

M.1K2

16 PORT MADI ROUTING SYSTEM



DirectOut GmbH
Leipziger Str. 32 | D-09648 Mittweida
info@directout.eu | www.directout.eu

DirectOut
TECHNOLOGIES

M.1k2

is a scalable 16-port MAD1 router that provides a powerful routing matrix for up to 1024 x 1024 audio channels that fills the gap between small scale routing devices and large cross bar solutions. The device features two I/O slots that can be fitted with different 8-MADI-port I/O modules.

Safe, reliable operation

M.1k2 offer the highest reliability thanks to two phase-redundant power supplies. Furthermore, two MAD1 ports may be configured as redundant pairs. In the event of a problem, an automatic, click-free changeover takes place between the modules.

MADI Matrix

All audio signals can be routed arbitrarily, either in groups or singly. All input signals are refreshed, keeping the user bits unchanged at the output.

Embedder / De-embedder Matrix

Serial data (MIDI, RS-232, RS-422/485) embedded in the MAD1 signal or from the hardware interfaces can be routed separately from the audio signal.

Labelling

A powerful CSV import/export function is provided for I/O labelling. Switchable layers display either customized names or the port/channel number.

Snapshot Management

Snapshots containing all routing, label, port and clock configuration settings in one single package can be grouped in projects and exchanged between different M.1k2 devices.

User Management

Individual function control based on definable permission classes can be setup for different users enabling these users to share device control in complex environments according to their level of permission.

Clocking

The M.k12 may be clocked by any MAD1 input, word clock, video reference input or it can serve as a clock generator. The system clock is provided at two additional word clock outputs.

TECHNICAL DETAILS

MADI Ports (I/O):	2 x I/O modules with 8 ports per module
Modules:	SC-Socket multi/single-mode coaxial BNC, 75 Ω SFP
Word clock (I/O):	1 x coaxial BNC- word clock in 2 x coaxial BNC- word clock out 75 Ω termination switchable
Video reference input:	1 x coaxial BNC (75 Ω switchable) black burst (PAL, NTSC)
GPO:	1 x DSUB-9 - 2 x switched voltage - 2 x Optocoupler
RS-232:	DSUB-9 male
RS-422/485:	DSUB-9 female (422 / 485 switchable)
MIDI I/O:	2 x DIN 5-pin
Remote:	1 x RJ45 ethernet connector (100 Mbit/s) integrated webserver
USB:	USB 2.0 as virtual serial port
Sample Rates:	44.1, 48, 88.2, 96, 176.4, 192 kHz (+/- 12,5%)
MADI Formats (I/O):	48k Frame, 96k Frame, 56/64 channel, S/MUX
Power Supply:	2 x 84 V to 264 V AC / 47 Hz to 63 Hz / safety class 1
Dimensions:	Width 19" (483 mm) Height 2 RU (89 mm) Depth 10" (254 mm)
Weight:	about 4 kg

PolySync

Each MAD1 port may have its own clock reference, extending the application of the M.1k2 in mixed clock environments.

Doppelganger (Device Mirroring)

One (or more) M.1k2s can be configured to act as a slave to one master device. All configuration data (crosspoints, port configuration, labels etc.) is synchronized continuously.

Remote Access

Remote operation is via a network connection and web browser interface. Concurrent access from other locations is possible and is not limited to a specific operating system. Several plugins enable external control of the unit in various ways. Currently supported methods are Telnet, Pro-Bel SWP-08 (network and serial), MIDI, Jupiter, JSON.



Remote Methods:



Port Configurations:

