LION X Series
Digital Signal Processor

Product Introduction

The digital signal processor features a high-performance 32-bit floating-point DSP processor and an A/D to D/A converter. It supports a 24bit/48KHz sampling frequency and includes a high-quality 21-stage preamplifier circuit. The DSP processing incorporates a bus structure with built-in feedback cancellation, echo cancellation, noise suppression, and automatic mixing among other core audio algorithms, all aimed at restoring high-quality sound. Additionally, it offers comprehensive matrix mixing capabilities and supports multiple scene presets and scene saving functions. The user-friendly control software interface enhances operational ease. This device is primarily used in various large venues and can meet the application needs of theaters, concert halls, remote video conferencing, stadiums, churches, conference centers, theme parks, and public address systems, among others.

Product Features

➢ Highly integrated, integrating a variety of traditional Analog audio processing equipment in a Digital audio processor;

➢ High-performance 32-bit floating-point DSP processor, all-digital processing, fast response to feedback cancellation, echo cancellation, noise suppression and other core algorithms;

➢ High-performance A/D, D/A converter, 24bit/48KHz sampling frequency, high-quality Analog → Digital, Digital → Analog conversion;

➢ 8 Analog input channels and 8 Analog output channels, very small distortion and ultra-low background noise;

➢ Integrated design of audio processing and amplifier output;

- ➤ Rich interface expansion;

- ➤ Humanization, graphical, intuitive and easy-to-operate control software interface;

- ➤ Integrated design of audio processing, wireless microphone and amplifier outputs;

- ➤ Comprehensive matrix mixing functions;

- ➤ Scene storage is different from the Analog equipment is one of the most practical and significant features, can store 100 complete scenes, all the scenes can be exported to an external storage device for storage backup, so that the later call at any time.

Functions

- ◇ Comprehensive matrix mixing function, 24bit/48KHz sampling frequency, high performance A/D, D/A converter and 32-bit floating point DSP processor;

- ◇ DSP audio processing, built-in automatic mixing console, including mixing and automatic mixing functions, but also has a mixing component control function; at the same time with AFC, AEC, ANS module;

- ◇ Inputs per channel: Preamplifier, Generator, Expander, Compressor, Auto Gain, 5-band parametric EQ;

- ◇ Outputs per channel: delay, crossover, limiter, 31-band graphic EQ;

- ◇ Display shows the IP address;

- ◇ Chinese name can be set independently for each channel;

- ◇ Test signal generator, sine wave, pink noise, white noise, frequency and level magnitude selectable;

- ◇ Input phase switch, mute switch, phantom power switch;

- ◇ Output mute switch, phase switch per channel;

- ◇ Flexible switching between Chinese, Traditional and English languages;

- ◇ One-click display of all function modules;

- ◇ Storing Chinese help document and software with the machine;

- ◇ Central control code generated in the control software; power failure automatic protection memory function; one-key reset function;

- ◇ Channel copy, paste, joint control function;

- ◇ The same host allows 10 users to manage, the user name can be set to Chinese;

✧ Device name can be modified, Chinese name is allowed;

✧ Editable preset mode, new, delete, modify, one-key initialization, preset mode can be stored to computer and one-key recovery;

✧ Input and output channels can be set independently of the colour, one-key recovery switch;

✧ With camera tracking function, can independently adjust the preset position of a camera, compatible with VISCA, PELCO-D, PELCO-P three control protocols, support for custom commands;

✧ Convenient and fast web control: Built-in web controller for fast operation on Windows, macOS, Linux, Android, iOS and other platforms;

✧ Ethernet multi-purpose data transmission and control port, can support real-time management of single and multiple devices;

✧ Intuitive image, simple and easy to understand the graphical software control interface, for customers to bring fast, real-time operating experience;

✧ The device does not need a disc, comes with installation software, a device for a software version, to solve the troubles caused by the loss of the installation disc and the confusion of multiple software versions;

✧ Extendable USB interface, support USB music playback and recording function;

✧ Configuration of bi-directional RS232 interface, RS485 interface, standard Ethernet control interface, 8-channel programmable GPIO control interface (customisable inputs and outputs), level support for external inputs 3.3 ~ 24V;

✧ Support 100 groups of scene presets, scene increase, save, delete and other functions;

✧ Intuitive, graphical software control interface, works on Windows XP, 7, 8, 10, 11, etc.;

✧ Support mobile iOS, iPadOS, Android control software.

Specification

Analog channels	4/8 balanced/line inputs 4/8 balanced/line outputs
Digital Amplifier Channels	2x150W
Number of 232 serial interfaces	1

Number of RJ45 interfaces	1
Number of USB interfaces	1 USB Type A
Sampling Rate	48KHz@24bit
Preamplification	51dB
Phantom Power	48V
Frequency Response	20Hz～20KHz,±0.2dB
THD+N	≤0.003%@1kHz,4dBu
Analog to Digital Dynamic Range (A-weight)	120dB
Digital to Analog Dynamic Range (A-weight)	114dB
Input Impedance (Balanced)	20kΩ
Output Impedance (Balanced)	100Ω
EIN (A-weight)	≤-125dBu
Channel Isolation	100dB@1KHz,4dBu
Common mode rejection	70dB@50Hz
Signal-to-Noise Ratio	108dB
Maximum Input Level	18dBu
Maximum Output Level	18dBu
Background Noise	-90dBu
System Delay	≤9ms
Operating Power Supply	AC 110V-220V,50Hz/60Hz
Power Consumption	<330W

Operating Temperature	0-40℃
Operating Humidity	10%~90% No condensation
Product Weight	3KG
Product Size	482x258x45mm
Package Weight	3.5KG
Package Size	590×430×110mm