Leader

LVB440

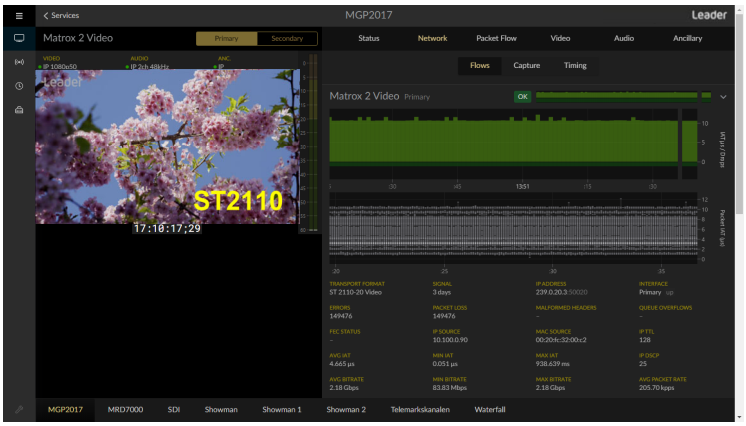
IP ANALYSZER

General

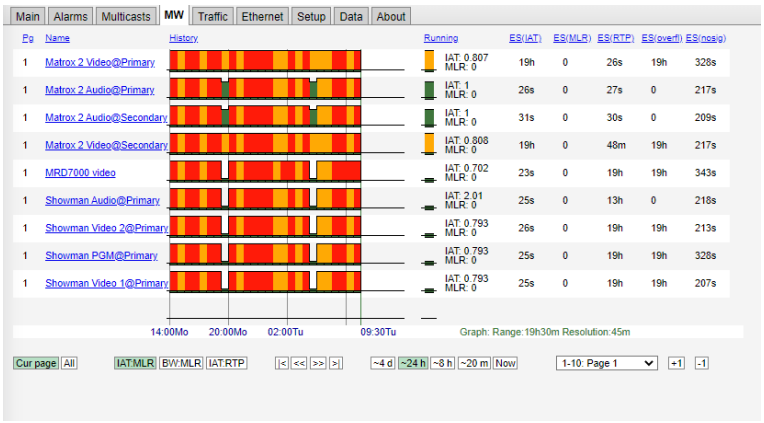
The LVB440 High Bit Rate IP Packet Monitor provides revolutionary monitoring and analysis capabilities for IP media traffic found in outside production, broadcast studios and master control centre's allowing for quick troubleshooting and quality improvement. The LVB440 supports ST2110, and ST2022-6 flows at dual 40 Gbps bitrate, and dual 60 Gbps with additional options. Streams from SD to 4K (UHD) can be monitored, with 8K monitoring configurations available. The LVB440 offers familiar visualization tools such as vector scope, picture monitor, audio pairs, and waveform monitor allowing broadcast and production crews to easily manage real-time analysis and troubleshooting of IP-based network audio and video streams. Packet analysis of uncompressed video and audio is available with microsecond accuracy. In addition, up to eight clients can view the analysis data in a standard web browser at the same time for simplified remote operation.

Features

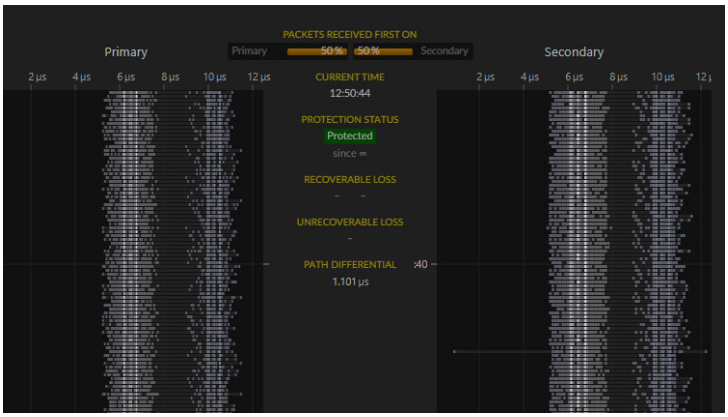
- 8 users can access the LVB440 simultaneously, remotely (via web browser / HTML5).
- Video can be confirmed with a minimum delay of 2 frames.
- ST2110 and ST2022-6 IP standard compatible.
- Supports dual SFP 10G, 25G, 40G, 100G.
- Dual 40 Gbps support; dual 60 Gbps analysis bandwidth with additional options.
- Check packet loss and jitter on both primary and secondary network lines.
- IP Jitter allows you to visualize changes in arrival time between two adjacent IP packets.
- Comprehensive error logging for up to 4 days, including packet loss.
- Check PTP lock status, grandmaster information, Clock Identity, time delay, ANC.
- Easily verify video stream available on the network.
- Various error settings such as freeze error, color freeze error, silence error, phase shift voice error FEC packet loss, RTP packet loss, synchronization error, etc. are possible.
- Multiple packets can be monitored at the same time.
- Primary and secondary video streams can be checked by simply alternating tabs.
- Network status history recorded and displayed graphically for ease of troubleshooting.
- NMOS compliant for simplified automation and integration.
- Video, audio, and ANC packet status can be verified at a glance.
- Key statistics and alarming available including.
- Video format, number of errors, bit rate, packet rate, angle of view, frame rate, and color system compatible standards.
- Video frame and packet capture function, up to 50 video frames and up to 10,000 packets.
- Measure primary and secondary packet delays.
- Visual alarm summaries.



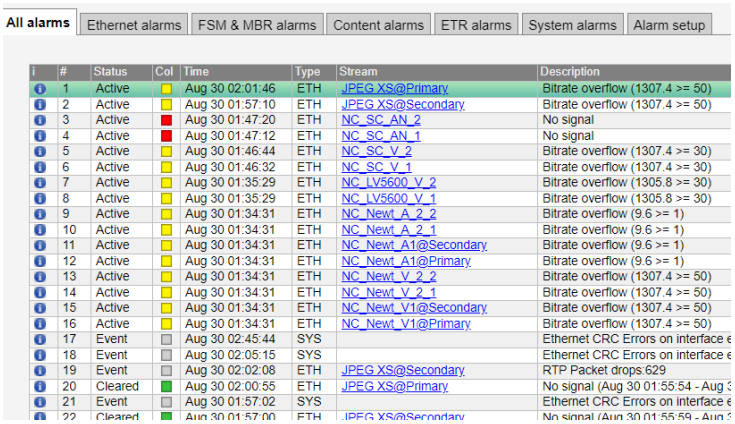
Monitor packets



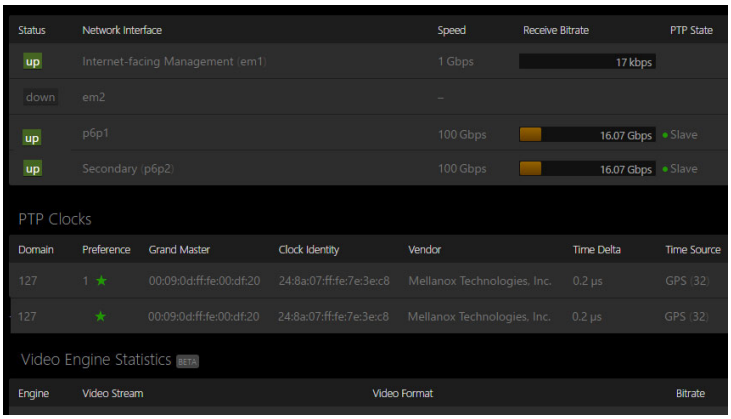
Display errors that occurred in chronological order



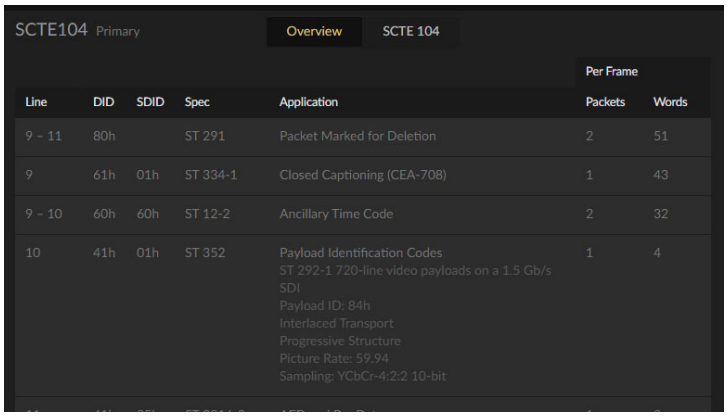
Packet loss and jitter on the primary and secondary flows in ST.2022-7 operation



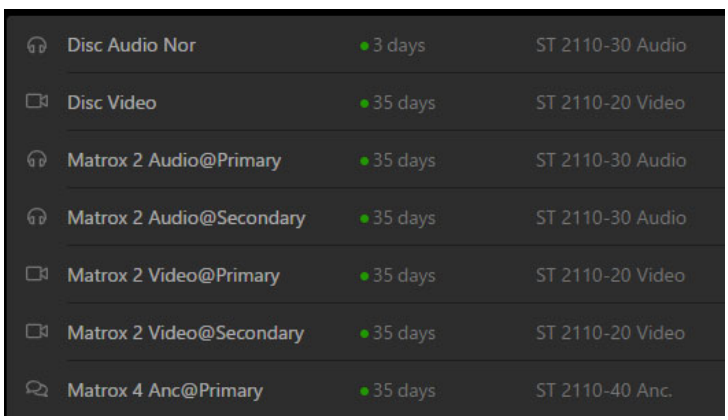
Error log



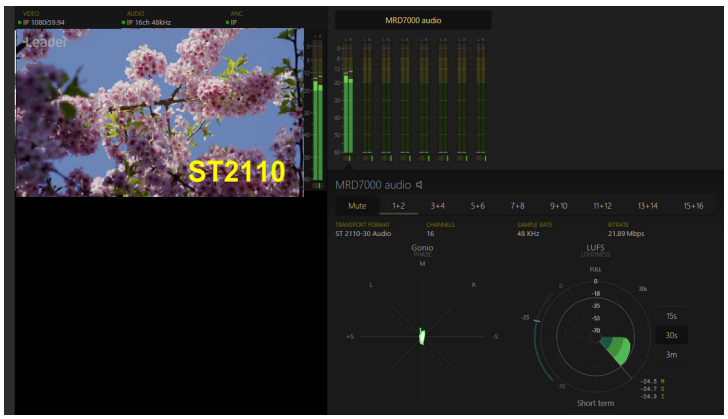
PTP lock status, grandmaster information, Clock Identity, time delay, ANC Information



Ancillary Data and SCTE-104



Flow displays



Audio monitoring

Measurement Items

- RTP error average, minimum / maximum per flow
- Average CRC error, minimum / maximum per flow
- IAT average, minimum / maximum per flow
- Bitrate average, minimum / maximum per flow
- PTP delay average, minimum / maximum per flow
- Average packet rate
- DSCP QoS parameter settings per flow
- Packet TTL per flow

Monitoring band

- Monitoring bandwidth LVB440 standard
- Dual configuration　PORT-A: 40G, PORT-B: 40G
- Single configuration　PORT-A only: 40G

- Monitoring bandwidth LVB440 + 40G-OPT
- Dual configuration　PORT-A: 60G, PORT-B: 60G
- Single configuration　PORT-A only: 80G

Corresponding standard

- ST 2110-20/21/30/31/40, ST 2022-6
- ST 2110-22 Compressed (option)
- ST 2022-7 Redundant stream via dual interface
- OP-47/SMPTE RDD 8, CEA 608/708 Subtitling
- PTP v2 SMPTE 2059 / IEEE 1588-2008
- NMOS IS-04/05/07 & 09

Options

■List of hardware options

Model Name	Function
LVB440-APPLIANCE	High-Performance appliance for Instrument View Analytics of ST 2110 and ST 2022-6, capable of dual stream analysis of complete ST 2022-7 redundancy analysis. • Dual 100G-QSFP interface for 10G, 25G, 40G, 50G and 100G connectivity • 40Gbps data rate • Eight simultaneous Instrument / Widglet View users.
LVB440-SER21	Additional 40Gbps, for total of 80 Gbps data rate.
LVB-SW3	Software Maintenance. 3-year software maintenance and version upgrade support.
LVB-SW5	Software Maintenance. 5-year software maintenance and version upgrade support.
TBC	19” 4RU iPad Pro rack mounting kit with PoE (Power over Ethernet).
TBC	SMPTE ST 2110-22 – Compressed JPEG-XS support

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Specified product specifications are subject to change without notice. September 9, 2021