

LiveRec24+

The **LiveRec24+** is a data acquisition solution for up to 24 dynamic signals with an analogue bandwidth of **30 kHz/channel** and very high precision. All channels are equipped with **24 bit high end AD-converters** with a **dynamic range of more than 110 dB**. The noise floor is lower than any ICP® sensor. The **1 V range with only 3 µV noise** covers the range down to lowest input signals which provides an almost carefree dynamic range.

The **X-Range** covers 12 channels in 135 dB range by combination of two 24 Bit AD-converters to one channel. Therefore range selection is not needed any more. **The dynamic range in the FFT is higher than 160 dB**.

The module works with a very low **power consumption of typ. 6.5 W**. With the **4mA ICP® / IEPE supply** it is perfectly suitable for any kind of ICP®/IEPE sensor. All 24 channels support AC and DC coupling. Two additional **pulse inputs with 512 kHz sampling rate and 4 slow DC inputs** complete the 24 dynamic inputs. A **galvanic isolated CAN-Bus adapter** is available as an option. Despite all these features the **LiveRec24+** is even **25% smaller** than comparable frontends.

The modules are powered by **9-36 V** and are connected to the **PC via Ethernet**. A single module can be connected and powered by an USB-C interface.

The **Soundtec LiveHub** provides galvanically isolated power supply and data connection for up to 4 modules. The LiveHub ethernet outputs can be connected to each other with standard Gigabit Hubs to increase the number of channels to some 100 channels easily.

Technical Features

- 24 dynamic channels with reference ADCs
- Input -10 V to +20 V and +/1 V, or alternatively -10 V to +20 V in X-range mode
- Dynamic range (SFDR) 110 and 107 dB(A) or 135 dB(A) in X-range mode
- DC and AC (0,3 Hz) coupling
- ICP® supply with 4 mA (+/10%)
- TEDS support
- AC precision 0.015 dB
- DC precision 1mV (20 V range)
- Input impedance > 1MOhm
- Input noise 3 µV (A weighted) in 1 V input range
- Sampling rate 64 kHz, 30 kHz analogue bandwidth (-3 dB)
- Sampling rate analogue 1,024 MHz with precise digital filtering to 64 kHz
- Max. input without damage -20/+30 V

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Additional inputs

- 2 pulse inputs for RPM measurements with 512 kHz
- 4 slow DC inputs with 0–15 V range and 0.5% precision / 10 Bit
- CAN-Bus input with galvanic isolation (option)

Connections

- 50 pin D-Sub for 24 channels resp. 12 channels with X-range
- 15 pin D-Sub for 2 pulse channels and 4 slow DC channels
- 2 x RJ45 Ethernet and Soundtec X-Bus (incl. Power supply, sync and data to Live-Hub)
- USB-C power supply 5 V / 2 A and USB data transfer
- 9 pin D-SUB CAN-Bus
- Banana plug for ground connector

Environmental Conditions and Dimensions

- Temp. range for operating mode -10°C to 55°C (to 50°C in multi-module usage)
- Temp. range for storage -40°C to +85°C
- Humidity 0-93% not condensing
- Dimension 176 mm x 148 mm x 30 mm
- Weight 820 gr
- Connection between modules: magnetic, with M5 screw fitting



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