LC16D NETWORK AUDIO CONVERTER

L-ACOUSTICS

AES67

milan™

LC16D is a multichannel converter that bridges MADI and AES/EBU legacy digital formats bidirectionally with a Milan-AVB network. Supporting up to 128 Milan-AVB inputs and output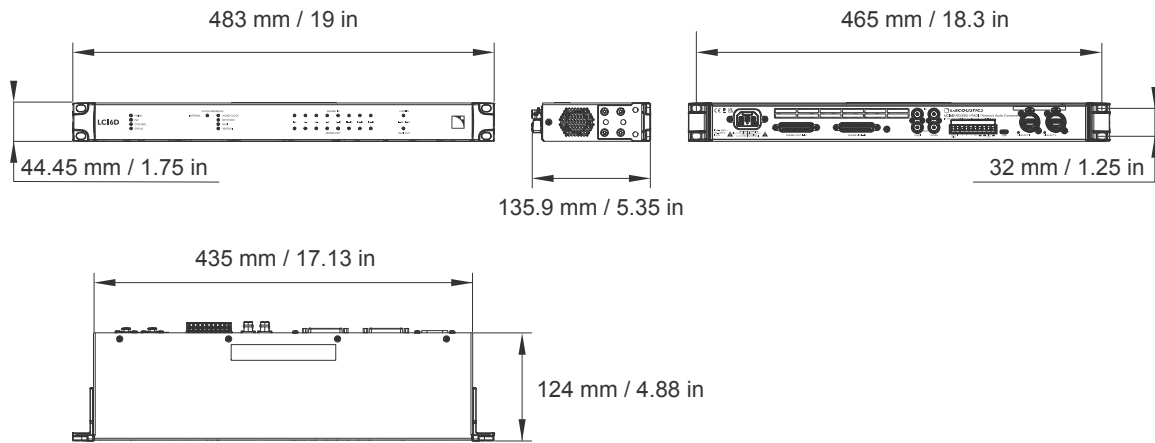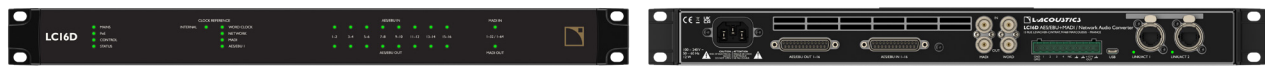s simultaneously, LC16D offers dynamic mapping of channels, and comprehensive synchronization options, with remote control via a simple to use embedded web interface. Flexible power options and seamless Milan-AVB network audio connections deliver robust redundancy features as standard, all housed in a compact and rugged 1RU chassis.

Up to 16 AES/EBU inputs and outputs can be connected using standard DB25 connectors. Asynchronous sample rate converters (ASRC) are implemented on each AES/EBU input. A pair of BNC connectors provide access to MADI. At a sampling rate of 96 kHz, 32 input and 32 output channels are supported, and up to 64 at 48 kHz. Used together, up to 80 input sources and 80 output destinations can be connected and dynamically mapped to and from a redundant Milan-AVB network. The comprehensive clocking options facilitate the selection of a reference from any of six different sources, which is then presented to all outputs, enabling clock distribution across a system. An alternative network mode is also supported, enabling AES67 streams to be converted to AES/EBU and MADI outputs. Up to three levels of power redundancy are available using a combination of the internal PSU and the dual, PoE-supporting, Ethernet ports.

SPECIFICATIONS

General	
Mains rating	100 V - 240 V (±10%), 50-60 Hz
Power redundancy	1 x AC mains PSU
	2 x Power over Ethernet (class 3 PD, compatible with IEEE802.3at-2009 PSE)
Power consumption	8W (typical/idle), 12 W (max)
Operating temperature	-5 °C / 23 °F to 50 °C / 122 °F

Network audio I/O	
Standards	Milan-AVB (IEEE 1722) or AES67: AES67-2023 (Receiver only)
Number of input/output streams	16/16 Milan-AVB mode or 16/0 AES67 mode
Supported channel counts (input stream or output stream)	1 to 8
Channels per Stream	Up to 8
Supported stream formats	Milan Base Format (IEEE 1722 AAF PCM32), or AES67 mode (L16 or L24, 48 kHz)
Supported sampling frequencies	48 or 96 kHz (48 kHz only in AES67 mode)
Media Clock in/out in Milan-AVB mode	1 Milan CRF Media Clock stream
Media Clock in AES67 mode	Derived from the network grandmaster clock elected according to PTPv2

AES/EBU inputs	
Number of inputs (in Milan-AVB mode only)	8 (16 audio channels)
Standard	AES/EBU (AES3) or electrical S/PDIF (IEC 6095 Type II)
Asynchronous Sample Rate Converters (ASRC)	8 (can be disabled individually)
Supported sampling frequencies (fx) and word length	44.1 to 192 kHz at 16, 18, 20, or 24 bits
Default AVB output mapping	Streams 1-2

AES/EBU outputs	
Number of outputs	8 (16 audio channels)
Standard	AES/EBU (AES3) or electrical S/PDIF (IEC 60958 Type II)
Sampling frequency (Fs) and word length	48 kHz or 96 kHz at 24 bits
Default audio network input mapping	Streams 1-2

MADI inputs	
Number of inputs (in Milan-AVB mode only)	64 channels at 48 kHz
	32 channels at 96 kHz
Default AVB output mapping	Streams 3-10 (48 kHz) or Streams 3-6

MADI outputs	
Number of outputs	64 channels at 48 kHz
	32 channels at 96 kHz
Default audio network input mapping	Streams 3-10 (48 kHz) or Streams 3-6 (96 kHz)

Word clock	
Input Frequency	48 kHz or 96 kHz
Output Frequency	48 kHz or 96 kHz

Audio clock sources	
Clock Reference Sources	Internal, Milan-AVB (CRF media clock or input stream), Word clock In, MADI In, AES/EBU Input 1
Supported operating frequencies	48 kHz or 96 kHz (Only IEEE 1588-2028, PTP v2 supported in AES67 input mode)
Control and monitoring	
Network connection	Dual-port Ethernet Gigabit interface
L-Acoustics remote control software	Embedded Web Server, LA Device Scanner
General Purpose Inputs / Outputs (GPIO)	4 GPIO, isolated optocoupler input, isolated relay contacts
Third-party control solutions	HTTP API
Connectors	
AES/EBU inputs / outputs	2 x DB25 (AES59, annex C 8-way pinout)
MADI input / output	2 x BNC (75 Ω terminated)
Word clock input / output	2 x BNC (75 Ω terminated)
Milan-AVB / PoE	2 x 1Gb/s etherCON™
GPIO	1 x 10-pin terminal block
Mains power	1 x IEV C13 V-Lock™ compatible socket
Physical data	
Height	1U
Weight	2 kg / 4.41 lb
Protection rating	IP3x

483 mm / 19 in

465 mm / 18.3 in

44.45 mm / 1.75 in

135.9 mm / 5.35 in

32 mm / 1.25 in

435 mm / 17.13 in

124 mm / 4.88 in

CONNECTION EXAMPLES

Multiple FOH consoles and TV truck

Stage monitor system with multiple consoles and mix outputs

Signal distribution and integration corporate event

Redundant L-ISA Processor II system