NMOS **A**dvanced **S**treaming **A**rchitecture

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matrox video

v0.1

Public GitHub Repository

- https://github.com/alabou/NMOS-MatroxOnly
  - README.md

Purpose

- The NMOS Advanced Streaming Architecture extends and defines IP-based media streaming for the professional AV (ProAV) market. Designed to address the growing demand for flexible, secure, and scalable streaming workflows, these specifications extend the NMOS framework with advanced features that enhance configurability, interoperability, security, and resource management in both small-scale and large-scale systems.

Key Objectives

- **Unprecedented Configurability**
- **Unified Management**
- **Comprehensive Protocol and Media Support**
- **Enhanced Security**

Key Features

- Stream and Sub-stream Configurability with IS-11
  - Fine-Grained Control, Dynamic Adaptation
- Sender and Receiver Capabilities
  - Sender Capabilities, Receiver Capabilities
- Unified Group Management
  - Simplified Workflows, Efficient Relationships
- Advanced Security Framework
  - Encryption, Secure Access Control, Resource Protection, HDCP Support
- Comprehensive Protocol and Media Type Support
  - Protocol Compatibility, Media Format Versatility

Expectations

- These specifications represent a significant evolution in NMOS technology, offering unmatched configurability, interoperability, security, and resource management for proAV workflows. By enabling configuration of independent streams and per-sub-stream configuration within multiplexed flows, leveraging sender and receiver capabilities, and integrating advanced security protocols, they provide a state-of-the-art framework for the professional AV market. Whether managing small-scale systems or large distributed networks, these specifications ensure efficiency, reliability, and future-proof operation.

Public GitHub Repository

- https://github.com/alabou/NMOS-MatroxOnly
  - README.md

- Clone the repository on your local computer
  - git clone https://github.com/alabou/NMOS-MatroxOnly.git

NMOS With * Specifications

- NMOS With AAC.md
- NMOS With H.264.md
- NMOS With H.265.md
- NMOS With H.222.0.md
- NMOS With AES3.md

- NMOS With IPMX.md
- NMOS With USB.md
- NMOS With SRT.md
- NMOS With NDI.md
- NMOS With RTSP.md

- NMOS With Natural Groups.md
- NMOS With Redundancy.md
- NMOS With Privacy Encryption.md
- NMOS With Node Reservation.md
- NMOS With OAuth2.0.md
- NMOS With IS-11.md

Other Specifications

- One Model to Rule them All.md
- Atomic State Changes.md
- ReceiverCapabilities.md
- SenderCapabilities.md
- Transports.md
- Capabilities.md
- NodeAttributes.md
- SenderAttributes.md
- FlowAttributes.md
- SourceAttributes.md
- TransportAttributes.md

Examples

- The **examples/** directory provides over 80 JSON and SDP examples

JSON Schemas

- The **schemas/** directory provides schemas for all the supported transports

- https://github.com/alabou/nmos-parameter-registers/tree/MatroxOnly

Testing and Parameter Registers

- https://github.com/alabou/nmos-testing/tree/MatroxOnly
  - Additional test suites
    - Matrox-Transports
    - Matrox-Capabilities
    - Matrox-Privacy
    - Matrox-AAC
    - Matrox-H264
    - Matrox-H265
    - Matrox-H222
    - Matrox-USB

- https://github.com/alabou/nmos-parameter-registers/tree/MatroxOnly

- This concludes our introduction to the Matrox NMOS Advanced Streaming Architecture. Additional tutorials will progressively become available, each covering a key aspect of the architecture. Stay tuned!

- If you have any questions, feel free to reach out at abouchar@matrox.com.

- Thank you for attending.