Audio Processor

TS-DP880

Description

It is a high-performance audio processor with 8 analog balanced inputs and 8 analog balanced outputs. Integrated dynamic range control (DRC), automatic gain control(AGC), auto feedback control (AFC), adaptive noise reduction (ANS), adaptive echo cancellation (AEC), audio filters (GEQ, PEQ, crossover) and other functions.It is mainly used in professional sound reinforcement scenarios to meet the application requirements of sound reinforcement systems such as conference rooms, courtrooms, auditoriums, multi-function halls, performances, classrooms.

Feature

* High-performance 64-bit DSP processor (800M main frequency), 32-bit/48KHz AD/DA, professional DSP processing, providing excellent high-quality sound.

* Support 8 in 8 out audio matrix function, the input sensitivity can be adjusted according to different audio sources. Each input supports 48V phantom power supply, which can be individually configured to be turned on and off, flexible and convenient.

* Support the ducker function, which is used for background music to automatically duck the microphone to speak, and provide a variety of parameter settings, which is convenient for flexible use on site.

* Support the automatic gain function of the microphone, which is used to control the dynamic range of the pickup signal of the microphone to achieve consistent sound quality from far and near.

* Support intelligent mixing function, including gain sharing mixing and threshold automatic mixing. The input channel can independently choose whether to participate in intelligent mixing, and can choose the corresponding mixing mode according to the application requirements of different scenarios. It can effectively solve the pain points that the sound reinforcement system is unstable and easy to howl due to the multi-opening of the microphone.

* Support equalizer function, provide parametric equalizer and graphic equalizer, each input/output with 12-band parametric equalizer/10-band graphic equalizer/15-band graphic equalizer/31-band graphic equalizer optional. The parametric equalizer supports three types of EQ highshelf, EQ lowshelf and peak filters, and the graphic equalizer supports single-point bandwidth adjustment.

* Support crossover function, provide Bessel, Linkwich-Rayleigh, Butterworth three filter types for selection, and support 6/12/18/24/32/40/48db/oct slope settings, the filter is adjustable in the whole frequency band.

* Support the expander function to expand the dynamic range of the signal and to eliminate the noise floor of the device.

* Support compressor function to compress the dynamic range of the signal, commonly used to compress the output signal.

* Support the limiter function to limit the output signal range, and prevent damage to the sound reinforcement equipment.

* Support the delayer function, providing a maximum delay adjustment of 2000ms, which is used to adjust the delay of each output signal, so that each audio signal remains synchronized when reaching the listener's ears.

* Support the echo cancellation function, which is used for remote audio and video conferences to eliminate echo and increase voice clarity.

* Support noise cancellation function, which can effectively eliminate environmental noise such as air conditioner sound and fan sound, and improve voice clarity.

* Support auto feedback control function, two processing schemes of notch filter + frequency shifter, effectively solve the problem of acoustic feedback.

* With ultra low system processing delay, the delay is less than 3ms.

* 2-inch IPS real color display on the panel, supporting the display of device network information, real-time level, channel mute status, matrix mixing status and other status.

* Panel with USB interface, supports multimedia storage, and can store, record or play.
* Support scene preset, import, export, support up to 8 scenes.
* Support the function of restoring factory settings.
* With RS-232 interface, it can be used to connect to the external central control system to achieve centralized control.
* With RS-485 interface, it can be connected to the central control system and camera tracking system to achieve automatic camera tracking function.
* With 8-channel programmable GPIO control interface (customizable input and output).Support channel copy, paste, and gang control functions.
* Enternet multi-purpose data transmission and control port, can support real-time management of single and multiple devices.
* Support access to equipment through PC software, with management and control software: intuitive and graphical interface, support Windows7, 8, 10 and other system.
* Support operation control through Android mobile phone APP software, device login, scene switching, input and output,matrix routing and channel setting and other functions through Android mobile APP software.
* Supports power-off automatic protection memory function.
* The rear panel has 8-way audio Phoenix terminal balanced input interface (with 48V phantom power supply), 8-way audio Phoenix terminal balanced output interface, 1 dip switch, 1 RJ45 interface, 1 RS232 interface, 1 RS485 interface, 8 programmable GPIO control interfaces, and 1 grounding column; the front panel has a 2.0-inch IPS true color display, 1 encoding knob, and 1 USB storage device interface.
* The device has a unified centralized control function and supports 65,535 devices to be centrally controlled through software.
* It has a matrix gain adjustment function, and the gain of each input channel participating in the mixing is adjustable, with a gain adjustment range of -72db to 12db.
* The device has an encoding knob and an IPS screen, which can be used to control and configure the device mute, gain, and scene; the IPS screen can display the IP address, real-time level of input and output channels.
* With the device positioning function, the client can locate similar devices in the LAN with one click, and the located devices will display the positioning information.
* The audio processor software can be integrated into the conference audio comprehensive management platform to realize the unified management of audio devices. The platform can scan the online status of digital conference hosts, audio processors, mixers, suppressors, and amplifiers. Multiple online devices of the same product can also be scanned, and the device hardware name, hardware IP address, online and offline status information can be displayed; it has the function of uploading configuration information to the cloud or saving it locally for backup and restoring configuration information with one click.
* With the Web page management function, the control software can be downloaded through the Web page, and the gain of each channel can be adjusted through the Web page.
* Supports the central control function, which can realize gain addition and subtraction, gain limitation, query of each channel level bar, and setting of gain addition and subtraction step value.
* With dual-machine hot backup function.

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Specification

Input channel	8 balanced MIC/LINE inputs, using bare wire interface terminals, balanced connection
Output channel	8 balanced line outputs, using bare wire interface terminals, balanced connection
Input channel	Preamplifier, signal generator, 12-band parametric equalizer, input module, input equalizer, expander, compressor, automatic gain, ducker, feedback suppression, echo cancellation, noise cancellation
Output channel	31-segment graphic equalization adjustment, limiter, output equalizer, delay, and output module
Processor	48kHz sampling frequency, 64-bit DSP processor; 32-bit A/D and D/A conversion
Phantom power	DC 48V
Frequency response	20Hz～20KHz
THD + N	≤0.002% OUTPUT=24dBu/1kHz
SNR	≥110dB@1kHz 24dBu (A-weighted)
Channel isolation	≥100dB@1kHz 24dBu (A-weighted)
Input impedance (balanced)	20KΩ
Maximum output impedance (balanced)	100Ω
Input range	≤+24dBu
Howling searching and suppression methods	Fully automatic wave trap
Notch filter	24 (static points and dynamic points can be configured)
Q value range	10-50
Frequency resolution	1Hz
Howling searching time	0.1—0.5S
Sound transmission gain	4—10dB
System gain	0dB
Crossover	With Butterworth, Bessel, Linkwich-Rayleigh three high and low pass filters
Equalizer	31-band graphic equalizer + 12-band parametric equalizer
Display	2-inch IPS true color display, resolution 320×240
Power supply	AC 110V-220V 50/60Hz
Power consumption	≤40W
Working temperature	-10℃～+45℃
Working humidity	20%~80% relative humidity, no condensation
Cooling method	Fan forced cooling
Dimension（L×D×H）	484×298.2×45mm
Net weight	3.4kg
Analog/digital dynamic range	116dB
Digital/analog dynamic range	120dB