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.

ORION®
24x7 Confidence Monitoring of Linear/IP Video

Enabling Superior QoS and QoE

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.
Key Features

- **In-depth monitoring and compliance checks**
  - CableLabs checks
  - MPEG-2 transport streams over IP / ASI
  - ATSC, DVB and ISDB compliance
  - TR 101 290 and ATSC A/78 compliance
  - PCR Overall Jitter check for PCR analysis
  - Analyze SI/PSI/PSIP Tables on Private PIDs
  - Video and audio conformance checks
  - Video Metadata checks for Frame rate and Picture Scanning Type
  - Logo Detection, Dropout and position change checks
  - DVB subtitles, Closed Captions, Teletext, XDS, and Text Services
  - SMPTE 2022-2 standard for IP Conformance
  - Service Availability monitoring and reporting
  - Wallboard Mosaic View
  - Round-robin monitoring mode

- **Monitoring QoS/QoE/MOS**

- **Video quality checks**
  - Freeze frames, black frames, blockiness, blocky distortion

- **Audio quality checks**
  - Loudness compliance (ITU, EBU and CALM), silence and audio levels

- **Ad Insertion Monitoring**
  - SCTE35 Compliance checks
  - Logging and Inspection of SCTE35 Cue Markers and Avails

- **Encoder Boundary Point Monitoring**
  - Advanced EBP monitoring for aligned EBPs across ABR Feeds
  - Multi Bitrate Transport Stream (MBTS) monitoring using IDR-PTS

- **SDI signal monitoring**
  - SDI over BNC
  - SDIoIP (ST-2110)

- **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**
  - Audio Alarms
    - Highly configurable and easy to set up alarms/alerts (including SNMP/Email)
    - Rich, highly configurable reports for real-time and logged data
    - Real-time graph and timeline for analyzing alerts and trends
  - Historical reports for PCR Measurements
  - XML export of Closed Captions, EBP and IGMP information
  - Exportable Ad-Insertion Monitoring Reports with Cue details and Video Thumbnails
    - Integrated with VEGA analyzer for offline debugging

- **REST APIs support**
  - APIs for Setup and Configuration
  - APIs for controlling Monitoring operations
  - APIs for Alert reports in XML, PDF and CSV format
  - APIs for fetching Bitrate, Loudness, PIAT, RTP Loss, Jitter, FEC Packet Recovery stats in XML and CSV formats
  - APIs for fetching Closed Captions, SCTE-35, EBP and IGMP data in XML format

- **Role-based access**

- **Dark and light theme based UI for better user experience**
Benefits

• Enterprise level solution
  - Support for 10 Gbps monitoring with fiber and copper connectivity
  - Easy deployment and expansion using standard IT hardware
  - Supports 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
  - ST2110 Monitoring including support for ST-2110-20/30/31/40, PTP, Redundancy and NMOS Integration

• 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

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
**Formats & Protocols Support**

**Interface**
IP (v4), ASI, SDI, SDIoIP (ST-2110), VLAN 802.1Q

**Protocols**
MPEG-2 Transport, DVB, ISDB, and 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), HRTP