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.

### 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
  - ST2110/2022:6 monitoring

- **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
Key Features

- **In-depth monitoring and compliance checks**
  - MPEG-2 transport streams over IP / ASI / SDI
  - 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
  - Monitor ST2110 SDIoIP streams
  - **SDI signal monitoring**
    - SDI
    - SDI-over-IP (SMPTE 2022-6)
    - ST2110
  - **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-specific 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, EBPs 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, EBPs 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**

<table>
<thead>
<tr>
<th>Interface</th>
<th>IP (v4), ASI, SDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocols</td>
<td>MPEG-2 Transport, DVB, ISDB, ATSC compliance, SDIoIP</td>
</tr>
<tr>
<td>Audio Formats</td>
<td>MPEG-1/MPEG-2 Audio, AAC/AAC+ (HE-AAC) Audio, Dolby AC-3, EAC-3 Audio, AES3 Audio, SMPTE 302M, Audio True peak levels, detection of Stereo/Mono Audio, and Audio noise</td>
</tr>
<tr>
<td>Video Formats</td>
<td>SD/HD/UHD/4K Video, HEVC, H.264/MPEG-4 Part 10 (AVC), MPEG-2 Video</td>
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<tr>
<td>Embedded Data</td>
<td>Closed Captioning (EIA-608, EIA-708, SCTE-20, DIVICOM, NADBS, VANC (SMPTE 2038), Text Services), DVB Subtitle, Teletext, SCTE-27, SCTE-35, XDS</td>
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<tr>
<td>Network Transmission Protocol</td>
<td>UDP/RTP, Multicast (IGMP v1/2/3), HRTP</td>
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<tr>
<td>Checks</td>
<td>TR 101 290, CableLabs, Audio loudness, Audio quality, Video quality, IP Level, QoS/QoE/MOS, SCTE35 signalling checks</td>
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