



## Product Brief

Mividi Multi-viewer Monitoring Probe: IMS-mini

# Mividi Multi-viewer Monitoring Probe: IMS-mini

The Mividi IMS-mini is a compact multi-viewer system that runs Mividi's popular multi-viewer software IMS-120 on an Intel NUC PC. The size of the device is only 4.5 x 1.9 x 4.4 inches. It receives data via IP interface and supports most common streaming protocols including TS over UDP, RTP, HTTP, HLS, RTMP, RTSP and MMS. It has a mini-HDMI and mini-DP interfaces for multi-viewer video output.

## Broadcast, IPTV and OTT Video Monitoring Probe

Mividi IMS-mini is a small device with powerful features that can be used for viewing video and audio services, analyzing transport streams, logging errors, generating alarms, and recording stream data. The IMS-mini provides a convenient solution for broadcasters, IPTV and Internet OTT video service providers to meet their video service monitoring requirements. Because the device is very compact that weighs less than 2 pounds (or 1 kg), it may be placed in the fields that can collect quality of service (QoS) data near customer premises. It is a cost-effective solution for small station and field monitoring with a price only a fraction of traditional multi-viewer systems.

The Mividi IMS-mini uses IP interface to receive video data. It supports TS over UDP, RTP or HTTP broadcast protocols, and HLS, RTMP, RTSP, and MMS web streaming protocols. It supports DVB and ATSC broadcast standards, supports MPEG-2, H.264/AVC, and H.265/HEVC video encoding formats, as well as all commonly used audio formats.

The IMS-mini probe can simultaneously display up to ten SD, four 760p or three 1080i video channels. It also supports video rotation on the multi-viewer while monitoring the streams in the background non-stop up to 20 channels. Any transport stream errors are logged in a database for review and report. Alarms can be triggered by a variety of errors that can be selected by users. In addition, the device can be equipped with a web server for remote access and control.



## Turn-key solution with a mini PC

The IMS-mini uses the Intel NUC as hardware platform. The Mividi IMS-120 software is preinstalled and fully configured so it is ready to use out of box. It takes the input from the IP interfaces and output multi-viewer videos from the mini HDMI and mini DP interfaces.



Intel NUC dimensions

## Multi-viewer Monitoring

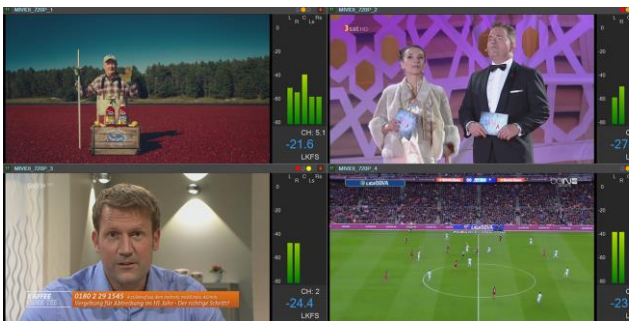
The IMS-mini supports display of multiple videos and audio PCM levels of program in SPTS and MPTS. It calculates audio loudness and displays the loudness value along with video images. Additionally, the device can also decode and display DVB subtitles and ATSC closed captioning data.

Each monitoring probe can simultaneously decode up to ten SD, four 720p or three 1080i HD channels. It supports video rotation if more videos need to be monitored. The display panels can be arbitrarily configured in terms of size and location. Audio-only program display is also supported.

The system takes stream input using IP interface and support many IP streaming protocols including UDP, RTP, HTTP, HLS (HTTP Live Streaming), RTMP, RTSP and MMS.



Multi-viewer Display of ten SD Channels



Multi-viewer Display of four 720p Channels



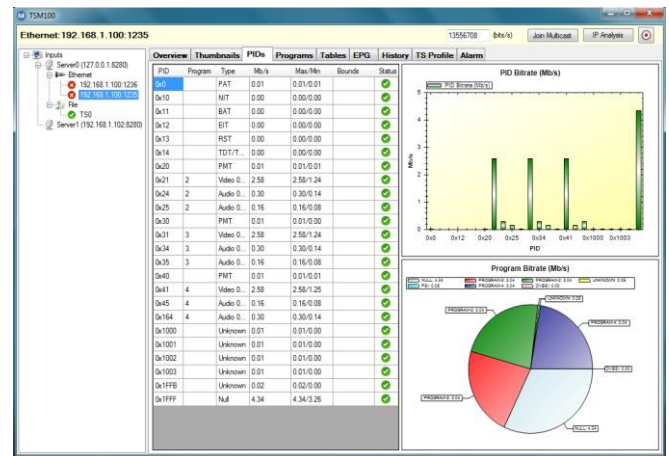
Multi-viewer Display of three 1080i Channels

## Comprehensive TS Analysis

The Mividi IMS-mini provides comprehensive TS analysis for MPEG, DVB and ATSC streams. It supports MPEG-2, H.264/AVC, and H.265/HEVC video encoding formats, as well as commonly used audio formats including MP3, AAC, AAC plus, and AC3. It can also decode DVB SI and ATSC PSIP metadata tables and perform standard compliance check on these data.

The system performs detailed TS error check based on DVB test guideline TR 101 290 and reports all three priority level errors. It analyzes transport stream program structure, measures PID bitrate, performs PCR, and buffer analysis, detects any black and frozen frames, and monitors missing audio and video element streams.

In addition to MPEG transport layer testing, the system also performs IP and HTTP layer testing, including MDI measurement on IP streams, and measures video segment downloading parameters and monitors delay on HLS input streams, as well as HLS playlist syntax analysis.



TS Analysis View

## Error Logs and Alarms

The system provides multiple ways of sending error alarms, including email, visual displays on a multi-viewer screen, and audio sound. The alarms can be triggered by errors selected by users, such as loss of input, audio or video components, black or frozen frames, etc.

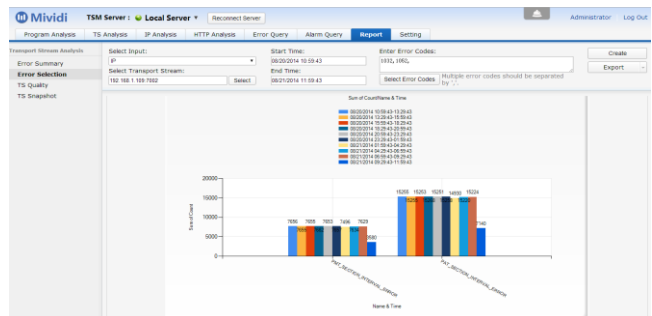
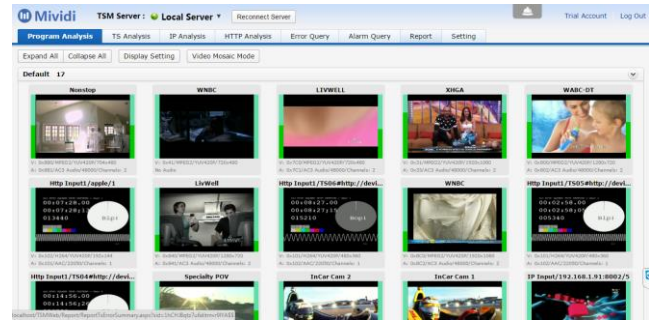
All errors and alarms are logged in the database and can be reviewed at a later time. Reports can be generated to summarize TS status over a period of time.

## Remote Access

An optional web server is available on the probe for remote access to test results, include video thumbnails, TS analysis results, error and alarm log. The web server can be accessed using a standard web browser.

The system provides multiple ways of viewing the conditions of video services remotely. Video key frames are decoded and may be displayed in a remote monitor. Additionally, the full multi-view display screen can be captured and streamed to a remote location for display.

Central network management software is also being developed to manage multiple IMS-mini probes across network. The central server provides a URL link to individual probes for status check, collects alarms, and compares QoS value of videos at different location. (The central management server is not part of the probe offering.)



## Specifications:

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### Simultaneously display of video channels:

SD	HD 720p	HD 1080i
10	4	3

(Support video rotation.)

### Inputs

IP:	UDP/RTP Unicast or Multicast TS over HTTP, HLS, RTMP, RTSP, MMS
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### Output

Video:	Mini HDMI and mini DP connectors
Audio:	3.5 mm mini jack

### OS & Hardware Specification

OS:	Windows 7, 8 or 10
CPU:	Intel Mini PC 5th generation i7 Dual-Core
RAM:	8 GB
Hard drive:	250 GB Solid State Drive
Graphic Cards:	Intel HD Graphics 6100
Network Connectivity:	1 GB NIC adapter

## Purchase Information

Product Code: IMS-mini

Price:

Multi-viewer only :	\$1,980 USD
Multi-viewer with TS analysis and remote access web server:	\$2,980 USD

Turn-key solution with pre-installed  
software.

## 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 video monitoring system TSM-100, HLS Analyzer, Multi-viewer Monitoring System for Internet Media, and SCTE35 and Ad Insertion Monitoring, and Loudness Logging System.

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