

L-ISA PROCESSOR II CORE



- Multipurpose audio processor designed for scalability
- Flexible feature licensing and subscription options
- Enable Source Intelligence, L-Acoustics DJ, L-ISA and Ambiance™
- Milan-AVB and MADI
- Up to 128 inputs x 128 outputs
- Dual redundant power supplies



L-ISA Processor II Core is a hardware solution dedicated to advanced real-time audio processing. Designed as a multi-purpose device, it provides the same specifications and resources as its predecessor, L-ISA Processor II, without pre-installed software application licenses. L-ISA Processor II Core brings users the capacity to choose the processing mode and output channel count they need while utilizing the same adaptable hardware. With the ability to perform L-ISA object-based mixing, Ambiance™ acoustic enhancement, L-Acoustics DJ source separation or Source Intelligence voice extraction, depending on the needs of the project, L-ISA Processor II Core is a supremely versatile and capable platform.

L-ISA Processor II Core offers a scalable licensing model. With independent subscriptions and licenses to enable the full set of processing tools and applications available and L-ISA packs with 16, 32, 64 and 128 outputs, which can be upgraded when necessary.

Providing a state-of-the-art audio experience from intimate installations to the largest tours, L-ISA Processor II Core delivers up to 128 inputs and up to 128 outputs using Milan-AVB and MADI protocols.

The road-ready chassis integrates robust mechanics with locking connectors and includes two redundant universal power supplies. When required, a second processor can be used in mirror mode for further redundancy. As a Milan-certified device, L-ISA Processor II Core also ensures reliability for audio distribution with seamless Milan network redundancy for all AVB streams.

L-ISA Processor II Core is remotely controlled and monitored using the L-ISA Controller software.

I/O

The input and output count of L-ISA Processor II Core are dependent on the enabled license or subscription. The available input count and feature set are the same regardless of the active L-ISA license. The license packs or subscription determine the number of available outputs. Source Intelligence functions independently of any installed L-ISA licences.

L-ISA Processor II Core can process up to 128 inputs, selected from 64 AVB channels (8 redundant streams of 8 channels) and 96 MADI channels at 96 kHz. At 48 kHz, these inputs are selected from 64 AVB channels and 192 MADI channels. The Milan-AVB streams are received via two etherCON™ connectors and the MADI streams are received via three BNC connectors.

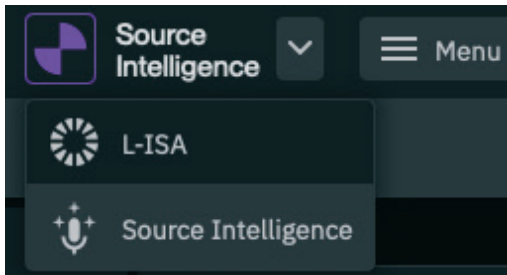
L-ISA Processor II Core can output up to 128 channels via both AVB and the MADI output channels. Using the IEEE AVB standard allows 16 streams of 8 channels or for Milan seamless redundancy 15 redundant streams of 8 channels are available, plus a dedicated CRF stream. The Milan-AVB streams are transmitted on primary and secondary etherCON™ connectors. The single BNC MADI output connector supports 32 channels at 96 kHz or 64 channels at 48 kHz.

An additional stereo AES/EBU input/output and a stereo headphone output are available for local inputs and monitoring.

RELATED SOFTWARE & SPATIAL SYSTEMS SOLUTIONS

Software applications compatible with L-ISA Processor II Core

- **L-ISA Controller**



L-ISA Controller is the dedicated software interface for all processing applications compatible with L-ISA Processor II Core. It has separate modes for object-based mixing (**L-ISA**) and vocal separation and enhancement (**Source Intelligence**). The user interface was designed in collaboration with leading mixing engineers to ensure intuitive navigation and streamlined workflow, even during the most demanding productions and creative applications. Both modes are accessed via this single application.

Switching between modes is achieved via a simple drop-down

selector in the top left corner of the application.

- **L-ISA Object-based mixing**

With an L-ISA license it enables mixing and programming immersive sound with L-ISA Processor II Core. Transforming object based audio into a practical, visual workflow, enabling engineers and designers to create hyperreal and immersive experiences efficiently, from pre-production through show operation.

- **Source Intelligence**

L-Acoustics vocal separation and enhancement application. The dedicated user interface in L-ISA Controller is designed for simplicity and ease of use. Four independent instances are available: each with separate refinement / reduction controls for high and low frequency content. The amount of reduction is controlled by a simple slider that can be adjusted from 0 – 100%. Source Intelligence supports input and output via MADI, Milan-AVB or AES/EBU.

In order to use Source Intelligence it is necessary to complete a brief system validation process which scans the connected system for a minimum of three connected L-Acoustics Amplified Controllers.

Spatial Systems compatible with L-ISA Processor II Core

- **L-Acoustics DJ**

L-Acoustics DJ is the only solution that transforms any stereo set into a fully immersive sound performance — live, and without changing the DJ's workflow. Powered by machine-learning source separation and the industry's leading spatial audio engine, it unlocks a new dimension of performance, crowd impact, and club prestige.

- **Ambiance™**

Transform any space with Ambiance™, a hybrid acoustic enhancement solution. This innovative technology allows you to completely control the acoustics of your venue, creating the perfect environment for intimate performances or amplified events. Ambiance™ goes beyond simply enhancing audio content; it crafts the ideal acoustic experience for your entire space.

- **HYRISS**

HYRISS (Hyperreal Immersive Sound Space) revolutionizes auditory experiences in the home, retail, hospitality, and corporate environments with cutting-edge technology. By utilizing a high-resolution, 3D network of loudspeakers with advanced processing and creative technologies, HYRISS ensures unparalleled listening quality and acoustic comfort. It surpasses traditional sound systems by integrating advanced hardware and software to create dynamic, spatial audio tailored for any environment.

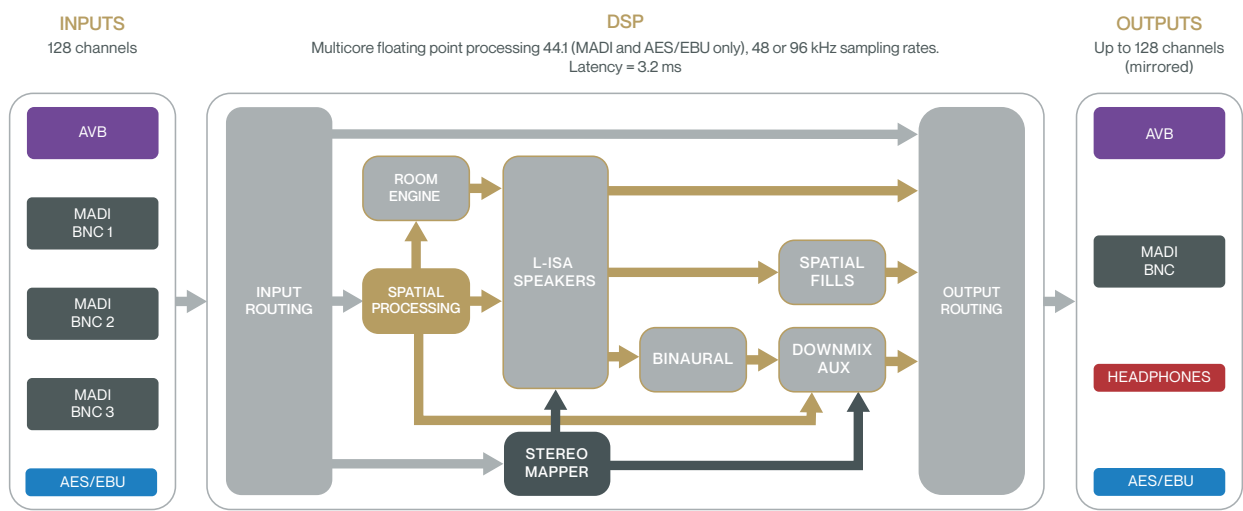
- **L-ISA Immersive**

L-ISA Immersive is a spatial audio solution that transcends traditional surround sound, creating a truly immersive 3D audio environment. By strategically placing speakers all around the audience, including surround and often overhead speakers, L-ISA empowers sound designers to craft dynamic spatial audio experiences. This allows for sonic world-building that transports listeners inside their creation. With L-ISA, audiences step into another reality, connecting with spatial audio in a way that transcends conventional setups. Whether a live performance or an immersive art installation, L-ISA Immersive brings unparalleled sonic depth and creativity to venues worldwide.

- **L-ISA Hyperreal**

L-ISA Hyperreal delivers an ultra-realistic shared sonic experience by connecting sound precisely with its visual source on stage. Every sonic element, from vocals to instruments, feels natural and life-like. Utilizing a multidimensional frontal speaker array, the L-ISA Hyperreal solution is a fit for any size production looking to create the ideal listening experience.

I/O & DSP ARCHITECTURE



LICENSES AND SUBSCRIPTIONS

L-ISA PROCESSOR II Core L-ISA Features

INPUTS	• 128 inputs / 96 objects
FEATURES	• Room Engine • Snapshot Engine • FX Engine • Binaural • Stereo Mapper • Scale Simulation • MIDI Time Code / Program Change • AAX, VST, AU / Control Plug-ins • OSC Input / Output • DeskLink • Spatial Fills • Static/Dynamic Input Delay • Session configuration recall from 3rd party devices

Live packs

All Live packs include the same L-ISA features and input count

LIVE 16	16 outputs
LIVE 32	32 outputs
LIVE 64	64 outputs
LIVE 128	128 outputs*

* Of the 128 outputs, up to 64 can be L-ISA speakers

Ambiance™ Acoustics enhancement license: with management of 32 microphone inputs to craft fine-tuned, bespoke Ambiance Signatures.

L-Acoustics DJ License: Enables source separation features and control options.

Source Intelligence MONOVOX4 subscriptions: A minimum 12 month subscription term applies. For Certified Providers the subscription must be purchased through All Access. End customers must purchase through a referral link provided by their Certified Provider.

NETWORK

Network control

L-ISA Processor II Core is primarily controlled and monitored with L-ISA Controller using an Ethernet-based network. L-ISA Processor II Core is fitted with a Control Ethernet port and two AVB ports for primary and secondary streams which conform to the Milan standard. While the AVB ports are used to pass audio and clock information, the Control port is used to connect the PC/Mac hosting L-ISA Controller and control the processor.

Additionally, third-party control interfaces that support HTTP, and the Q-SYS plugin or Crestron module can be used to shutdown the L-ISA Processor II Core, recall session configurations and monitor information such as clock source and sample rate.

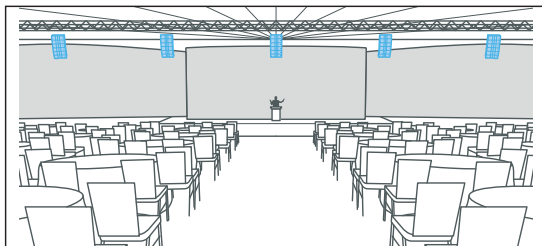


AVB is the only protocol that guarantees deterministic and synchronous network behavior, ensuring on-time delivery of time-sensitive data. Milan is the application layer on top of AVB, independent from any private entity, that ensures seamless interoperability between any Milan-certified device. The Milan initiative developed agreed-upon standards for media stream format, media clocking, seamless redundancy, and more so that no IT expertise is required to set up a reliable and deterministic AVB network with Milan-certified devices.

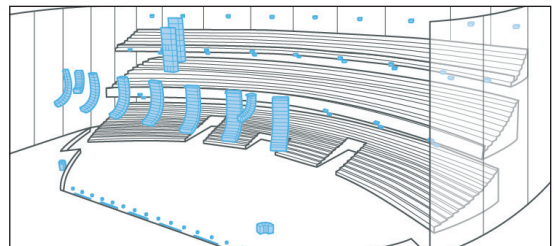
Milan-AVB is an evolving, long-term, viable, and durable network developed by the industry for the industry.

APPLICATIONS

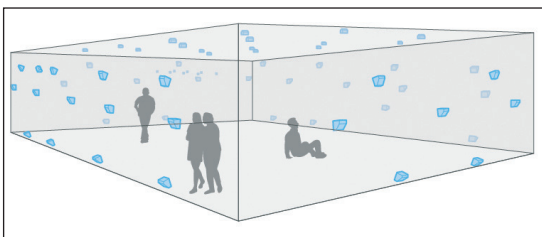
L-ISA Processor II Core is the ultimate and expandable hardware platform to deliver hyperreal sound, immersive hyperreal sound, or any creative sonic experience for small corporate events, theaters, congregations, and through to multi-sensory immersive experiences.



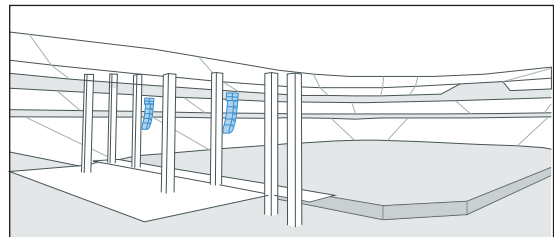
Hyperreal sound in corporate events



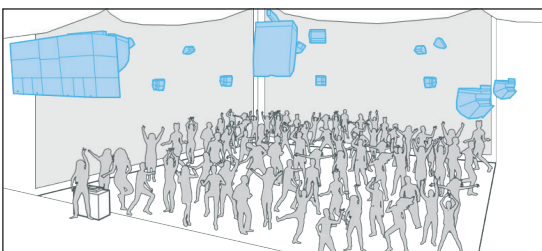
Spatial Fills for theatrical performances



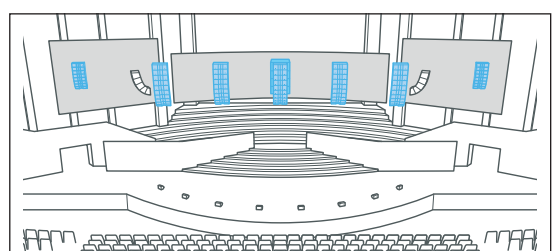
Immersive hyperreal sound for multi-sensory
immersive experiences



Source Intelligence for stadiums



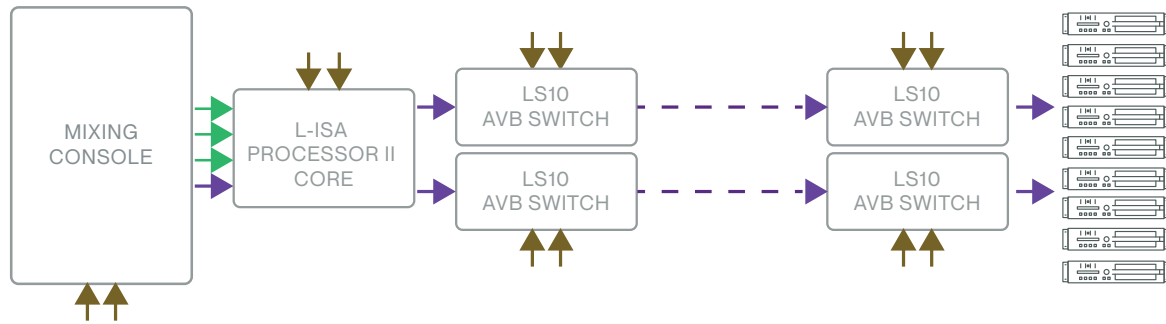
L-Acoustics DJ for large clubs



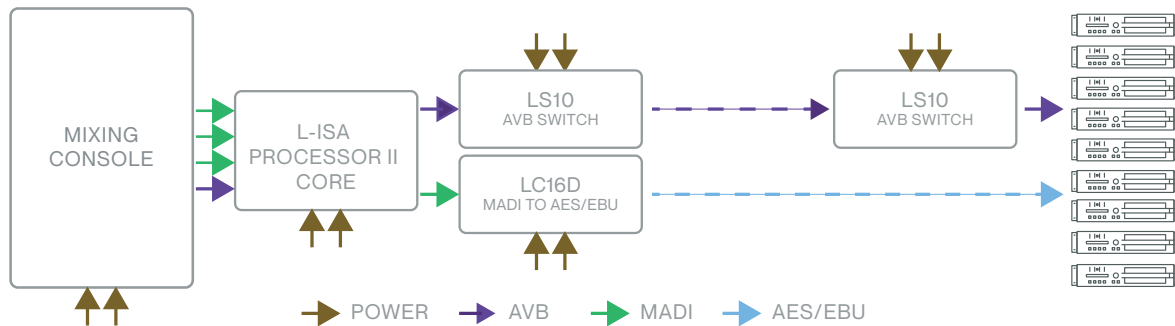
Hyperreal sound for congregations

AUDIO SIGNAL DISTRIBUTION

Seamless redundant Milan-AVB configuration*:

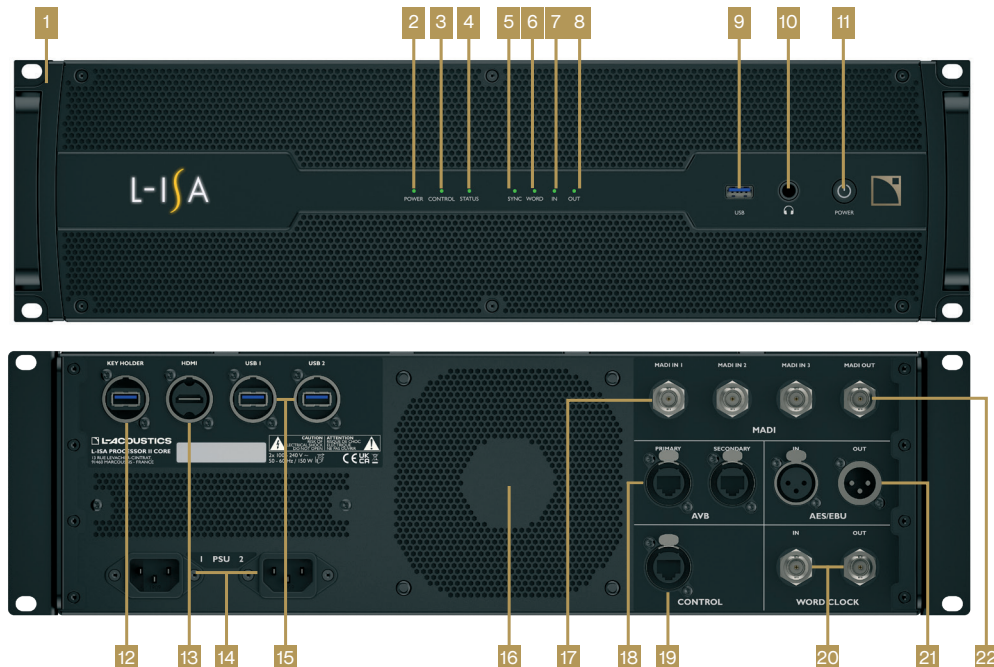


Milan-AVB with AES/EBU fallback*:



* Two L-ISA Processor II Core can also be configured in mirror mode for further hardware redundancy

USER INTERFACE



- | | | |
|--------------------------------------|---|---|
| 1 3U chassis | 11 Power button | 18 AVB etherCON™ 1 Gbit Ethernet connectors (Primary and Secondary) |
| 2 Power LED | 12 Key holder for backup system | 19 Control etherCON™ 1 Gbit Ethernet connector |
| 3 Control network LED | 13 HDMI output (for maintenance only) | 20 Word clock input and output BNC connectors |
| 4 Status LED | 14 Redundant power supply inlets (IEC C13 V-Lock power connector) | 21 AES/EBU input and output XLR connectors |
| 5 Sync LED | 15 Additional USB ports (x2) (for booting from backup) | 22 MADI output BNC connector |
| 6 Word clock LED | 16 Fan grill | |
| 7 Input signal LED | 17 MADI input BNC connectors (x3) | |
| 8 Output signal LED | | |
| 9 USB port | | |
| 10 Stereo headphone out (6.3 mm TRS) | | |

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L-ISA Processor II Core is a hardware solution dedicated to advanced real-time audio processing. Designed as a multi-purpose device it has no pre-installed software application licenses. L-ISA Processor II Core brings the capacity to choose the processing mode and output channel count required while utilizing the same adaptable hardware.

Users can choose the software layer they need from L-ISA object-based mixing and spatial systems or Source Intelligence vocal enhancement. L-ISA Processor II Core provides state of the art audio experience from intimate installations to the largest tours, and can deliver 128 inputs and up to 128 outputs using Milan-AVB and MADI protocols. L-ISA Processor II Core offers a scalable licensing model, with L-ISA license packs from 16 to 128 outputs, which can be upgraded upon users' requirements or a Source Intelligence subscription. The chassis integrates a robust mechanics and locking connectors, and includes two redundant universal power supplies. When required, a second processor can be used in mirror mode for further redundancy. As a Milan-certified device, L-ISA Processor II Core also ensures reliability for audio distribution with seamless Milan network redundancy for all AVB streams.

SPECIFICATIONS

Power supply	
Power supply model	Universal Switched Mode Power Supply (SMPS) with power factor correction (PFC)
Mains rating	Redundant power supplies: 2 x 100 V - 240 V - $\pm 10\%$, 50-60 Hz, 350 W
Connector	IEC C13 V-lock™ compatible
Audio inputs	
Milan-AVB supporting Milan seamless redundant networking	64 AVB channels (8 redundant streams of up to 8 channels) 2 x etherCON™ Gigabit ports for AVB primary and secondary
MADI	192 channels at 44.1 or 48 kHz / 96 channels at 96 kHz 3 x BNC connectors
AES/EBU	2 channels (1x AES3) at 44.1, 48 or 96 kHz 1 x XLR female connector
Audio outputs	
Milan-AVB supporting Milan seamless redundant networking	128 AVB channels (16 redundant streams of up to 8 channels) 2 x etherCON™ Gigabit ports for AVB primary and secondary
MADI	64 channels at 44.1 or 48 kHz / 32 outputs at 96 kHz 1 x BNC connector
AES/EBU	2 channels (1 x AES3) at 44.1, 48 or 96 kHz 1 x XLR male connector
Headphones	Analog stereo headphones 6.3 mm TRS
Audio clock sources	
Milan-AVB	CRF input and output streams audio input and output streams
Word clock	Input and output on BNC connectors
MADI	Input and output on BNC connectors
AES/EBU	Input on XLR connector
DSP	
L-ISA processing at 96 kHz	96 objects rendered to a maximum of 128 outputs (depending on license pack) L-ISA parameters: Pan, Width, Distance, Elevation, Aux Send Room engine
Direct audio routing	Audio format conversion MADI to AVB or AVB to MADI AVB to AVB stream multiplexing
Sampling rates	44.1 (MADI and AES/EBU only), 48kHz, 96kHz
Latency (input to outputs)	3.2 ms
Boot time to AVB audio pass through	31 s
Remote control and monitoring	
Network connection	Ethernet Gigabit interface with etherCON™ connector
Remote control software	L-ISA Controller or any HTTP-based third-party control device
Operating conditions	
Temperature	-5° C / 23° F to +50° C / 122° F
Maximum altitude	2000 m / 6500 ft
Physical data	
Dimensions W x H x D	483 x 133.35 (3U) x 458 mm / 19 x 5.25 (3U) x 18 in
Weight	11 kg / 24.3 lb