

## HUB1408

DIGITAL MATRIXES

8 outputs digital zoner with DSP



### PRODUCT OVERVIEW

HUB1408 is a digital zone manager with 14 inputs and 8 outputs. It has the HANGAR embedded web-server application (control from standard web browser in Windows / MacOS, etc.) for its configuration; remote control from physical wall installation panels, call (paging) stations and applications for mobile devices (Android, iOS). Includes DSP with specific functions for both inputs and outputs.

HUB Series offers multiple possibilities, being intuitive and easy to configure. From the least experienced user to the most expert, you can set up a professional audio installation in a matter of minutes (Plug & Play). It is the perfect solution for any type of sound that requires managing and controlling different zones.

**KEY FEATURES**

- 14 inputs, 8 outputs digital zoner with integrated DSP
- Easy programming and control by embedded web application, HANGAR, and standard web browser
- Control from the front panel and user remote control by:
  - eMCONTROL1 wall panels (up to 8)
  - eMPAGE paging consoles (up to 2)
  - Ecler pilot application, compatible with Android and iOS: control graphic panels set to user needs (pilot panels)
  - TP-NET protocol (RS-232 interface with DB9 connector) for control and integrating with third party systems
- Control available, by zone (output): selection of audio source (input), volume adjustment and MUTE, 3 band tone adjustment and general volume
- Four priority levels, ducker/pager functions
- Available DSP: frequency shifter, link stereo, delay, crossover filters, 8-band graphic EQ, compressor/limiter and much more
- Predefined setups for a quick installation (plug and play)
- MUTE port can be activated by closing the external dry contact, affecting programmed outputs to this effect

**APPLICATIONS**

- Commercial
- Hospitality
- Education
- Corporate
- Sports and wellness

**ACCESSORIES & COMPATIBLE DEVICES**

- eMPAGE
- eMCONTROL1

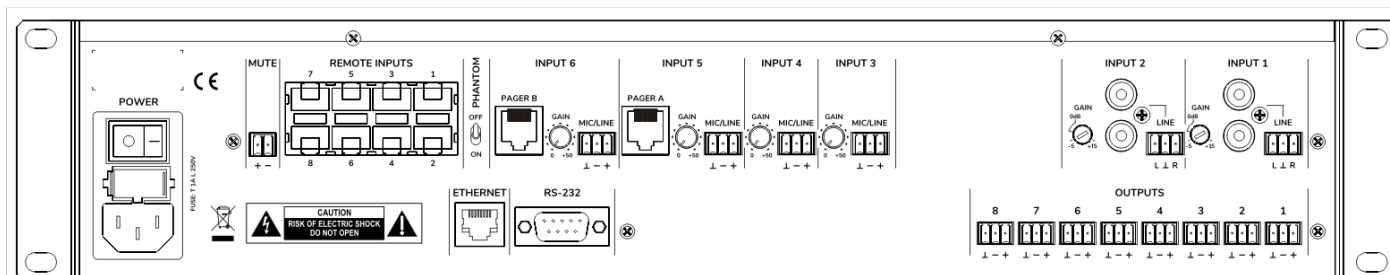
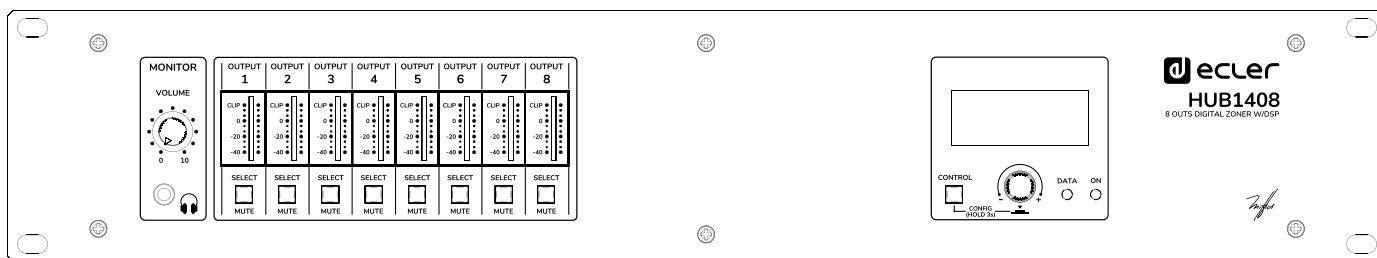


eMPAGE



eMCONTROL1

**MECHANICAL DIAGRAMS**



## TECHNICAL SPECIFICATIONS

HUB1408	
<b>DIGITAL</b>	
DSP	
CPU	Floating point 32/64bit
Sampling rate	48 kHz
Latency	<1.5 ms.
<b>Converters</b>	
Resolution	24 bit, AKM
Dynamic range	AD:111dB, DA: 115dB
<b>ANALOGUE</b>	
<b>Input 1, 2 (Line)</b>	
Sensitivity	+5 / -15dBV External potentiometer adjustment
Impedance	>13k
Input headroom	12dBV
Connector	RCA female with Euroblock stack
Type	Unbalanced
<b>Input 3, 4, 5 ,6 (Mic/Line)</b>	
Sensitivity	+0 / -50dBV External potentiometer adjustment
Impedance	>24k electronically balanced
Input headroom	12dBV
Connector	Euroblock (Symmetrical)
Type	Balanced
Pagers	Input 5 and 6 (by RJ45 connector)
Phantom	+48VDC (rear panel switch)
CMRR	>60dB (20Hz - 20kHz)
<b>Input 7 to 14 (Remote Input)</b>	
Sensitivity	0dBV without adjustment
Impedance	>24k electronically balanced
Input headroom	12dBV
Connector	RJ45 Connector
Type	Balanced
CMRR	>60dB (20Hz - 20kHz)
<b>Outputs 1 to 8 (Line)</b>	
Max output level	12dBV
Connector	Euroblock 3-pin
Type	Balanced
<b>Headphones output</b>	
Selectable output	From Out1 to Out8
Power	>200mW – 200Ω
Connector	Mini-Jack 3,5mm
<b>General</b>	
External mute	Normally open. Assignable to any output zone
Frequency response	<10Hz ~ 20kHz (+0dB / -0.5dB)
Output noise floor (FFT)	>110dB (from 20Hz to 20kHz)
THD + Noise	< 0.005% (1kHz, 1Vrms)
Crosstalk	>90dB, 20Hz - 20kHz

	CMRR	>60 dB Typical
	Flatness	Better than $\pm 0.1$ dB
<b>PROCESSING</b>		
<b>Input level (x14)</b>		
	Volume	From Off to 0 dB
	Mute	On-Off
	Metering	Vumeter post fader
	Stereo	On-Off (Inputs 3 to 6)
	Polarity	On-Off
	High pass filter	50Hz to 150Hz (Inputs 3 to 6)
	Frequency shifter	On-Off ; 5Hz (Inputs 3 to 6)
<b>Noise gate (x4)</b>		
	Inputs	Input 3 to 6, Bypass ON - OFF
	Threshold	From -80dBV to +12dBV
	Depth	From 0 dB to 80 dB
	Attack	From 0.1ms to 500ms
	Hold	From 10ms to 3000ms
	Release	From 10ms to 1000ms
<b>Input EQ (x14)</b>		
	Type	Baxandall 3 way EQ
	Gain	-10dB ~ +10dB in 0.1dB steps
	Frequency	Low 200Hz Mid 1kHz High 6.3kHz
<b>Output level (x8)</b>		
	Volume	From Off to 0 dB
	Mute	On-Off
	Metering	Vumeter post fader
	Stereo	On-Off
	Polarity	On-Off
<b>Output EQ (x8)</b>		
	Type	Baxandall 3 way EQ
	Gain	-10dB ~ +10dB in 0.1dB steps
	Frequency	Low 200Hz Mid 1kHz High 6.3kHz
<b>Output graphic EQ (x8)</b>		
	Type	8-Band Graphic EQ
	Gain	-10dB ~ +10dB in 0.1dB steps
	Frequency	63Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz
<b>Output compressor (x8)</b>		
	Bypass	On-Off
	Mode	Compressor / Limiter
	Threshold	-36 dB to +12 dB
	Ratio	1 to 100
	Knee	Soft / Hard
	Attack	0.1ms to 500ms
	Release	10ms to 1000ms
	Make-up gain	0 dB to 10 dB
<b>Output delay (x8)</b>		
	Outputs	1 to 8
	Bypass	On-Off
	Delay	0 to 300ms

	Unit	ms, meters, feet
<b>Output crossover (x8)</b>		
Outputs		1 to 8
Bypass		On-Off
Mode		High Pass Filter / Low Pass Filter
Frequency		20Hz to 20kHz
<b>General volume</b>		
Volume		From Off to 0dB
Selectable outputs		Out 1 – Out 8
<b>Ducker</b>		
Input		IN3 to IN6. In 5 and 6 selectable: DUCKER or PAGER
Outputs		Selectable: 1-8 zones
Priority		Four levels (1max-4min)
Priority volume		-40 dB to +6 dB
Threshold		-80dB to +12dB
Depth		0dB to 80 dB
Attack		5ms to 2000ms
Release		50ms to 3000ms
Hold		10ms to 3000ms
<b>Pager</b>		
Input		IN5 and IN6 selectable: DUCKER or PAGER
Outputs		Selectable: 1-16 zones
Functions		Two function buttons (F1, F2)
Priority		Four levels (1max-4min)
Priority volume		-40 dB to +6 dB
Chime volume		-12dB to +0dB
Chime melody		None, Melody 1, Melody 2
Depth		0dB to 80 dB
Attack		5ms to 2000ms
Release		50ms to 3000ms
<b>Pilot panels</b>		
General		On-Off, Public, Label, Users and Zone
Volume control		On-Off, Label and Style
Source selection		On-Off, Label and Allowed sources
Equalizer		On-Off, Label, and Style
Color		Controls, Text and Background
<b>OTHERS</b>		
<b>Mechanical</b>		
Dimensions		482,6 x 88,0 x 210,0mm / 19.0" x 3.5" x 8,3" (WxHxD)
Weight		3,60kg / 7.93 lb.
<b>Power supply</b>		
Mains		90-240 VAC, 50-60Hz
Power consumption		20W
<b>Connectivity</b>		
Management Connectivity		Ethernet Base-Tx 10/100Mb Auto X-Over CAT5 up to 100m
Remote bus		RS485
Aux. Power Supply for Remotes		+12VDC, 0,6A max. (short circuit protected)
Programming and control		Hangar (embedded web application), Ecler pilot (Andorid/iOS application), TPNET (UDP/RS232)

## A&E SPECIFICATIONS

The Multi-Zone audio system shall comprise of 8 independent controllable output zones, 6 audio inputs, containing 4 balanced microphone inputs with priority function and phantom power possibility, and 8 remote audio inputs with RJ45 connection. The zone outputs shall be balanced and equipped with Terminal Block connectors.

Native remote management shall be available via smart devices, standard Internet browser and remote wall-panels. Remote control from third-party systems shall be available using TP-NET control protocol through Ethernet or RS-232 ports. The digital zoner shall include a factory setup and predefined configuration management for a plug & play installation. The system shall include an integrated web-server for device's configuration, on which a fully functional web-based user interface is running, which can be accessed through a web browser without installing additional software.

On the front panel, the zoner shall include Power ON and Data status LEDs, outputs signal level indicator, monitor output jack and monitor level knob. On the rear panel, the matrix shall include power on switch, 2 unbalanced stereo inputs with Euroblock and RCA connectors, 4 balanced mic/line inputs with Euroblock connector, 2 pager RJ45 ports, phantom switch, 8 RJ45 remote inputs and 8 zone outputs with Euroblock connector. Also a MUTE dry contact, RS-232 port (DB9 connector) and Ethernet RJ-45 port.

All internal processing shall be digital (DSP). Audio conversion shall have a resolution of 24-bit, and sampling rate should be 48 kHz in an architecture of 32/64 bit. The dynamic range shall not be lower than 111 dB for AD conversion and 115 dB for DA conversion. Possibilities at the inputs shall include: treatment of channels in mono or stereo mode, phase adjustment, feedback suppressor algorithm, high-pass filter, noise gate, level adjustment, mute and level indicators. Possibilities at the outputs shall include: treatment of channels in mono or stereo mode, phase adjustment, external MUTE, 8 band parametric EQ, delay, compressor / limiter, crossover filter, level adjustment, mute and vumeters level indicators. In addition, 4 priority modules management including 2 physical paging consoles.

The zoner shall operate on a 100-240V AC - 50/60 Hz mains network and shall be equipped with a removable power cord having a standard shuko (CEE 7/7) AC plug. The connector on the zoner chassis shall be a fused IEC C14 type. The zoner chassis shall be a two rackspace 19" housing. Depth from mounting surface to rear supports shall be 210 mm and the weight shall not exceed 3,60 Kg.

The digital zoner shall be the ECLER HUB1408.



All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications.

For technical requests address to your supplier, distributor or fill the contact form in our website, at Support / Technical Request.

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