

D*AP4 LM EDITION - 4 Channel Level Magic™ Audio Processor Edition

With 4 processing channels, 3G SDI and optional logging features, the D*AP4 LM EDITION is the ideal solution for automatic and intelligent loudness management in real-time stereo TV or radio broadcast playout environments. Level Magic™ ensures maximum audio quality whilst maintaining compliance with all worldwide loudness standards.



The D*AP4 LM EDITION audio processor provides automatic and adaptive loudness management compliant with all current broadcast audio loudness recommendations including ITU-R BS.1770 standards as well as recommended practices ATSC A/85, ARIB TR-B32, Free TV OP-59, Portaria 354 and EBU R128.

Overview

The D*AP4 LM EDITION audio processor features loudness control plus dynamic range processing and true peak limiting for up to four channels of audio (2x 2.0). Fail Over and Voice Over are also included.

Level Magic™ and Dynamic Range Control

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. The adaptive dynamic section includes an expander/gate and upward compressor.

Fail Over and Voice Over

Fail Over permits automatic switching to a backup signal should the primary feed be lost, whilst Voice Over allows for seamless integration of voice and program content during continuity announcements or video description with automatic ducking.

Spectral Signature™

The optional Spectral Signature™ dynamic equalizer is a powerful creative tool allowing adaptive control of the spectral balance of your content. Spectral Signature™ analyzes incoming audio and compares its spectral structure 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.

Loudness Measurement and Logging

For compliance with local regulations, loudness and true peak levels can be measured by the optional J*AM software. SNMP or GPIO alarms can also be triggered if pre-set limits are exceeded. A real-time plot of input vs output levels can be displayed and the results logged to a destination folder anywhere on the network. A log file analyzer rebuilds the original plot for easy readout of historical data.

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

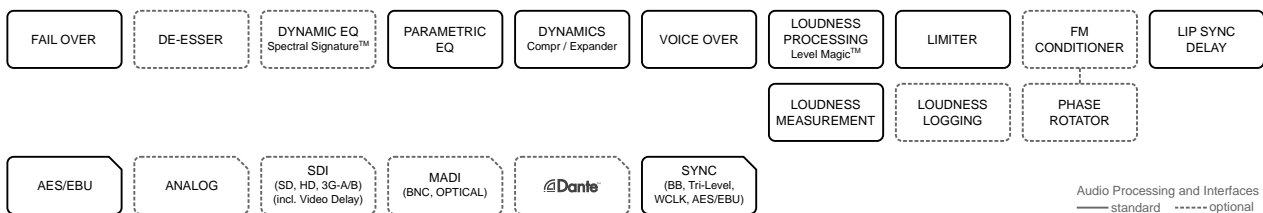
A web interface allows easy and intuitive setup and configuration from anywhere in your network. Onscreen metering and measurements are available for easy reference and a dedicated "mobile" UI is tailored specifically for touch screens or smaller displays such as tablets and smartphones.

System Integration

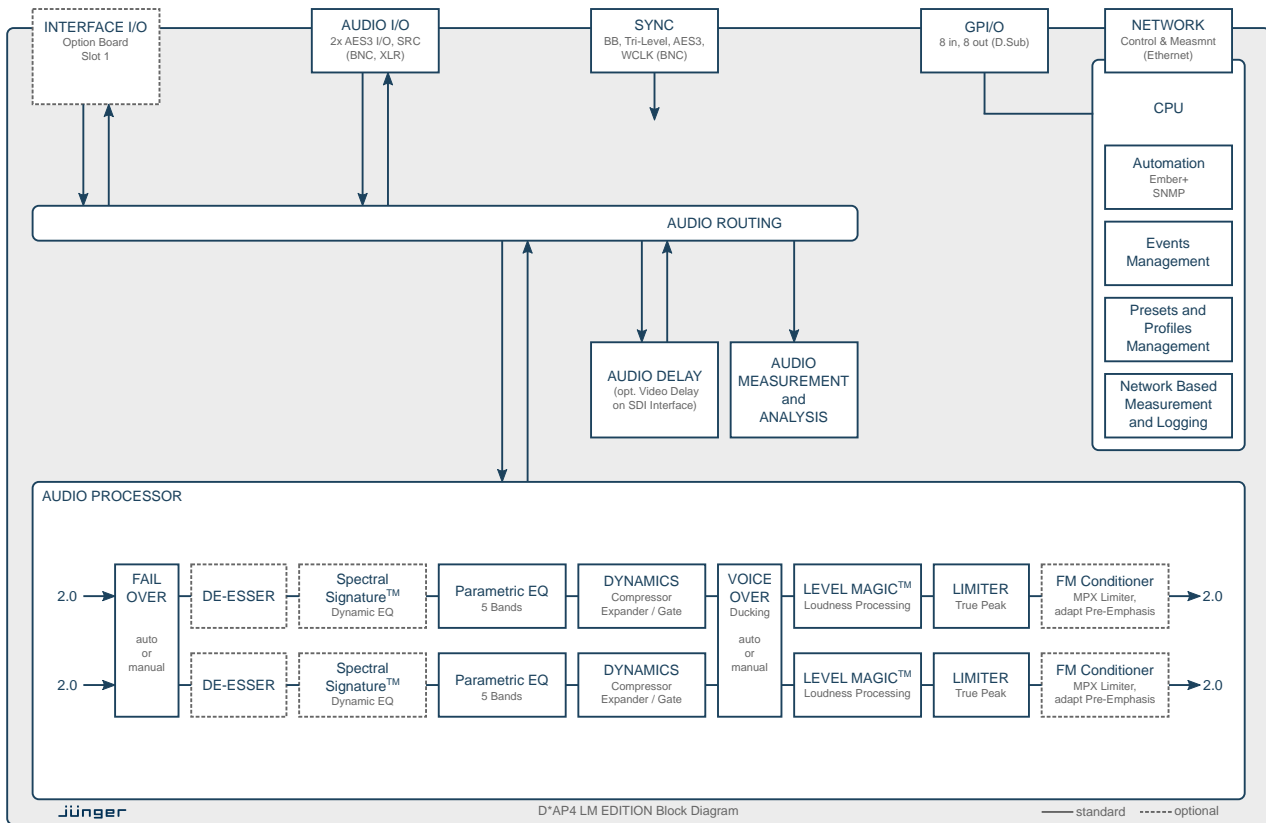
All system parameters are remotely accessible allowing the unit to be integrated and operated by broadcast control systems. An advanced built-in Event Management tool allows the loading of parameter presets either by hotkeys on the optional X*AP RM1 remote panel, by 8 onboard GPIO's or by network commands 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

- Level Magic™ loudness management 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
- 5 band parametric EQ
- Dynamics with compressor and expander/gate
- Fail Over with signal loss detection
- Voice Over functionality
- Optional Spectral Signature™ dynamic EQ
- 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 LM EDITION:** D*AP4 base unit plus LM 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 Spectral Signature™ dynamic EQ
- License FM Conditioner
- License De-Esser

