Broadcast Stream Analyzer

Precision STLTP & Video Quality Analysis

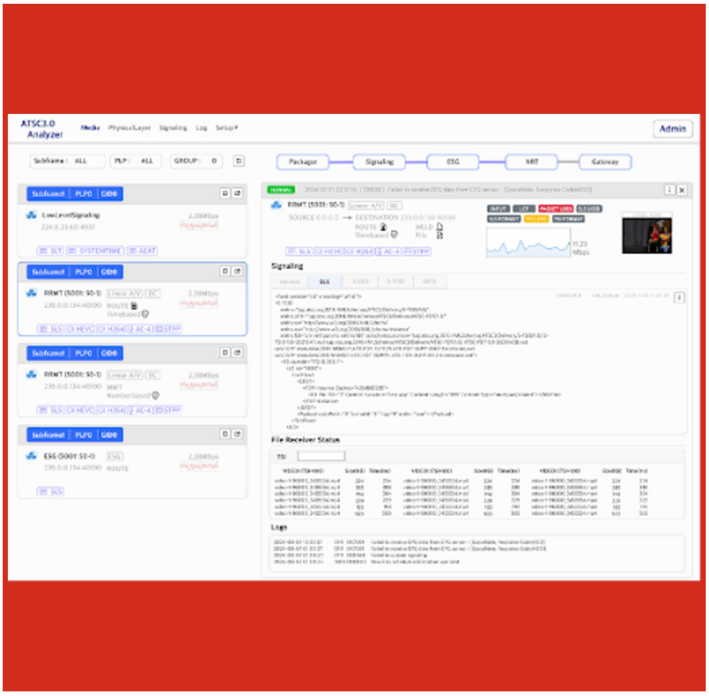
DATASHEET

The Broadcast Stream Analyzer from DigiCAP is a purpose-built tool for deep analysis and monitoring of ATSC 3.0 / TV 3.0 broadcast streams, designed for engineering teams and broadcasters like Broadcaster.

It provides comprehensive STLTP decoding, signaling analysis, and real-time video decoding to ensure reliable, standards-compliant transmissions. With intuitive visualization and error detection, it transforms complex data into actionable insights, enabling rapid troubleshooting and quality assurance across Brazil's nationwide TV 3.0 rollout.

Key Features

- **Comprehensive STLTP analysis:** Decodes and inspects all ATSC 3.0 signaling elements (LLS, STLTP payloads, IP/service layer).
- **Real-time video decoding & visualization:** Supports next-gen codecs including **VVC+LCEVC,** critical for 4K/8K UHD broadcast quality.
- **Error & anomaly detection:** Instantly flags configuration errors, data loss, latency, and frame drops.
- **Visual confirmation:** Displays decoded video to verify end-to-end transmission quality beyond log data.
- **Rapid troubleshooting:** Intuitive visual representation of errors and anomalies accelerates root cause resolution.



Why Broadcast Stream Analyzer Matters

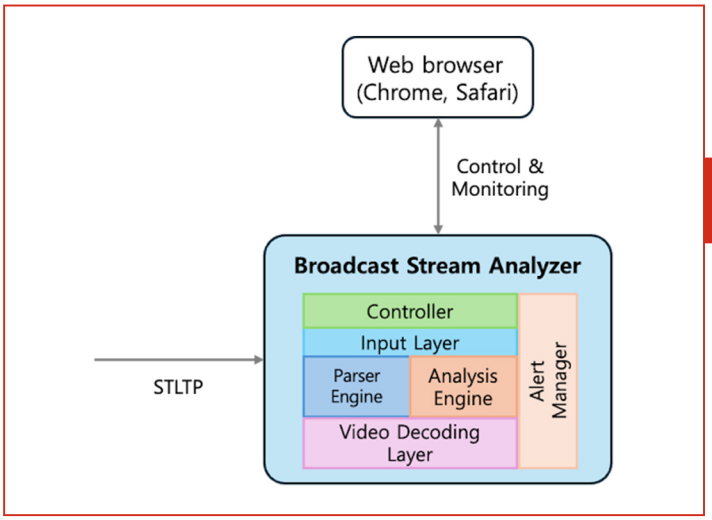
In the transition to TV 3.0, broadcasters face **higher complexity and tighter quality standards.** Conventional monitoring tools don't provide enough visibility into STLTP or next-gen codec workflows.

The Broadcast Stream Analyzer solves this by delivering:

- **End-to-end verification:** Ensures what's sent from the studio is broadcast exactly as intended.
- **Faster problem resolution:** Engineers identify and fix issues immediately.
- **Enhanced quality assurance:** Visual detection of compression artifacts, sync issues, or anomalies.
- **Confidence in rollout:** Ensures Globo's 4K/8K broadcasts meet both technical and viewer expectations.

Architecture

- ✓ **Input layer:** Ingests ATSC 3.0 STLTP streams and extracts LLS, SLTP payloads, IP/service data.
- ✓ **Analysis engine:** Performs signaling decoding, anomaly detection, and error analysis.
- ✓ **Video decoding layer:** Real-time decoding of UHD streams with codec error visualization.
- ✓ **UI/dashboard:** Intuitive interface with stream details, decoded video, and highlighted errors.



What This Means for Broadcaster

By adopting Broadcast Stream Analyzer, Broadcaster gains:

- **Reliable TV 3.0 transition:** Validates STLTP transmissions during rollout.
- **Next-gen codec readiness:** VVC+LCEVC decoding ensures UHD content quality.
- **Proactive error handling:** Immediate detection of signaling or video anomalies.
- **Operational efficiency:** Intuitive visual analysis reduces engineering workload.

This tool ensures Globo can **deliver flawless broadcasts,** protecting its reputation and viewer trust during Brazil's historic shift to TV 3.0.

Inputs & Outputs

- ✓ **Inputs:** STLTP streams, IP-based broadcast transport.
- ✓ **Decoded outputs:** Signaling data tables, IP/service info, video visualization.
- ✓ **Reports:** Error logs, anomaly reports, visual snapshots.

Security

- **Local deployment** ensures sensitive broadcast stream data stays within broadcaster's network.
- Optional integration with Enterprise Monitoring for centralized oversight.

Specifications

- **Standards support:** ATSC 3.0 STLTP (LLS, SLTP payloads), IP/service analysis.
- **Codec support:** VVC+LCEVC, UHD 4K/8K decoding.
- **Error detection:** Latency, frame drops, color errors, compression artifacts.
- **UI:** Web-based interface with video visualization and error highlighting.
- **Deployment:** Cloud-hosted subscription service on NexCaster platform, fully managed by DigiCAP with continuous updates included.

Support

Broadcast Stream Analyzer is offered with DigiCAP's **global engineering support,** including updates for evolving TV 3.0 standards and codecs, ensuring continuous compatibility and performance.

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