

What's New

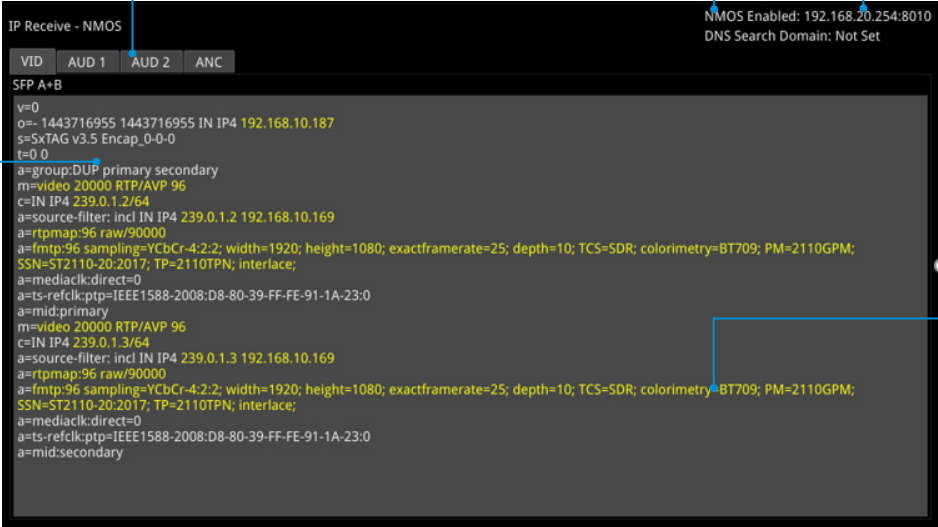
Qx V3.4.1

The latest features in Qx version 3.4.1 support AMWA NMOS for enhanced automated configuration of the Qx within SMPTE 2110:

- Advanced Media Workflow Association (AMWA) Networked Media Open Specifications (NMOS) supplied as standard
- Self-tested as part of the JT-NM Spring 2020 test program https://jt-nm.org/jt-nm_tested/
- Support for NMOS IS-04 Discovery and Registration – versions: 1.0, 1.1, 1.2, and 1.3
- Support for NMOS IS-05 Connection Management – versions: 1.0 and 1.1
- Qx acts as an NMOS Receiver Node with a choice of Single or Dual NMOS nodes
- Compatible with any NMOS-compliant Controller for the management of ST 2110 connections.



New IP Receive – NMOS Instrument



The screenshot displays the 'IP Receive - NMOS' interface. At the top right, it shows 'NMOS Enabled: 192.168.20.254:8010' and 'DNS Search Domain: Not Set'. Below this is a table with columns 'VID', 'AUD 1', 'AUD 2', and 'ANC'. The main area shows SDP transport file details for 'SFP A+B', including parameters like 'v=0', 'o=- 1443716955 1443716955 IN IP4 192.168.10.187', 's=SxTAG v3.5 Encap_0-0-0', 't=0 0', 'a=group:DUP primary secondary', 'm=video 20000 RTP/AVP 96', 'c=IN IP4 239.0.1.2/64', 'a=source-filter: incl IN IP4 239.0.1.2 192.168.10.169', 'a=rtptime:96 raw/90000', 'a=fmtp:96 sampling=YCbCr-4:2:2; width=1920; height=1080; exactframerate=25; depth=10; TCS=SDR; colorimetry=BT709; PM=2110GPM; SSN=ST2110-20:2017; TP=2110TPN; interlace;', 'a=mediaclk:direct=0', 'a=ts-refclk:ptp=IEEE1588-2008:D8-80-39-FF-FE-91-1A-23:0', 'a=mid:primary', 'm=video 20000 RTP/AVP 96', 'c=IN IP4 239.0.1.3/64', 'a=source-filter: incl IN IP4 239.0.1.3 192.168.10.169', 'a=rtptime:96 raw/90000', 'a=fmtp:96 sampling=YCbCr-4:2:2; width=1920; height=1080; exactframerate=25; depth=10; TCS=SDR; colorimetry=BT709; PM=2110GPM; SSN=ST2110-20:2017; TP=2110TPN; interlace;', 'a=mediaclk:direct=0', 'a=ts-refclk:ptp=IEEE1588-2008:D8-80-39-FF-FE-91-1A-23:0', and 'a=mid:secondary'. Annotations point to various parts of the interface: 'Tabs to View Active SDP Data for Each Flow' points to the table headers; 'SDP Transport File for SFP A + B' points to the SDP text; 'NMOS Connection Details' points to the top right status; 'IP Address & Port Number of NMOS Registry' points to the IP and port; and 'User-defined Color Highlighting of SDP Data Parameters' points to the highlighted text in the SDP file.

- Based on NMOS application programming interface (API) specifications for open connectivity of networked media devices.
- NMOS APIs standardized by AMWA and supported by leading media enterprises.
- Simplifies the automated setup of SMPTE 2110 environments through automatic discovery and registration.
- Enables the remote control of media flows from a central NMOS controller and browser.
- Automated population of flow parameters reducing errors and the overhead of manual flow configuration.
- Node receivers switchable between Single and Dual interface binding (for 2022-7 support).
- Enables the automated management of multiple remote Qx devices from a single NMOS-enabled broadcast control system or NMOS browser.
- Provides individual tabs to access the SDP Transport file for the four different flows in SMPTE 2110 – Video, Audio 1, Audio 2 and Ancillary Data.
- Aids the registration of networked Qx devices in a centrally managed repository.
- Supports service discovery through both Unicast DNS-SD and mDNS.

About the AMWA NMOS Specifications

IS-04: Discovery and Registration

- Suite of APIs to discover and register networked resources.
- Enables the discovery of remote Qx devices connected to the network.
- Registers all discovered Qx devices in a central repository managed by an NMOS Controller.
- Automated registration of any new Qx devices added to the network.
- In addition to Registered Operation, the Qx supports Peer-to-Peer Operation where the Qx can discover other nodes and be discovered through DNS-SD without a central registry for smaller systems.

JT-NM Testing

- The Qx rasterizer was self-tested according to the JT-NM test criteria and remotely verified at the JT-NM Self Testing in March 2020.
- Qx v3.4 successfully passed all test criteria for AMWA NMOS TR-1001-1 and SMPTE 2110 in March 2020.

Additional New Qx Features

- A pair of vertical Eye time cursors to generate and display time measurements across the Eye (shown above) available in SDI Stress mode with Qx option PHQXO-SDI-STRESS.
- Remote upgrade of Qx software using SFTP from software version 3.3.1.
- Fast ballistics option added to provide instantaneous attack ballistics for audio metering in the Analyzer - Audio Metering instrument.

IS-05: Connection Management

- API for establishing or removing flows between NMOS Senders and the Qx.
- Allows connections to be staged in advance and activated only when required.
- Allows you to make multiple connections simultaneously using a *salvo* operation.



- Display of additional ancillary data in the Picture and Picture - Copy instruments:
 - ST309 Date in the format: **dd mmm yyyy**
 - Input name of the source video stream can be user-defined or extracted from ancillary data using DID / SDID values.
- Enhanced tabular data display in the Analyzer - 2110 Format Setup instrument.

