Audio over IP - Setup

The **AoIP** section under **Interfaces** provides the configuration and status information for Audio over IP operation.

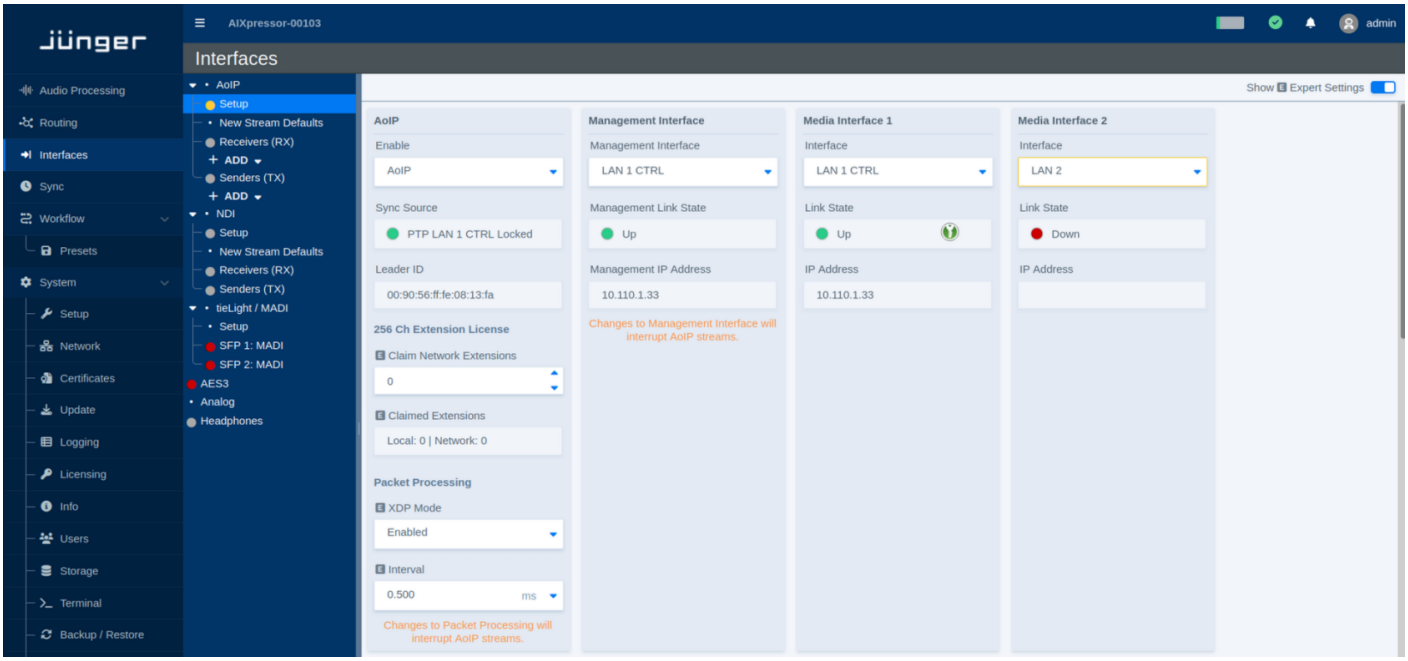
> **Important -** IGMP Snooping must be enabled on all switch ports connected to flexAI systems. Otherwise, forwarded multicast traffic may stress the connected system.

Expand **AoIP** in the **Interfaces** menu and select **Setup**.

> Note - Some AoIP parameters are only visible when **Show Expert Settings** is enabled. Enable this option to display all parameters described in this section.

The page is divided into several sections for general AoIP configuration, network interfaces, synchronization, Livewire, NMOS, receiver settings, and sender settings.

Changes to some low-level AoIP settings may temporarily interrupt active AoIP streams. Where this applies, a corresponding message is shown on the page.



AoIP

This section controls the general AoIP operation and shows the current synchronization status.

Parameter	Values	Default	Description
Enable	Available AoIP modes / Disabled	-	Enables or disables Audio over IP operation.
Sync Source	Status	-	Shows the synchronization source currently used for AoIP and whether the clock is locked.
Leader ID	Status	-	Shows the identifier of the PTP Leader Clock currently providing synchronization on the network.

Channel Extension License

Additional licensed AoIP channel capacity can be made available locally or through network licensing.

Parameter	Values	Default	Description
Claim Network Extensions	Number of extensions	-	Defines how many available channel extension licenses should be claimed from the network.
Claimed Extensions	Status	-	Shows the number of channel extensions currently claimed from local and network license sources.

Packet Processing

These parameters control low-level packet processing for AoIP.

> XDP provides highly efficient packet processing close to the network interface, reducing the CPU overhead associated with AoIP traffic. This makes it possible to handle higher packet rates and very small packet times more efficiently.

Parameter	Values	Default	Description
XDP Mode	Enabled / Disabled	-	Enables or disables XDP-based packet processing for AoIP.

Parameter	Values	Default	Description
Interval	Supported intervals	-	Defines the packet-processing interval. Incoming packets are collected for this period and then passed on for processing as a group.

Changing packet-processing settings may interrupt active AoIP streams.

Management Interface

The **Management Interface** is used for AoIP control and management communication.

> The **Management Interface** is used for AoIP control and management traffic, including protocols such as **NMOS**. Selecting the correct Management Interface is therefore important, as these services may be restricted to this interface.

Parameter	Values	Default	Description
Management Interface	Available network interfaces	-	Selects the network interface used for AoIP management communication.
Management Link State	Status	-	Shows whether the selected management interface has an active network link.
Management IP Address	Status	-	Shows the IP address assigned to the selected management interface.

Changing the Management Interface may interrupt active AoIP streams.

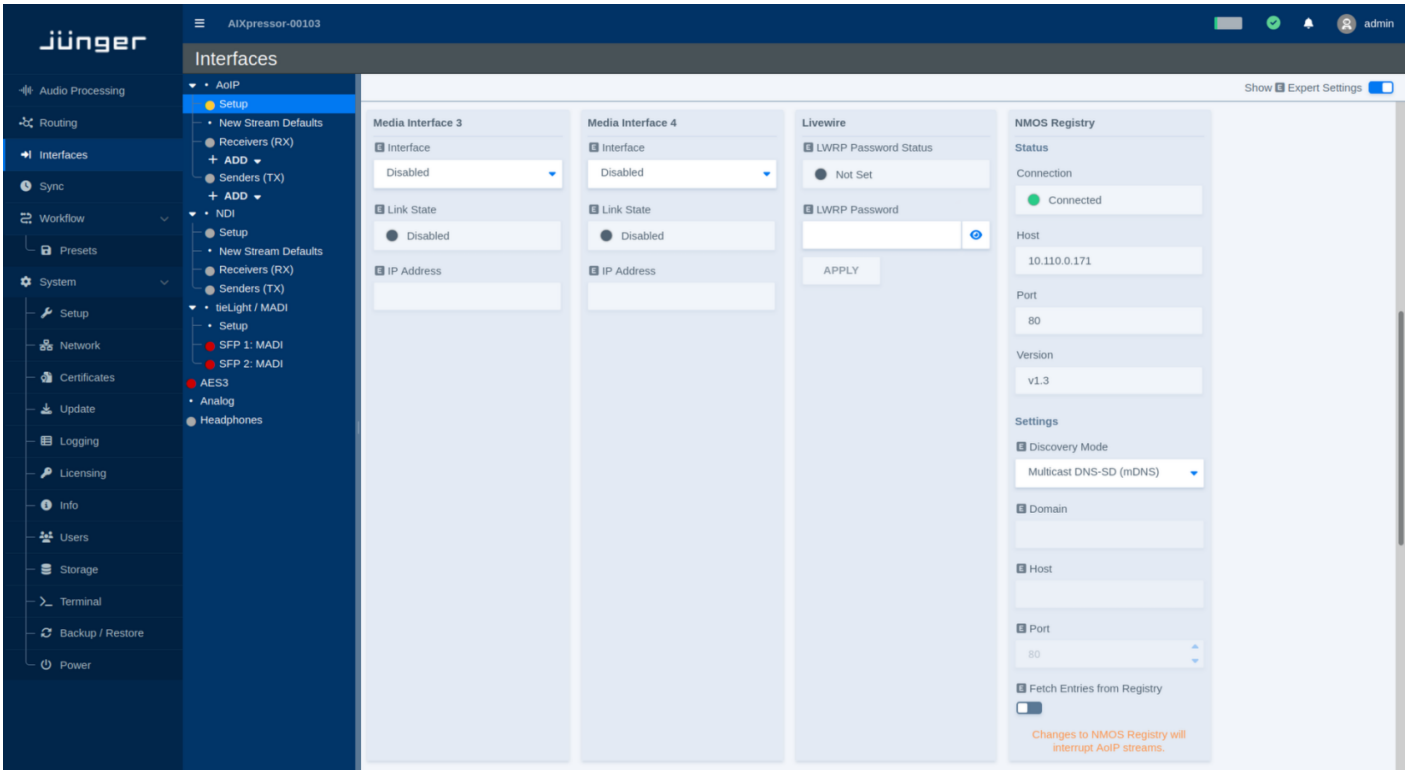
Media Interfaces

Media Interfaces carry the AoIP media traffic. Up to four Media Interfaces can be configured, depending on the system and its available network interfaces.

All Media Interface sections use the same parameters.

Parameter	Values	Default	Description

Interface	Available network interfaces / Disabled	-	Selects the network interface used for AoIP media traffic. Select **Disabled** if the Media Interface is not required.
Link State	Status	-	Shows the current physical link state of the selected network interface.
IP Address	Status	-	Shows the IP address assigned to the selected Media Interface.



Livewire

The **Livewire** section provides the password used for Livewire Routing Protocol (LWRP) access.

Parameter	Values	Default	Description
LWRP Password Status	Status	-	Indicates whether an LWRP password has been configured.
LWRP Password	Password	-	Sets the password used for LWRP access. Use the visibility icon to show or hide the entered password.
Apply	Button	-	Applies the entered LWRP password.

NMOS Registry

The **NMOS Registry** section shows the current NMOS registry connection and provides the corresponding discovery settings.

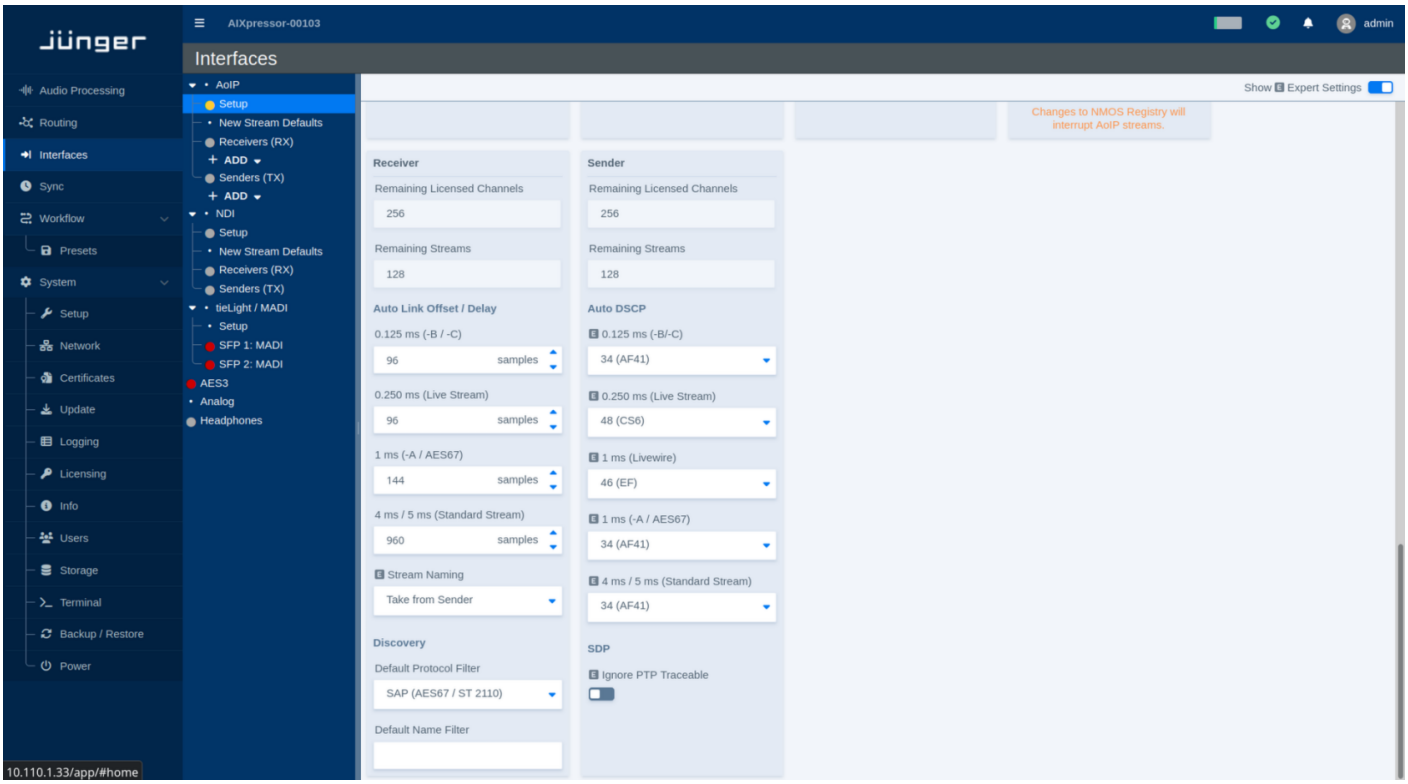
Status

Parameter	Values	Default	Description
Connection	Status	-	Shows whether the flexAI system is currently connected to an NMOS Registry.
Host	Status	-	Shows the address of the currently used NMOS Registry.
Port	Status	-	Shows the port used for the current registry connection.
Version	Status	-	Shows the NMOS API version used for the registry connection.

Settings

Parameter	Values	Default	Description
Discovery Mode	Available discovery modes	-	Selects how the NMOS Registry is discovered.
Domain	Domain name	-	Defines the DNS domain used for registry discovery when required by the selected Discovery Mode.
Host	Host name or IP address	-	Defines the NMOS Registry host when manual registry configuration is used.
Port	Port number	-	Defines the port of the manually configured NMOS Registry.
Fetch Entries from Registry	On / Off	-	Enables retrieval of available entries from the connected NMOS Registry.

Changing the NMOS Registry configuration may interrupt active AoIP streams.



Receiver

The **Receiver** section shows the remaining receiver capacity and defines default behavior for automatically connected streams and stream discovery.

Capacity

Parameter	Values	Default	Description
Remaining Licensed Channels	Status	-	Shows the number of licensed receive channels that are currently still available.
Remaining Streams	Status	-	Shows the number of additional receiver streams that can currently be created.

Auto Link Offset / Delay

The Auto Link settings define the receiver delay used when streams are connected automatically. Separate values are provided for the supported stream and packet-time classes.

Auto Link Offset defines the fixed receive/playout delay that is automatically applied when a stream is linked. It provides additional time for network packets to arrive before they are presented to the audio engine, improving tolerance to network jitter and late packets.

A separate offset can be configured for each packet-time class. Once applied, the delay remains constant for streams of that type, so the additional latency is deterministic rather than varying with network conditions.

Parameter	Values	Default	Description
0.125 ms (-B / -C)	Delay in samples	-	Defines the Auto Link offset/delay for streams using a 0.125 ms packet time.
0.250 ms (Live Stream)	Delay in samples	-	Defines the Auto Link offset/delay for Live Streams using a 0.250 ms packet time.
1 ms (-A / AES67)	Delay in samples	-	Defines the Auto Link offset/delay for streams using a 1 ms packet time, including AES67 streams.
4 ms / 5 ms (Standard Stream)	Delay in samples	-	Defines the Auto Link offset/delay for Standard Streams using the corresponding packet-time class.

Higher delay values provide additional buffering at the receiver but also increase the end-to-end audio latency.

Stream Naming

Parameter	Values	Default	Description
Stream Naming	Available naming modes	-	Defines how automatically connected receiver streams are named. **Take from Sender** uses the name provided by the sending device.

Discovery

Parameter	Values	Default	Description
Default Protocol Filter	Available discovery protocols	-	Selects the protocol filter initially applied when discovering streams. Depending on the system configuration, this may include Livewire, SAP for AES67/ST 2110, or NMOS.

Parameter	Values	Default	Description
Default Name Filter	Text	-	Defines an optional name filter applied when displaying discovered streams. Leave the field empty to show streams regardless of their name.

Sender

The **Sender** section shows the remaining sender capacity and defines default network parameters for transmitted streams.

Capacity

Parameter	Values	Default	Description
Remaining Licensed Channels	Status	-	Shows the number of licensed transmit channels that are currently still available.
Remaining Streams	Status	-	Shows the number of additional sender streams that can currently be created.

Auto DSCP

Auto DSCP defines the Differentiated Services Code Point (DSCP) automatically assigned to transmitted AoIP packets for each supported stream type.

Parameter	Values	Default	Description
0.125 ms (-B / -C)	DSCP value / class	-	Defines the DSCP marking used for streams with a 0.125 ms packet time.
0.250 ms (Live Stream)	DSCP value / class	-	Defines the DSCP marking used for Live Streams with a 0.250 ms packet time.
1 ms (Livewire)	DSCP value / class	-	Defines the DSCP marking used for Livewire streams with a 1 ms packet time.
1 ms (-A / AES67)	DSCP value / class	-	Defines the DSCP marking used for 1 ms AES67 streams.

Parameter	Values	Default	Description
4 ms / 5 ms (Standard Stream)	DSCP value / class	-	Defines the DSCP marking used for Standard Streams with the corresponding packet-time class.

> **DSCP (Differentiated Services Code Point)** is a field in the IP header used to classify network traffic for Quality of Service (QoS). Network switches and routers can use this value to prioritize time-critical AoIP packets over less critical traffic.

> **Auto DSCP** automatically assigns the appropriate DSCP value according to the selected stream type and packet time. This helps ensure that streams with higher timing requirements receive the intended network priority without having to configure the DSCP value manually.

SDP

Parameter	Values	Default	Description
Ignore PTP Traceable	On / Off	-	Ignores PTP traceability information when evaluating SDP data. This can be relevant for streams that use absolute timing information referenced to the Unix epoch beginning on January 1, 1970.

Revision #4
Created 2026-09-04 10:58:17 UTC by FK
Updated 2026-10-06 12:31:17 UTC by FK