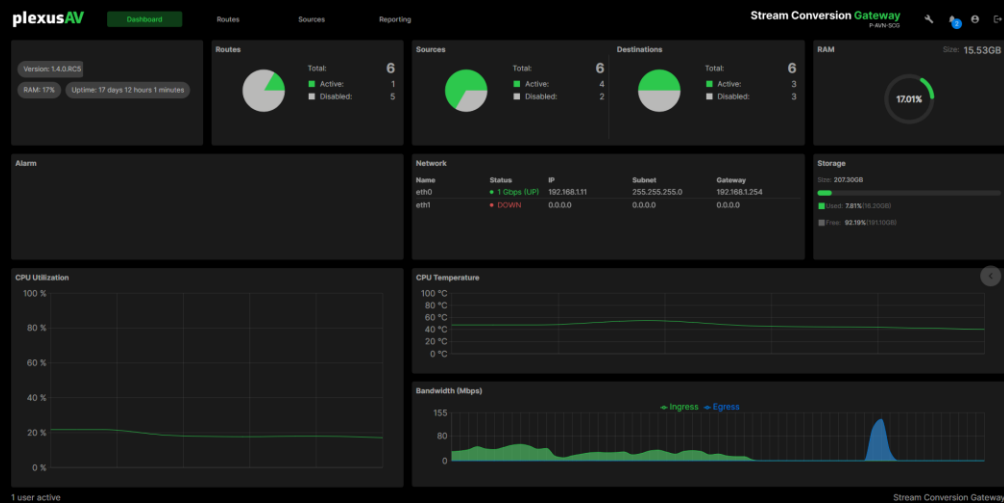




Stream Conversion Gateway Software

P-AVN-SCG-ADV | P-AVN-SCG-MINI | P-AVN-SCG Software VM

User Manual

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About PlexusAV

PlexusAV delivers a full-featured, open IPMX-based AV-over-IP platform built for flexibility and scalability — offering transceivers, encoders, decoders, speakers, and software-based products for centralized management and IP stream protocol conversion.

Control options include a local UI and centralized management via plexusAV Visual Array. Additional NMOS and RESTful API support offer third-party control for integration flexibility. For more information, visit www.plexusav.com

Revision History

Date (MM/DD/YYYY)	Version	Description	Author
08/12/2026	1.0	Initial release covering P-AVN-SCG-ADV, P-AVN-SCG-MINI, and the P-AVN-SCG Software VM	JF

⚠ Safety Instructions

Important: Read and follow these safety precautions before installing or operating this product. The plexusAV P-AVN-SCG Stream Conversion Gateway is a software product, available as a downloadable Software VM or preloaded on the P-AVN-SCG-MINI and P-AVN-SCG-ADV hardware appliances. The instructions below apply when running on the MINI or ADV hardware; if you are running the Software VM, follow the safety and handling guidance provided by your own server/host hardware. Failure to follow these precautions on MINI or ADV hardware may result in electric shock, fire, or injury.

General Use

- Read and retain all instructions.
- Observe all warnings and follow instructions carefully.
- Do not use this product near water.
- Clean only with a dry cloth.

Installation & Environment

- Do not block ventilation openings — keep all vents clear on unit.
- Do not install near heat sources such as radiators, heat registers, stoves, or other devices that produce heat.
- Do not expose this product to dripping or splashing liquids.
- Place on a stable, ventilated surface — or rack mount
- P-AVN-SCG-ADV: designed for mounting in a standard 19-inch, 1RU rack space; confirm the rack and mounting hardware can support the unit's weight.

Power & Cables

- Protect the power cord/supply from being walked on or pinched, especially at plugs and the point of exit from the unit.
- Use only the power supply cable(s) included with the unit, or a replacement specified by PlexusAV.
- Unplug the unit during lightning storms or when unused for long periods of time.

Servicing

- Refer servicing to qualified personnel only.
- On both hardware appliances, HDMI and USB connections are for service/diagnostic use only — normal operation only requires power and network connections.
- Use only replacement parts specified by PlexusAV or with equivalent operating characteristics.

⚠ Safety Precautions

There is always a danger present when using electronic equipment. Unexpected high voltages can be present at unusual locations in defective equipment and signal distribution systems. Become familiar with the equipment you are working with and observe all safety precautions in this manual.

Package Contents

P-AVN-SCG-MINI

- P-AVN-SCG-MINI appliance
- External DC power supply
- Quick Start Guide
- HDMI Cable
- Mounting Bracket*

P-AVN-SCG-ADV

- P-AVN-SCG-ADV 1RU chassis
- Power cable(s), region-appropriate
- Quick Start Guide

P-AVN-SCG Software VM

- No physical items ship — the Software VM is delivered as a downloadable virtual machine image, provisioned on your own host hardware
- Deployment instructions and license activation are provided at the time of purchase (see Section 2 for deployment steps and Appendix C for host system requirements)

If any of these items were omitted from the packaging, please submit a support ticket at:

Support: <https://plexusav.com/support-request/>

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1 Overview

Quick Links

[Support Ticket System](#)

[Knowledge Base](#)

[API Developer Hub](#)

[SCG Product Page](#)

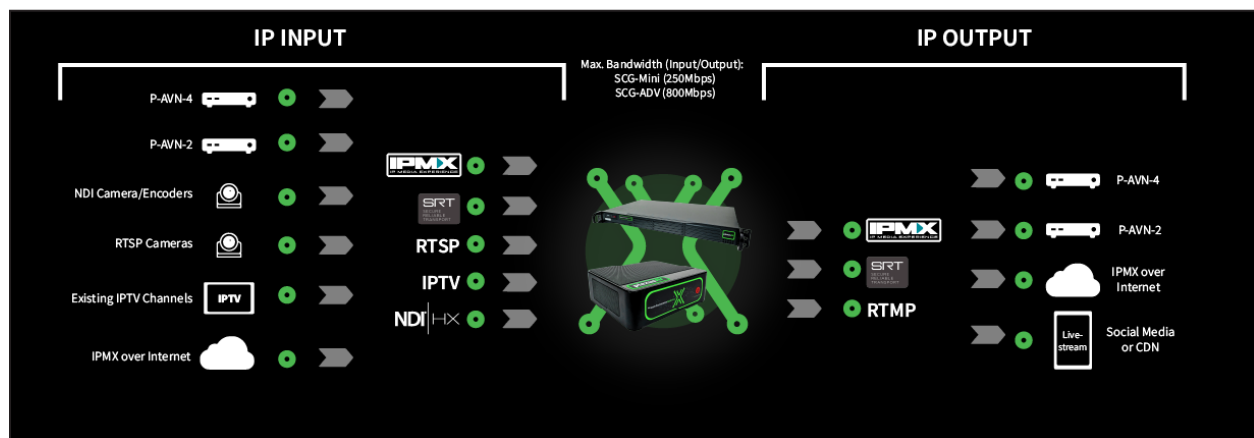
Document Conventions

Convention	Meaning
Warning	Indicates a potential risk of injury, equipment damage, or unsafe operation.
Caution	Indicates a condition that can interrupt operation, cause configuration loss, or require recovery.
Important	Identifies commissioning-critical information or compatibility requirements.
Note	Provides supplemental information, best practice, or operational context.
UI labels	Bold text indicates interface labels, buttons, menu names, and field names.
Procedures	Numbered steps are used when order matters; bullets are used for unordered information.
Figures	Every figure is numbered with a concise caption; controls are annotated directly on screenshots where practical.

1.1 Product Introduction

The plexusAV P-AVN-SCG Stream Conversion Gateway is a protocol-conversion appliance that bridges AV-over-IP ecosystems onto a common IPMX network. Because IPMX, SRT, RTMP/streaming-platform delivery, and MPEG-TS/IPTV all commonly carry H.264/H.265 video payloads, the SCG can translate a stream from one of these protocols to another without a full re-encode pipeline, letting facilities mix AVoIP standards on a single network rather than standardizing on one.

Typical uses include extracting an IPMX signal for delivery to the public internet (SRT or a streaming platform such as YouTube, Facebook Live, LinkedIn Live, or a CDN), bringing an external SRT or IPTV/MPEG-TS feed into an IPMX-native facility, and general protocol bridging for digital signage, e-sports/content-creation, meeting-room, stadium/large-venue, and educational-network deployments. Configuration is performed through an onboard, workflow-based web interface, and the unit exposes a REST API and NMOS IS-04/IS-05 discovery and control for integration with third-party systems and with the plexusAV Visual Array platform.



P-AVN-SCG protocol conversion overview (IP input protocols → SCG → IP output protocols)

At a Glance

Primary Function — Protocol-conversion gateway bridging AV-over-IP ecosystems on a common network

Primary AV Transport — IPMX (also bridges SRT, SRT IPMX, MPEG-TS/IPTV, RTMP, and NDI|HX)

Control Options — Onboard web interface, REST API, NMOS IS-04/IS-05, and plexusAV Visual Array

Power — External DC supply (MINI); dual redundant AC supplies (ADV); host-provided (Software VM)

Deployment Type — 1RU rackmount (ADV), tabletop/enclosure mini-PC (MINI), or virtual machine

1.2 Deployment Options

The Stream Conversion Gateway is a software product, available three ways: preloaded on the P-AVN-SCG-ADV (1RU rackmount) or P-AVN-SCG-MINI (compact mini-PC) hardware appliances, or as a downloadable P-AVN-SCG Software VM that runs on your own virtualization host. All three share the same web interface, REST API, and protocol-conversion feature set — the option selected determines maximum throughput and physical form factor.

Specification	P-AVN-SCG-ADV	P-AVN-SCG-MINI
Form factor	1RU, 19" rackmount chassis	Compact mini-PC appliance
Maximum throughput	Up to 1.5 Gbps (750 in 750 out)	Up to 600 Mbps (300 in 300 out)
Primary use case	Higher channel-count / density deployments	Small PC / Low channel-count
Data interfaces	2x RJ-45 1Gbps Ethernet (auto-negotiating); Expandable via optional IP Add-On card	2x RJ-45 1Gbps Ethernet (auto-negotiating)
Power input	Dual redundant power supplies, 100–240V / 50–60Hz auto-ranging (IEC C13)	External DC power supply, region specific
Dimensions	1RU rack-standard	Mini-PC “NUC” form-factor
Expansion	1x PCIe slot (optional IP / network card)	None
Service-Ports	HDMI, USB 2.0	HDMI, USB 2.0

P-AVN-SCG Software VM

[System requirements — software VM projects must consult with plexusAV team to define the minimum vCPU, RAM, disk, and supported hypervisors (e.g. VMware ESXi, Hyper-V, KVM) — any VM application should be confirmed with engineering and tested before installation]

Licensed Features

NDI|HX conversion is available but is a licensed feature — a per-device license must be activated from the web interface before NDI|HX input/output can be used (see Section 3.4).

By default, every SCG appliance ships with one NDI|HX license applied at no cost. Additional NDI|HX input or outputs will require paid licensing.

Key Features

- Multiprotocol conversion supporting IPMX (via TR-10-11), SRT, SRT IPMX, MPEG-TS/IPTV, and streaming-platform protocols (RTMP and similar), all built around a shared H.264/H.265 payload.
- NMOS IS-04 (discovery/registration) and IS-05 (connection management) for compatibility with Visual Array + third-party IPMX devices and NMOS-based control systems.
- Intuitive, workflow-based onboard web interface, built to the same UI guidelines used across other plexusAV products for a consistent user experience.
- REST API for third-party integration, monitoring, and control.
- Manageable alongside other plexusAV endpoints through plexusAV Visual Array.

1.3 P-AVN-SCG-MINI



Figure 2 — P-AVN-SCG-MINI front panel

- Power Button — front panel, press to power the unit on.
Note: BIOS is configured to turn on PC whenever power is available
- plexusAV brandmark and "Stream Conversion Gateway" product label.
Note: there are a few different mini PC models deployed | appearances may be different.

Some early-production units may use a slightly different chassis and appearance. All branded -MINI models have been tested and qualified for smooth operation. This is a cosmetic hardware revision difference only and does not affect operation.



Figure 3 — P-AVN-SCG-MINI rear panel example

1. USB-A ports — service/diagnostic use only. keyboard can be used for command line.
2. HDMI output — service/diagnostic use only. Will also show IP address of Eth ports.
3. Ethernet 1 (Eth0) — primary IPMX network connection, static IP 192.168.1.11 by default.
4. Ethernet 2 (Eth1) — secondary port, DHCP by default.
5. DC power input — connect the included external power supply or PS2 cable.

1.4 P-AVN-SCG-ADV

The P-AVN-SCG-ADV runs on a 1RU rackmount server platform with a full front panel, dual onboard Gigabit NICs, and open PCIe expansion slot (no expansion cards installed in the standard build).

- Power Button — front panel, press to power the unit on.
Note: BIOS is configured to turn on PC whenever power is available
- Ethernet 1 (Eth0) — rear panel; primary IPMX network connection, static IP 192.168.1.11 by default.
- Ethernet 2 (Eth1) — rear panel; secondary port, DHCP by default.
- Power inlets — rear panel, dual redundant power supplies (IEC C13); connect to a 120V or 240V outlet (auto-ranging).
- PCIe expansion slot — rear panel, empty in the standard build. An optional IP AddOn card can be installed in an open slot for additional network ports.

As with the MINI variant, the P-AVN-SCG-ADV only requires power and an Ethernet connection for normal operation; rear-panel HDMI and USB connections are for service use only.

1.5 Software VM Deployment

The P-AVN-SCG Software VM has no physical chassis or panels. It is deployed as a virtual machine on your own server hardware — see Section 2 for deployment steps and Appendix C for minimum system requirements.

2 Installation

For unpacking, physical placement/mounting, and power and network cabling instructions, refer to the Quick Start Guide included with your P-AVN-SCG-MINI or P-AVN-SCG-ADV unit. The Datasheet, Quick Start Guide, and this Manual are also available for download from the product page:

Product Page: <https://plexusav.com/products/p-avn-scg/>

The P-AVN-SCG Software VM does not ship with a printed Quick Start Guide. To deploy it: import the VM image on a virtualization host meeting the minimum system requirements (see Appendix C), connect its virtual network interface to a virtual switch/network with a path to the IPMX network, and power it on. No physical mounting, power connection, or cabling is required.

Please open a support request ticket when installing the VM so the plexusAV team can document and install your SCG license.

Support Request Page: <https://plexusav.com/support-request/>

2.1 Before You Begin

Confirm these prerequisites before beginning installation.

Prerequisite	Details
Required tools and hardware	None for the MINI or ADV — both ship ready to power and connect. The Software VM requires a virtualization host meeting the requirements in Appendix C.
Power requirements	MINI: the included external DC power supply ADV: dual redundant AC supplies (IEC C13) Software VM: power is provided by your host hardware.
Network requirements	One Ethernet connection is required (Eth0); the second port (Eth1) is optional. Multicast-capable (IGMP v2/v3) and NMOS-capable switching is recommended for the IPMX/NMOS segment. Neither hardware unit requires PoE.
Installation environment	MINI: a stable, ventilated surface — no rack mounting is required. ADV: a standard 19-inch, 1RU rack space with clear front/rear airflow.
Information to have ready	A static IP/subnet/gateway if not using DHCP Relevant IP and connection parameters for route sources/destinations not IPMX

2.2 Network Setup

Both hardware appliances ship with the same default network configuration. To reach the unit for first-time setup, temporarily set your computer's network adapter to a static IP on the same subnet as the unit's default address, then connect directly or through the same switch:

Network Planning Reference

Reference	Guidance
Switch capability	Multicast (IGMP v2/v3) and NMOS-capable switching is recommended for the IPMX/NMOS segment; a standard unmanaged switch is sufficient for the temporary PC-to-unit setup connection described below.
PoE budget	Not applicable — both hardware appliances use external DC or AC power rather than PoE.
Addressing	Eth0 ships static (192.168.1.11); Eth1 ships DHCP. Either port can be reconfigured to static or DHCP from the Network panel (Section 5.7).
Timing and discovery	NMOS IS-04/IS-05 for IPMX discovery and connection management; SCG operation does not depend on PTP.

Reference	Guidance
Segmentation	On a VLAN-segmented network, confirm the interface used for IPMX output can reach the target IPMX/NMOS segment; SRT, RTMP, and MPEG-TS legs typically route over a general-purpose or WAN-facing segment instead.

Default Settings

Setting	Default Value
Ethernet 1 (Eth0)	Static, https://192.168.1.11 (default)
Ethernet 2 (Eth1)	DHCP (default)
Username	admin
Password	proav101

Note: units are configured with the credentials above before they ship. If a unit still has an unconfigured factory image, the web interface will force a password change on first login — see Section 4.1.

Once connected, open a web browser (Chrome, Edge, or Safari) on your computer and navigate to the unit's IP address to continue setup through the web interface. If you don't know the IP address plug in the HDMI output to a monitor and it will be displayed.

[P-AVN-SCG Software VM: network configuration depends on the virtual network setup of your hypervisor. The default web-interface credentials (admin / proav101) apply the same as the hardware appliances once the VM is reachable — confirm default IP behavior on first boot with engineering before publishing.]

3 Web-Interface Access & Orientation

This section covers logging in, changing the network address, and orienting yourself in the web interface. For detailed field-by-field reference on every panel, see Section 5 — Web Interface Reference.

3.1 Logging Into the Web Interface

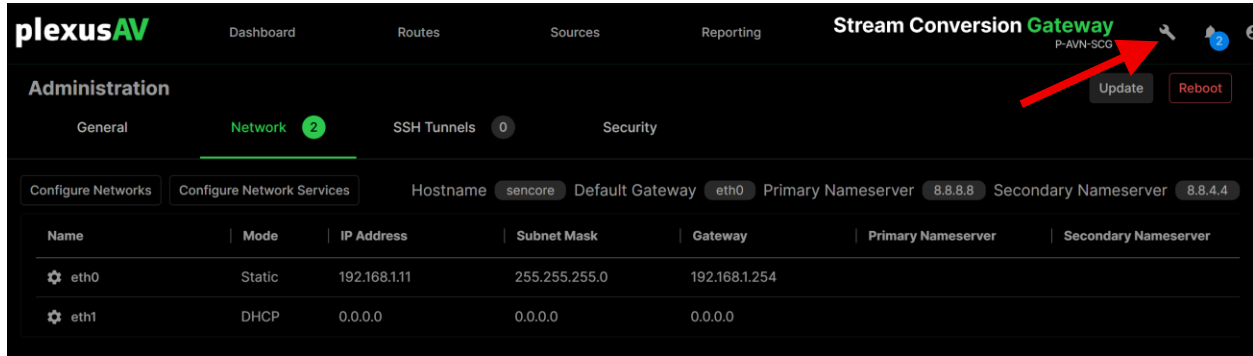
Open a supported browser and navigate to the unit's IP address (https://192.168.1.11 by default). Your browser may warn that the certificate is not trusted — this is expected for the unit's self-signed certificate; accept/proceed to continue.

Log in with the default credentials (admin / proav101). If the unit presents a first-run password-change prompt instead, set a new password and use it for subsequent logins.

3.2 Network Configuration

To change the unit from its default static address to a network-appropriate address:

- In the left navigation pane, select the System menu, then Network.
- Edit the IP configuration (static or DHCP, address, subnet, gateway) as needed for your network.
- Apply the changes. The unit's web interface will become reachable at the new address.



Administration → Network page, where the unit's IP configuration is changed

3.3 Top Navigation Bar Overview



The SCG top Navigation Bar

The SCG web interface uses a top navigation bar rather than a side menu. Four primary tabs give access to daily-use views; system-level configuration is reached through the wrench icon.

Tab	Description
Dashboard	Landing page — live status widgets for routes, sources, destinations, system resources, and alarms.
Routes	Build, view, and edit protocol-conversion routes.
Sources	Read-only monitoring table of all sources configured across routes.
Reporting	Active alarms and historical event log.

- Wrench icon — opens Administration/Network Settings, Licenses, About, and Reboot.
- Bell icon — Alarms flyout with a live count badge and severity summary.
- Person icon — current session panel (logged-in user, logout).

For detailed field-by-field reference on every panel and dialog, see Section 5 — Web Interface Reference.

3.4 About Panel & Licensing

The About panel displays the unit's software version, serial number, and a unique unit UUID. Some protocol conversions — currently NDI|HX — are licensed features, and throughput itself is also a licensed tier; both require a license to be applied before use:

- Open the About panel and copy the unit's UUID.
- Submit a support ticket with the UUID and the desired license type (e.g. NDI|HX, or a higher throughput tier).
- PlexusAV support will generate and return a license code. Return to the web interface, open the Licenses panel, paste in the code, and apply it.

Support Ticket System: <https://plexusav.com/support-request/>

For the full About and Licenses field reference, see Sections 5.9 and 5.8.

4 Managing via plexusAV Visual Array

plexusAV Visual Array (VA) is PlexusAV's centralized platform for discovering, configuring, and monitoring PlexusAV devices across a network from a single interface. The P-AVN-SCG IMPX outputs can be detected through Visual Array and routed to compatible plexusAV products for playback.

Visual Array discovers and manages SCG routes through NMOS, which is an IPMX-based discovery protocol. As a result, VA only detects and displays SCG routes whose output is IPMX. Routes converting to non-IPMX outputs (SRT, RTMP, or MPEG-TS) are not visible in Visual Array and must be monitored and configured directly through the SCG's own web interface.

4.1 Adding This Device to Visual Array

The SCG advertises itself on the network via NMOS discovery, allowing Visual Array to detect and add it automatically once both devices share a network segment (or are reachable through NMOS registration).

4.2 What You Can Do in Visual Array

- Monitor IPMX outputs in real time.
- Switch decoder channels between SCG IPMX outputs and other IPMX devices (such as P-AVN4 and P-AVN-2 endpoints) on the same network.

Configuration changes and firmware updates for the SCG must be performed through its own local web interface — Visual Array does not push configuration profiles or firmware to this device.

For complete instructions, see the plexusAV Visual Array Manual:

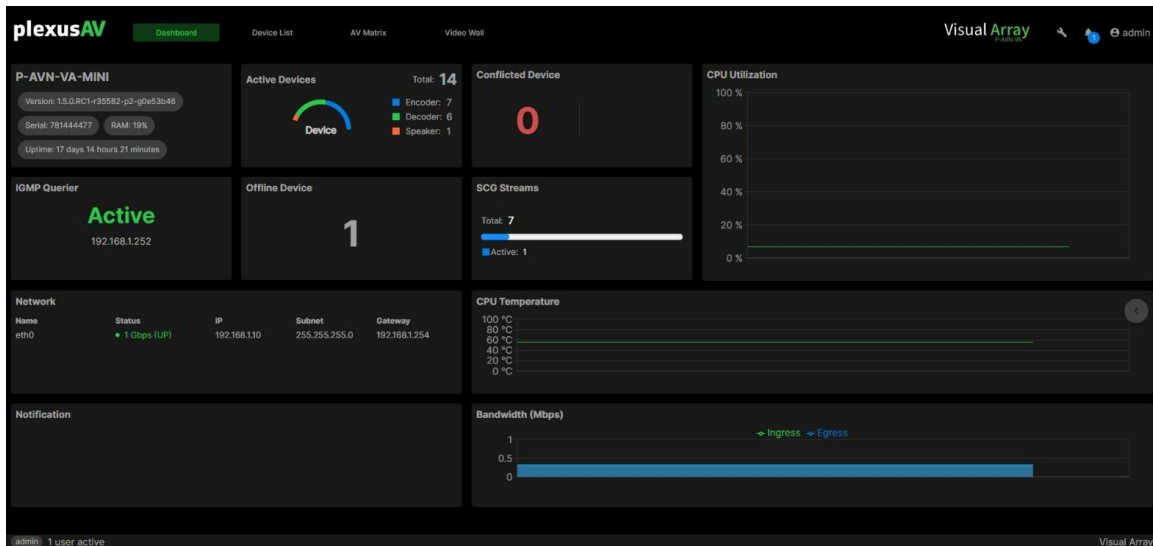
Visual Array Manual: <https://plexusav.com/support/visual-array/>

4.3 Confirming SCG Integration in Visual Array

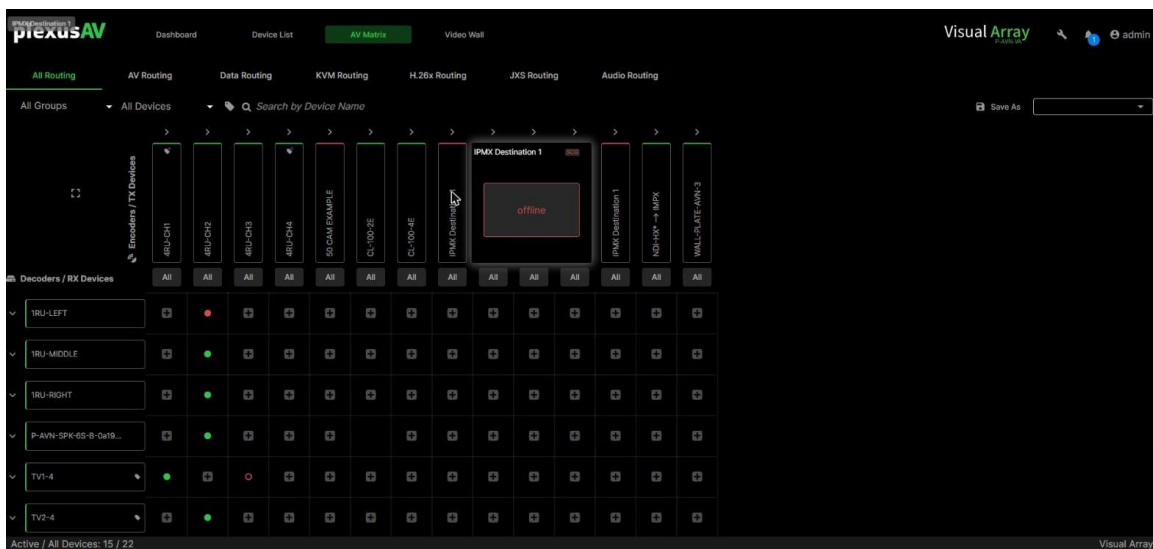
Visual Array surfaces the SCG's IPMX outputs directly inside its own interface, rather than listing the SCG appliance itself as a managed device. Two places in Visual Array confirm the integration is active:

- Dashboard — the "SCG Streams" widget reports a live count of total and active streams originating from the SCG, separate from the general device tally.
- AV Matrix — each SCG-originated IPMX output appears as a TX-device column labeled with a red "SCG" tag, and can be routed to any Visual Array-managed decoder or display like any other source.

Note: Visual Array's Device List does not include an entry for the SCG appliance itself — it manages the individual IPMX streams the SCG produces, not the gateway hardware.



Visual Array Dashboard, showing the "SCG Streams" widget (Total: 7, Active: 1)



Visual Array AV Matrix, an SCG-originated "IPMX Destination 1" TX device tagged "SCG"

5 Web Interface Reference

This section documents every configuration and monitoring panel in the SCG web interface in detail, using screenshots and field references captured from a live unit. For basic login and orientation, see Section 3.

5.1 Dashboard Panel

The Dashboard is the landing page and gives an at-a-glance view of unit health and stream activity.

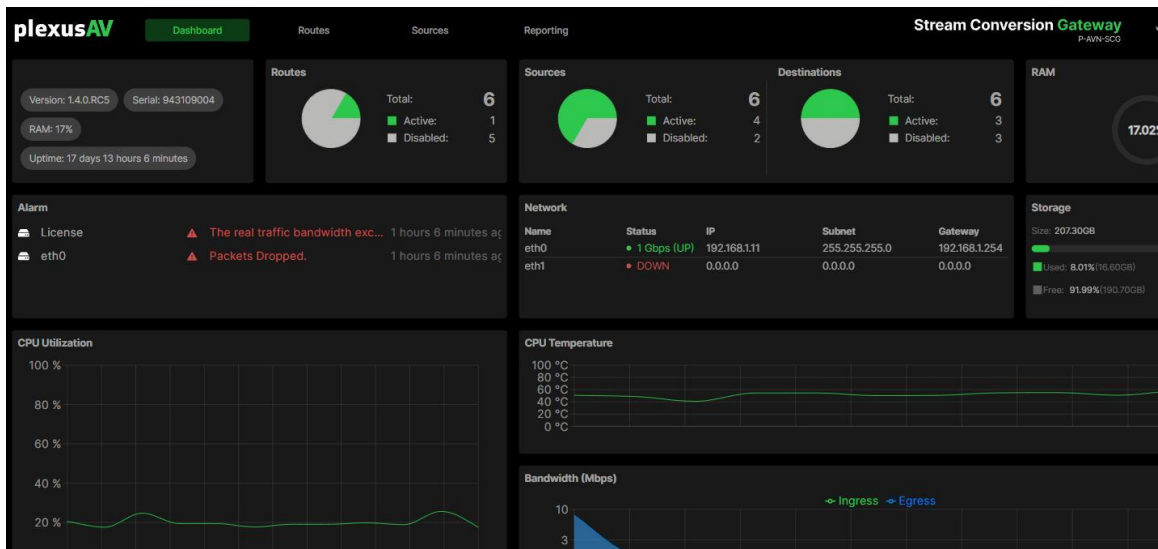


Figure 8 — Dashboard panel

Field	Description
Version / Serial / Uptime	Installed firmware version, unit serial number, and time since last boot.
Routes / Sources / Destinations	Total, active, and disabled counts for each, shown as donut charts.
RAM	Live memory-utilization gauge.
Storage	Total capacity plus used/free percentage and GB.
CPU Utilization	Live line chart, percent over time.
CPU Temperature	Live line chart, degrees Celsius over time.
Bandwidth	Live ingress/egress area chart, in Mbps.
Network	Per-interface Name, Status, IP, Subnet, and Gateway.

Field	Description
Alarms	Live list of active alarms with elapsed time; mirrors the Reporting panel's Active Alarms tab (Section 5.6).

5.2 Routes — List & Flow Canvas

The Routes tab is where protocol-conversions are created, grouped, and edited.

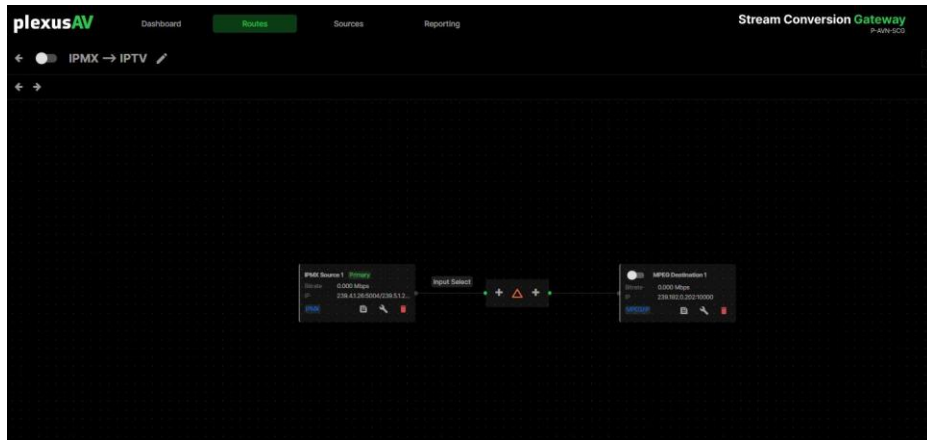
Route	Label	Interface	Protocol	Bitrate(Mbps)	Address
☐ Default					
☐ IPMX → IPTV	IPMX Source 1 Active	eth0/eth0	IPMX	0.00	239.41.26:5004/239.51.26:5004
	MPEG Destination 1	eth0	MPEG IP	0.00	239.192.0.202:10000
☐ IPMX → NDI-HX3	IPMX Source 1 Active	eth0/eth0	IPMX	0.00	239.41.154:5004/239.51.154:5004
	NDI-HX Destination 1		NDI	0.00	
☐ IPMX → NDI	IPMX Source 1 Active	eth0/eth0	IPMX	0.00	239.41.28:5004/239.51.28:5004
	NDI-HX Destination 1		NDI	0.00	
☐ IPTV → IPMX	MPEG/IP Source 1 Active	eth0	MPEG IP	0.00	239.192.0.201:10000
	SCG IPTV	eth0/eth0	IPMX	0.00	239.11.213:5004/239.11.214:5004
☐ NDI to IPMX - Wa...	IPMX Source 1 Active	eth0/eth0	IPMX	0.00	239.192.0.200:5004/239.192.0.201:5004
	NDI-HX* → IMPX	eth0/eth0	IPMX	0.00	239.192.0.200:5004/239.192.0.201:5004
☐ RTSP → IPMX	RTSP Source 1 Active		RTSP	0.00	192.168.1.211:554
	BOLIN RTSP	eth0/eth0	IPMX	0.00	239.11.226:5004/239.11.227:5004

Figure 9 — Routes list

Setting	Range	Description
Route	Checkbox + route name/identifier.	Selects a route for group actions or deletion. Click on the route name to open up the route configuration page.
Label	Text	Source or destination endpoint label within the route.
Interface	e.g. eth0/eth0	Physical interface(s) in use for that leg.
Protocol	See Sections 5.3–5.4	Transport protocol for that leg.
Bitrate (Mbps)	Live measured value	Live measured bitrate.
Address	IP:port or host:port	Address for that leg.
New Group	Button	Opens Create Group: a Group Label plus a multi-select of routes to add.

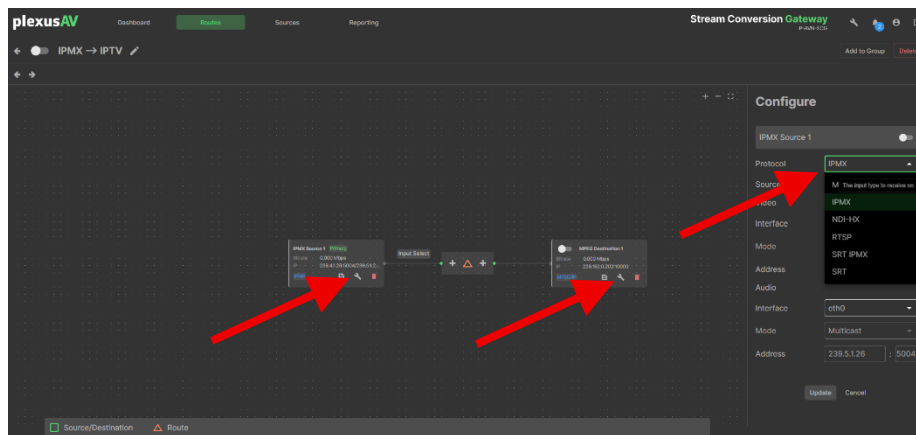
Setting	Range	Description
New Route	Button	Opens New Route: a Route Label plus an optional "Create from Template" selection (see Administration → General → Template Profile Manager, Section 5.7).
Delete	Button	Deletes the selected route(s) or group(s); enabled once a row is checked.

Selecting a route by clicking on the route name opens a node-graph. Click the + sign on the left side to configure a source, and click the + sign on the right side to configure an output.



Route flow canvas (Source → Input Select → Destination), showing an IPMX-to-IPTV conversion route

- Each Source/Destination node has an enable toggle plus Detail, Configure, and Delete controls.
- Canvas controls include zoom, fit-to-screen, Add Source, Add Destination, Add to Group, Previous/Next Route navigation, and a route-level Delete.
- Click the wrench icon on any source or destination to bring up the protocol configuration



Source Configure panel, showing the Protocol selector

5.3 Source Configuration by Protocol

Opening a source node's Configure control shows a protocol-specific field set. All source protocols share an enable toggle and a Protocol selector with six options: MPEG/IP, IPMX, NDI-HX, RTSP, SRT IPMX, and SRT.

IPMX

Field	Values	Notes
Source	Dropdown of discovered IPMX sources.	Select Protocol
Video Interface / Address	eth0/eth1; IP:Port	Configure Video Parameters
Audio Interface / Address	eth0/eth1; IP:Port	Configure Audio Parameters

MPEG/IP

Must be SPTS (Single Program Transport Stream with TS header information / tables)

Field	Values	Notes
Interface	eth0/eth1	Select Ethernet Interface / Port
Mode	Multicast / Unicast	Choose IP class
Address	IP:Port	Configure UDP IP and Port
FEC	Enabled / Disabled	Enable/Disable Forward Error Correction
IGMP Filter	Exclude / Include	Shown only in Multicast mode; used for IGMPv3 SSM
IGMP Address List	Add / Delete All	Editable list of IP addresses.

NDI-HX

Field	Values	Notes
Source	Dropdown of discovered NDI sources on the network.	NDI devices must be on the network and reachable.

RTSP

Commonly used to receive camera feeds or other network streams with H.264/H.265

Field	Values	Notes
Address	Host:Port	Manual RTSP Settings
Username	Text	Manual RTSP Settings
Passphrase	Masked	Manual RTSP Settings
Path	Text	Manual RTSP Settings

SRT IPMX

A distinct protocol from plain SRT below — carries IPMX payload from plexusAV encoders/sources.

Field	Values	Notes
Call Mode	Caller / Listener	Rendezvous mode is not present on this firmware.
Discovery Timeout (s)	Numeric, default 3	
Latency (ms)	Numeric, default 20	
Passphrase	Masked	
Remote Link table	Host/IP, Port, Local Port Mode, Local Port, Interface, Priority	Supports multiple bonded links.

SRT TS

A SRT I/O link that carries traditional MPEG-IP (SPTS) style IPTV or broadcast content with compatible payloads.

Field	Values	Notes
Call Mode	Caller / Listener	Rendezvous mode is not present on this firmware.
Discovery Timeout (s)	Numeric, default 3	
Latency (ms)	Numeric, default 20	

Field	Values	Notes
Passphrase	Masked	
Stream ID	Text	
RTP Tunnel Mode	Disabled / Enabled	
Bonding	Disabled / Enabled	"+" adds an additional bonded link row.

5.4 Destination Configuration by Protocol

Destination nodes use a separate Protocol selector with six options: MPEG/IP, SRT, IPMX, SRT IPMX, RTMP, and NDI-HX.

IPMX

Field	Values	Notes
Video Interface / Address	eth0/eth1; IP:Port	Always multicast — no Mode field.
Audio Interface / Address	eth0/eth1; IP:Port	Always multicast — no Mode field.

MPEG/IP

Field	Values	Notes
Interface	eth0/eth1	
Destination	IP:Port	
Source IP Mode / Source IP	Auto / Manual; IP:Port	
Source MAC Mode / Source MAC	Auto / Manual; MAC address	
TS Packets Per IP Packet	Numeric, default 7	
TS Bitrate (Mbps)	Numeric, default 30	
Encapsulation	UDP (and other options)	

SRT

Field	Values	Notes
Call Mode	Caller / Listener	
Discovery Timeout (s)	Numeric	
Latency (ms)	Numeric, default 125	Default differs from the source-side default of 20ms.
Bandwidth Overhead (%)	Numeric, default 25	
TS Packets Per SRT Packet	Numeric, default 7	
Time To Live (hops)	Numeric, default 64	
Type Of Service	Numeric, default 0	
Encryption Mode	Disabled / AES128 / AES256	

SRT IPMX

Shares the same base fields as source-side SRT IPMX (Call Mode, Discovery Timeout, Latency, Passphrase, and the bonded remote-link table).

RTMP

Commonly used to output a live stream into a social media platform or CDN delivery system.

Field	Values	Notes
Interface	eth0/eth1	
Stream URL	Text	Required. Determined by the RTMP system receiving the feed.
Stream Key	Masked	

NDI-HX*

Field	Values	Notes
Name	Text	Required.
Group	Text, default "public"	
Video	Toggle	Enable/disable video.
Audio	Toggle	Enable/disable audio.

5.5 Sources Panel

The Sources tab is a read-only monitoring view — all configuration happens at the route level (Section 5.3).

Field	Description
Name	Source label.
Protocol	Configured source protocol.
Address	Source address.
Bitrate	Live measured bitrate.
Status	Green dot = active/receiving; grey dot = inactive.

plexusAV			
Dashboard Routes Sources Reporting			
Name	Protocol	Address	Bitrate
● IPMX Source 1	IPMX	239.4.1.26:5004/239.5.1.26:5004	0.000 Mbps
● IPMX Source 1	IPMX	239.4.1.154:5004/239.5.1.154:5004	0.000 Mbps
● IPMX Source 1	IPMX	239.4.1.28:5004/239.5.1.28:5004	0.000 Mbps
● MPEG/IP Source 1	MPEG IP	239.192.0.201:10000	0.000 Mbps
● IPMX Source 1	IPMX	239.192.0.200:5004/239.192.0.201:5004	0.000 Mbps
● RTSP Source 1	RTSP	192.168.1.211:554	0.000 Mbps

Sources Tab

5.6 Reporting Panel

Reporting has two tabs.

Tab	Description
Active Alarms	Badge count; table columns Location, Device, Description, Last Change.
Log	Table columns Timestamp, Location, Device, Transition (green = alarm cleared, red = alarm raised), Description. Includes pagination controls and a Clear action.
Configure	Opens an Alarms tab listing alarm types with a global SNMP checkbox per alarm, to enable SNMP trap notification.

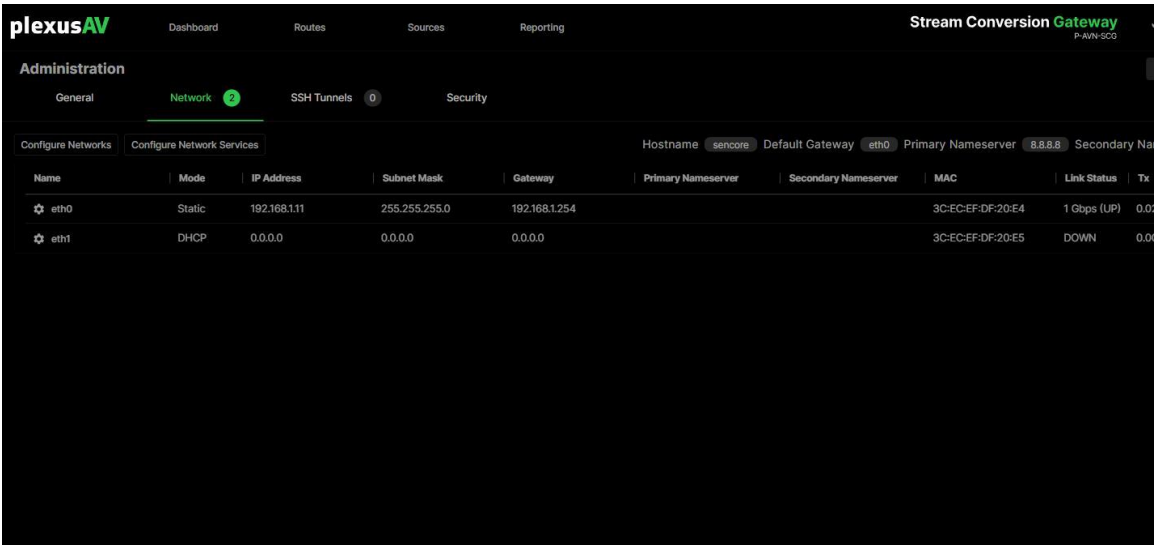
5.7 Administration Panel

Administration is reached from the wrench icon, not a top-level tab, and has four tabs: General, Network, SSH Tunnels, and Security. An Update button (top right) applies pending changes; Reboot (red, destructive) restarts the unit.

General tab

Field	Description
Unit Label	Change button.
Template Profile Manager	Configure → Add/Upload saved route templates, used by Routes → New Route → Create from Template.
Date / Time	Update Mode (e.g. NTP), NTP Server, Current Date, Current Time, Time Zone — Configure button.
SNMP Trap Managers	Configure → Add/Remove a list of manager IP addresses.
Diagnostics	Generates and downloads a diagnostics support bundle.

Network tab



Administration → Network tab

Field	Description
Hostname	The unit's configured network hostname (factory-default value to be confirmed with engineering before publishing).
Default Gateway / Nameservers	Summary row showing the active default-gateway interface and primary/secondary nameservers.

Configure Networks

Hostname

sencore

Default Gateway

eth0

Primary Nameserver

8.8.8.8

Secondary Nameserver

8.8.4.4

Apply

Cancel

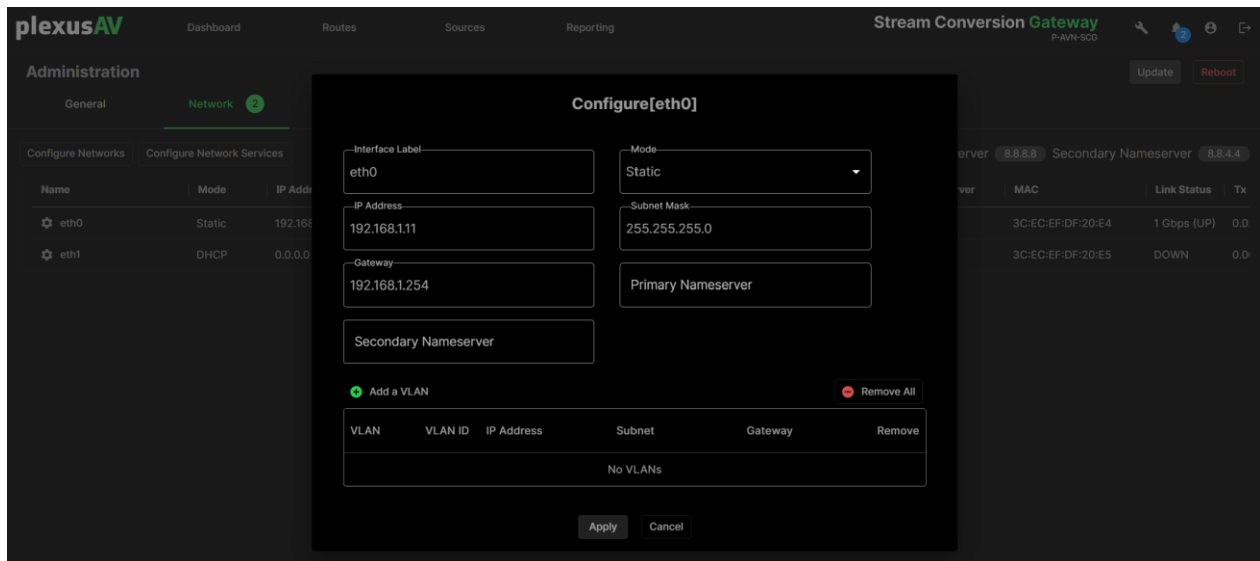
Configure Networks

Per-interface table:

Field	Description
Name / Mode	Interface name; DHCP or Static.
IP Address / Subnet Mask / Gateway	Current addressing for that interface.
MAC / Link Status	Hardware address; e.g. "1 Gbps (UP)" or "DOWN".
Tx / Rx	Live traffic counters.

Buttons: Configure Networks, Configure Network Services. Each interface's gear icon opens a Configure[ethX] dialog:

Field	Values
Interface Label	Text.
Mode	DHCP / Static.
IP / Subnet / Gateway	IPv4 fields, shown in Static mode.
Primary / Secondary DNS	IPv4 fields.
VLAN table	Add a VLAN / Remove All. VLAN, VLAN ID, IP, Subnet, Gateway, Remove.



SSH Tunnels tab

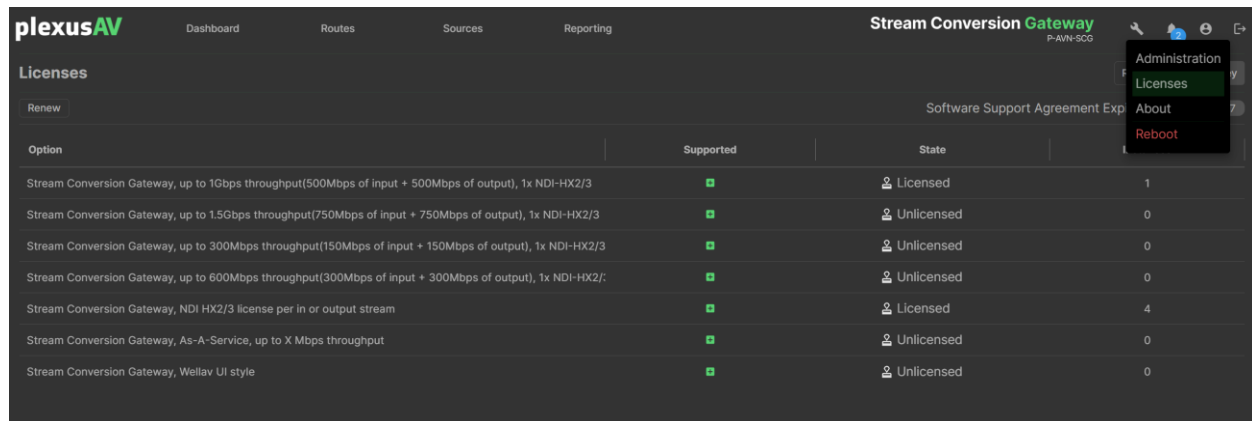
Table columns: No., State, Host, Port, Username, Remote Source Port, Local Destination Host, Local Destination Port, Delete.

Add SSH Tunnel — Field	Values
Host	Text, required.
Port	Numeric, default 22.
Username	Text.
Key File	File upload, default "No Key File."
Remote Source Port	Numeric, required.
Local Destination Host	Text, default localhost.
Local Destination Port	Numeric, default 80.

Security tab

Field	Description
Password	Hidden; Change button.
Security Manager	Shows CSR state (e.g. "CSR Not Configured"); Configure button.
HTTPS encryption	SSL/TLS Certificate; Upload button.

5.8 Licenses Panel



plexusAV Dashboard Routes Sources Reporting Stream Conversion Gateway P-AVN-SCG Administration Licenses About Reboot			
Licenses Renew Software Support Agreement Exp			
Option	Supported	State	
Stream Conversion Gateway, up to 1Gbps throughput(500Mbps of input + 500Mbps of output), 1x NDI-HX2/3	■	👤 Licensed	1
Stream Conversion Gateway, up to 1.5Gbps throughput(750Mbps of input + 750Mbps of output), 1x NDI-HX2/3	■	👤 Unlicensed	0
Stream Conversion Gateway, up to 300Mbps throughput(150Mbps of input + 150Mbps of output), 1x NDI-HX2/3	■	👤 Unlicensed	0
Stream Conversion Gateway, up to 600Mbps throughput(300Mbps of input + 300Mbps of output), 1x NDI-HX2/3	■	👤 Unlicensed	0
Stream Conversion Gateway, NDI HX2/3 license per in or output stream	■	👤 Licensed	4
Stream Conversion Gateway, As-A-Service, up to X Mbps throughput	■	👤 Unlicensed	0
Stream Conversion Gateway, Wellav UI style	■	👤 Unlicensed	0

Licenses panel

Field	Description
Option	License SKU description.
Supported	Green checkmark indicator.
State	Licensed / Unlicensed.
Instances	Count of licensed instances in use/available.

Software Support Agreement Expiration is shown as a date chip at the top right. Renew and Remove act on an existing license; Apply Key opens an Enter License Key dialog (paste a generated code, then Apply).

Throughput itself is a licensed tier

- -MINI appliance default at 300 Mbps (150+150), up to a max of 600 Mbps (300+300)
- -ADV appliance default at 1 Gbps (500+500), up to a max of 1.5 Gbps (750+750)
- Default on -MINI / -ADV one NDI|HX2/3 instance; additional NDI|HX instances are licensed per stream. An As-a-Service throughput tier is also available.

5.9 About Panel

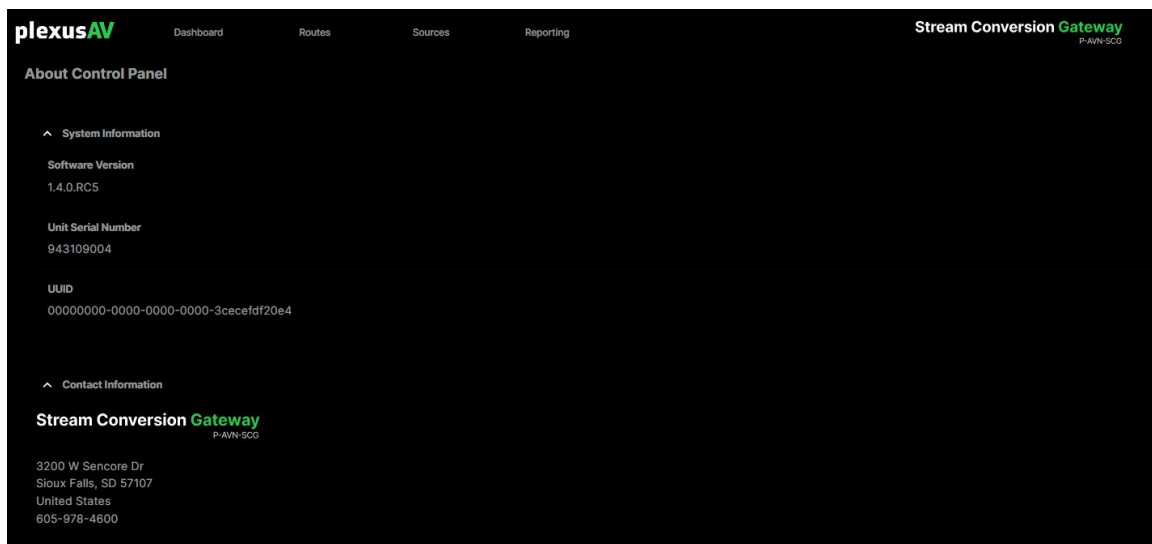


Figure 15 — About panel

Field	Description
Software Version	Currently installed SCG software version.
Unit Serial Number	Factory-assigned serial number.

Field	Description
Unit UUID	Unique identifier used to generate license codes; derived from the primary network interface's MAC address.
Contact Information	Support contact details presented in the unit's firmware image (to be confirmed/updated to plexusAV contact details before publishing — see Appendix F for the current official contact information).
Third-Party Software Information	Open-source package/version/license table — see Appendix D.

6 API Control

The P-AVN-SCG can be monitored and controlled programmatically over the network via REST API, and discovered/connected via NMOS IS-04 and IS-05. Confirm the exact endpoint set against the API Developer Hub before integrating.

API Developer Hub: <https://developer.plexusav.com/>

7 Troubleshooting

Symptom	Likely Cause	Corrective Action
No power	DC/AC power source unavailable or insufficient (MINI: external DC supply; ADV: one or both redundant AC feeds).	Verify the power source, cable/supply seating, and outlet; on the ADV, confirm both supplies if redundancy is required.
Route not visible in Visual Array	The route's destination protocol isn't IPMX, or there is a network/NMOS discovery issue.	Confirm the route's destination protocol is IPMX (Section 4); verify NMOS reachability and that both devices share a network segment.
Cannot reach the web UI	Unknown or changed IP address, incompatible subnet, or incorrect static settings.	Confirm the default address (192.168.1.11 on Eth0) hasn't been changed; set your computer to the setup subnet in Section 2.2 and retry.
Browser reports an untrusted certificate	The unit uses a self-signed HTTPS certificate by default.	This is expected behavior — accept/proceed, or upload a signed certificate via Administration → Security (Section 5.7).

Symptom	Likely Cause	Corrective Action
NDI HX or throughput unavailable / "maximum instance reached" alarm	The unit's current license tier doesn't include enough NDI HX or throughput instances.	Check Licenses (Section 5.8) for current State/Instances, then submit a support ticket to add capacity.
Route configured but no video or audio	Source/destination protocol mismatch, incorrect address, or a licensed protocol (NDI HX) not yet activated.	Verify source and destination settings against Sections 5.3–5.4, and confirm any required license is active.
Factory reset / lost credentials	Unknown admin password or unreachable configuration.	Contact plexusAV support

Appendices

Appendix A — Acronyms and Glossary

Term	Definition
AES67	Audio-over-IP interoperability standard for networked audio.
AES-128/256	Advanced Encryption Standard — encryption used to secure SRT streams.
CBR / VBR	Constant Bitrate / Variable Bitrate — stream encoding modes.
FEC	Forward Error Correction (SMPTE ST 2022-1) — recovers lost packets in MPEG/IP streams.
HLS	HTTP Live Streaming — adaptive streaming protocol. Not present as a selectable protocol in firmware 1.4.0.RC5; roadmap status to be confirmed with engineering.
IGMP	Internet Group Management Protocol — used for multicast group membership.
IPMX	IP Media Experience — open standard suite for professional AV-over-IP.
MPEG-TS / IPTV	MPEG Transport Stream — common format for IP-delivered broadcast/streaming video.
NDI HX	NewTek/Vizrt's compressed video-over-IP protocol; licensed feature on the SCG.

Term	Definition
NMOS	Networked Media Open Specifications (IS-04 discovery/registration, IS-05 connection management).
RIST	Reliable Internet Stream Transport — protocol for reliable streaming over lossy networks. Not present as a selectable protocol in firmware 1.4.0.RC5; roadmap status to be confirmed with engineering.
RTMP	Real-Time Messaging Protocol — common streaming-platform ingest protocol.
RTSP	Real Time Streaming Protocol — source protocol option in the live web interface (previously documented in this manual as generic "RTP").
SRT	Secure Reliable Transport — low-latency streaming protocol with encryption support.
SRT IPMX	An SRT-based transport carrying IPMX payloads; a distinct, separately selectable protocol option from standard SRT in the web interface.
TR-10-11	AMWA/IPMX technical recommendation for H.264/H.265 payloads over IPMX.

Appendix C — Specifications

Data Interfaces & Management

Parameter	Value
Ethernet 1	RJ-45, 10/100/1000, auto-negotiating
Ethernet 2	RJ-45, 10/100/1000, auto-negotiating
Web UI	On-board web interface (HTTPS)
External Control	REST API
NMOS Support	IS-04, IS-05

P-AVN-SCG Software VM — System Requirements

[Minimum vCPU, RAM, disk, and supported hypervisors (e.g. VMware ESXi, Hyper-V, KVM) to be confirmed with engineering before project installation. Requirements may change based on client volume and application.]

Appendix E — Warranty

PlexusAV Hardware Three-Year Warranty: PlexusAV warrants this instrument against defects from any cause, except acts of God and abusive use, for a period of 3 (three) years from date of purchase. During this warranty period, PlexusAV will correct any covered defects without charge for parts, labor, or recalibration.

Appendix F — Support and Contact Information

Product Support is available free of charge — please submit a request with details of the issue. Before any product can be returned for service, an RMA number must be obtained by contacting PlexusAV first.

Support Ticket System: <https://plexusav.com/support-request/>

Appendix G — Ordering Information

Part Number	Description
P-AVN-SCG-MINI	Stream Conversion Gateway compact appliance, dual NIC, includes license for up to 300 Mbps of throughput (150 Mbps input + 150 Mbps output), includes 1x NDI HX2/3 license
P-AVN-SCG-MINI-LIC-ADD-300	Stream Conversion Gateway license, enables 600 Mbps max throughput (300 Mbps input + 300 Mbps output)
P-AVN-SCG-ADV	Stream Conversion Gateway Advanced 1RU appliance, dual NIC, includes license for up to 1 Gbps of throughput (500 Mbps input + 500 Mbps output), includes 1x NDI HX2/3 license
P-AVN-SCG-ADV-LIC-ADD-500	License to add 500 Mbps additional throughput, up to 1.5 Gbps max (750 Mbps input + 750 Mbps output)
P-AVN-SCG-NDI-LIC	NDI HX2/3 license per Stream Conversion Gateway input or output stream
P-AVN-SCG-ADV-IPADDON	Option card for 2x additional RJ-45 network ports — factory option, only available for P-AVN-SCG-ADV
P-AVN-SCG-VM-SOFTWARE	Stream Conversion Gateway software only — for custom hardware or virtual deployment; quoted separately based on project details



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Scan or visit plexusav.com/products/p-avn-scg