

## ZES 80

The ZES-80 digital audio matrix from the SONORA family offers DSP features in all of its lines for both equalization and signal routing.

The system offers 8 balanced audio inputs and 8 balanced audio outputs with an internal high quality DSP with analog-to-digital and digital-to-analog conversions. The internal DSP offers as well, parametric equalization, filters, compressors, and many features to fine-tune the audio in any installation.

The ZES-80 has a digital audio input via COBRANET<sup>®</sup>. This allows to send audio signals from all audio channels, and a system control by the same Ethernet cable under redundant mode. The software SIME offers an intuitive and easy way to manage and control the ZES-80 from a PC, a tablet or a smartphone.



### Features of ZES 80:

- 8x8 E/S audio matrix.
- Audio transmission via COBRANET<sup>®</sup> protocol
- High performance DSP
- Two analog steps of gain which are selectable per each input channel for improving the signal noise ratio.
- Remote or local configuration
- Remote or local supervision
- Graphic interface for easy remote configuration handling (GUI)
- Automatic gain control (CAG)
- PHANTOM supply selectable in any input for microphones
- MP3 internal player with extensible capacity through SD card
- Prerecorded messages player (optional)
- 16 Input/Output monitoring by software (optional)
- RS-232 / RS-485 connectors to communication (optional)
- 24V DC, 1A output (optional)
- Local monitoring amplifier: 1.5W @ 4  $\Omega$  (optional)
- Meets the requirements of the EN 60849 standard.

**Technical specifications:**

Model	LD AZES80BS02
Analog input	Balances Audio, 0dBm , -20dB
Input impedance	10KOhm
Converter A/D, D/A	24bits, 192kHz
Phantom supply	Phantom 48V, eligible
Analog output	Output tension, 0dBm balanced
Output impedance	Impedance <50Ohm, allowed charge until 600Ohms
Frequency response I/O	+ 0.5 dB (20-20.000 Hz)
Connectors	Connectors tipe Phoenix, removable
Signal/noise ratio	>105dB with A ponderation
Total harmonic distortion	(IN+OUT) <0.005%
Crosstalk	<-70dB
Digital gain	From-100 to 12dB
CMRR	>60dB
COBRANET connection	2x RJ-45
Ethernet connection	RJ-45
Inputs/Outputs	TTL 0-5V
RS-485 Interface	2 differential lines, Half-Duplex
RS-232 Interface	3 lines connections (TX,RX,GND)
Rigging	24V DC, 1A max.
Monitor amplifier	1.5W 8Ohm
Box	Iron chassis with microtextured paint
Colours	Grey Front(RAL7016), black box(RAL9005)
Supply	220V 240~ 50Hz
Consumption	22 W
Dimension	44 x 483 x 310 mm (height x width x Depth)

**Rear Panel:**



### Technical specifications for engineers and architects

The signal processor will be a system with 16 balanced analog channels and an equipment of 1U height of 19 rack. It will have 8 input channels and 8 outputs channels.

The input channel will have the possibility of selecting an additional step of gain to adequate the signal, in order to allow the connection as line or microphone input bringing 48Vdc phantom supply output that can be individually eligible for each entry.

The conversion A/D and D/A will have a high quality with capacity to work from 192kHz 24bits of resolution. The dynamic characteristics of every channel will bring a high quality level in the ratio signal/noise that exceed 100dB and the total global distortion standing below to 0.01%.

The input/ output connection will be a Phoenix Combicon of 3.81 passing thought or equivalent, that will be included in the system and will allow to make connections without any special tool. To control and monitoring, an independent RJ-45 connector will allow the access to the Ethernet that will permit the separate access though VLAN that will avoid to work in the same that control package with the audio signal.

The digital processor will include an audio transmission-reception module on the Ethernet using the Cobranet protocol, that will allow the audio transmission from distances of 100m on the line-cable with a fail-over automatic function. The Cobranet module will allow the transmission and reception of 8 channels with a reception capacity through 8 different bundles.

The system includes DSP processing for every channel, bringing a number of processing blocks without having an specific design for every installed system. Every channel will offer gain control, equalizer, compressor and level detector. For each output equalizer, limiting device, output level detection, white and pink noise generator will be also provided, together with a tone generator, with eligible frequency and mix control for every output. Moreover, it will include a cross matrix that allow to connect any input signal to any output.

In addition, the processor will dispose of an expansion card with 16 contact-closure or configurable TTL inputs and outputs. It will include as well an MP3 file internal player with extensible capacity through SD card. It also include communications through the RS-232 and RS 485 serial port that will allow the use as an intermediate between Ethernet and other devices, allowing also to control the gain and the signal routing through RS-232 Interface console.

An amplified output will be available for the direct connection of a 8 Ohm loudspeaker that allows the signal monitoring. The expansive module includes 2 rigging output (24V and 1 A) that will allow to commute the attenuators for the prior transmissions.

The management software will allow to control and configure all the DSP' functions, and also the expansion cards. This software could be use to manage one or several system, and should also include and intermediate control software that allow the management of all the processors od a whole installation in an integrated way with an integration's software, without installing an specific server.