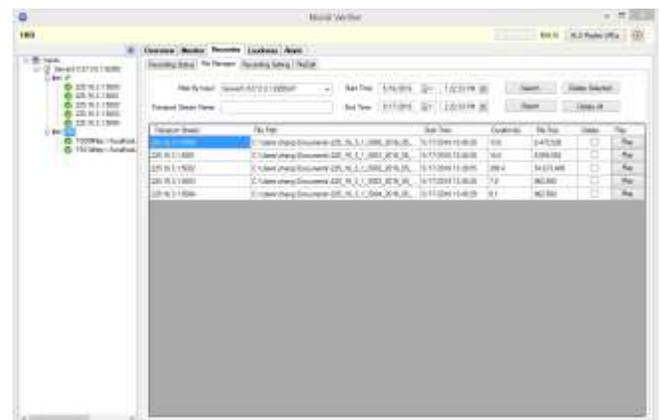
The software also supports watermarking. For example, channel name and timestamp can be overlay on the recorded video. By default, all recorded files will be in TS formats, but can be converted to mp4 if required by users.

File Management

For each recording file, metadata associated to the file such as file path, length, stream and channel name, timestamp are saved in the database. A user can easily search recording files based on stream and channel ID, date and time, and the software will display a list of files that match the search criteria.

For each file listed, a "Play" button is displayed for a quick link to play the file. Click the "Play" will play back the recording file. You can also use the File Management page to delete unwanted files.

The software provides the function for auto-deleting old recording files. Users can configure the number of days recording files will be saved. When recording files are older than specified days, the recording files as well as associated metadata will be deleted automatically. The software can also monitor available space in the hard drive and delete the oldest files when the drive is full.



Record File Management

Features

- Supports TS over IP or ASI input.
- Supports multiple IP streaming protocols:
 - UDP/RTP Unicast or Multicast
 - TS over HTTP
 - HLS (HTTP Live Streaming)
 - RTMP
 - RTSP
 - SRT (Secure Reliable Transport)
- Supports SPTS (Single program transport stream) and MPTS (Multi program transport stream).
- Records full transport stream or selected programs.
- Records original video streams or low bitrate proxy streams.
- Simultaneously monitors and records between 20-40 channels depending on input and recording video format.
- All recorded files are recorded in MPEG-2 TS format by default and can be converted to MP4 format.
- Schedules recording on specific time period and auto-repeat daily, weekly or monthly.
- Manages and plays back recording files.
- Cuts and merges recording files, decode video frame by frame.
- Emails and shares video clips on social network.
- Supports recorded data query and report generation.
- Decodes and save subtitle/CC data.
- Decodes and save EPG data.
- Supports MPEG-2, AVC/H.264, HEVC/H.265 video formats.
- Supports MP3, AAC, AAC+, and AC3 audio formats.
- Supports live broadcast as well as VOD streaming monitoring.
- Auto-alarm, error logging and report generation.
- Visual and audio alarms for following error conditions:
 - Loss of input signals
 - Missing subtitle/Closed Captioning data
 - Missing EPG data
 - Recording errors such as hard drive is full or recording is unexpectedly stopped
- Error alarms can be sent by email, SMS, or audio sound alarms.
- Recording files can be stored in local hard drives or network drives
- Runs on standard Windows platforms, including Windows 7, 8, 10 and Windows Server 2008, 2012, 2016, 2019.
- Runs on cloud VM including Microsoft Azure and Amazon AWS

Applications

- Video broadcast and compliance logging applications
- Video recording for Internet video stream services
- Head-end application for video recording and loudness monitoring

Specifications:

Inputs

IP:	<ul style="list-style-type: none">• UDP/RTP Unicast or Multicast• HTTP or HLS (HTTP Live Streaming)• RTMP• RTSP• SRT
ASI	<ul style="list-style-type: none">• MPEG TS

OS & Hardware Requirements

OS:	Windows 7, 10, Windows Servers
CPU:	Intel® Core i7 and Xeon
RAM:	16 GB DDR4
Hard drive:	2 - 16 TB
Graphic Cards:	Intel® HD Graphics 630 Nvidia Quadro
Network Connectivity:	1G NIC adapter
Conformities:	UL, CSA, CE, RoHS

Purchase Information

Product Name: Mividi™ Broadcast Recording System

Product Code: AMR130

Purchase options:

- Software only
- Fully built systems

The system and software price depends on the number of streams to be monitored at the same time. Please contact Mividi info@mividi.com for more details.

For Product Information

Mividi offers a series of products for testing and improving video service quality for broadcasters and Internet media providers. Related products include IP Multiviewer, IP video monitoring system TSM-100, HLS Analyzer, Integrated Multi-viewer Monitoring System, SCTE35 and Ad Insertion Monitoring System.

To contact a customer service representative regarding Mividi products, please email to info@mividi.com or visit <http://www.mividi.com>.

Mividi, Inc
475 Wall Street
Princeton, NJ 08540, USA
Tel: (001)609-924-5599
www.mividi.com

