FI-DSP1616
16 Channel Audio Matrix systems

The FI-DSP1616 audio matrix system is a sophisticated audio processing solution designed for routing, mixing, and managing multiple audio signals across complex setups. It is widely used in professional environments such as conference rooms, live performances, broadcasting studios, and large-scale installations

The system support high resolution audio sample rates, ensuring minimal distortion and dynamic range for crystal clear sound reproduction. 16 balanced analog inputs and outputs using Phoenix connectors supporting both microphone and line-level signals. Full matrix routing allows any input to be mapped to any output, with adjustable gain per crossover point.

Includes 31-band graphic EQ and 8 band parametric EQ, compressors, limiters, noise gates and automatic gain control for precise tonal shaping and dynamic management. Build-in RJ45 ports enable Ethernet control, supporting TCP/IP protocols for remote management across network segments.

Product Features

- 16 analog inputs and 16 analog outputs, support to select Line level and Mic level.
- Dante network audio 16×16 in option.
- Support 48V phantom for each Mic level input, 40 level sensitivity (1dB in step).
- Built-in AFC(feedback cancellation) , 2 level to select.
- Built-in AEC(echo cancellation) for remote video-conference system.
- Built-in ANC(noise cancellation) for optimizing local meeting system.
- Built-in AGC(automatic gain control) for optimizing microphone signals in complex scenarios.
- Support auto mix and matrix mix.
- Support camera tracking with most of camera control.
- Support presets archiving and locking, help project to hide parameters of setting.

Product Applications

- conference rooms
- live performances
- broadcasting studios
- large-scale installations

Specification

DSP Process	
Process	32bit float point DSP 400MHz
System Delay	<3ms
AD/DA70V/100V	24-bit 48KHz

Analog Audio Inputs and Outputs	
Input	4X4 channels balanced
Input Interface	3.81mm phoenix, 12-pin
Input Impedance	9.4KΩ/Balance; 4.7KΩ/Unbalance
Max Input Level	17dBu/Line; -3dBu/Mic@20dB sensitivity
Phantom Supply	+48V DC, 5.5mA in each input channel
Output	4X4 channels balanced. Line level
Output Interface	3.81mm phoenix, 12-pin
Output Impedance	100Ω/Balance; 50Ω/Unbalance

Audio Performance Specifications	
Frequency Response	20Hz-20kHz(+-0.5dB)/Line, input 0dBu; 20Hz-20kHz(+-1.5dB)/Mic, 20dB gain sensitivity, input -10dBu
THD+N	-90dB(@17dBu, 1kHz, A-wt)/Line -90dB(@-6dBu, 1kHz, A-wt)/Mic, 20dB gain sensitivity
SNR	110dB(@17dBu, 1kHz, A-wt)/Line 100dB(@-6dBu, 1kHz, A-wt)/Mic, 20dB gain sensitivity

Connect Ports and Indicators	
USB	Type B, free driver
RS485	Serial port communication
TCP/IP Interface	RJ-45
Indicator Light	Input signal, +48V, Link, Output signal

Electrical and Physical	
Supply	AC 190V～264V 50/60 Hz
Product Dimensions	488mmx260mmx44mm
Package Dimensions	555mmx325mmx98mm
Net Weight	4.3kg
Package Weight	5kg
OperatingTemperature	-20℃～80℃