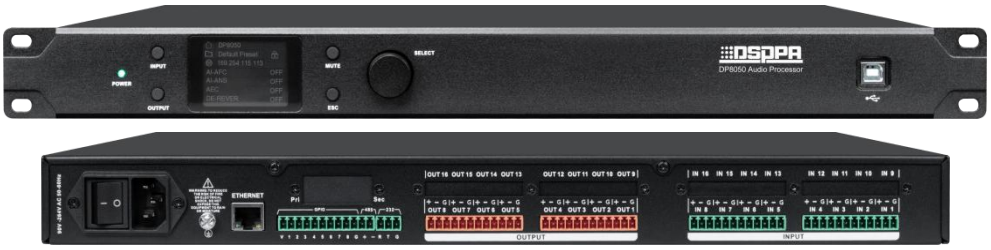
DP8050

8-In 8-Out Professional AI Audio Processor



Description

This device is an 8-in, 8-out automatic mixing media matrix featuring 8 analog inputs and 8 analog outputs. It offers a comprehensive suite of DSP functions, including AI-based feedback suppression, AI noise reduction, automatic mixing, matrix mixing, equalization, crossover, compressor, AGC (Automatic Gain Control), AEC (Acoustic Echo Cancellation), and ANC (Active Noise Control). The unit is controlled via USB (driver-free) connection to a PC, and supports RS232, RS485, and TCP/IP for integration with central control systems, making it suitable for a wide range of sound reinforcement applications.

Features

- 8 analog balanced inputs and 8 analog balanced outputs, with maximum input/output level of 17dBu (5.48Vrms) without distortion.
- 48V phantom power available per input channel.
- Microphone preamplifier per input channel with gain adjustable from 0 to 40dB in 1dB steps.
- Stereo USB sound card function for playback and recording.
- USB port for computer software control and USB sound card transfer function.
- RS232 serial port for computer software control and central control integration.
- RS485 serial port for computer software control and central control integration.
- Network interface for software control and central control, enabling management of multiple devices simultaneously via network connection.
- 8 external GPIO ports.
- LCD screen for configuring device name, presets, IP address, input/output volume, input mode, and for checking firmware version.
- Comprehensive DSP functions: AFC (Adaptive Feedback Cancellation), AEC (Acoustic Echo Cancellation), ANC (Active Noise Cancellation), AGC (Automatic Gain Control), AUTO MIX (Automatic Mixing), MATRIX MIX (Matrix Mixing), Noise Gate, PEQ (Parametric Equalizer), Delay, FIR Filter, High/Low-Pass Crossover, Compressor, and Limiter.
- 15-band PEQ for inputs and 10-band PEQ for outputs.
- 2000ms delay per input channel and 2000ms delay per output channel.
- 512 Tap FIR per output channel.
- Voice activation function (camera tracking) per input channel, supporting PELCO-D, PELCO-P, and VISCA

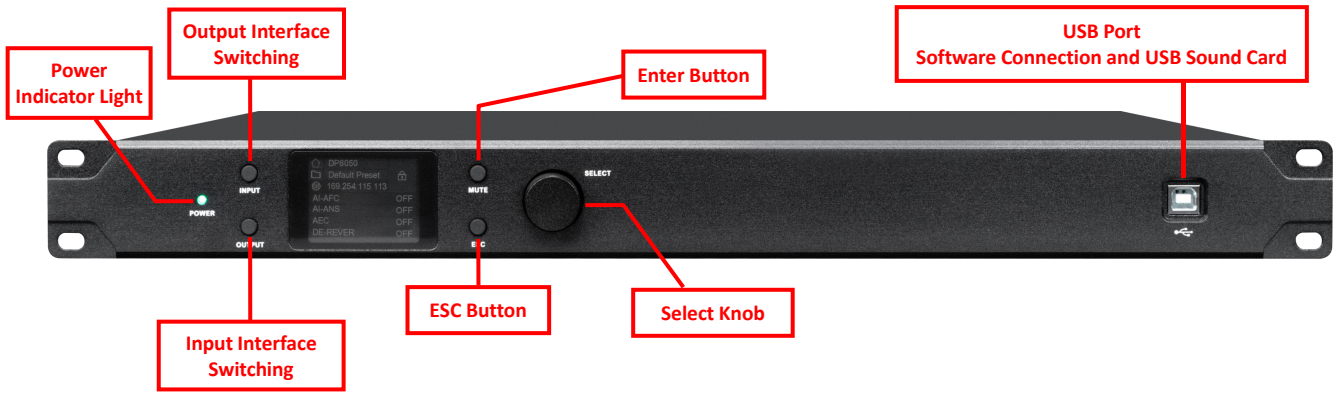
protocols.

- 60 preset memory locations.
- Support for control box control.
- Support for Android APP network control.
- Archive locking and parameter hiding function to ensure project technical security.

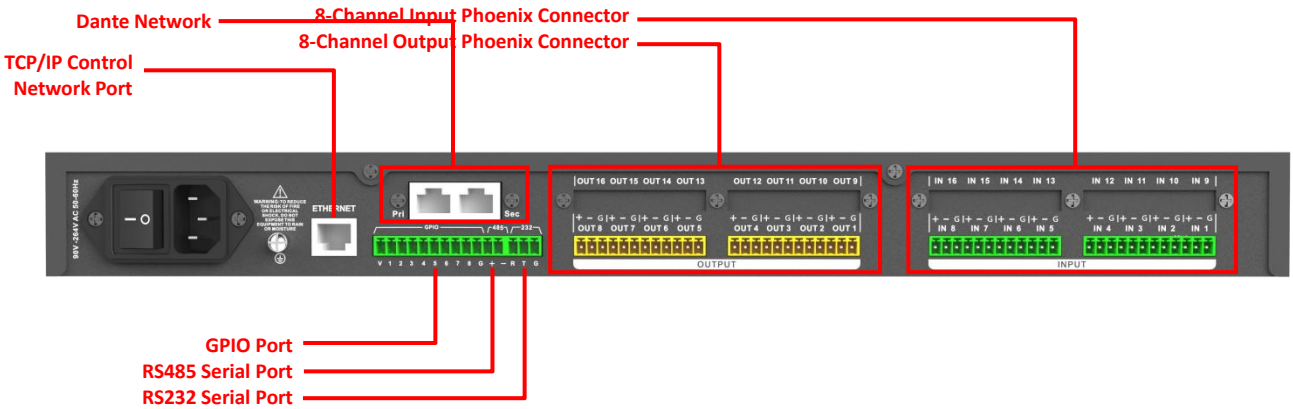
Specifications

Model	DP8050
DSP Chip	
Signal Processing	32bit float point dsp 400Mhz
Audio System Delay	< 3ms
Digital-to-Analog Conversion	24-bit
Sampling Rate	48KHz
Analog Audio Input/Output	
Input Channel	8 balanced inputs, Mic/line level
Audio Connector	3.81 mm Phoenix plug, 12-pin
Input Impedance	16kΩ
Maximum Input Level	17dBu (5.48Vrms)/Line; -3dBu (0.54Vrms)/Mic@20dB Gain
Phantom Power	+48VDC, 5.5mA per channel
Output Channel	8 balanced outputs, line level
Output Impedance	150Ω
Audio Performance Specifications	
Frequency Response	20Hz-20kHz (±0.5dB)/Line, input 0dBu (0.775Vrms) 20Hz-20kHz (±1.5dB)/Mic, 20dB gain, input -10dBu (0.245Vrms)
THD+N	-90dB (@17dBu, 1kHz, A-wt)/Line -90dB (@-6dBu, 1kHz, A-wt)/Mic, 20dB gain
S/N Ratio	110dB (@17dBu, 1kHz, A-wt)/Line 100dB (@-6dBu, 1kHz, A-wt)/Mic, 20dB gain
Communication Ports and Indicators	
USB	Type-B 2.0, drive-free
RS232	Serial port communication
TCP/IP Network Port	RJ-45
Indicator Light	Link, +48V, input and output audio signals
Electrical and Physical Parameters	
Power Supply	90V-264V AC 50-60 Hz
Operating Temperature	-20℃~60℃
Dimensions (W*D*H)	483mm*265mm*44.5mm
Package Dimensions (W*D*H)	540*390*80
Overall Package Dimensions (W*D*H)	560*430*425
Net Weight	3.3KG
Gross Weight	4.4KG
Overall Gross Weight (5 Units)	23KG

Front Panel



Rear Panel



Machine Dimension Drawings