MIMO88

DIGITAL MATRIXES

Installation Digital Matrix

PRODUCT OVERVIEW

MIMO88 is an 8 in / 8 out digital audio matrix, fully programmable and linkable to a second unit to become a 16x16 matrix, with real routing from any input to any output.

KEY FEATURES

• Expandable to 16 inputs / 16 outputs to become a real 16 x 16 matrix
• Fully programmable and controllable via EclerNet software
• UCP (User Control Panels) remote control system, compatible with WPmSCREEN and third-party devices, such as computers, tablets, smartphones, etc.
• TP-NET protocol compatible, for third-party control systems integration
• A few processing bits: signal generator, delays, full parametric EQ filters at inputs and
outputs, inputs noise gate, level, mute, phase, vu-meters, outputs compressor / limiter,
ducking (priority & overriding), virtual and physical paging stations management,
automatic mixer function, presets save & recovery, scheduled events triggering
• FREQUENCY SHIFTER function to avoid acoustic feedback (Larssen Effect), available for each INPUT channel.
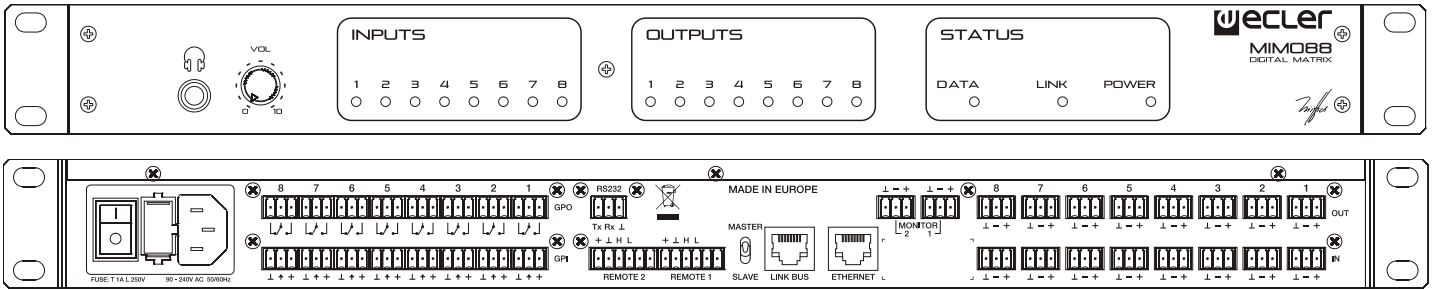
APPLICATIONS

• Centralized, distributed or hybrid fixed installation
• BGM & Paging solutions
• Conferencing (automatic mixing)
• P.A. management
• Installations requiring remote total control
• Live sound (WiFi management is possible)

CERTIFICATIONS

• EN60065:2014
• EN55103-1:2009
• EN55103-2:2009
• 2006/95/EC
• 2004/108/CE

MECHANICAL DIAGRAMS

TECHNICAL DATA

DSP	
DSP	2 x 32/64bit
Sampling Rate	48kHz
Latency IN to OUT	<2.9ms (+1ms for 16x16)
Converters	
Resolution	24bit AKM
Dynamic Range	AD:110dB, DA: 115dB
Analogue	
8+8 Input/Output	Terminal block (Symmetrical)
2 monitor output	Terminal block (Symmetrical)
Headphones related	Jack ¼
Analogue Input headroom	+27dBV = +30dBu
Max. output level	+18dBV = +21dBu
Input sensitivity @ 0dBV out	From -50dBV to +10dBV in 0.5dB step
Input Impedance	Balanced, >4kΩ
Phantom power	+42VDC, 5mA max. software switched
Headphones	>200mW/200Ω
Frequency response (-3dB)	5Hz to 24kHz
Flatness	better than ±0.1dB
THD+Noise @ 1kHz, 0dBV input (line)	<0.004%
THD+Noise @ 1kHz, -40dBV input (mic.)	<0.008%
Output Noise floor FFT (20Hz - 20kHz)	better than 115dB
Interchannel crosstalk (20Hz - 20kHz)	better than 90dB (100dB typ.)
Channel Leakage (20Hz - 20kHz)	better than 100dB (115dB typ.)
CMRR 20Hz- 20kHz	65dB typ.
Processing	
Input Level (x8)	Range: from Off to 0 dB Mute: Yes Signal Polarity reverse: Yes Metering: VU+clip pre & post fader
Output Level (x8)	Range: from Off to 0 dB Mute: Yes Solo: Yes Signal Polarity reverse: Yes Metering: VU+clip pre & post fader
Output Gain	Range: from 0 to +6 dB
Input Delay (x8)	from 0 to 1000 ms Units: sec/ms/m/cm.
Output Delay (x8)	from 0 to 1000 ms Units: sec/ms/m/cm.

Parametric Eq. Types
(4 max per input)
(8 max per output in 8x8 mode)
(4 max per output in 16x16 mode)
	Bypass / On-Off all channels
	Param Eq. Freq: 20Hz-20kHz
	         Gain: -60/+12 dB
	         Q: 0.3 to 200
	Low & High Shelf 6/12 dB/oct
	Low & High Pass 6/12 dB/oct
	All Pass 1/2 order

High & Low pass output Crossover filters (x8)	Bypass On-Off Butterworth in 6/12/18/24 dB/oct Bessel in 12/18/24 dB/oct Linkwitz-Riley in 12/24 dB/oct
Input Noise Gate (x8)	Bypass On-Off Threshold: from –80 dBV to +18 dBV Depth: 0 dB to 80 dB Attack time: from 0,1 ms. to 500 ms. Hold time: from 10 ms. to 3000 ms. Release time: from 10 ms. to 1000 ms.
Input Compressor / Limiter (x8)	Bypass On-Off Threshold: from –36 dBV to +18 dBV Ratio: 1:1 to inf:1 (limiter) Knee: hard / soft Attack time: from 0,1 ms. to 500 ms. Release time: from 10 ms. to 1000 ms. Make up gain: from 0 to +10 dB
Input Frequency Shifter	Available on all inputs. ON / OFF function
Output Limiter (x8)	Bypass On-Off Threshold: from –36 dBV to +18 dBV Attack time: from 0,1 ms. to 500 ms. Release time: from 10 ms. to 1000 ms.
Built in Signal Generator	Sine: from 20 Hz to 20 kHz Polarity: from 20 Hz to 20 kHz White noise Pink noise
Stereo Linking	Adjacent input / output channels Linked processing Matrix routing linked
Mix Matrix	Size: 8x8 (1-MIMO88) Size: 16x16 (2-MIMO88 with expan. link bus) Vol: Input, Output, Crosspoint Mute: Set/Clear individual, row, column, all Input /output Mono/stereo selector Meter: Input /output VU and clip
Pager	Input: IN1 to IN8 (or to IN16 in 16x16) Priorities: 4(1max) 4 (min) Depth: 0 dB to 80 dB Attack time: from 5 ms. to 2000 ms. Release time: from 50 ms. to 3000 ms. Chime Source: None, Melody 1, Melody 2 Chime Volume: from –12 dB to 0 dB

Mechanical

Dimensions	482.6x44x266.5mm
Weight	3.5kg

Supply

Mains	90-264VCA 47-63Hz
Power consumption	45VA

Miscellaneous

Management Connectivity	Ethernet Base-Tx 10/100Mb Auto X-Over CAT5 up to 100m.
Expansion LINK BUS (16x16 ch.)	Proprietary over CAT5, Xover cable up to 100m.
Remote Bus	2, over twisted pairs; up to 1km (see specific specs.)
GPI	8, from 0 to 10VDC or TTL level
GPO	8, 3 poles isolated relay; 1A, 48VDC max. -
Aux. Power Supply for Remotes & GPI	+12VDC, 1.2A. max. (short circuit protected)
Time and date retention (battery)	1 month aprox. (ambient temperature dependant)
RTC accuracy	±1 minute /year

SOFTWARE

EclerNet Software	Realtime full GUI of all functions and controls thru Ethernet with interactive graphical display
	Grouping mode channels or devices
	Grouping of other groups
	Automated report generation
	Up to 256 devices on same net
	Autodiscovery devices feature
	Routing capability through NAT gateways
	Real time metering at input/output (DSP)
	Device "Finder" feature
	Save & Recall setup and preset functions
	Firmware update capability thru Ethernet
	Password protection (device & project with two user levels)
	Default Network configuration:
	IP: 192.168.0.100
	Mask: 255.255.255.0
	Gate: 192.168.0.1
	UDP Port: 2210
Operating System	Windows® 10; W8.1; W8; W7; Vista (SP1); XP Prof. (SP3); W2000 Prof. (SP4)
Minimum EclerNet System Requirements	Pentium IV ® 1GHz
	512MB RAM
	40MB HDD free space
	800x600 pixels & 16bits color display
	10/100/1G Ethernet Network card