

COMPACT 256 – SDI Audio Processor System for up to 16 SDI Streams

Belonging to the High Density range of digital audio processors, the Compact 256 is aimed at broadcast playout facilities with a large number of TV channels that require efficient and transparent loudness management for the maximum number of audio channels within the minimum amount of rack space.



For loudness management of multiple TV channels where rack space is at a premium, the Compact series offers the most efficient ratio of DSP performance and throughput with the smallest footprint requirement. All current broadcast audio loudness standards are supported.

Overview

The Compact 256 consists of a 3RU 19" frame pre-installed with a C8702 controller card, an optional C8817 8x GPI/O card and up to 16 C8492 cards that provides a combination of SDI de-embedding/embedding, Level Magic loudness management with dynamics and true peak limiting. With 16 C8492 a maximum of 16 SDI streams and up to 256 audio channels can be processed.

C8492 SDI/DSP Board

At the heart of the Compact series is the C8492 processing card that combines I/O functionality with a powerful DSP that can provide loudness processing on up to 16 channels of audio within the SDI stream. In its standard form, the card is configured for four channel operation (2x 2.0) with licensing options to increase this to eight or sixteen channels for stereo and/or surround audio configurations. The surround mode includes automatic Upmix and Downmix.

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 dynamics section comprises of an upward compressor and an expander/gate.

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 vs 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.

System Integration

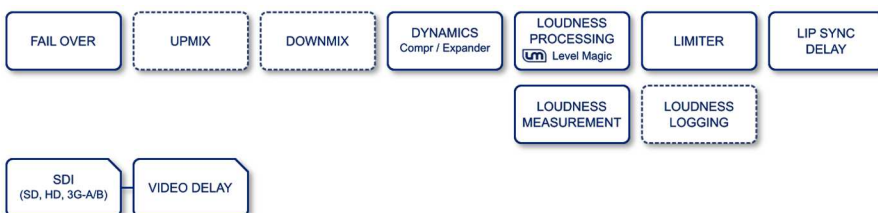
All system parameters are remotely accessible allowing the unit to be integrated and remotely operated by broadcast control systems. An advanced built-in Event Management tool allows the remote loading of parameter presets either by 8 GPI/O's on the C8817 or by network commands using the Ember+™ control protocol. This helps to apply individual processing to manage compliant and non-compliant audio.

Web Configuration

A web interface allows easy and intuitive setup and configuration from anywhere in your network.

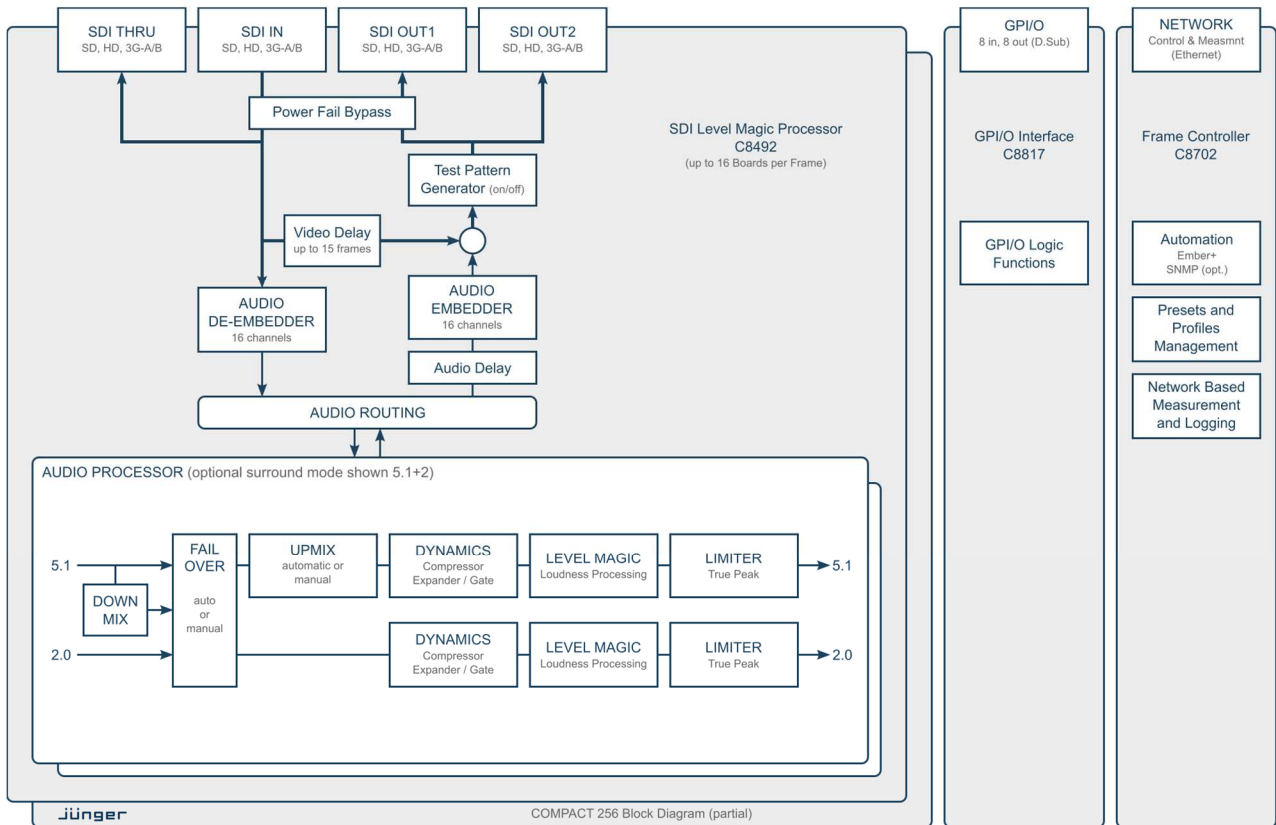
Interfaces and System Security

Audio input for the C8492 is 3G/HD/SD SDI with two processed SDI outputs including video delay, and a separate pass through of the re-clocked input signal. A fail over function allows that should the primary embedded audio channels be lost, the card can automatically revert to alternative audio channels instead. 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 TV playout facilities.



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

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Key Features

- 19"/3RU frame, C8702 frame controller
- Optional C8817 GPI/O interface
- Space for 16 additional C8492 boards
- Scalable design for up to 256 audio channels in up to 16 SDI streams
- 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
- True peak limiter
- Dynamics with downward compressor and expander/gate
- Upmix and Downmix (only with surround upgrade licenses)
- Fail Over with signal loss detection
- Adjustable audio and video delay for lip sync management
- Optional loudness logging software (J*AM)
- Power fail bypass relays
- Ethernet connectivity for setup and control via web browser
- External control via network or GPI/O's
- Dual redundant PSU's

Versions and Options

- Compact 256 – SDI Audio Processor for up to 16 SDI streams
- Option Board C8492 SDI/DSP (max 16 boards)
- License C8492 upgrade to 8ch stereo (4x 2.0)
- License C8492 upgrade to 16ch stereo (8x 2.0)
- License C8492 upgrade to 8ch surround (5.1+2.0) or (4x 2.0)
- License C8492 upgrade to 16ch surround 2x [(5.1+2.0) or (4x 2.0)]