



APPLICATION NOTES

AES67 CONFIGURATION ON DSP+ MODELS

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Powersoft brand new Quattrocanali DSP+ and Duecanali DSP+ models can be set up to receive audio over IP streams compliant to AES67 interoperability standard.

This application note describes how to properly configure the amplifier and patch it to a compatible AES67 stream using the software ArmoniaPlus.

AES67 specifications

AES67 is a technical standard for audio applications of networks that allows high-performance streaming Audio-over-IP interoperability between different networking systems.

All Powersoft amplifiers featuring a Dante card can be configured to work with AES67 audio streams according to Audinate’s compatibility specification by enabling the “AES67 mode” via ArmoniaPlus or Dante controller.

The new Powersoft DSP+ models can receive AES67 streams natively when connecting the dedicated network port “AoIP” to your AES67 network.

Network port configuration for DSP+ models is *Split Mode* and cannot be changed: The two ports have their own IP Address that can be configured in DHCP mode (default configuration) or in Static mode.

The first port “Ethernet” is used for remote control via ArmoniaPlus or third-party clients while the second port “AoIP” is for receiving AES67 compatible streams.

The following table describes the specification of AES67 streams supported by DSP+ models:

AES67	
Discovery	SAP/SDP
Network	Multicast
Packet Time	1 ms
Sample Rate	48 kHz
Encoding	L24
Channels	Up to 8 per stream

Table 1 – DSP+ AES67 specifications.



Application Examples

The following example is showing how a network infrastructure should be created when using Powersoft DSP+ amplifiers with a third-party processor.

The elements of the system are:

- Third-party processor
- Managed Gigabit Switch
- Powersoft DSP+ amplifiers
- Passive loudspeakers

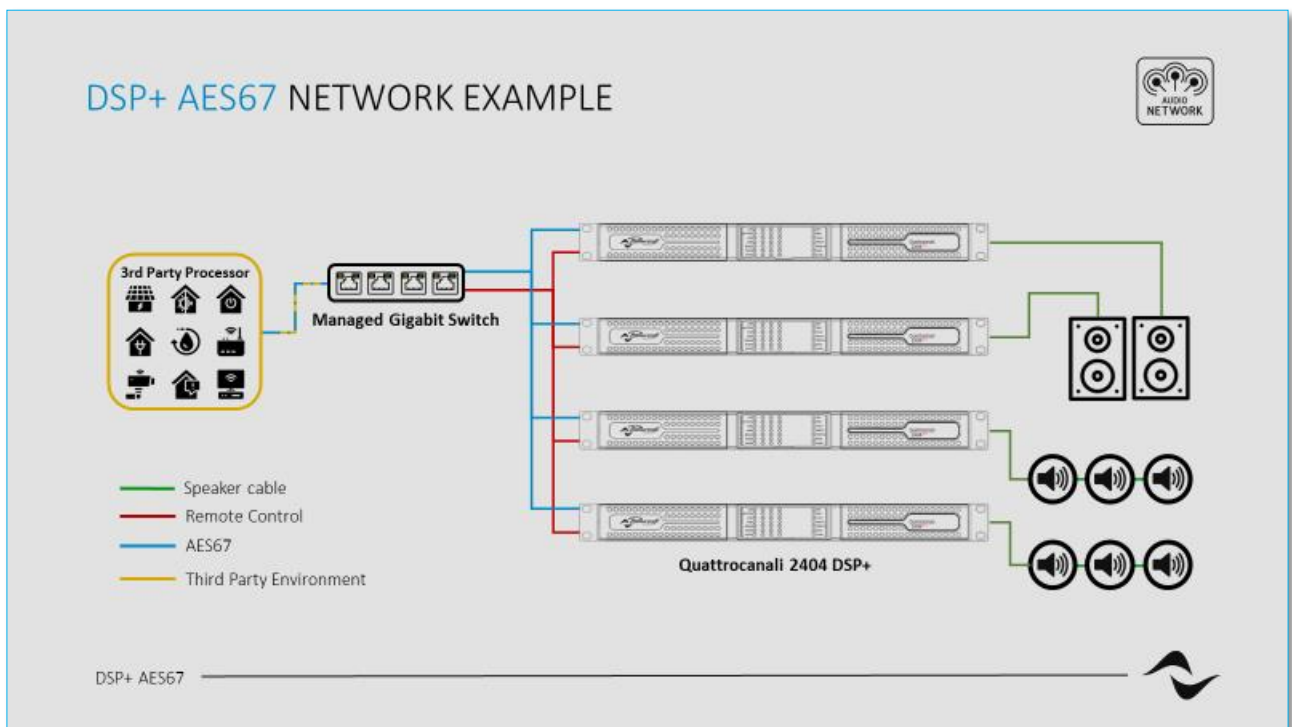


Figure 1 – DSP+ AES67 Network example drawing.



The same drawing can be created into ArmoníaPlus for a clearer overview and management of the system:

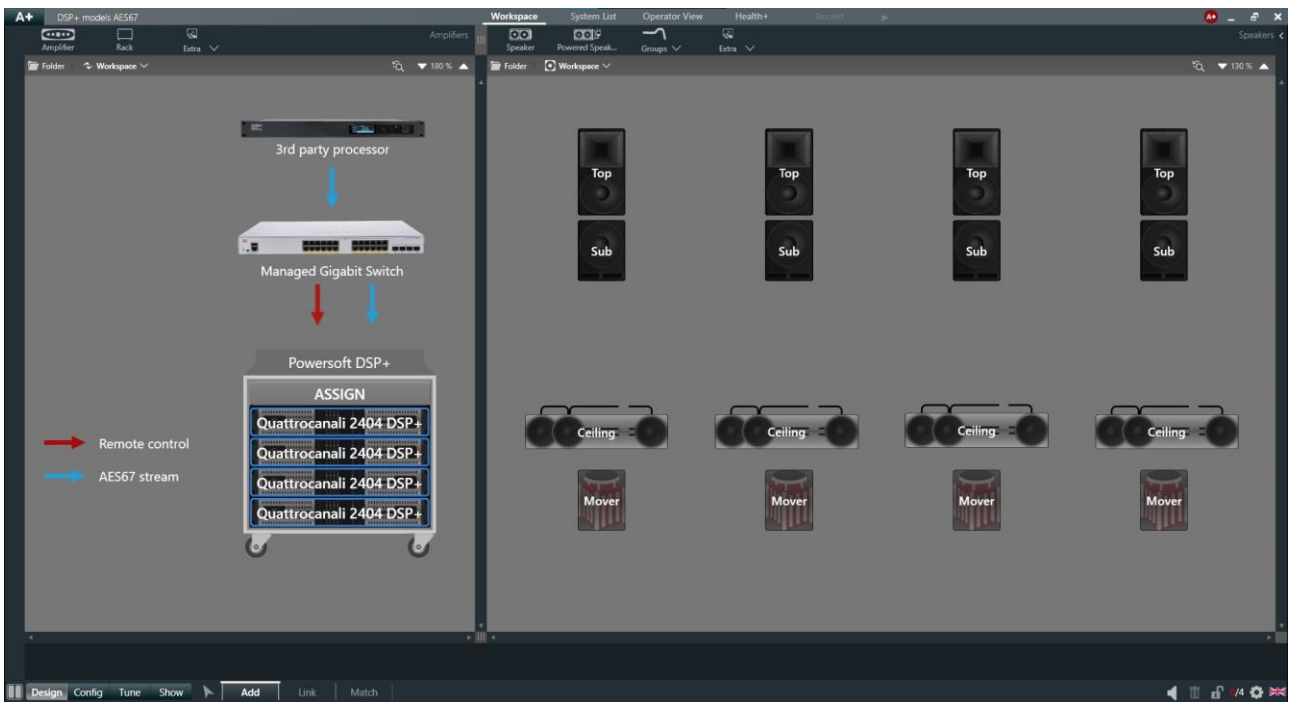


Figure 2 – ArmoníaPlus Live sound project with DSP+ models.



AES67 patching

Patching a DSP+ amplifier to receive an AES67 stream is a very easy operation through ArmoníaPlus:

1. Connect your pc with ArmoníaPlus to both remote control and AES67 network.
2. Open the 'Communication Manager' and enable the AES67 button to let ArmoníaPlus being able to scan AES67 streams (Figure 3).

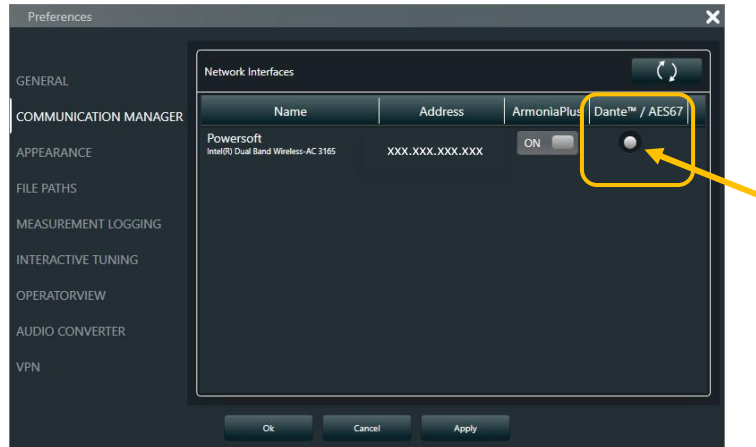


Figure 3 – ArmoníaPlus Communication Manager.

3. Click "Ok" to confirm and close the window.
4. Go to the tab "Config" and select the "Input" function.
5. Select the input of the amplifier that you want to patch. (Multiple input selection is available when using same amplifier series).
6. Click on the desired priority box and select "AES67" on the amplifier input column.
7. Choose the AES67 Rx channel of the amplifier that you want to be patched
8. Select the Tx stream in the "Network devices" column and the source channel (Figure 4).

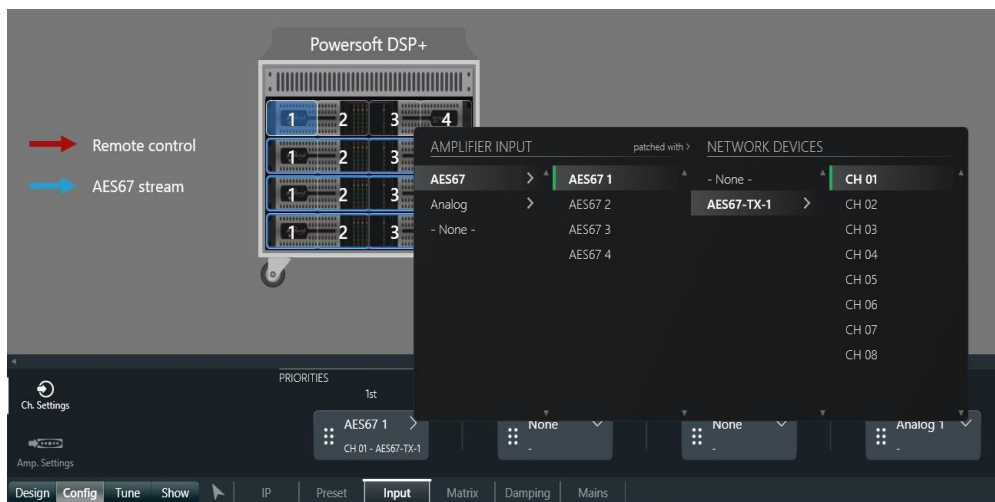


Figure 4 – AES67 input patching window.



AES67 settings

AES67 chipset in DSP+ amplifier can be configured accessing to the “AES67 settings” tab available in the option of the amplifier (Figure 5).

Parameters available are:

- Device Name
- IP address
- Sample rate (fixed at 48kHz)
- Latency

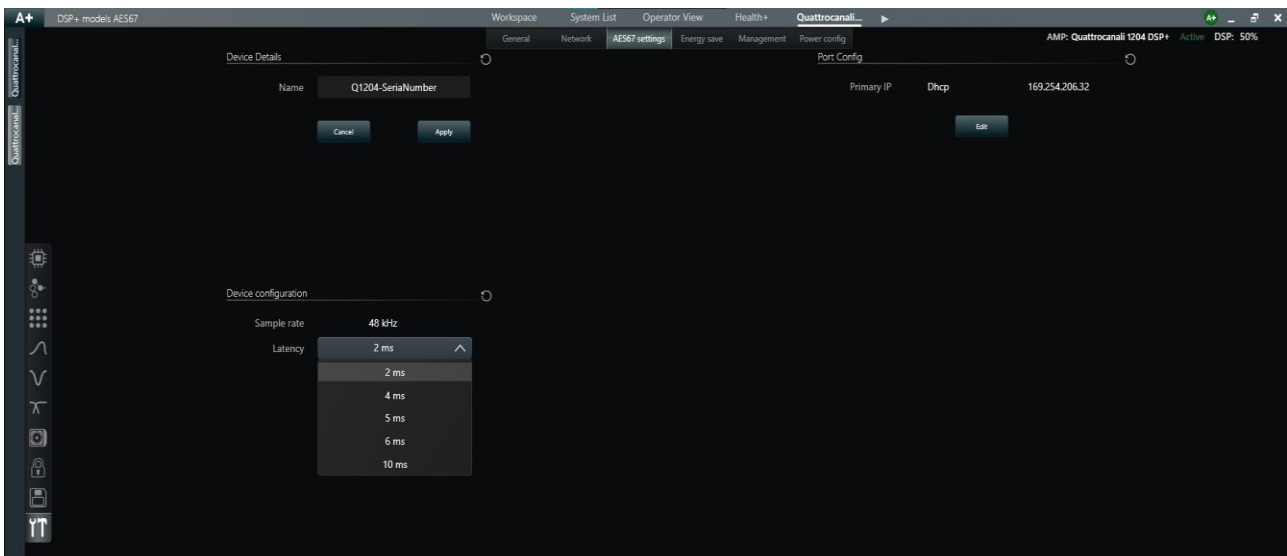


Figure 5 – AES67 settings window.

The latency parameter can be set according to the network bandwidth available and the desired performances.

A higher latency value is suggested to have more stability and avoid audio dropouts or clock issues.



Audio-over-IP support and Dynamic Music Distribution compatibility

The following tables lists the compatibilities of Duecanali and Quattrocanali series amplifiers to the Dante protocol and AES67 streams and the support to Dynamic Music Distribution systems:

	Dante Rx	AES67 Rx	Dynamic Music Distribution compatible	
Duecanali Series	6404 DSP		✓	
	4804 DSP		✓	
	1604 DSP		✓	
	804 DSP		✓	
	6404 DSP+D	✓	✓	✓
	4804 DSP+D	✓	✓	✓
	1604 DSP+D	✓	✓	✓
	804 DSP+D	✓	✓	✓
	6404 DSP+		✓	
	4804 DSP+		✓	
	1604 DSP+		✓	
	804 DSP+		✓	
Quattrocanali Series	8804 DSP		✓	
	4804 DSP		✓	
	2404 DSP		✓	
	1204 DSP		✓	
	8804 DSP+D	✓	✓	✓
	4804 DSP+D	✓	✓	✓
	2404 DSP+D	✓	✓	✓
	1204 DSP+D	✓	✓	✓
	8804 DSP+		✓	
	4804 DSP+		✓	
2404 DSP+		✓		
1204 DSP+		✓		

Table 2 – List of AoIP protocols and compatibility with Dynamic Music Distribution.

For AES67 configuration on DSP+D models using Audinate’s chipset you can refer to the Application note [Configuring AES67 on Dante amplifiers](#).

Notes:

DSP+ models and AES67 patching features are available using in the “Live sound” project skin in ArmoníaPlus 2.4.x or above.

AES67 patching is not available on virtual/offline devices.



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