

## D\*AP8 TAP EDITION - 8 Channel Surround Television Audio Processor Edition

With 8 processing channels, 3G SDI, Dolby® support and optional logging features, the D\*AP8 TAP EDITION 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 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\*AP8 TAP EDITION 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 EDITION.

### 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 GPI/O 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.

### GfK Watermarking

An optional GfK SE watermarking encoder is available to allow audience measurement.

### Web Configuration

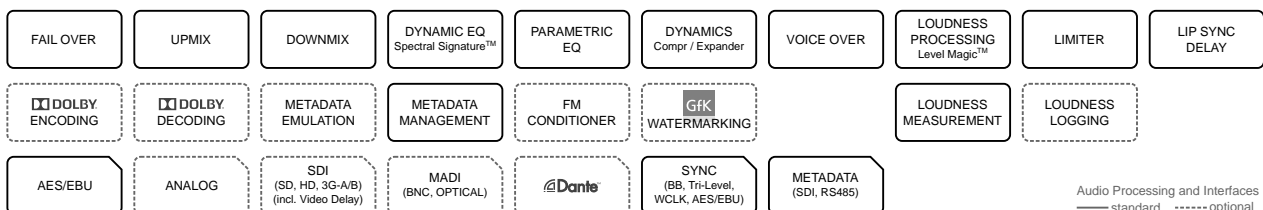
A web interface permits easy and intuitive setup and configuration from anywhere in your network. Onscreen metering and measurements are available for easy reference and a dedicated "mobile" UI is tailored specifically for touch screens or smaller displays such as tablets and smartphones.

### System Integration

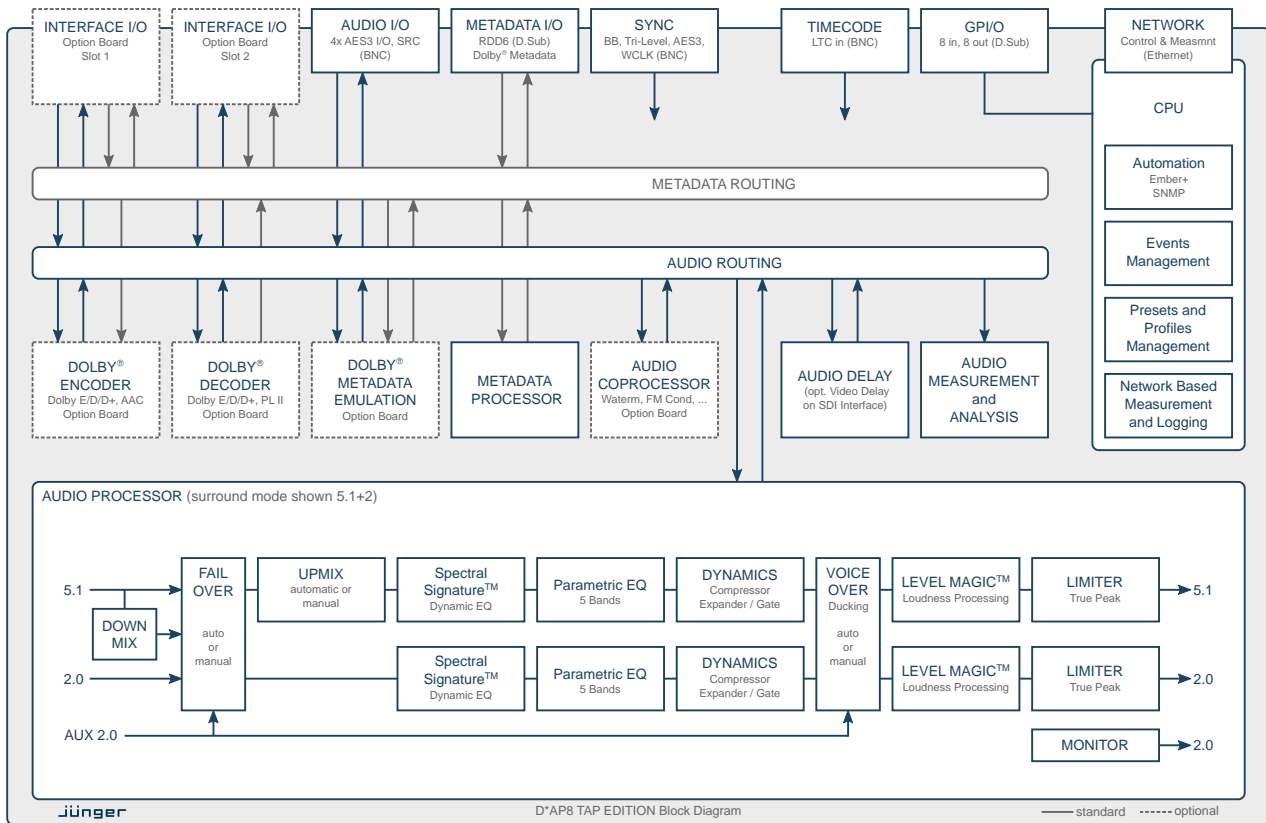
All system parameters are remotely accessible allowing the unit to be integrated and remotely operated by external control systems. An advanced built-in Event Management tool allows the remote loading of parameter presets either by hotkeys on the optional X\*AP RM1 remote panel, by 8 onboard GPI/O's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

- 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)
- 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 EDITION:** 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

