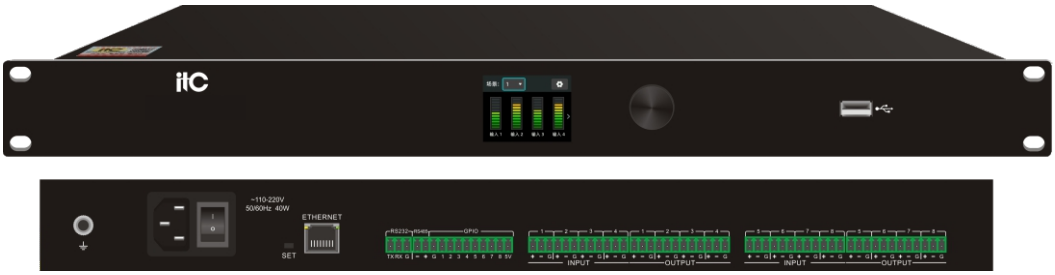
# Audio Processor

## TS-DC880



## 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.

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* 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.
* Support RS-232 interface, which can be used to connect with external central control system to realize centralized management and control.
* Support RS-485 interface, which can be connected to the central control system and camera tracking system, and can realize the automatic camera tracking function.
* 84-channel programmable GPIO control interface (customized 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.
* Support EQ (parametric and graphic), crossovers,compressors, limiters, noise gates, feedback suppression, automatic gain control (AGC), echo cancellation, and reverb GUI-based control software
* Ethernet for remote control and monitoring,support for Dante/AES67 networking for audio over IP
* Integration with popular conferencing systems and control protocols (e.g., AVB, RS-232, IP control)
* Ultra-low latency processing for real-time audio adjustments

## Specification

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| **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 |
| **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 |
| **Power supply** | AC 110V-240V 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 |