# X-4sd

# Audio and MPX switch/splitter

## Highlights

▶ 4-channel digital audio/MPX matrix

▶ Active AES/EBU splitter

▶ AES/EBU switch

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# X-4sd – Audio and MPX switch/splitter

## General

▶ The perfect companion for redundant audio and MPX streaming
▶ Four stereo channel splitter and switch selectable in one device
▶ Four digital inputs via female XLR-3
▶ Four digital outputs via male XLR-3
▶ Bypass relay for continuous operation, even after power failure
▶ Dual power supplies (230 VAC and/or -48vDC, internal or hot-swap)
▶ Remote control via IP (SNMPv3/Web-GUI) and GPIO

## Splitter

▶ Up to four outputs
▶ Active powered distribution amplifier for each output
▶ Manual input selection
▶ Passive bypass on channel 1

## Switch

▶ Up to two independent audio switches
▶ Configurable number of switching inputs (e.g. 1:2, 1:3, 1:4)
▶ Combinable with splitter
▶ Adjustable detection of audio or MPX presents and automatic switch over
▶ Passive bypass on channel 1

## Control

▶ Remote control via GPIO, Web-GUI or SNMPv3
▶ Multiple access levels (Read-only, Manager & Administrator)

## Monitoring

▶ Headphone output
▶ Quality parameters via SNMPv3/Web-GUI and GPIO

## Backup / advanced redundancy management

▶ Passive loop through relays available
▶ Redundant power supply 230 VAC or -48 VDC[*]

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[*] This function is optional. Please find the complete list of options at the end of the document.

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# Technical details (1/2)

## Interfaces

### Performance

| | |
|---|---|
| **Digital in** | 4 x AES/EBU, 110 Ω bal., integrated XLR |
| **Digital out** | 4 x AES/EBU, 110 Ω bal., integrated XLR |
| **Amplifier** | 3-way AES/EBU stereo digital distribution amplifier |
| **Headphone (out)** | L/R, < 10 Ω, 6,3 mm |
| **Dynamic range** | 16 Bit, > 89 dB<br>24 Bit, > 130 dB |
| **Sample rates** | 16 kHz – 192 kHz |
| **Insertion Loss** | < 0.1 dB |
| **Impedance** | 110 Ω ± 2 % |
| **Output Insulation** | > 40 dB |
| **Max. voltage level** | 10 Vpp |

### Ethernet

| | |
|---|---|
| **Data** | Controlling and setup functions |
| **Connector** | 3x RJ45 |
| **Type** | Auto switching 10/100/1000 BASE-T |

### Contact-closure

| | |
|---|---|
| **Inputs** | 8 inputs<br>26 pole sub-D male |
| **Outputs** | 7+1 floating relays<br>7 relays SPST (from A)<br>1 relay SPDT (from C)<br>DC: max. 30 V, 1 A, 10 W<br>26 pole sub-D male |

## Control & Monitor

### Ethernet

| | |
|---|---|
| **User interface** | Integrated WebGUI, LCD display |
| **Data** | Control and setup functions |
| **Optional** | Private data, MPEG ancillary data (IRT) |

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# Technical details (2/2)

| | |
|---|---|
| **Optional** | Private data, MPEG ancillary data (IRT) |
| **USB** | USB 2.0 interface for service, configuration and firmware updates |
| **Protocol** | 2wcom NMS, Telnet, HTTPS, SNMPv3, UDP, Reliable Transport, SFTP IGMP, ICMP, NTP, DHCP, SSH, PTPv2, TCP |

## Front panel

| | |
|---|---|
| **LCDisplay** | Graphical, 264x64 pixel |
| **Jog wheel** | Impulse, enter button |
| **4 Duo LEDs** | Power, input, output, warning |

## General Data

| | |
|---|---|
| **Power consumption** | < 20 W |
| **Case dimensions** | 19'', 1 RU, depth: 310 mm, width: 424 mm, front panel: 484 mm |
| **Weight** | < 5 kg |
| **Material** | Steel plate (aluminum-zinc coated) |
| **Operating temp. range** | 0 – +45°C |
| **Storage temp. range** | -40 – +70°C |
| **Languages** | English |

## Power Supply

| | |
|---|---|
| **Standard AC** | 1 internal IEC power connector<br>voltage range 90 – 260 VAC (nominal 100 – 240 VAC)<br>frequency range 47 – 63 Hz (nominal 50 – 60 Hz) |
| **Dual internal (optional)** | Two internal redundant power supplies (AC or DC)<br>automatic switchover and prioritization<br>AC: 90 – 260 VAC (nominal 100 – 240 VAC), 47 – 63 Hz (nominal 50 – 60 Hz) |
| **Dual hot-plug (optional)** | Two hot-swappable redundant power supplies (AC or DC)<br>automatic switchover and prioritization<br>AC: 90 – 260 VAC (nominal 100 – 240 VAC), 47 – 63 Hz (nominal 50 – 60 Hz) |

## Available models

| | |
|---|---|
| **Basic** | X-4sd splitter |
| **Option** | X-4sd switch |
| **Option** | MPX 192kHz |

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# Options

## X-4sd base unit variations

You can choose between the following base unit variations:

| Article no. | Name |
|---|---|
| VER63202 | Base unit X-4sd with 2x internal AC power supplies |
| VER63203 | Base unit X-4sd with slot for 2x hot-plug power supply |
| | ▶ 2x hot-plug power supplies AC / DC not included. |
| | ▶ Please order 2 hot-plug power supplies AC (VER45851) or DC (VER45852). |

## X-4sd hardware options

Please note that hardware options are installed at the factory in Flensburg, Germany, and can only be retrofitted independently in individual cases.

| Article no. | Name | Description |
|---|---|---|
| VER63211 | 192 kHz / MPX mode | Activation of either 192 kHz mode or MPX mode |
| VER45851 | Hot-plug AC power supply | Power supply with automatic switch over in case of failure. |
| | | ▶ 90 – 260 VAC (nominal 100 – 240 VAC), |
| | | ▶ 47 – 63 Hz (nominal 50 – 60 Hz) |
| VER45852 | Hot-plug DC power supply | Power supply with automatic switch over in case of failure. |
| | | ▶ 40 – -60 VDC (nominal -48 VDC) |

## X-4sd software options

Please note that software options can be retrofitted remotely.

| Article no. | Name | Description |
|---|---|---|
| VER63210 | Automatic Redundancy Switch | Adjustable silence detection and prioritization of inputs |
| VER63213 | 2nd instance (2x 2:1 switch) | Two instances of the X-4sd work independent in one unit (2 in 1). Limitations: |
| | | ▶ 2x 2:1 switch. |
| | | Two digital in- and outputs, one analog output each only. |

**Datasheet Version: July 14, 2023**
**These data are subject to modifications and amendments. Errors excepted.**

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