

ORION[®]

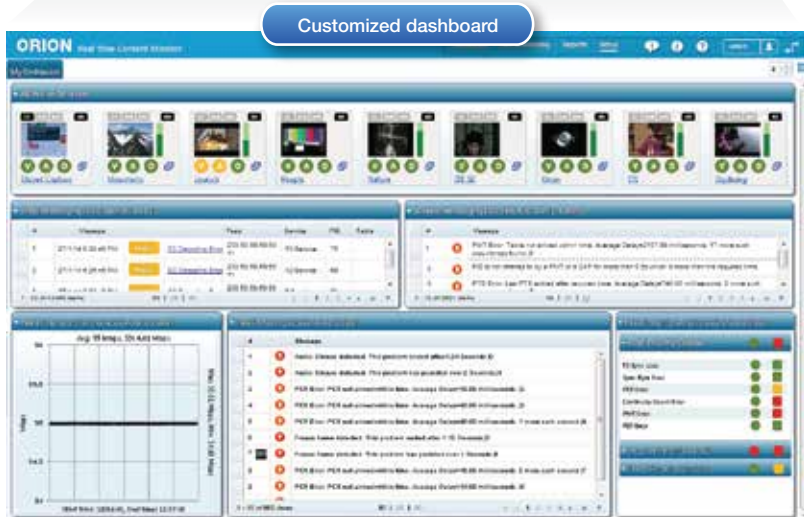
24x7 Confidence Monitoring of Linear/IP Video

Enabling Superior QoS and QoE



Headends and video service providers today deal with a large amount of complex content. Programs may be re-encoded, transcoded, and multiplexed. These transformations can adversely affect the content integrity and user experience.

Keeping these diverse complexities and challenges in mind, Interra's ORION[®] provides an edge as the only enterprise-class software solution that offers a simple, yet powerful approach to content monitoring. ORION performs critical monitoring functions in a single, integrated platform that is comprehensive, efficient, and easily scalable for hundreds of programs.



Real-time Content Monitoring

Created For

- Broadcasters, Cable Networks
- Telco Operators
- Encoder/Decoder Manufacturers
- System Developers
- Streaming Media Providers
- End-to-end DTV Solution Providers
- Cable and Satellite Headends

Benefits

- **Enterprise Level Solution**
 - Support for 10 Gbps monitoring with fiber and copper connectivity
 - Easy deployment and expansion using standard IT hardware
 - Supports Windows and Linux operating system
 - Support for deployment in Virtual Environment
 - Authentication/authorization using LDAP
- **Comprehensive Monitoring**
 - MPEG-2 TS monitoring, closed captions, audio/video quality, and Ad insertion with SCTE-35 triggers
- **Established Quality Checks**
 - Leverages QC and standards compliance of our leading BATON and VEGA products
- **HEVC 4K support**
 - Monitors HEVC streams in different resolutions including 4K
 - Assesses QoE
- **Digital Program Insertion and Compliance checks**
 - Monitor and log every SCTE-35 message
 - Record Ad insertions for visual inspection
 - Check inserted ads for audio/video quality
 - View syntax details and time-accurate thumbnails of SCTE-35 cue messages
 - Trigger service recording around SCTE 35 SPLICE OUT and SPLICE IN events

Key Features

- **In-depth monitoring and compliance checks**
 - MPEG-2 transport streams over IP / ASI / SDI / SDI-over-IP
 - ATSC, DVB and ISDB compliance
 - TR 101 290 and ATSC A/78 compliance
 - DVB subtitles, Closed Captions, Teletext, XDS, and Text Services
 - Video and audio conformance checks
 - SMPTE 2022-2 standard
 - Advanced EBP monitoring for aligned EBPs across ABR Feeds
 - PCR Overall Jitter check for PCR analysis
 - Detectable changes in Audio / Video metadata during Splice events
 - Video Metadata checks for Frame rate and Picture Scanning Type
 - Logo Detection, Dropout and position change checks
 - Service Availability monitoring and reporting
 - Wallboard Mosaic View
 - Analyze SI/PSI/PSIP Tables on Private PIDs
 - Round-robin monitoring mode
- **Monitoring QoS/QoE/MOS**
- **Video quality checks**
 - Freeze frames, black frames and blockiness
- **Audio loudness compliance**
 - ITU, EBU and CALM Act
- **Audio quality checks**
 - Loudness, silence and audio levels
- **Content integrity checks**
 - Digital Program Insertion and compliance checks
 - Encoder Boundary Point monitoring for ABR content
 - Multi Bitrate Transport Stream (MBTS) monitoring using IDR-PTS
- **SDI signal monitoring**
 - SDI
 - SDI-over-IP(SMPTE 2022-6)
- **Well-managed recordings**
 - Manual and automatic recording of signals (TS or PCAP) based on customizable triggers
 - Continuous / chunked recording of a specified time or file size
 - Reason-specified manual recording
- **Alarms, alerts and reporting**
 - Audible Alarms
 - Highly configurable and easy to set up alarms/alerts (including SNMP)
 - Rich, highly configurable reports for real-time and logged data
 - Integrated with VEGA analyzer for offline debugging
 - Real-time graph and timeline for analyzing alerts and trends
 - Historical reports for PCR Measurements
 - XML export of Closed Captions, EBP and IGMP information
 - APIs for XML-based reports
 - Additional system alerts
 - PDF export of real-time feed / service level graphs
 - Ignore and restore alerts
- **Real-time playback**
- **REST APIs support**
 - Managing profiles, system control and configuration
 - Managing and monitoring feeds and services such as Service Decoding, Video/Audio Quality Analysis, Buffer Analysis, Audio Loudness Monitoring, PID details
 - Managing and exporting reports
 - for Alerts in XML, PDF and CSV format
 - for Trends in Bitrate, Loudness, PIAT, RTP Packet Loss, Jitter, FEC Packet Recovery in XML and CSV formats
 - for Closed Captions, SCTE-35, EBP and IGMP data in XML format
- **Role-based access**
- **Dark and Light theme based UI for better user experience**

ORION effortlessly monitors streaming content scaling single to multiple monitoring units / sites across different geographical locations. ORION Central Manager provides real-time consolidated views and long term reports for enterprise-wide centralized monitoring.

ORION has a rich and customizable web-based interface enabling remote monitoring, thereby providing extreme flexibility and on-the-go decision-making. ORION offers other significant features like error detection, video quality analysis, alerts, reporting, thumbnails, and trend analysis.

Formats & Protocols Supported

Interface	IP (v4), ASI, SDI, SDI-over-IP (SMPTE 2022-6)
Protocols	MPEG-2 Transport, SDI-over-IP, DVB, ISDB, ATSC compliance
Audio Formats	MPEG-1/MPEG-2 Audio, AAC/AAC+ (HE-AAC) Audio, Dolby AC-3, EAC-3 Audio, AES3 Audio, SMPTE 302M
Video Formats	SD/HD/UHD/4K Video, HEVC, H.264/MPEG-4 Part 10 (AVC), MPEG-2 Video
Embedded Data	Closed Captioning (EIA-608, EIA-708, SCTE-20, DIVICOM, NADBS, VANC (SMPTE 2038), Text Services), DVB Subtitle, Teletext, SCTE-27, SCTE-35, XDS
Network Transmission Protocol	UDP/RTP, Multicast (IGMP v1/2/3), HRTMP
Checks	TR 101 290, CableLabs, Audio loudness, Audio quality, Video quality, IP Level, QoS/QoE/MOS