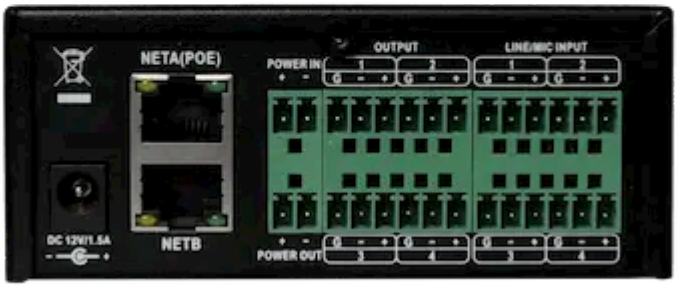
DMX208A Network Audio Processor Manual



Safety Instructions

(Directives regarding fire, electric shock, or personal injury)

WARNING - When using this electrical product, basic precautions should always be followed:

1. To reduce the risk of injury, close supervision is necessary when the product is used near children.
2. Do not use this apparatus near water, for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool or lake.
3. This product may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
4. The product should be located in a place with good ventilation.
5. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
6. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product. Ensure that the external adapter provides good power quality to avoid interference with the machine's operation.
7. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings. The apparatus shall not be exposed to dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the apparatus.
8. Refer servicing to qualified service personnel under the following conditions:
    1. Objects have fallen, or liquid has been spilled into the product;
    2. The product has been exposed to rain;
    3. The product does not appear to operate normally or exhibits a marked change in performance;
    4. The product has been dropped, or the enclosure damaged.
9. Do not attempt to service the product beyond what is described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

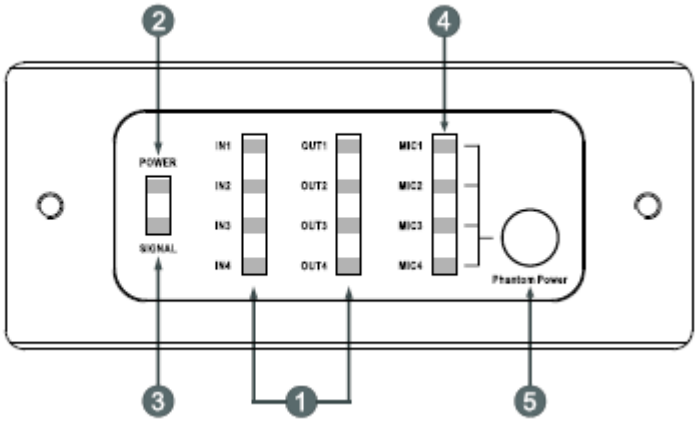
1. Product Introduction

Thank you for purchasing this network audio processor featuring high integration, performance, scalability, and flexible control.

1.1 Features

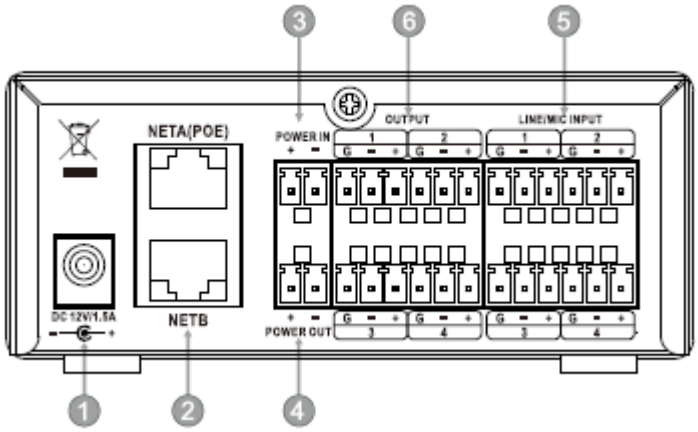
- 48kHz / 96kHz sampling rate
- High-performance AD/DA with low distortion, wide dynamic range
- Network connectivity with intuitive control software for real-time monitoring
- 4 MIC/LINE inputs, 4 balanced outputs
- 4 AES67 network inputs/outputs
- Adjustable input sensitivity (0/15/20/24dB) with independent 48V phantom power
- Independent input/output volume control (-∞ to +12dB)
- Dual Gigabit Ethernet ports (POE-AF supported)
- POWER LINK interface for multi-unit power daisy-chaining
- 14 status LEDs, phantom power switch
- Rack-mountable (4 units in 1U)

1.2 Front Panel



- **Level meters**: IN1-4 (inputs), OUT1-4 (outputs). Red indicates clipping.
- **POWER**: Red LED indicates power on
- **SIGNAL**: Green=network connected, Orange=disconnected
- **Phantom Power**: MIC1-4 LEDs show phantom power status
- **Phantom power button**: Toggles phantom power per channel

1.3 Rear Panel



- **DC 12V/1.5A power input**
- **NETA(POE)/NETB**: Gigabit Ethernet ports
- **POWER IN/OUT**: Daisy-chain power connectors
- **Balanced/unbalanced audio I/O**

1.4 System Connection

2. Functional Description

2.1 Power On

- Power adapter/POE connection lights POWER LED
- 20-second boot process
- SIGNAL LED flashes green (connected) or orange (disconnected)

2.2 Phantom Power Control

- **Channel selection**: Press Phantom Power button to cycle through channels (selected channel flashes red)
- **Turn the Phantom Power on/off**: Hold button for 3s on selected channel

2.3 Factory Reset

Hold Phantom Power button for 10s until all LEDs flash red twice.

2.4 Device Locator

Hold button for 5s to highlight device in GUI.

3. PC Software Control

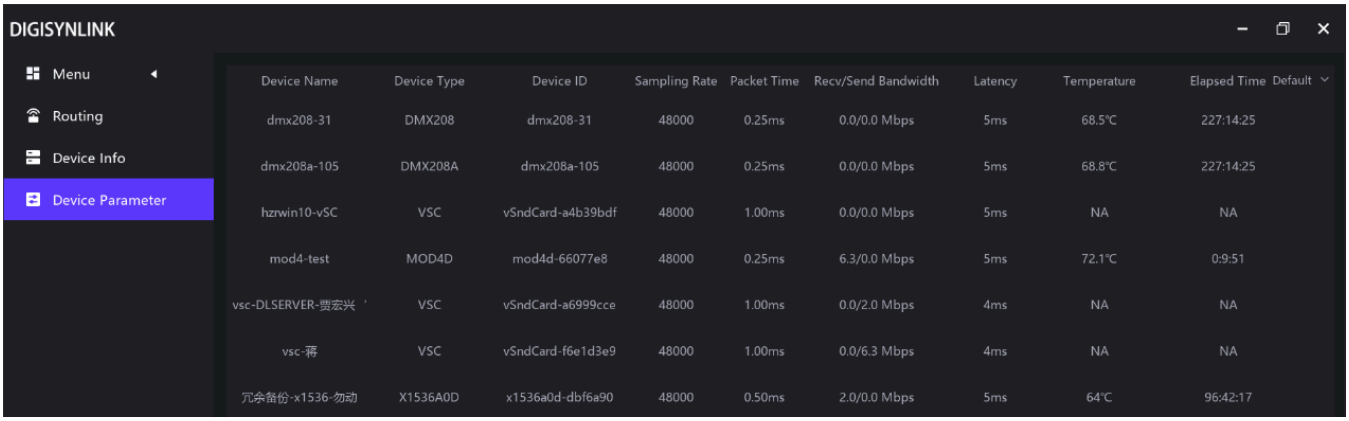
3.1 Connection

Software auto-discovers devices on same LAN.

3.2 Device Info

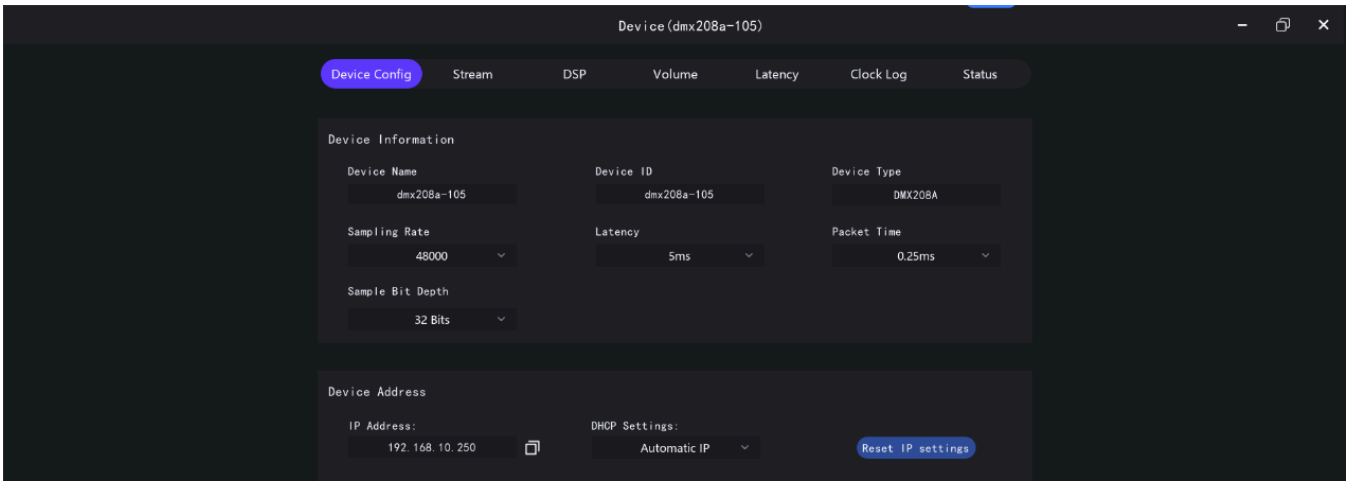
Displays ID, IP, clock status, firmware etc.

3.3 Parameters

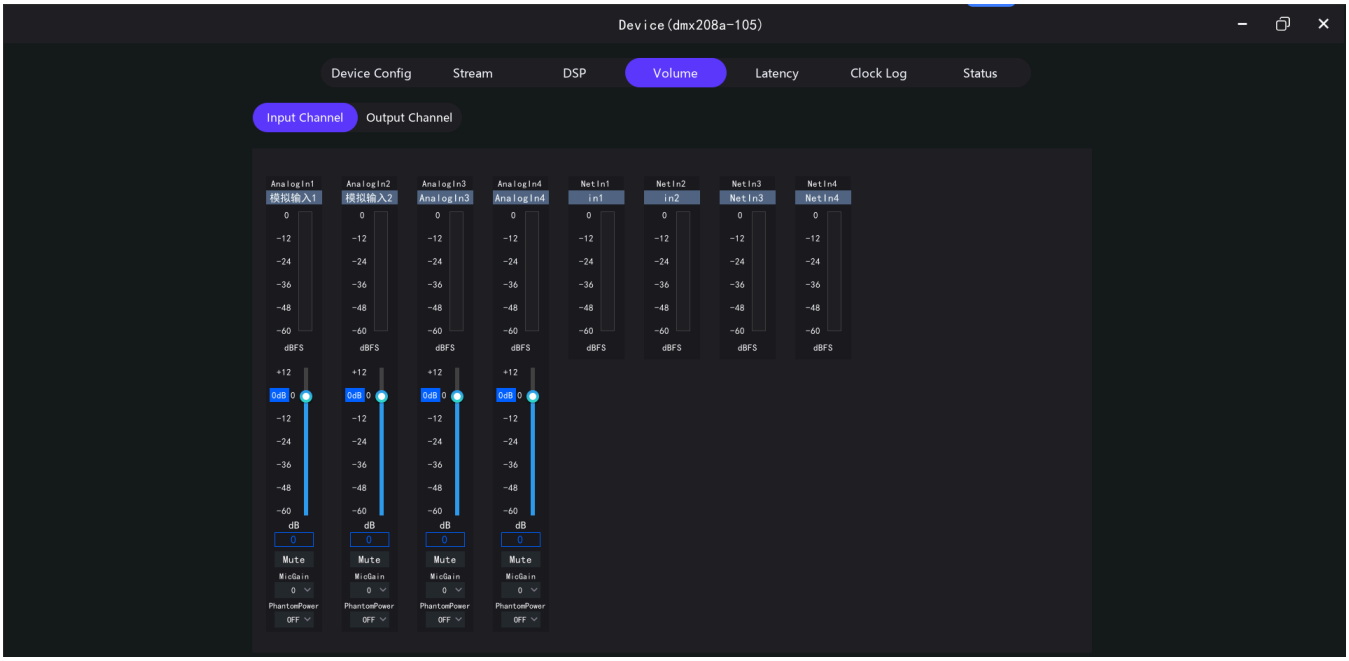


Shows sample rate, network latency, uptime.

3.4 Configuration

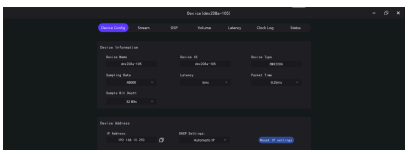


3.4.1Analog I/O Settings



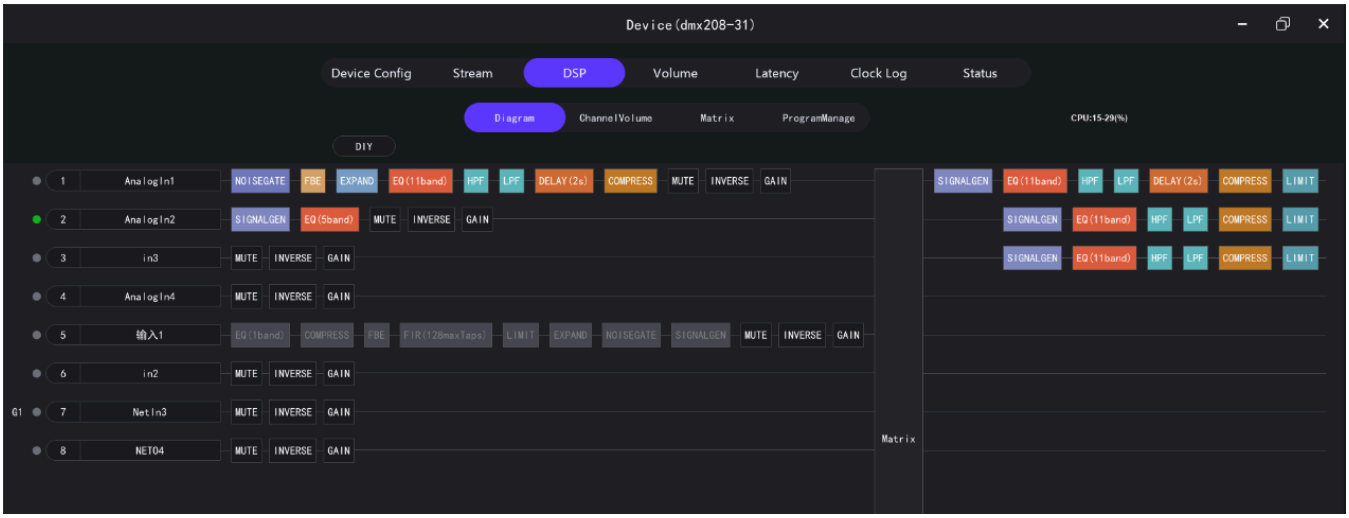
Channel gain/mute controls

3.4.2 IP Configuration

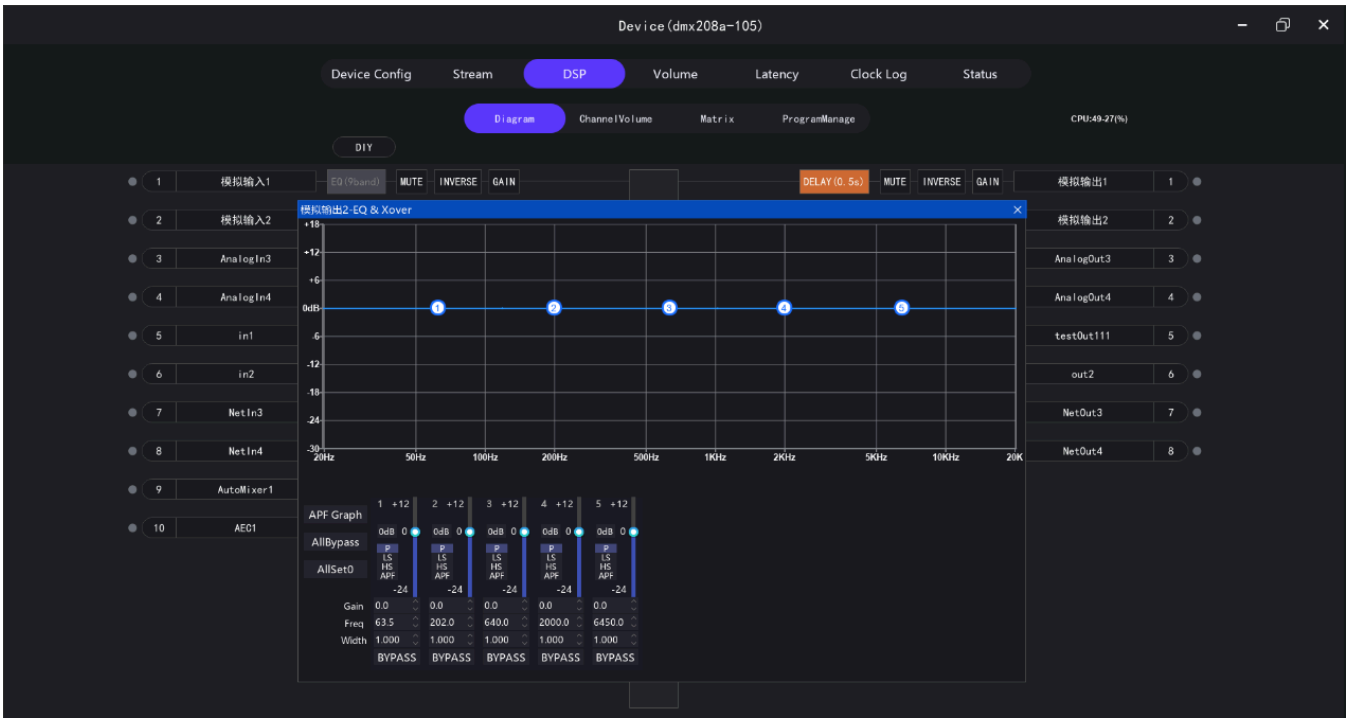


Static/DHCP IP settings

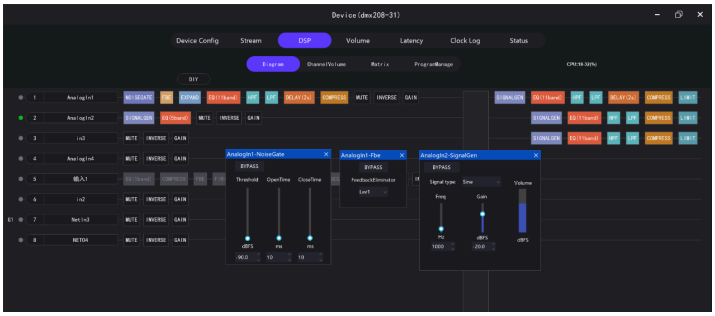
3.5 DSP Functions



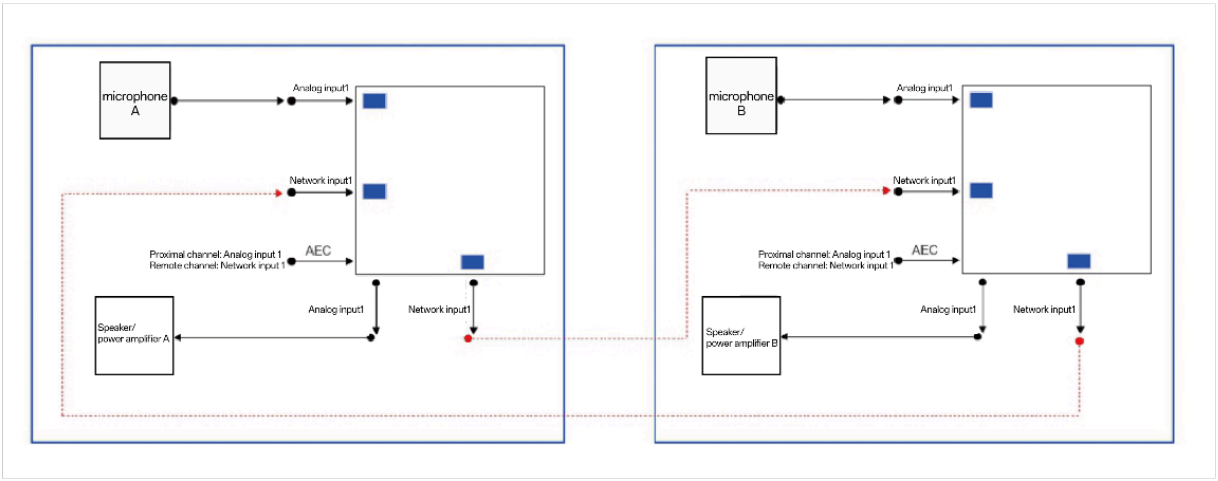
- **Channel selection**: Analog/Network I/O
- **CPU monitor**: (keep <85%)
- **PEQ**: with graphical display

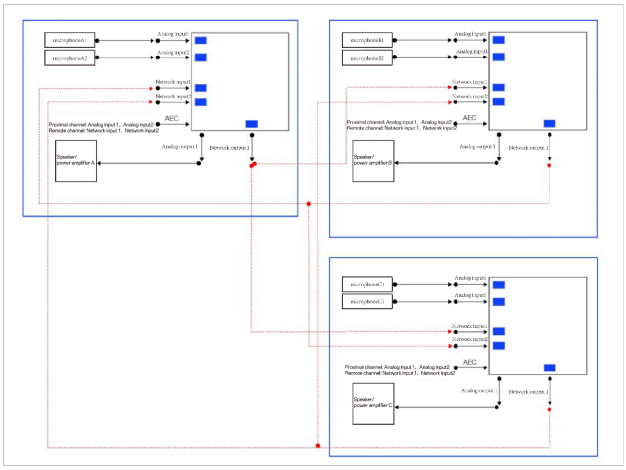


- **Volume, HP/LP filters**
- **Delay**: (0-1000ms, max 4 channels)
- **Feedback suppression**: (Off/1-3)
- **Noise gate, limiter, compressor**
- **FIR filters**
- **Matrix routing**

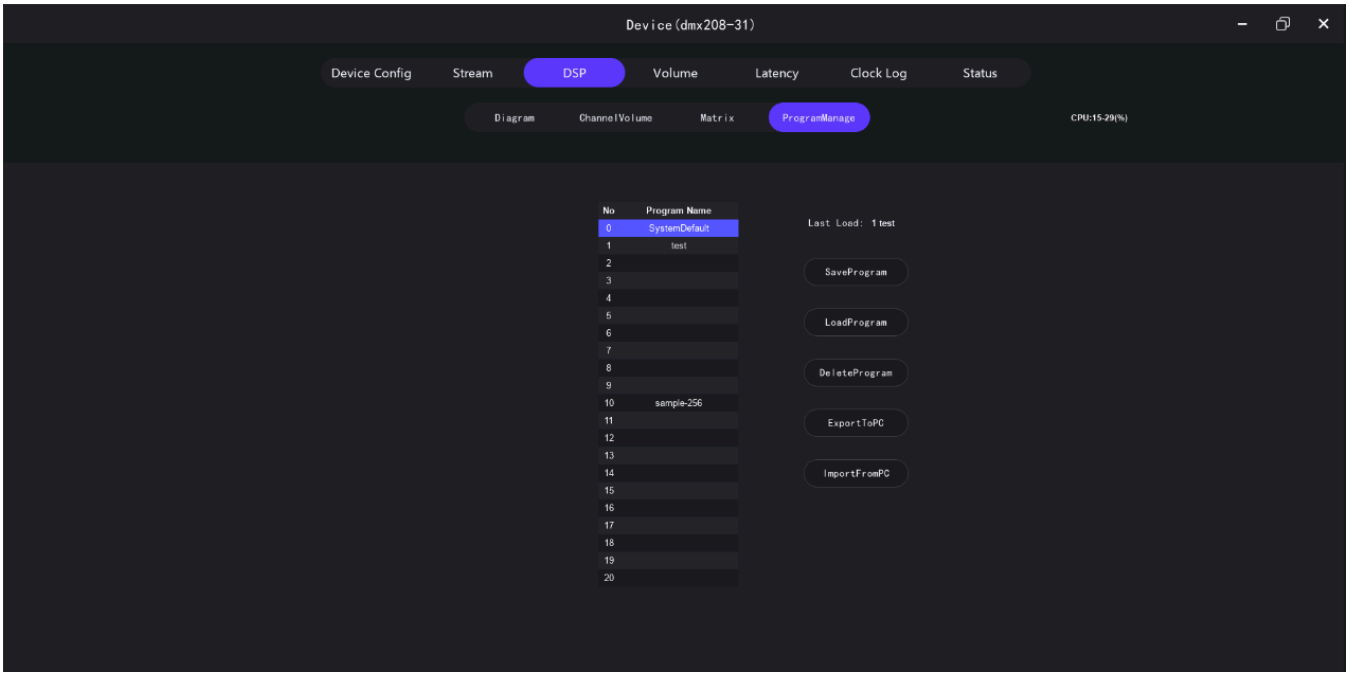


- **Optional AEC/AGC/ANS**



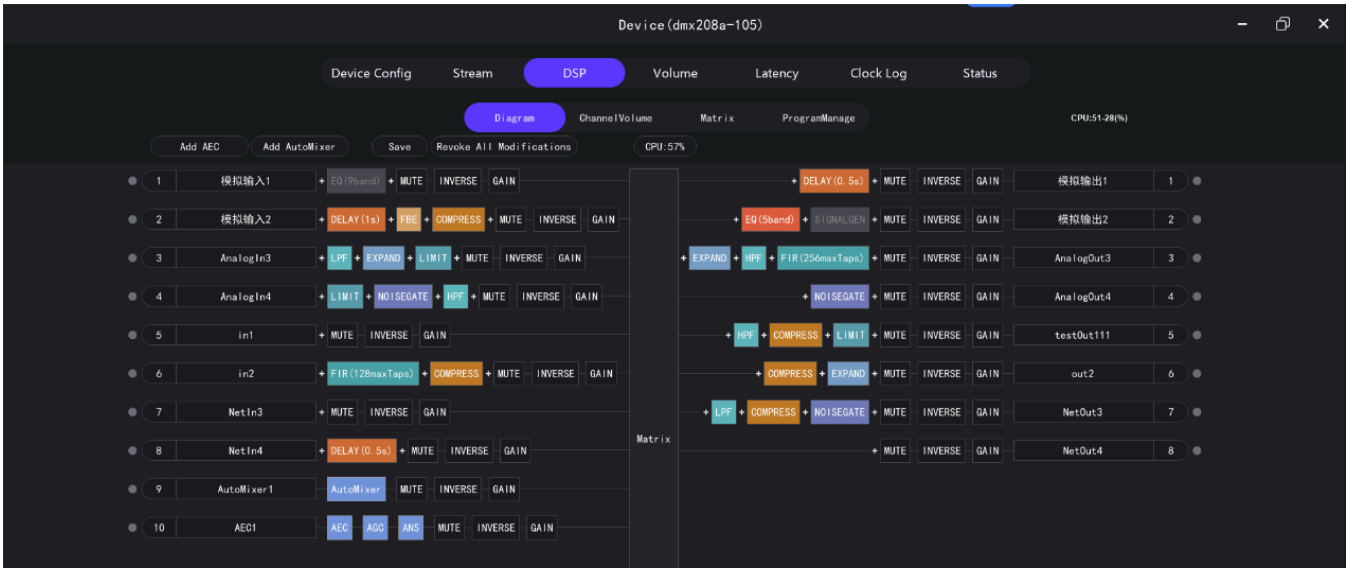


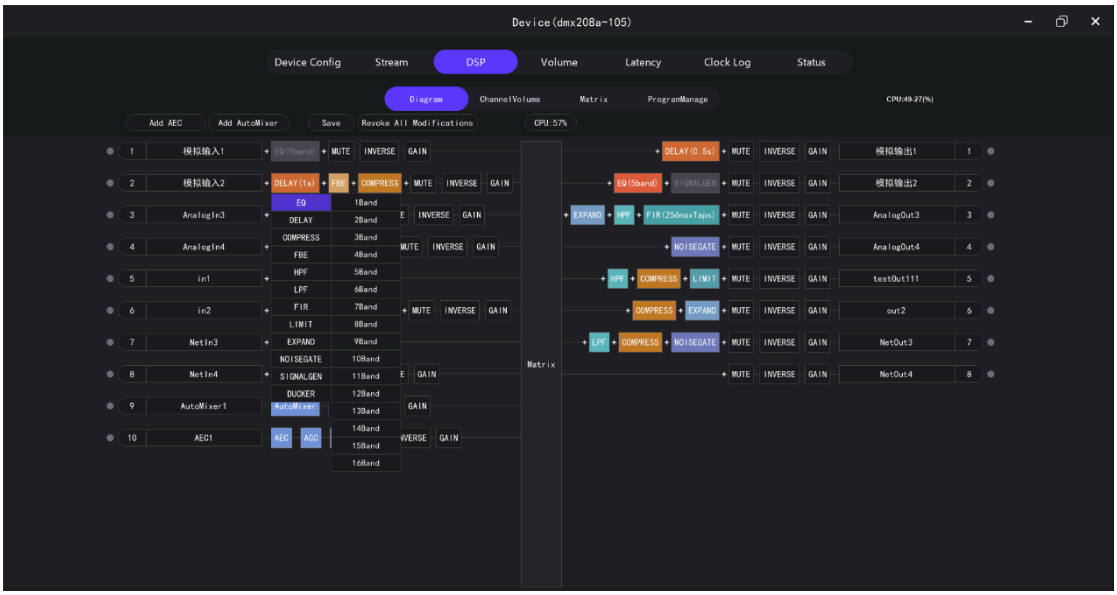
3.5.1 Preset Management



Save/load/import/export configurations

3.5.2 Custom DSP





Build custom signal chains with CPU monitoring

4. Networking Notes

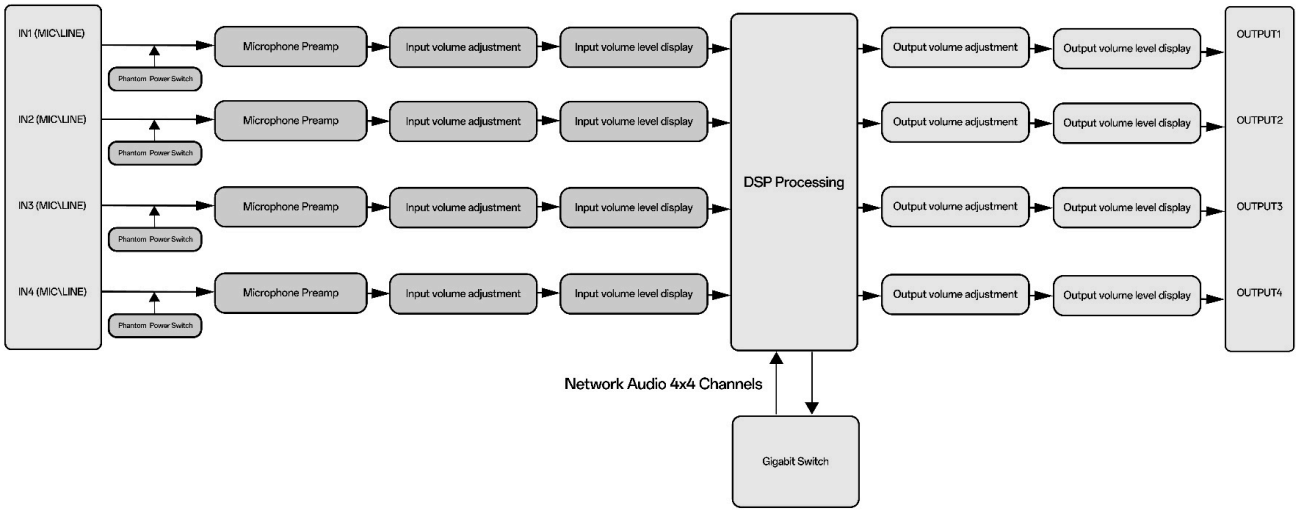
Critical precautions:

1. Verify power adapter specifications
2. Avoid EMI-heavy environments
3. Common failure causes:
    1. Router issues
    2. Firewall blocking
    3. Insufficient permissions
    4. IP conflicts (ensure unique IPs in same subnet)
4. Restart PC after software installation

5. Troubleshooting

Symptom	Solution
No power LED	1. Check power/PoE connection 2. Verify adapter output 3. Inspect POWER LINK
No network connection	1. Check cables (green=good, orange=bad) 2. Verify software version 3. Check IP subnet
Device unresponsive	1. Confirm IP subnet 2. Test network 3. Check switch/router
IP mismatch	1. Verify physical connection 2. Check static IP 3. Test DHCP
No output	1. Confirm input signal 2. Check wiring 3. Verify mute/volume 4. Check matrix

6. Signal Flow



7. Specifications

	Parameter	Specification
Audio	Analog I/O	4in/4out
	Network I/O	4in/4out, Gigabit Switching
	Network latency	1/2/5/6ms
	Sample rate	48kHz / 96kHz
	SNR	98dB@+4dBu, 0dB gain 85dB@+4dBu, 24dB gain

	THD+N	0.005%@1kHz
	Crosstalk	90dB
	Frequency response	±0.2dB 20Hz-20kHz
	Max input level	+14dBu (THD+N≤1%)
	Max output level	+14dBu (THD+N≤1%)
	Dynamic range	110dB, A-weighted
	Gain range	0dB / 15dB / 20dB / 24dB
	CMRR	≥50dB@1kHz
	Phantom power	48V, 10mA
	Mute function	Silent switching
Power		Adapter/PoE-AF 12V DC 1.5A Daisy-chain (max 2 units)
Physical	Dimensions	108 × 149 × 45mm
	Weight	0.54kg

Specifications subject to change without notice