

# Spider-80Xi

The Spider-80Xi is a compact version of Spider-80X with an extremely lightweight form factor.

The mechanical design of Spider-80Xi eliminated the enclosure of each modular card inside of chassis. Light weighted, it is ideal for the applications that the portability and size are critical to the usage while exchangeability of cards is not required. Featuring a 64-channel chassis weighing less than 10.5 kg, the Spider-80Xi can be carried in one hand and is optimal for field environment testing where portability is essential.

Like the Spider-80X, multiple chassis combine to create a system up to 512 channels, all sampled simultaneously. A dedicated massive storage hard disk (a solid state hard drive with a capacity of 250GB) allows the time signals of all input channels to record at up to 102.4 kHz/channel. Accurate time synchronization results in excellent phase match in the frequency domain between all channels, either on the same Spider front-end or across different front-ends.

Real-time FFT, octave, order tracking or vibration control functions can be enabled. The modular boards of the Spider-80Xi are installed at the factory and are not onsite swappable.

Spider-80Xi system comes with two different chassis, one that can host up to 64 input channels, one up to 32 input channels. Multiple chassis can be chained up to hundreds of channels, all sampled simultaneously. Multiple Spider-80Xi front-ends are accurately synchronized through the IEEE 1588v2 protocol, making sure all measurement channels are on the same time base.

Accurate time synchronization results in excellent phase match in the frequency domain between all channels, either on the same Spider front-end or across different front-ends. Channel phase match, even between separate Spider front-ends, is within 1.0 degree at 20 kHz which is suitable for high quality structural and acoustics applications requiring cross-channel measurement.

The Spider-80Xi system consisting of the 64-channel chassis is powered by AC power, at 100~240 VAC. The Spider-80Xi system consisting of the 32-channel chassis is powered by the DC power, at 10V to 22V. The latter is also easily operable with an external battery pack. With the Spider-Battery, (developed by Crystal Instruments) a 32-channel Spider-80Xi system operates up to 4 hours without interruption.

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