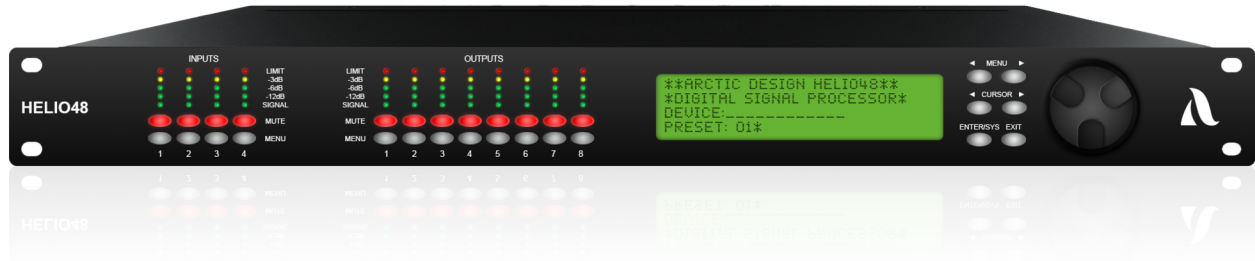


# HELIO48



Meet Helio, the digital processor renowned for its outstanding audio processing, advanced precision, and reliable performance. No matter where your audio is directed or how your sound is processed, Helio ensures exceptional sound performance on every occasion.

## Benefits

- Quick and easy installation
- User-friendly interface to configure, control and distribute audio signals anywhere
- High-performance audio and precise audio effects for pristine audio clarity
- Protect user-selectable menus or entire device for authorized access

## Features

- 4 XLR line inputs, 8 XLR line outputs
- High-performance 96kHz sampling, 32-bit converters
- Connect via Ethernet, USB or front panel
- Signal processing via intuitive software allows configuration and control for signal routing, mixing, equalization, filtering (including FIR), and delay
- Save and recall up to 30 presets
- Password protect user-selectable menus or entire device
- Stack up to 16 units via network connectivity
- Rack mountable (1U)
- Included Arctic Desk PC app

## Application examples

FOH loudspeaker management  
 Floor monitors  
 Time/phase crossover alignment  
 Fixed audio installations  
 Delayed speakers  
 Zoned systems  
 Room equalization  
 Acoustic correction  
 and more

## Technical specifications

Processor: 40-bit floating point  
Sample rate: 96kHz  
Analog converters: High-performance 32-bit  
Propagation delay: 1.5ms, 1.75 – 7.75ms with FIR

Input impedance: >10k Ohms  
Output impedance: 50 Ohms  
Maximum level: +20dBu  
Type: Electronically balanced

Frequency response: +/-0.1dB (20 to 30kHz)  
Dynamic range: 115dB typ (unweighted)  
CMMR: >60dB (50 to 10kHz)  
Crosstalk: <-100dB  
Distortion: 0.002% (1kHz @ +4dBu)

Gain: -40 to +15dB in 0.25dB steps  
Polarity: +/-  
Delay: Up to 650ms per I/O

EQs: Variable equalizers: 8 per I/O  
Type: Parametric, Hi-shelf, Lo-shelf, Phase (1st and 2nd order)  
Gain: -30 to +15dB in 0.25dB steps  
Bandwidth: 0.02 to 3.61 Oct (Q=0.31 to 72.13)  
Graphic EQ: 1 per input, 31 band 1/3 Oct steps

IIR crossover: 2 individual filters per I/O  
Type: Butterworth, Linkwitz-Riley, Bessel  
Slope: 6 to 48dB per Oct

FIR crossover: 2 Individual filters per Output  
Type: Multi-tap  
Slope: 50 to 1200 Taps

Compressors: 1 compressor per input channel  
Limiters: 1 limiter per output channel  
Threshold: -20 to +20dBu  
Attack: 0.3 to 100ms  
Release: 2 to 32x the attack time  
Ratio: 1:1 to 1:40 (compressor only)

System parameters  
Number of programs: 30  
Delay units: ms, ft, m  
Frequency modes: 36 steps/Oct, 1Hz resolution  
Security locks: Password  
Channel names: 6 characters  
Front panel display: Backlit LCD

Connectors  
4 XLR inputs, 8 XLR outputs, USB Type-B,  
Ethernet standard CAT5, Power standard IEC  
socket

Power: 100-240 VAC (50/60Hz)  
Dimensions: 19"x1.75"x9" (483x44x229mm)  
Rack unit: 1U standard EIA  
Weight: 10lbs/4.6kg

## Architects & Engineers specification

The digital signal processor shall provide 4 XLR line inputs and 8 XLR line outputs in a 19" 1U aluminum frame chassis. The processor shall use 40-bit floating point DSP filtering with high-performance 32-bit, 96kHz A/D and D/A converters. The processor's front panel interface shall provide quick access to control parameters and include individual channel mute buttons, channel selection buttons, LED signal meter per channel, LCD display screen, jog wheel and menu/cursor navigation buttons. The processor shall be configured and controlled via USB or Ethernet connection, or used standalone. Ethernet connections allow up to 16 units that can be managed and controlled with the Arctic Desk PC desktop app. The processor's signal flow is as follows: Input, gain, delay, filters (8-band PEQ, 31-band GEQ, dual IIR XOvers), compressor, routing matrix to mix and send any inputs to desired output, Output gain, delay, filters (8-band PEQ, dual IIR XOvers, dual FIR XOvers), limiter, mute, analog output. The processor shall provide 30 presets with non-volatile memory and a user-defined password to lock selectable menus or the entire device. The processor shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be two years. The processor shall be Helio48.

