



ORION[®] 2110 Probe

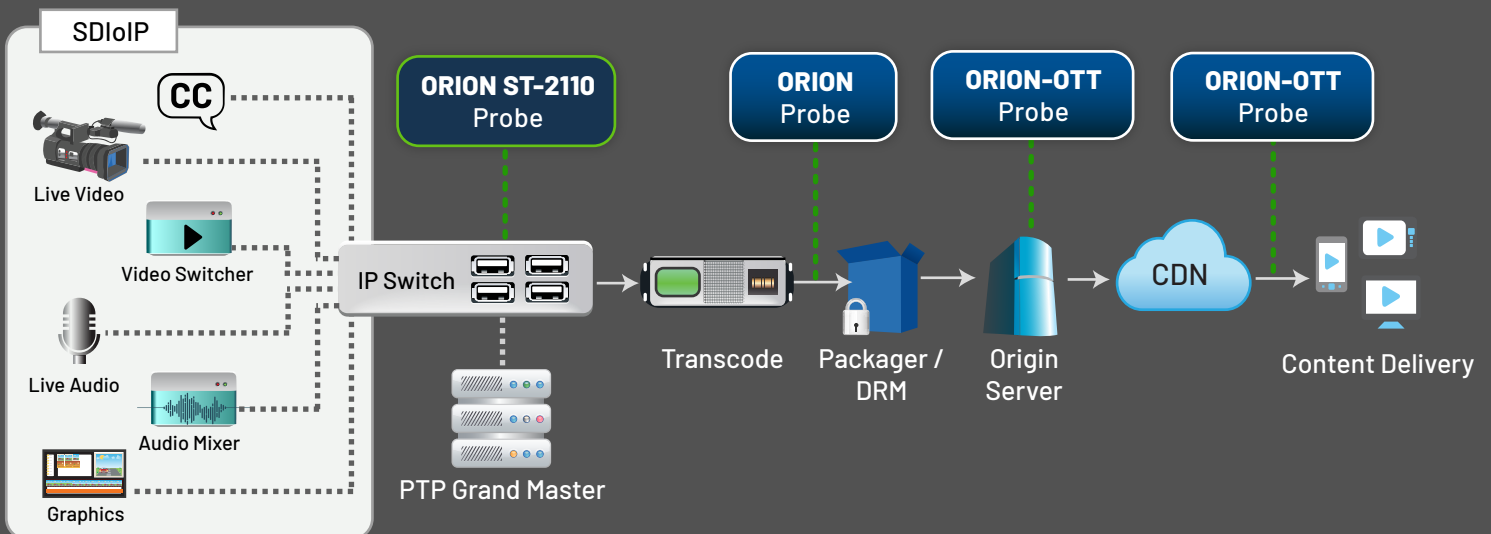
For SDI-over-IP based Media Workflows

The need for seamless interoperability, lower costs with standard IT infrastructure and greater flexibility in transmission of video, especially 4K/8K HDR content, has significantly urged broadcasters to transition from traditional SDI infrastructure to IP based video networks. IP networks offer more agility, stability and flexibility required for building the next-generation video production and distribution facilities.

SMPTe ST-2110 professional media over managed IP networks suite streamlines the shift to video over IP, encapsulating a wide range of protocols - from PTP clocks to high bitrate uncompressed or compressed video transmission over IP, ST-2110 is accompanied with its own set of intricacies and operational challenges.

Interra Systems' ORION 2110 Probe is a powerful solution to deal with the diverse complexities and challenges of the SDI-over-IP environments. The ORION 2110 Probe offers comprehensive QoS/QoE monitoring of ST-2110 essence streams, including ST-2110 main and redundancy signals and NMOS integration.

ORION 2110 Probe - for SDI-over-IP based Media Workflows



SMPTE ST-2110 Suite Standards Support

- **ST-2110-10** - System architecture and synchronization. Synchronization is based on SMPTE 2059
- **ST-2110-20** - Uncompressed video transport, based on SMPTE 2022-6
- **ST-2110-30** - Audio transport, based on AES67
- **ST-2110-31** - Transport of AES3 formatted audio
- **ST-2110-40** - Transport of ancillary data

Key Features & Benefits

- Detect issues quickly throughout the video workflow
- Monitor ST-2110 essence streams for both QoS and QoE
- Perform metadata monitoring for closed captions, teletext, and timecodes
- Monitor PTP (Precision Time Protocol) messages for all the ethernet network interfaces
- Monitor both primary and secondary streams simultaneously
- Monitor up to 100Gbps bandwidth (each for main and redundancy), on 16 HT core machine using single NIC
- Monitor video, audio, and ANC streams for various checks, such as black frames, freeze frames, blockiness, loudness, level, silence, closed captions, ancillary time code, teletext OP-47 data etc.
- Validates the SDP input with actual feeds' content
- Supports NMOS APIs
- Ensure seamless integration with third-party software using rich set of REST APIs
- Easily deploy on standard IT hardware

Service specific view with both primary and secondary signals

The screenshot displays the ORION Real-Time Content Monitor interface. At the top, there are two service-specific views for 'Vitussao2(Primary)' and 'Vitussao2(Secondary)'. Each view shows a video feed, availability (1.333%), quality (OK), bitrate (1.281109 Gbps), and code score (23). Below these are detailed QoS and QoE metrics for video and audio tracks. A 'PTP messages' table is visible at the bottom, showing synchronization data for interface 172.16.3.160.

Time Duration	Sync Count	Follow Up Count	Delay Request Count	Delay Response Count	Announce Count
09/17/21 19:19:55 - NOW	3	3	2	2	1
09/17/21 19:09:55 - 19:19:55	600 (60.00/min)	600 (60.00/min)	592 (59.20/min)	592 (59.20/min)	300 (30.00/min)
09/17/21 18:59:54 - 19:09:55	636 (63.60/min)	636 (63.60/min)	611 (61.10/min)	611 (61.10/min)	318 (31.80/min)

PTP messages

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