

D*AP4 FLX – 4 Channel Stereo Audio Processor

Providing an adaptable approach to digital audio processing, the D*AP4 FLX offers complete flexibility from a choice of multiple I/O formats including AES, 3G SDI, MADI, Dante™ and analog, coupled with an extensive list of license based processing options to create a fully customized solution in an efficient and space saving 1RU form factor.



Designed to be easily upgradable through additional licenses, the D*AP4 FLX is a cost effective dual stereo digital audio processor that can grow and expand to match the evolving needs of a wide range of applications in broadcast, live production or live streaming.

Overview

The D*AP4 FLX provides four channels of AES/EBU audio I/O (2x 2.0) with brickwall true peak limiting, adjustable audio delay and loudness measurement as standard. A choice of processing licenses can be added to unlock an extensive range of algorithms and processes:

Level Magic™ Loudness Management

Based on a unique multi-loop control principle, the Level Magic™ algorithm provides adaptive wideband loudness control with exceptionally high audio quality that is free of coloration, pumping, distortion or modulation effects. Level Magic™ is designed to be audibly transparent and due to its highly adaptive nature, requires only a small number of parameters to be input during initial setup.

Dynamics Processing

The dynamics section comprises of an upward compressor that controls dynamic range but retains the micro dynamic structure, and an expander/gate to remove low-level noise without introducing artifacts.

Parametric EQ and Spectral Signature™

A 5-band Parametric EQ is coupled with Spectral Signature™ dynamic equalizer, a powerful creative tool allowing adaptive control of spectral balance. Incoming audio is analyzed and its spectral structure is compared to a predetermined “reference” curve. This allows dynamic EQ corrections to be applied only if necessary to achieve a consistent sound image and tonal balance.

Fail Over

Fail Over ensures that if the primary signal is lost, the unit can switch automatically to a secondary backup feed.

Voice Over

Voice Over provides seamless integration of voice and program content in situations such as continuity announcements or video description with automatic ducking.

Loudness Measurement and Logging

The optional J*AM software displays input vs output levels and can log long term values to a destination folder anywhere on the network.

FM Conditioner

A powerful option for FM broadcast to pre-control the MPX power and peak deviation of a stereo FM signal, including true peak and pre-emphasis limiting. A Phase Rotator automatically detects imbalanced audio waveforms and restores symmetry to prevent transients that may unnecessarily trigger downstream processing.

De-Esser

A powerful De-Esser is available as a license option to control and manage excessive sibilance from spoken voices.

Web Configuration

A web interface allows easy and intuitive setup and configuration from anywhere in your network.

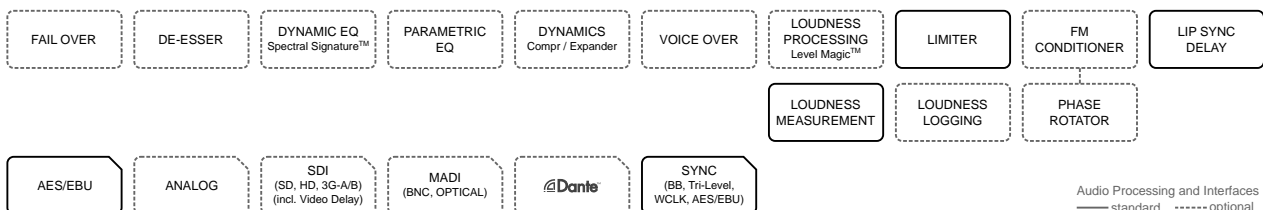
Onscreen metering and measurements are available for easy reference and a dedicated “mobile” UI is tailored specifically for touch screens or smaller displays such as tablets and smartphones.

System Integration

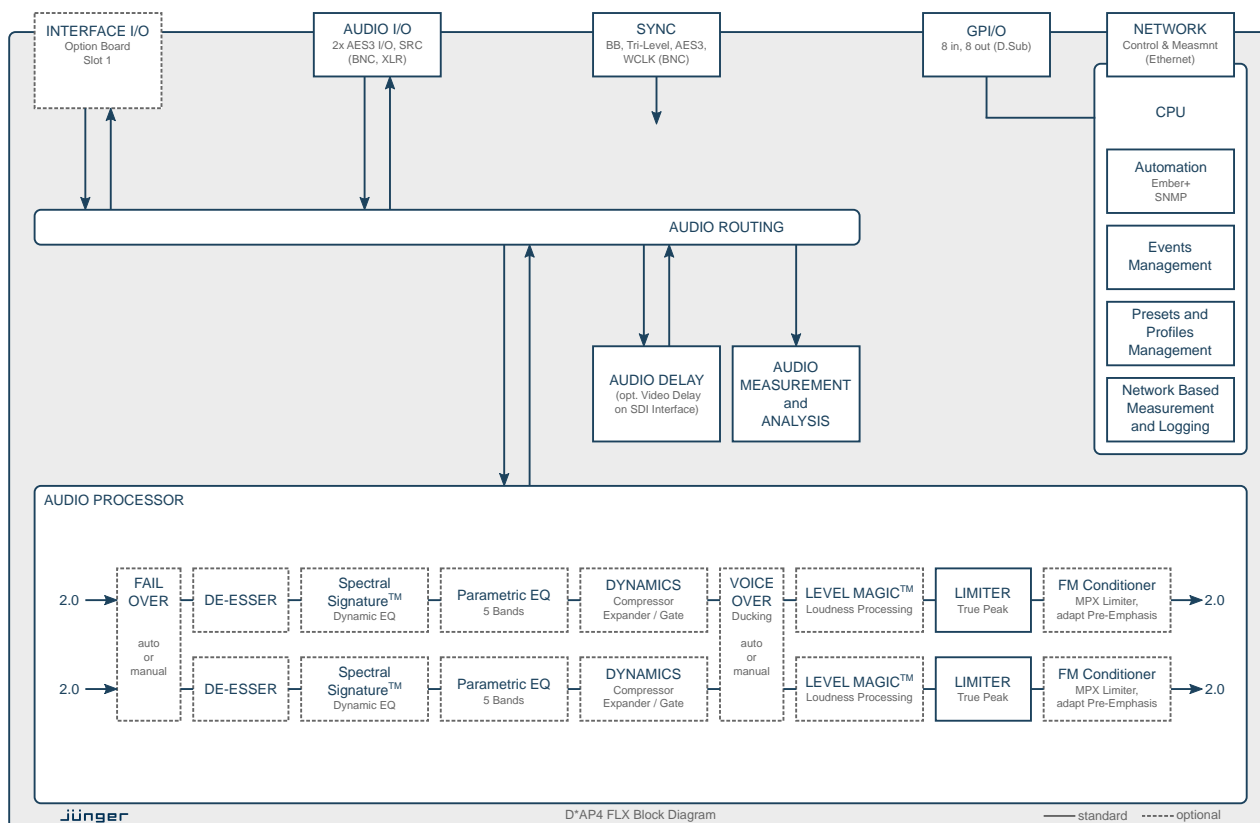
All system parameters are remotely accessible allowing the unit to be integrated and operated by broadcast control systems. An advanced built-in Event Management tool allows the loading of parameter presets either by hotkeys on the optional X*AP RM1 remote panel, by 8 onboard GPI/O's or by network commands using the Ember+™ control protocol. This helps users to apply individual processing to their programs or content and thereby ensure maximum audio performance in all situations.

Interfaces and System Security

Audio I/O's range from onboard AES₃ to optional 3G SDI including video delay, MADI, Dante™ audio over IP and analog. With power fail bypass relays, dual redundant PSU's and SNMP integration, the unit ensures maximum operational safety and peace of mind for today's critical 24/7 broadcast or content delivery facilities.



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Key Features

- Flexible feature set, configurable by licenses
- True peak limiter
- Level Magic™ loudness management (optional) according to: ITU-R BS.1770 (all revisions), EBU R128, ATSC A/85, ARIB TR-B32, Free TV OP-59 and Portaria 354
- Loudness measurement supporting all worldwide standards
- Optional Fail Over with signal loss detection
- Optional embedded audio management (1 SDI stream)
- Optional loudness logging software (J*AM)
- I/O modularity via 1 interface slot
- Ethernet connectivity for setup and control via web browser
- External control via network or GPI/O's
- Power fail bypass relays
- 19", 1RU device, redundant PSU

Versions and Options

- **D*AP4 FLX:** D*AP4 base unit with flexible feature set
- **X*AP RM1:** hardware remote control linked via Ethernet



- Option Board 16ch SDI I/O (3G/HD/SD)
- Option Board 4ch analog I/O
- Option Board 8ch analog Out
- Option Board 8ch AES/EBU I/O
- Option Board 16ch Dante™ Audio over IP
- Option Board 16ch MADI I/O
- License Level Magic™ loudness management
- License Dynamics with compressor and expander
- License EQ with parametric EQ and Spectral Signature™
- License Fail Over
- License Voice Over
- License FM Conditioner
- License De-Esser

