PlexusAV

P-AVN-SCG Stream Conversion Gateway

OVERVIEW

PlexusAV's P-AVN-SCG Stream Conversion Gateway (SCG) allows users to break free from the traditional AV-over-IP signal constraints. Serving as a bridge between all AV over IP technologies, the stream conversion gateway converts between protocols that use the same AV codecs in the payload. This means NDI®HX, IPTV, and RTSP feeds can be passed through the Stream Conversion Gateway and converted into IPMX channels for playback on the PlexusAV IPMX system.

It gets even better, with the ability to transmit and receive from public or WAN connections via SRT. Quickly and easily confgure site-to-site IPMX channel transmissions without any special ISP services or complicated routing.
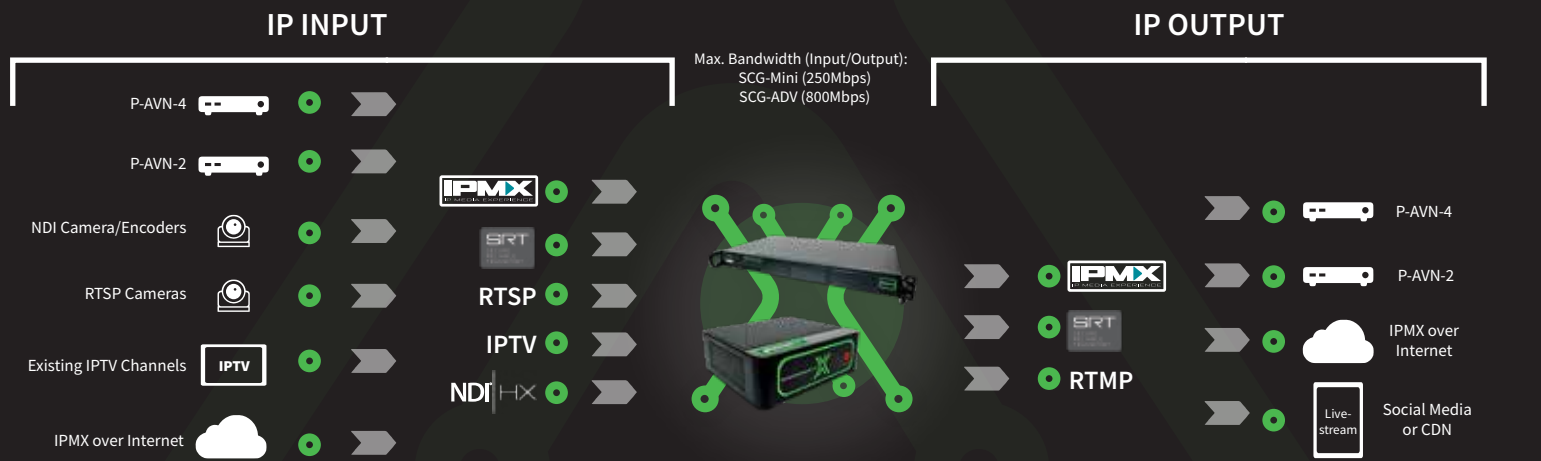
WHY CHOOSE THE STREAM CONVERSION GATEWAY?

- Universal AV Signal Compatibility: With multiprotocol support for IPMX, SRT, RTSP, NDI®HX, and MPEG/IP, this gateway is engineered to be compatible across various platforms. The device integrates smoothly with existing AV infrastructures, streamlining signal translation and reducing complexity.
- Versatile Network Bridge: Whether transmitting from public or WAN connections, or receiving and translating public streams into PlexusAV's ecosystem, the Stream Conversion Gateway allows AV signals to flow effortlessly between different networks. It allows for flexible distribution for scenarios like digital signage, e-sports, educational content networks, and large-venue entertainment.
- User-Friendly, Workflow-Based Interface: Built with an intuitive web interface, the Stream Conversion Gateway makes deployment fast and easy, regardless of experience level. This workflow-based design helps operators configure and manage the gateway with minimal training and maximum efficiency.
- Seamless Third-Party Integration: Equipped with NMOS and a HTTP/HTTPS API, the Stream Conversion Gateway ensures compatibility with third-party IPMX devices and solutions, giving users the freedom to design AV systems that meet unique needs without restrictive limitations.

APPLICATIONS

- Network scanning for compatible NDI®HX devices (single NDI license included, purchase required for additional channels).
- Monitor third-party cameras, existing IPTV channels, and encoder feeds on the PlexusAV IPMX system.
- Send IPMX channels from site-to-site over the public internet.
- Livestream dedicated encoder channels to social media or CDN.

KEY FEATURES

- Receive NDI®HX, RTSP, and MPEG-TS streams and easily convert to IPMX [H.264/H.625].
- Intuitive workflow-based web interface.
- Easily configure primary and backup source feeds.
- Seamlessly convert a single input to multiple output types.
- Signals converted to IPMX are automatically detected by Visual Array and P-AVN-4 transceivers.
- Robust API for 3rd party integration*

IP INPUT

- P-AVN-4
- P-AVN-2
- NDI Camera/Encoders
- RTSP Cameras
- Existing IPTV Channels — IPTV
- IPMX over Internet

IPMX
SRT
RTSP
IPTV
NDI HX

Max. Bandwidth (Input/Output):
SCG-Mini (250Mbps)
SCG-ADV (800Mbps)

IP OUTPUT

IPMX
SRT
RTMP

- P-AVN-4
- P-AVN-2
- IPMX over Internet
- Social Media or CDN (Live-stream)

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Stream Conversion Gateway Specifications

IPMX RECEIVE AND TRANSMIT
Receive:
    Input Type: IPMX H.264/265
    Bitrate range: 5-50Mbps per channel
    IGMP Compatibility: Version 2 and 3
Transmit:
    Output Format: UDP, RTP (with extension headers), Multicast and Unicast, CBR and VBR Streams.
    Bitrate Range: 5-50Mbps per channel

SRT RECEIVE AND TRANSMIT
Receive/Transmit:
    Protocol and IP range: UDP, Unicast
    Negotiation Modes: Caller, Listener, Rendezvous
    Latency: 20-8000Ms, user configurable
    Bitrate Range: 5-50Mbps per stream
    Encryption: AES-128/256

NDI-HX RECEIVE
    Input Type: NDI®HX [H.264/265]
    Bitrate range: 5-50Mbps per channel
    IGMP Compatibility: Version 2 and 3
    Discovery: Find NDI®HX devices on the network when selected as input type.

RTSP RECEIVE
    Input Type: RTSP [H.264/265]
    Bitrate range: 5-50Mbps per channel
    IGMP Compatibility: Version 2 and 3
    Discovery: Find devices when selected as input type.

MPEG/IP RECEIVE
    Input Type: UDP, RTP (with extension headers), Multicast and Unicast, CBR and VBR Streams Multicast Filtering.
    Forward Error Correction: SMPTE ST 2022-1 FEC
    Bitrate range: 5-50Mbps per channel
    IGMP Compatibility: Version 2 and 3

Dashboard

Routing (NDI®HX to IPMX)

P-AVN-SCG-MINI COMPACT APPLIANCE
Management Interfaces:
    WebUI: On-board web interface for easy configuration and control.
    HTTPS API: Supports GraphQL for advanced integration.
    NMOS Support: Full support for IS-04 and IS-05 standards.
Network Interfaces:
    Ethernet 1:   RJ-45 10/100/1000 Auto-Negotiating
    Ethernet 2:   RJ-45 10/100/1000 Auto-Negotiating
Dimensions & Power:
    Dimensions: 42mm x 126mm x 113mm (1.65" x 4.96" x 4.44)
    Weight: 1 lbs (0.45 kg)
    External Power Supply:
        Input: 100-240V AC, 50-60Hz, 1.5A
        Output: 19V @ 3.42A
Environmental Specifications:
    Operating Temperature: -14°F to 113°F (-10°C to 45°C)
    Storage Temperature: -4°F to 140°F (-20°C to 60°C)
    Operating Humidity: <85% (non-condensing)

P-AVN-SCG-ADV-1RU RACKMOUNT APPLIANCE
Network Interfaces:
    Ethernet 1:   RJ-45 10/100/1000 Auto-Negotiating
    Ethernet 2:   RJ-45 10/100/1000 Auto-Negotiating
Peripheral Interfaces (Terminal Access Only):
    Display: VGA (1)
    Mouse/Keyboard: 2x USB-A ports
Managed Interface:
    WebUI: On-board web interface for easy configuration and control.
    HTTPS API: Supports GraphQL for advanced integration.
    NMOS Support: Full support for IS-04 and IS-05 standards.
Dimensions & Power:
    Dimensions: 1RU Rack Mount - 43mm x 437mm x 249mm (1.7" x 17.2" x 9.8")
    Weight: 10 lbs (4.54 kg)
    Internal Power Supply: Total Output Power and Input - 200W with Input 100/250AC.
        AC Input Frequency: 50/60Hz.
    Max Throughput: 1Gbps Maximum (combined input/output).
Environmental Specifications:
    Operating Temperature: 41°F to 95°F (5°C to 35°C)
    Storage Temperature: -40°F to 140°F (-40°C to 60°C)
    Operating Humidity: <90% (non-condensing)
Included Accessories:
    Rackmount ears and hardware
    Power Cord

OPTIONAL LICENSES
    P-AVN-SCG-NDI-LIC: Adds 1x NDI input our output
    P-AVN-SCG-ADV-LIC-ADD-250:
        Adds 250 Mbps throughput up to max of 1Gbps
    P-AVN-SCG-ADV-IP-ADD-ON:
        Optional network card with additional 2x RJ45 ports

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