MultiProbe | MultiRec | MultiScreen

MultiProbe

Monitor and visualize your entire broadcast network with a powerful data driven operational platform

STREAM LABS

Convergence, Scalability and Analytics

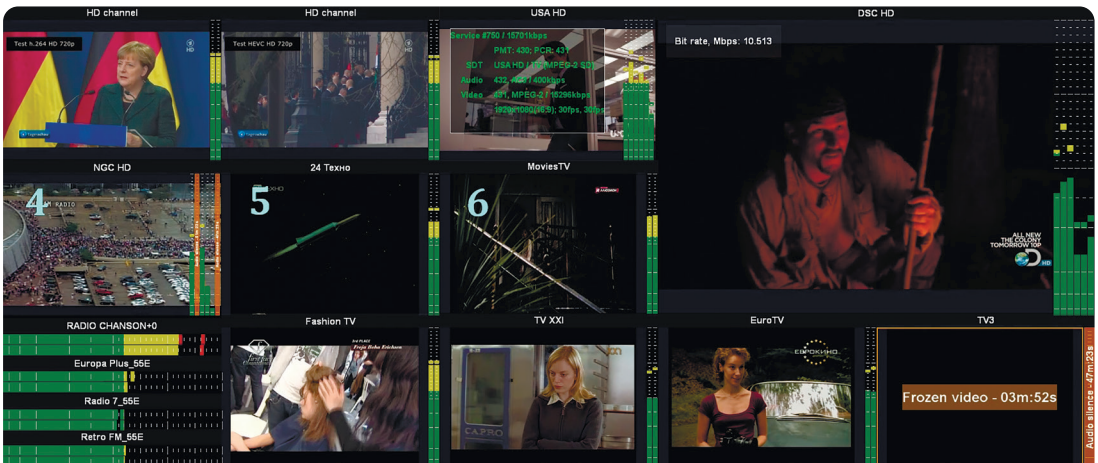
QoS **QoE** **Big Data** **Reports**

MultiProbe consolidates all your broadcast network infrastructure and emerging technologies into one consolidated Monitoring platform and gives you the ability to continuously evolve in a fast changing world with many unknowns.

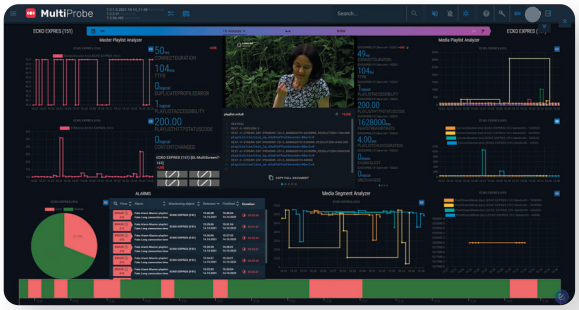
Control your whole distribution chain with an innovative approach in analytics and data correlation — from studio to end user, provide real-time content distribution quality statistics, throughout broadcast, satellite, cable, IPTV and OTT networks.

Application

- Mixed signal monitoring and multiviewer, SDI and IP all-in-one
- Monitor end user broadcast services status in real time;
- Monitor your entire distribution network infra-structure and complete signal distribution chain;
- Control remote site signal recordings;
- Customizable reporting and analytics tools for incoming data;
- Provide SLA analytics and maintain system uptime commitments;
- Multiviewer with distributed monitoring. View all signals at remote sites.



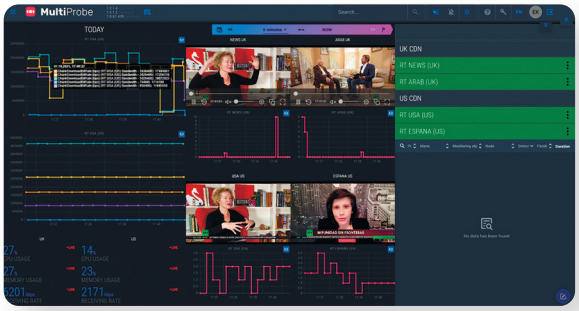
Compatibility



The system aggregates and processes broadcast content quality data at various stages of the media production workflow:

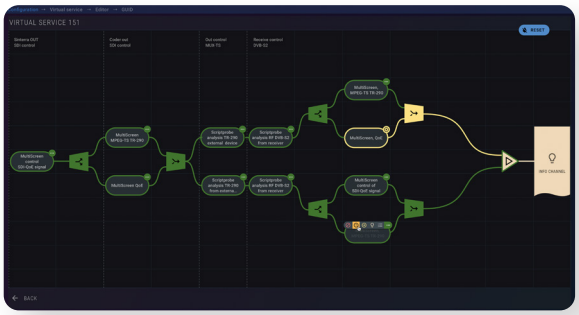
- Satellite hardware
- Cable and IPTV network devices
- OTT broadcast - headends
- Studio hardware
- TV channels Master Control
- Production trucks
- Control centers
- Regional and advertising tie-in complexes
- Sports Event broadcast equipment

Benefits



- 24/7 reliability
- Modularity
- Statistics
- Data Correlation
- SLA Calculation
- Infrastructure control
- Capture data from any devices
- Analytics

Features



- Personalized cross-platform WEB UI;
- Signal flow views to monitor objects in the form of a signal or logical channel path diagram;
- Data and analytics from any device in your network can be processed and used to find operational correlations;
- Support for all popular modern broadcasting standards;
- Highly customizable dashboards with the ability to display information in a convenient and intuitive interface (graphs, indicators, panels, etc);
- Generate video walls to display remote signals;
- Apply machine learning for quality assessment and statistics analysis;
- Cloud monitoring.

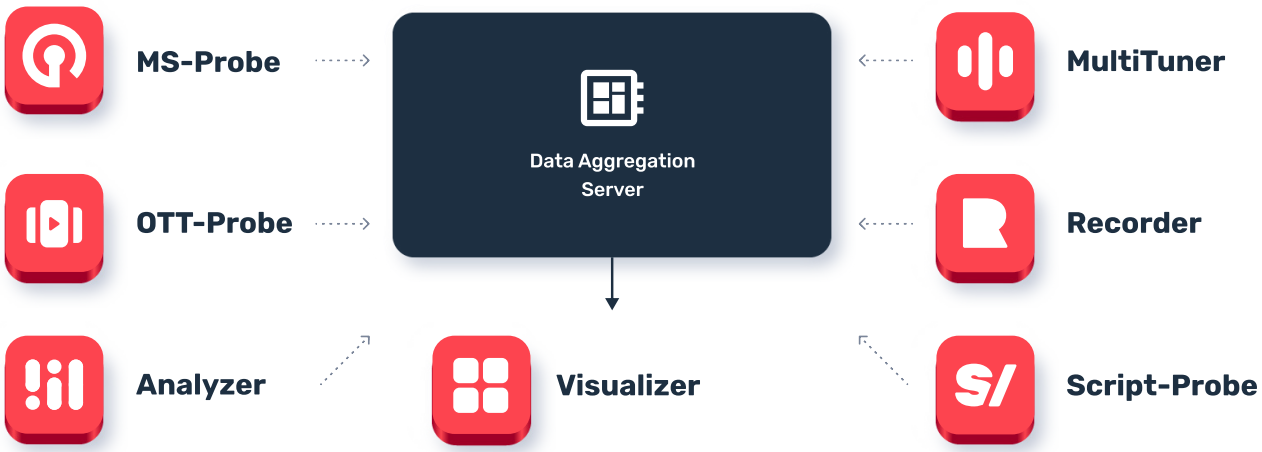
Main functionality

- Monitor and Visualize your entire network infrastructure from a single platform;
- Service delivery path visualization;
- Group/batch addition and configuration of monitored objects;
- Customizable views;
- Fully customizable interface templates;
- The ability to view signals from any point in real time, not only on the WEB, but also on video walls, mosaics, etc;
- Support for receiving and sending data from external systems using open protocols;
- Monitor subscriber equipment;
- Optimized hardware for video encoding and decoding;
- Effective monitoring(round-robin) for special applications.

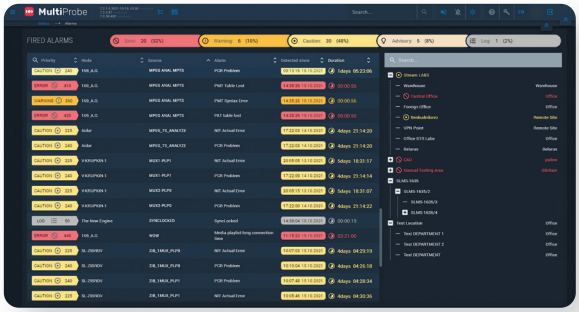
System components

MultiProbe consists of several software modules capable of functioning in tandem, complementing each other, and also capable of operating completely independently, which provides flexibility in selecting the required functionality for specific applications.

Architecture



Data collection



MS-Probe — software module for collecting media signal metrics.

OTT-Probe — OTT Broadcast Metrics Collection module.

Analyzer — software and hardware compact and portable units/modules for traffic flow analysis.

Script-Probe — software module for data collection from any devices and systems, an innovative tool for integrating custom scripts with a graphical interface.

STB-Probe — hardware and software module that performs alternate channel switching on subscriber STB's. Monitors end user quality of experience and forwards data analytics to the central aggregation server.

Monitoring of TV broadcast signals

Formats

- SD/HD/UHD-SDI
- CVBS/HDMI
- ST 2110
- ST 2022-6
- NDI
- SRT
- RTSP/RTMP
- MPEG-TS
- T2-MI
- HLS
- MPEG-DASH

MS-Probe

Analyzer

OTT-Probe

Measurements

QoS
- ETR 101290
- RFC 4445

QoE
- Artifacts
- Frozen/Black Screen
- MOS
- EBU R 128

Metadata
- Teletext
- Subtitles
- SCTE 104/35
- EPG

OTT metrics
- Master Playlist Analysis
- Media Playlist Analysis
- Media Segment Analysis
- Catch-UP
- VOD

Visualization

Visualizer

A multifunctional software component
that captures and displays received signals,
with the possibility of operational output
to the video wall in real time at a local control
point and in a remote monitoring center.

Record

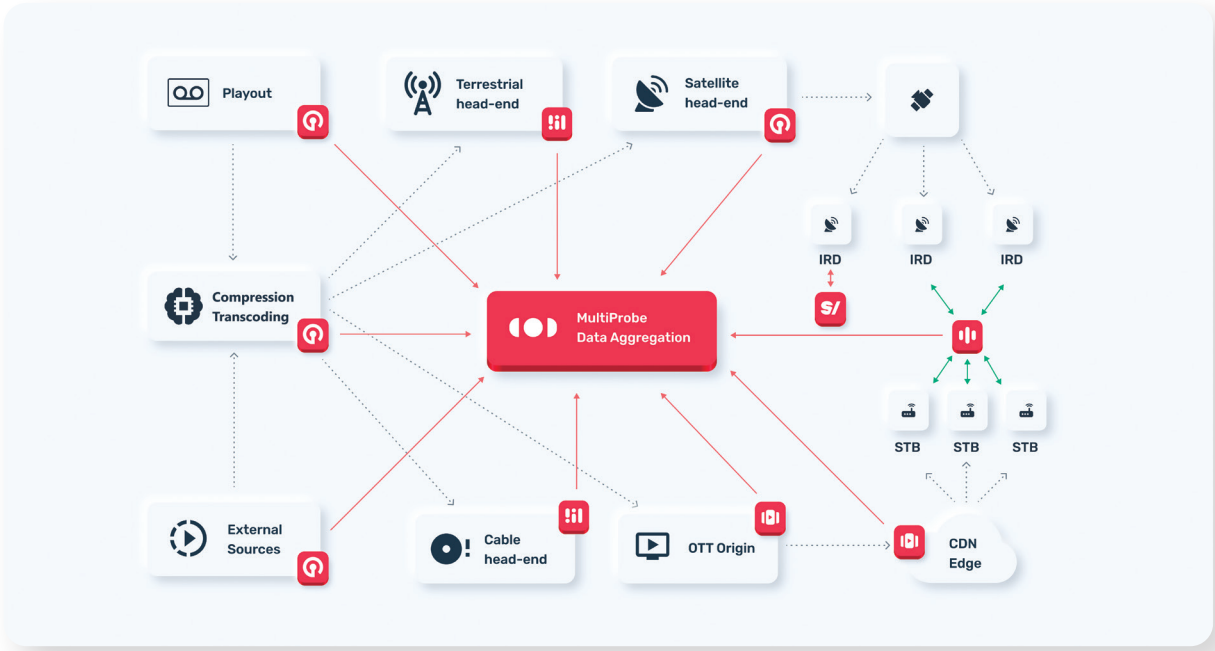
Recorder

Automatically control and record television
signals 24/7 or based on trigger events.

Aggregation and analytics

Data aggregation Server

Configure your system, interfaces as well as aggregate
data collection from all other modules in your network.
Central database repository for data collection
and analytics.



Specifications

Supported interfaces:

- 3G-SDI (SMPTE-424M, 10 bit, 3 Gbit/s);
- SD-SDI (SMPTE-259M, 10 bit, 270 Mbit/s);
- UHD Quad-link 3G-SDI (SMPTE ST-425, 4 x 3 Gbit/s);
- HDMI
- Analog (NTSC, PAL, SECAM);
- IP/Ethernet (ETSI TS 102 034);
- DVB-S/S2 (ETSIEN 300 421, EN302-307, EN301-210);
- HD-SDI (SMPTE-292M, 10 bit, 1,5 Gbit/s);
- 12G UHD-SDI (SMPTE ST-2082, 12 Gbit/s);
- DVB-ASI (ETSI EN 50083-9) Bitrate range 0..214 Mbit/s;
- Composite (NTSC, PAL, SECAM);
- AES/EBU (24 bit/ 192 kHz) channels;
- DVB-T/T2 (ETSI EN 300 744,302 755);
- DVB-C/C2 (ETSI EN 300 429 Annex A/B/C).

Media containers:

- MPEG-2 TS (ISO/IEC 13818-1), MPTS or SPTS;
- DVB T2-MI Streams (ETSI TR 101 290-1, A14-1).

Supporting network and OTT broadcasting protocols:

- FLASH (1889, 2326, 3550);
- RTMP streams (Real Time Messaging Protocol), H.264 - AAC and MP3 streams;
- RTSP (RFC 1889, 2326, 3550);
- NDI (NewTec);
- SDI over IP (SMPTE 2022-6)
- MPEG-DASH
- MMS & MMSH Microsoft Media Server Protocol and MMS over HTTP;
- HLS (HTTP Live Streaming Monitoring);
- SRT (Haivision);
- SMPTE 2110.

Video codecs:

- MPEG-1 (ISO/IEC 11172-1);
- MPEG-4.2 (ISO/IEC 14496-2);
- HEVC (H.265) до 4K.
- MPEG-2 (ISO/IEC 13818-1);
- MPEG-4.10 (H.264, ISO/IEC14496-10).

Audio codecs:

- MPEG-1 Layer II (ISO 11172-3);
- AAC/ADTS/ADIF (ISO/IEC 13818-7, ISO 14496-3);
- AC-3/E-AC-3, ATSC A/52;
- SMPTE 302M.