

D*AP8 TAP - 8 Channel Surround Television Audio Processor

With 8 processing channels, 3G SDI, Dolby® support and optional logging features, the D*AP8 TAP is the ideal solution for automatic and intelligent loudness management in real-time surround TV broadcast playout environments. Level Magic ensures maximum audio quality whilst maintaining compliance with all worldwide loudness standards



The D*AP8 TAP 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*AP8 TAP audio processor features loudness control plus dynamic range processing for up to eight channels of audio (4x 2.0, or 5.1+2). Optional audio decoding and encoding (Dolby® E, Dolby® Digital Plus, Dolby® Digital or AAC, HE-AAC v1/2) including metadata management are also provided, along with 5.1 downmix and upmix features, sophisticated fail over and voice over systems.

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.

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

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.

Spectral Signature

Jünger Audio's 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. Spectral Signature is a standard feature on the D*AP8 TAP.

Loudness Measurement and Logging

To check compliance with local regulations, loudness and true peak levels can be measured and transferred via Ethernet to the optional J*AM measurement and logging software. SNMP or GPIO alarms can also be triggered if pre-set limits are exceeded. A real-time plot of input v/s output levels can be displayed and the results logged to a destination folder anywhere on the network. A log file analyzer can rebuild the original plot for easy readout of historical measurements.

Automatic Upmix

When broadcasting a mix of stereo and 5.1 audio content, it can be disturbing to viewers when the surround field collapses back to stereo and vice-versa. The unit can be set to detect stereo or mono only content and automatically create 5.1 in order to maintain a constant surround experience. Existing 5.1 content will pass untouched.

Web Configuration

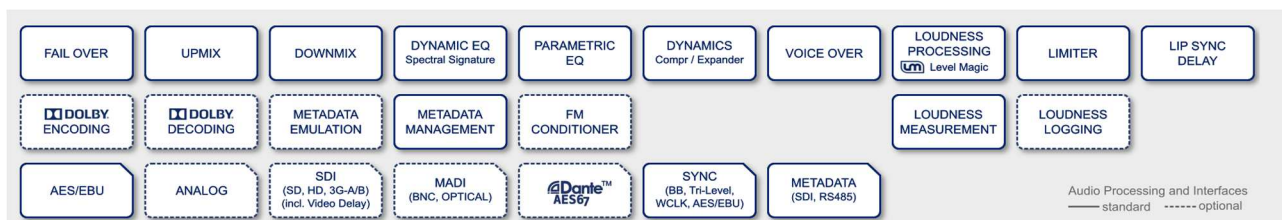
A web interface permits easy and intuitive setup and configuration from anywhere in your network. Onscreen metering and measurements are available for easy reference and a dedicated "mobile" UI is tailored specifically for touch screens or smaller displays such as tablets and smartphones.

System Integration

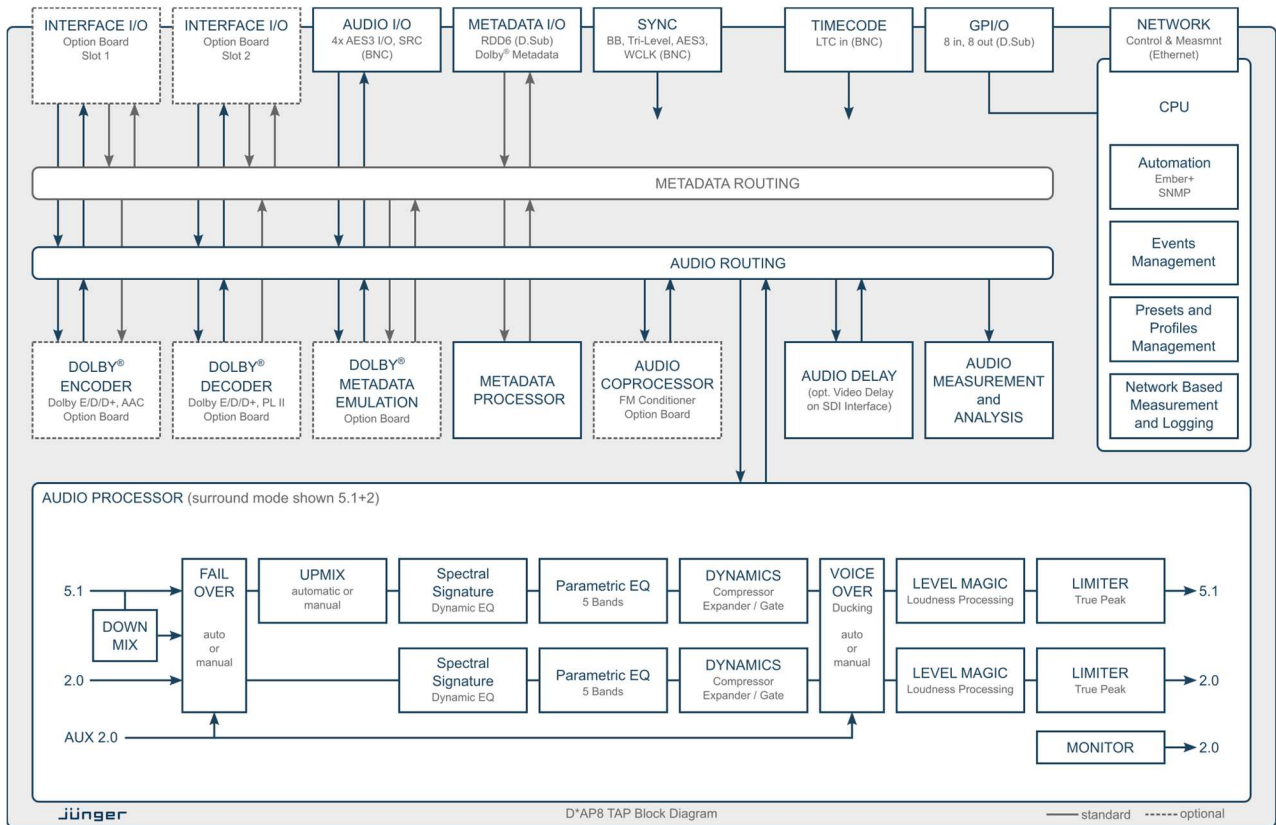
All system parameters are remotely accessible allowing the unit to be integrated and remotely operated by external control systems. An advanced built-in Event Management tool allows the remote loading of parameter presets either by hotkeys on the optional X*AP RM1 remote panel, by 8 onboard GPIO's or 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
- Spectral Signature dynamic EQ
- 5 band parametric EQ
- Dynamics with compressor and expander/gate
- Surround Upmix functionality
- Fail Over with signal loss detection and automatic Upmix
- Voice Over functionality
- Optional audio encoding & decoding: Dolby® Digital Plus, Dolby® Digital, Dolby® E, Pro Logic II, AAC, HE-AAC v1/2
- Dolby® Metadata generation, processing and emulation
- Optional loudness logging software (J*AM)
- On board interfaces: 4x AES/EBU I/O, Sync in, Sync out, Metadata I/O, 8 GPI/O
- I/O modularity via 2 interface slots (e.g., 2 SDI streams)
- 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*AP8 TAP: D*AP8 base unit plus TAP 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
- Option Board Dolby® D / D+ / E decoder, Pro Logic II (dec/enc), Dolby® Metadata emulation
- Option Board Dolby® D / D+ / AAC / HE-AAC encoder
- Option Board Dolby® E encoder
- Option Board FM Conditioner Coprocessor
- Option Board GfK Watermarking Coprocessor

