

LINUS14/14D Data Sheet

LINUS14/ 14D

4-Channel Loudspeaker
Management Amplifier



The LINUS14/14D is a 4-channel high-power loudspeaker management amplifier with networking and DSP, delivering 3500 W RMS per channel (at 4 Ω) in a lightweight 19-inch / 2U package.

The immense power of the LINUS14/14D class D-IC output stage topology ensures maximum headroom and sonic accuracy. This amplifier technology is combined with SHARC floating-point processing that features vast processing power which enables the integration of sophisticated audio algorithms. The advanced signal processing includes IIR and phase-linear FIR filters for perfect linearity and superior sound performance as well as look-ahead and various protection limiters for increased system headroom and secure system performance.

The LINUS14/14D contains four comparator inputs for use with CODA Audio sensor-controlled subwoofers and bass extension modules. Receiving a real-time measurement of diaphragm movement from the loudspeaker's integrated velocity sensor, LINUS14/14D compares it with the input audio signal and adjusts the amplifier driving voltage and/or current, correcting any driver inaccuracy. This comparator functionality creates a self-optimising, closed feedback loop in which the LINUS14/14D provides the precise amount of power required by the driver to accurately reproduce the original audio signal.

The LINUS14/14D contains presets for use with CODA Audio loudspeaker systems, enabling quick setup time and providing the utmost in audio clarity and performance. In addition to FOH system control, LINUS14/14D is suitable for monitor systems, delay systems, and zoned systems. 110 factory presets for compatible CODA Audio systems are included, 20 user preset slots are available.

The LINUS14/14D contains a port for use with a DANTE audio network and ports for LiNET, to transmit and receive up to 8 digital audio signals with low latency across very long distances with an additional link output for daisy-chaining multiple LiNET-equipped units.

LINUS14/14D Features

- ⊕ Very high output power (4x 3500W @ 4 Ohm)
- ⊕ SHARC floating point DSP @ 96 kHz
- ⊕ DANTE and LiNET – 8x freely configurable digital audio signals over CAT5 cables
- ⊕ 4 dynamic comparators for use with CODA Audio sensor controlled subwoofers
- ⊕ LINUS Control Ethernet interface provides network control and monitoring of amplifiers
- ⊕ Advanced IIR and linear-phase FIR filters
- ⊕ Efficient Class D-IC design for superior sound performance
- ⊕ Switch-mode power supply for 115 V / 230 V with automatic voltage selection



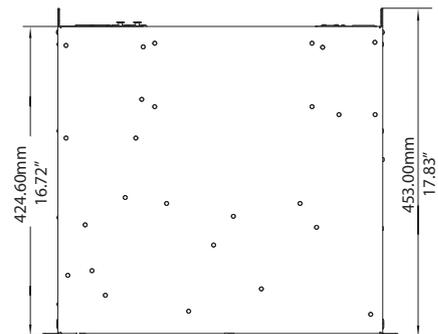
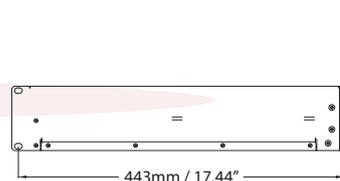
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GENERAL	
Number of output channels	4
Output stage	Class D
Internal samplerate / bit-depth	96 kHz / 24 bit
Signal-to-noise ratio (22 Hz - 20 kHz, 4 Ω - analogue input)	>108 dB (unweighted) >111 dB (A-weighted)
Signal-to-noise ratio (22 Hz - 20 kHz, 4 Ω - digital input)	> 116 dB (unweighted) > 119 dB (A-weighted)
Frequency response (8 Ω load, with CLEAR preset)	20 Hz-20 kHz = (+0.0 dB / -1.0 dB)
THD+N & IMD (4 Ω load @ 1/2 output power)	20 Hz-20 kHz = < 0.005%
Latency (input to loudspeaker output)	min. 2.70 ms AES/EBU input min. 2.00 ms Analogue input
Protection circuits	Inrush current limiter, Thermal limiter, Output DC, SMPS over-current, Output overload
LED indicators	Mute status, Limit, Signal, Protection, Ethernet control active, Digital signal locked, Dante™ Power on
Ethernet connection	2x 100 Mbps RJ45 Control 1x 100 Mbps RJ45 Dante™
AC MAINS	
AC mains input connector	Neutrik 32A powerCON®
AC mains voltage (high range)** (dual voltage SMPS with automatic voltage range selection)	180 V = Minimum 230 V = Nominal 265 V = Maximum
AC mains voltage (low range)** (dual voltage SMPS with automatic voltage range selection)	90 V = Minimum 115 V = Nominal 132 V = Maximum
AC mains frequency	47 - 63 Hz
Power consumption* (1/4 power = 600 W @ 4Ω to represent typical music signal)	Amplifier in standby = 17.6 W Amplifier idle = 191 W Amplifier 1/4 power = 3200 W
*typical values - some variation may exist due to component intolerances	
** voltage range should not be exceeded. Amp. output power will degrade below nominal voltage & increase above	

INPUT	
Input sources	Analogue & AES/EBU & Dante™
An. input impedance (balanced)	12 kΩ
Max. input level (an. differential)	+18 dBu / 6.15 V _{rms}
Input connections	4x XLR3 Analogue IN / 2x XLR5 Sensor IN / 1x RJ45 LINET IN (8x CH) / 1x RJ45 LINET LINK (8x CH) / 1x RJ45 Dante IN (4x CH)
Supported digital input formats (Internal SRC)	32 kHz / 44.1 kHz / 48 kHz / 88.2 kHz / 96 kHz / 176.4 kHz / 192 kHz
OUTPUT	
RMS output power* (20 Hz - 20 kHz, THD < 0.01%) (All channels driven)	1800 W @ 8 Ω / 3500 W @ 4 Ω 4400 W @ 2.7 Ω / 4500 W @ 2 Ω
Peak output power* (20 Hz - 20 kHz, 6 dB Crest Factor) (All channels driven)	3600 W _{pk} @ 8 Ω / 7000 W _{pk} @ 4 Ω 6500 W _{pk} @ 2.7 Ω / 5200 W _{pk} @ 2 Ω
Max. output voltage*	+/- 170 V _{pk}
Max. output current*	+/- 52 A _{pk}
Damping factor (8 Ω load, 1 kHz & below)	> 2500
Min. output load	2 Ω nom / 2.7 Ω - sensor control
Power output connections	2x Neutrik NL4 speakON® 1x Neutrik NL8 speakON®
THERMAL	
Operating temperature	+5°C to 55°C / 41°F to 131°F
Thermal output (BTU/h)	679.02 = Idle / 2470.39 = 20% / 5159.16 = 50% / 9635.88 = 100%
Thermal output (kWh)	0.199 = Idle / 0.724 = 20% / 1.512 = 50% / 2.824 = 100%
Cooling	2x thermally controlled fans Hot air expelled at rear
PHYSICAL	
Dimensions (W x H x D)	483.5x88x454mm / 19x3.4x17.8"
Shipping dimensions (W x H x D)	675x130x560 mm / 26.5x5.1x22"
Net weight	14.75 kg / 32.5 lbs
Shipping weight	17.5 kg / 38.6 lbs



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