

# DIGITAL SIGNAL PROCESSING

## ALF-DSP1616-UD





## DESCRIPTION

Audio Digital Signal Processors (DSP's) are equipped with several core technical features to simulate the work of an audio engineer. The ALF-DSP1616-UD consists of 16 analogue inputs and 16 analogue outputs, 16 DANTE inputs and outputs, USB Audio, 8 General Purpose Input / Output (GPIO) connections, RS-232, RS-485, and IP control. It is equipped with advanced audio processing modules including Acoustic Echo Cancellation, Noise Suppression, and Auto Mixing.

The Analogue to Digital (A/D) and Digital to Analogue (D/A) convertors on the Input and output stage of the DSP's features 48kHz sampling rate and a bit rate of 24Bits, providing high definition audio sampling and processing. It also has a dynamic range of 110dB and a maximum level of +24dBu. It features input and output processing modules including: Expanders, Compressors, Acoustic Gain Compensation (AGC), Parametric EQ, Feedback Suppression, Ducker, Gate, Ambient Noise Compensation, Graphic EQ, and Delay.

DSP-based audio management, routing, processing, and control, is facilitated via a computer running the GUI Software for the DSP Hardware models. The Alfatron DSP Controller software is a Windows-based application, which is used to configure and control the DSP's. The Alfatron DSP Controller is a full-feature application, including parameter adjustments and peripheral accessory settings of all modules, such as RS232, RS485, and click-and-drag panel configuration.

## **FEATURES**

- 16 Balanced Mic / Line Inputs and 16 Balanced Line outputs on phoenix (PCB) connections.
- 24Bit, 48kHz A/D and D/A convertors
- 1ch. USB input and output
- Advanced Audio Processing incl. AEC, Auto-Mixing, Noise Suppression, Matrix
- Audio Processing Modules include:
  - Expanders
  - Compressors
  - Acoustic Gain Compensation (AGC)
  - Parametric EQ
  - Feedback Suppression
  - Ducker
  - Gate
  - Ambient Noise Compensation
  - Graphic EQ
  - Delay
- Software GUI Interface for easy setup and control of all DSP features.
  - RS-232, RS-485, and IP Control.
- 8 GPIO connections
- Dante 16 inputs and outputs

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#### **Software Installation Requirements**

A Windows PC with:

• Intel i5 processor or higher

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- 8 GB or higher memory
- 1 GB free storage space
- Windows 7 or higher version
- Minimum 1920 x 1080 resolution
- 24 bit or higher color
- Network (Ethernet) port



## ALF-DSPxx-U/D

## WALL PANEL CONTROLLER



#### ALF-CP1L

The wall mounted ALF-CP1D control panel consists of a 1.3" OLED screen and a rotary encoder.

The 2-line OLED provides customaisable menus and sub-menu controls of Volume, routing, presets and more.

Easily programmed and managed from the DSP software.

Single CAT5 connection with POE.

## **CUSTOMIZABLE GUI CONTROL**

The DSP's support a customaisable GUI interface that can be built to facilitate remote control of general items like volume, mute, presets, matrix routing, camera control and other external control commands.

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