



ZONE X 1208 (D)

HYBRID ARCHITECTURE DSP MATRIX - 12 IN / 8 OUT

LDZONEX1208, LDZONEX1208D

FEATURES

- Hybrid architecture DSP processor
- DSP templates available for different installation requirements
- 40-bit floating point DSP engine with analog devices dual core SHARC+ and ARM Cortex A5 processor
- New generation Linux operating system
- Premium grade microphone preamps and high-performance 32 bit AD/DA converters
- 12 balanced mic/line inputs with 48V phantom power selection per input
- 8 balanced outputs
- 8 GPI and 8 GPO logic ports
- 6-pole terminal block connectors (pitch 3.81 mm) for all audio and control inputs/outputs
- REMOTE bus for integration with wall panels and paging microphones from LD Systems
- Clean and intuitive front panel design
- Ethernet interface for remote control via the universal control software Xilica Designer
- Remote control apps available in both iOS and Android, for custom user panels
- Integrated event scheduler
- Optional 64x64 Dante expansion (audio over IP connectivity)
- 19" rack device, 1 RU

PACKAGING CONTENT

- LD ZoneX hardware
- Power cable
- User manual

CONNECTIONS, CONTROLS AND DISPLAY ELEMENTS

FRONT



1 GLOBAL STATUS LEDS

POWER = device is powered on

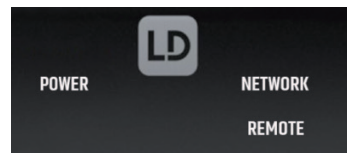
NETWORK = network connection established

REMOTE = LD Systems remote devices connected
(paging microphones, control panels, etc)

2 INPUT & OUTPUT LEDS

White = Signal present

Red = Signal overdriven



BACK



3 POWER CONNECTOR AND FUSE HOLDER

IEC power connector with fuse holder. The packaging content includes a suitable power cable.

CAUTION: Only replace the fuse with another of the same type and with the same ratings. See information on the housing. If the fuse repeatedly blows, please contact an authorised service centre.

4 ON/OFF SWITCH

Rocker switch to turn the device on and off.

5 ETHERNET - USB - RESET

Communication expansion card with Ethernet connector, or Ethernet + Dante (64 x 64 I/O) on "D" model, for communication between the ZoneX processor and the host computer, Micro USB recovery port for firmware recovery and IP reset button.

6 REMOTE

LD Systems remote bus for the integration with future control panels and paging microphones from LD Systems. Please note that this connector only supports LD Systems remote bus-compatible devices and not Ethernet switch ports!



7 GPO

8 GPO outputs (logic ports) with two selectable modes per output: LED (3 mA) or sink (300 mA). 3-pole terminal blocks (pitch 3.81 mm). Please also note the connection examples in this user manual (see **GPI/O – CONNECTION EXAMPLES**)

8 GPI

8 GPI inputs (logic ports), with short to ground activation. 3-pole terminal blocks (pitch 3.81 mm). Please also note the connection examples in this user manual (see **GPI/O – CONNECTION EXAMPLES**)

9 OUTPUTS

8 balanced audio outputs. 3-pole terminal blocks (pitch 3.81 mm).

10 INPUTS

12 balanced audio mic/line inputs with switchable 48V phantom power per channel. 3-pole terminal blocks (pitch 3.81 mm).

CONNECTING DEVICES

LD Systems ZoneX DSP processor and other control units run on a network-based infrastructure and are configured and controlled via a computer with the Xilica Designer software.

PREREQUISITES FOR OPERATION

- Computer
- Network interface (router, PoE switch)
 - A router is required for the IP address assignment and quick and easy connection to your computer and connected control units. A PoE switch is required for control units without local power supply.
- Ethernet cable. All wired connections use a standard RJ45 Ethernet cable (Cat 5e or better).

TECHNICAL DATA

Item number	LDZONEX1208 / D
Product type	DSP audio matrix for fixed installation
General data	
Audio inputs	12 balanced mic/line inputs + 1 remote bus audio input
Audio outputs	8 balanced line outputs
Logic inputs	8 GPI - activation via ground connection.
Logic outputs	8 GPO - modes: LED (3 mA) or sink (300 mA), per output selectable
Remote bus	Yes
Connectors	Inputs/outputs: 3-pole terminal block, pitch 3.81 mm; micro USB B service connector, remote IN RJ45, Ethernet RJ45 ZoneX1208D: Dante Primary and Secondary RJ45
LEDs	Front: "POWER", "NETWORK", "REMOTE", inputs 1 - 12 and outputs 1 - 8: White signal LED, red clip LED
Front panel controls	No
Rear panel controls	Mains ON/OFF, "IP RESET"
Expansion slots	for Ethernet (ZONEX1208) or Ethernet + Dante (ZONEX1208D) cards
Cooling	Passive convection cooling
Power supply	Wide-range switch mode power supply
Power supply connector	3-pole power supply socket (IEC)
Operating voltage	90 - 240 V AC; 50/60 Hz
Mains fuse	T2.5 A L / 250 V
Mains OFF-ON inrush current	21 A
Power consumption, idle mode	23 W
Max. Power consumption	60 W
Operating temperature	0 °C ... +40 °C (max. 60 percent relative humidity)
Width	19" rack (483 mm)
Height	1 HE (44.5 mm)
Depth	315 mm (with terminal blocks)
Weight	3.8 kg
Rack distance to the next device (height)	1 HE
Rack depth (required)	350 mm
Performance specifications	
Nominal input sensitivity	-22 dBu (sine wave, 1 kHz, max. gain)
Nominal input clipping	+20 dBu (Sine wave, 1 kHz)
Harmonic distortion (THD+N)	<0.003 percent (Line IN - OUT, +13 dBu signal, 20 Hz - 20 kHz, gain 0 dB)
Intermodulation distortion (IMD), SMPTE:	<0.01 percent (-10 dB under clip), analyzer bandwidth 90 kHz
Frequency response	15 Hz - 22 kHz (+/-0.15 dB)
Input impedance	Line: 4 kOhm (balanced)

Item number	LDZONEX1208 / D
Signal-to-noise ratio	>117 dB @ +20 dBU, gain 0 dB, 20 kHz bandwidth, A-weighted
Dynamic range (AES17)	112 dB
Channel crosstalk	120 dB @ 100 Hz, 120 dB @ 1 kHz, 105 dB @ 10 kHz
Common mode rejection, CMRR IEC	>60 dB (1 kHz)
Max. Gain	42 dB
Digital specifications	
DSP	40-bit floating point processing, Analog Devices dual core SHARC+ processor
System latency	4.3 ms
Resolution AD/DA converter	32 Bit
Sampling rate AD/DA converter	48 kHz
Remote bus specifications, measured between REM In and REM Out	
Nominal input sensitivity	20 dBU
Nominal input clipping	20 dBU
Harmonic distortion (THD+N)	<0.006% (+18 dBU, 20 Hz - 20 kHz)
Frequency response	20 Hz - 20 kHz (0.1 dB)
Input impedance	50 kOhm (balanced)
Signal-to-noise ratio	>105 dB (+20 dBU, 20 kHz bandwidth, A-weighted)
Common mode rejection, CMRR IEC	>65 dB @ 1 kHz
Gain	0 dB
Phantom power	+48 V DC / 500 mA
Protection	Resettable fuse (internal)