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D*AP8 MAP - 8 Channel Surround Monitoring Audio Processor

The D*AP8 MAP is a multi purpose audio device comprising of an 8 channel audio monitor, an optional comprehensive Dolby® toolkit including metadata emulation, along with full loudness metering and logging capabilities. Supporting 3G SDI, AES, MADI, Dante™ and analog I/O, the unit can handle 2.0, 5.1 or 7.1 audio formats.

Aimed at production, QC and live broadcast applications, Jünger Audio's D*AP8 MAP is a monitoring audio processor suited for use in OB trucks to serve as an ideal replacement for the discontinued Dolby® DP570 Multi-Channel Audio Tool.

Overview
The D*AP8 MAP audio processor features control and monitoring for up to eight channels of audio (4x 2.0, 5.1+2.0, or 7.1 speaker configurations) plus 4 additional program paths for measurement only. Optional audio decoding and encoding (Dolby® E, Dolby® Digital Plus, Dolby® Digital or AAC, HE-AAC v1/2, Pro Logic II) including full metadata management and emulation is available, along with 5.1 and 2.0 downmix. Network-based loudness metering and optional logging complete the main feature set.

Monitoring Controller
Selectable Primary and Secondary inputs permit easy switching between source signals for monitoring and auditioning of either surround or stereo mixes. A full downmix process facilitates monitoring of 7.1 / 5.1 / 2.0 / 1.0 to ensure predictable results for all end user speaker layouts. A speaker control section provides volume, solo, mute and matrix re-mapping for critical evaluation of audio quality from any channel to any speaker when used with the optional analog out board. The output section features full bass management for simulation of speaker configurations with or without subwoofers.

Also included is a powerful 5-band parametric equalizer featuring full control of filter type, frequency, gain and Q factor. The final output stage includes a true peak limiter.

Dolby Processing and Emulation
The optional Dolby® decoder makes the D*AP8 MAP the perfect choice for broadcast applications where the audio will be transmitted in either Dolby® Digital or Digital Plus formats, as it provides metadata emulation. Metadata parameters such as Dialnorm, downmix and DRC are critical to ensure correct performance of the end user's decoder. The emulation function enables values to be verified or adjusted in real time to be certain that the end user's audio is reproduced correctly and appropriately for their listening environment.

Loudness Metering and Logging
For compliance with local regulations, loudness and true peak levels can be measured and transferred via Ethernet to the optional J*AM software. All current loudness standards are supported including ITU-R BS.1770 (1 to 4) and recommended practices ATSC A/85, ARIB TR-B32, Free TV OP-59, Portaria 354 and EBU R128.
A real-time plot of input levels can be displayed and logged to a destination folder anywhere on the network. A log file analyzer rebuilds the original plot for easy readout of historical data, whilst a log port router allows the J*AM software to analyze up to four additional programs.

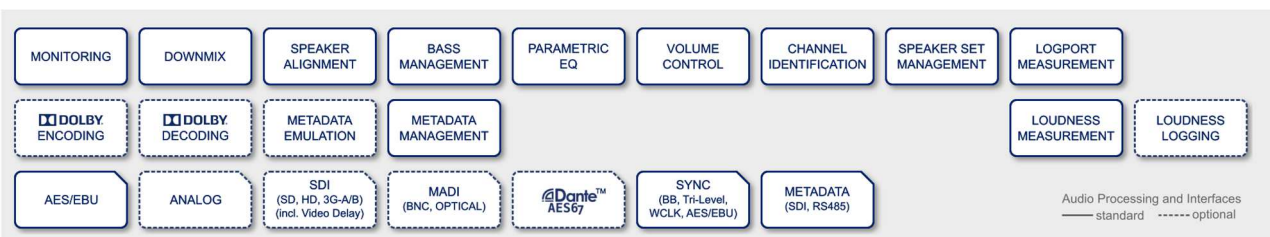**Control and Configuration**
A web browser interface allows easy and intuitive setup and configuration of all the unit's parameters anywhere on your network, whilst a variety of onscreen metering and measurements are available for easy reference. The optional X*AP RM1 Remote Panel gives direct control of volume, dim and speaker muting and includes a fully featured loudness meter display. A dedicated accessDP UI is tailored specifically for touch screens and provides optimized monitor control and Metadata workflows.
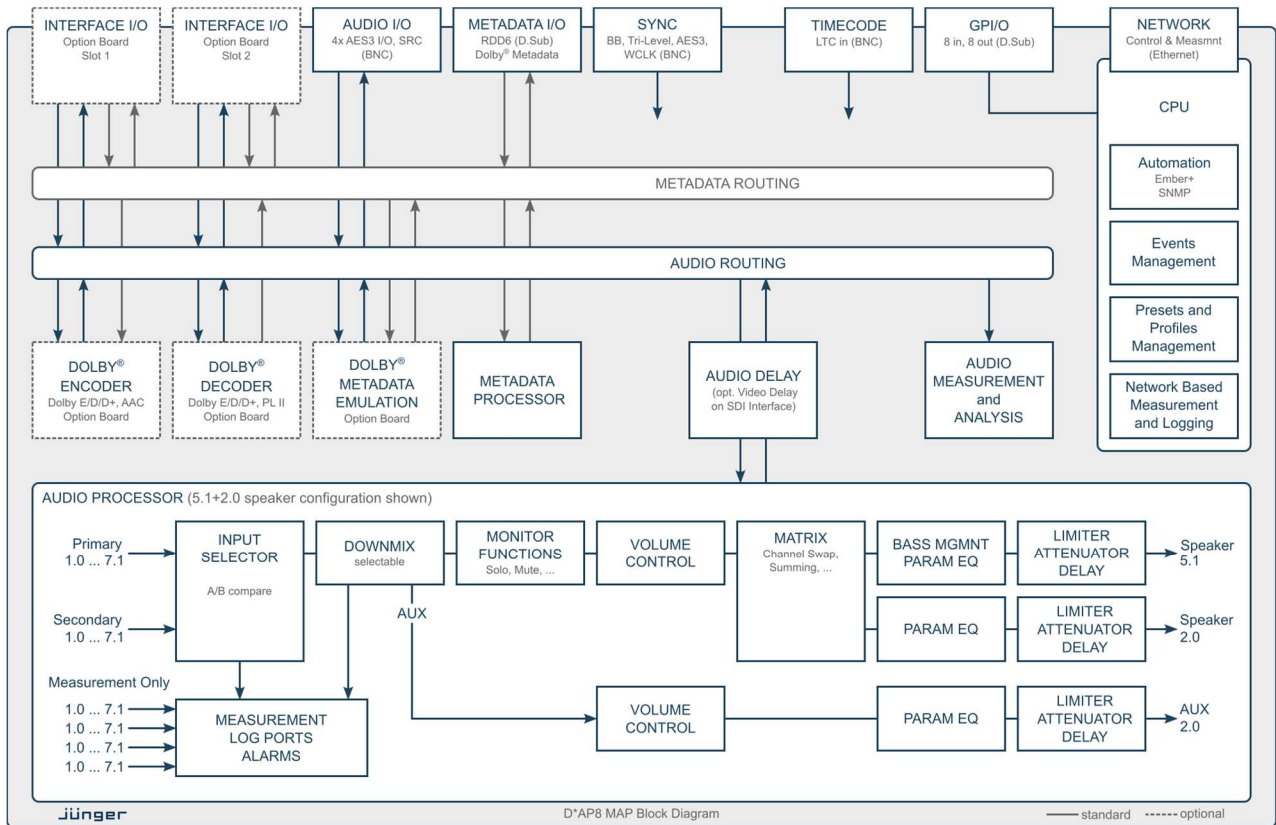
System Integration
All system parameters are remotely accessible allowing the unit to be operated by external control systems and software. An advanced built-in Event Management tool allows remote loading of parameter presets and settings either by hotkeys on the optional X*AP RM1 remote panel, 8 onboard GPI/O's or by network commands using the Ember+ control protocol.

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. Two interface expansion slots are available to allow for example digital audio in, and analog audio out, to drive monitor speakers directly. With dual redundant PSU's and SNMP integration, the unit ensures maximum operational safety and peace of mind for today's critical production or broadcast monitoring applications.

MONITORING	DOWNMIX	SPEAKER ALIGNMENT	BASS MANAGEMENT	PARAMETRIC EQ	VOLUME CONTROL	CHANNEL IDENTIFICATION	SPEAKER SET MANAGEMENT	LOGPORT MEASUREMENT
DOLBY ENCODING	DOLBY DECODING	METADATA EMULATION	METADATA MANAGEMENT				LOUDNESS MEASUREMENT	LOUDNESS LOGGING
AES/EBU	ANALOG	SDI (SD, HD, 3G-A/B) (incl. Video Delay)	MADI (BNC, OPTICAL)	Dante™ AES67	SYNC (BB, Tri-Level, WCLK, AES/EBU)	METADATA (SDI, RS485)		

Audio Processing and Interfaces
—— standard ------ optional

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D*AP8 MAP – 8 Channel Surround Monitoring Audio Processor

D*AP8 MAP Block Diagram

Key Features

- Multi channel / Multi format audio monitoring system (up to 7.1)
- Loudness measurement supporting all worldwide standards
- Multiple speaker connectivity with extensive solo/mute function
- Speaker alignment, parametric EQ, delay, bass management
- Downmix functionality
- accessDP touch optimized Dolby® workflow interface
- Dedicated log ports for network based measurement and logging
- Configurable measurement alarms
- Optional audio encoding & decoding: Dolby® Digital Plus, Dolby® Digital, Dolby® E, Pro Logic II, AAC, HE-AAC v1/2
- Dolby® Dialog Intelligence™
- Dolby® Metadata generation, processing and emulation
- Optional loudness logging software (J*AM)
- I/O modularity via 2 interface slots
- Ethernet connectivity for setup and control via web browser
- External control via network or GPI/O's
- 19", 1RU device, redundant PSU

Versions and Options

- D*AP8 MAP: D*AP8 base unit plus MAP 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
- License SNMP extension for measurement alarms