

# C8000 – Modular Audio Processing and Interface System

For a totally custom-built approach to digital audio processing, the C8000 modular system offers a wide range of hardware options including frames, I/O cards and processing cards that can be mixed and matched to create a unique solution for managing loudness and dynamics along with comprehensive Dolby® support.



The concept behind the C8000 modular system is total flexibility and adaptability for all digital audio processing applications. Choose a frame and then select only the modules with the required functionality to create a truly bespoke system.

### Frames

All frames are 19" based on the DIN 41494 standard and include 1RU and 3RU options with card installation from the front, rear or both, providing up to 76HP of card capacity. Audio transport is via up to four independently isolated backplane busses. Construction is from all aluminium side panels and cross members with steel covers for effective RF screening.

### Audio Interfaces

**Analog** – Line-level and microphone sources with 4ch in, 4ch out or 2ch I/O.

**Digital** – AES/EBU 4ch I/O via BNC or 25 pin D-Sub.

**SDI** – 3G/HD/SD including video delay for lip sync and SMPTE2020 Metadata transport.

**MADI** – 56/64ch I/O, both BNC and optical.

### Audio Processing

**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.

**Fail Over and Voice Over** – If the primary signal is lost, Fail Over means the unit can switch automatically to a secondary backup feed. Voice Over provides seamless integration of voice and program content in situations such as video description or continuity announcements with automatic ducking/mixing.

**Automatic Upmix** – Detects stereo or mono only content and automatically creates 5.1 in order to maintain a constant surround experience. Existing 5.1 surround content will pass untouched.

**Mixing/Limiting** – Matrix any 8 inputs to any 8 outputs and apply brickwall limiting.

**Delay** – Add delay of up to several seconds in order to maintain synchronization with other sources and signals.

### Dolby® Processing

**Decoding** – Dolby® E, Dolby® Digital+, Dolby® Digital, Dolby® Pro Logic II

**Encoding** – Dolby® E, Dolby® Digital, Dolby® Digital+, Dolby® Pro Logic II, AAC, HE-AAC v1/2

**Metadata** – Management and generation.

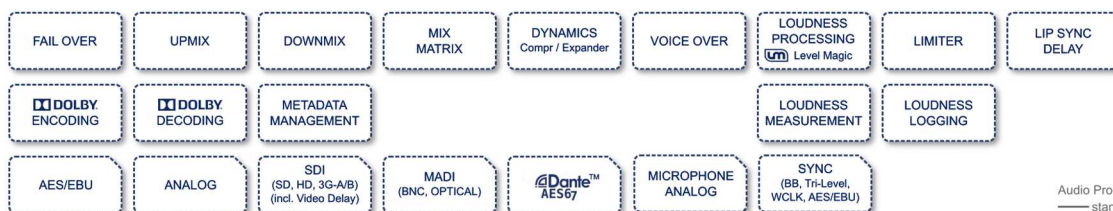
**Sync** – Comprehensive sync options range from SDI, AES3, MADI, word clock and video reference (incl. tri level) to internal.

**Web Configuration and Control**  
A web browser interface permits easy and intuitive setup and configuration from anywhere in your network.

For multi card installations, settings can be copied and pasted to allow fast configuration.

GPI/O's allow for simple interfacing with third party equipment whilst Ember+ protocol provides seamless integration with broadcast and playout automation systems.

Optional SNMP alarms complete the range of security provisions that can be added.



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

## C8000 – Modular Audio Processing and Interface System

### Key Features

- 19" frame based fully modular system (1RU or 3RU frames)
- Capacity from 6 to 35 cards depending on frame selected
- Wide range of audio processing functionality
- Comprehensive audio interface options
- SDI interface for embedding/de-embedding of audio, Metadata transport and lip sync control
- Extensive support for Dolby® decoding and encoding
- Network based control, management and measurement
- Network based automation via Ember+ protocol
- External control via GPIO's (max. 127)
- Redundant PSU and power fail bypass relays

### Options

- Integration with broadcast automation and playout systems and software
- Optional loudness measurement and logging (J\*AM)
- Optional SNMP integration

### Control & Sync Interfaces

C8702	Frame Controller, Web Interface
C8840	Sync Interface, dual redundant inputs (video sync, word clock, AES/EBU)
C8817	GPI/O Interface, 8 in + 8 out

### Audio Processing Boards

C8092	Level Magic Processor, Dynamics, Fail Over, Delay, up to 16ch
C8492B	SDI I/O (3G/HD/SD, video delay), Level Magic Processor, Dynamics, Fail Over, Delay, VANC Metadata, up to 16ch
C8088	Mix Matrix, Limiter, 8ch
C8082	Fail Over, Voice Over (Ducking), Limiter, 8ch Surround and Stereo

### License Options

- License C8092/C8492/8492B Upgrade to 8ch (4x stereo)
- License C8092/C8492/8492B Upgrade to 16ch (8x stereo)
- License C8092/C8492/8492B Upgrade to 8ch Surround, Automatic Upmix, Downmix
- License C8092/C8492/8492B Upgrade to 16ch Surround, Automatic Upmix, Downmix
- License C8702 SNMP

### Audio Interfaces

C8188	AES/EBU I/O, 4x stereo in/out, D-Sub
C8189	AES/EBU I/O, 4x stereo in/out, BNC
C8220	Analog I/O, 2ch in + 2ch out
C8234	Microphone, 4ch in
C8246	Analog 4ch in, XLR
C8247	Analog 4ch out, XLR
C8248	Analog 4ch in, D-Sub
C8249	Analog 4ch out, D-Sub
C8305	MADI 64ch in/out, BNC
C8306_MM	MADI 64ch in/out, optical SC-MM
C8306_SM	MADI 64ch in/out, optical SC-SM

### SDI Interfaces

C8405	SDI I/O (3G/HD/SD, video delay), 16ch embedder/de-embedder, SMPTE2020 Metadata
C8492B	SDI I/O (3G/HD/SD, video delay), Level Magic Processor, Dynamics, Fail Over, Delay, SMPTE2020 Metadata, up to 16ch

### Dolby® Processing

C8621	Dolby® D/D+/E Decoder, Metadata generator
C8631	Dolby® E Encoder, Metadata generator
C8612	Dolby® D/D+/AAC/HE-AAC Encoder
C8651	Dolby® Metadata Interface I/O, RS-485