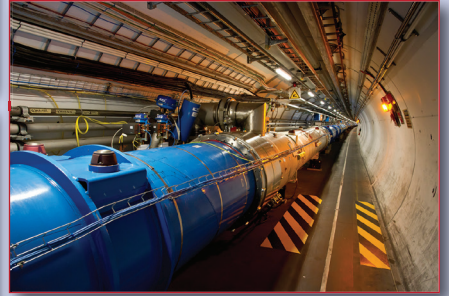
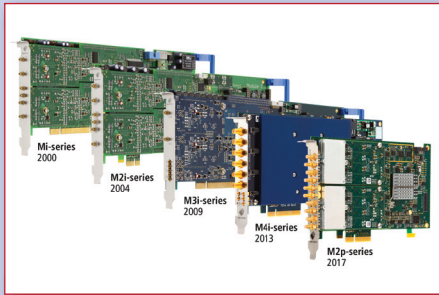


FAB S and LAB S

Spectrum Instrumentation: Digitizers and AWGs Built with German Quality



During its 30-year history, Spectrum Instrumentation has built a global business developing digitizers, arbitrary waveform generators (AWG) and digital I/O products for the instrumentation needs of leading companies, universities and research organizations. The founders, Gisela Hassler and Michael Janz, began their venture designing custom products, initially used in printer controllers and acoustics applications. Their first catalog product, an 8-bit, 50 MHz digitizer on an ISA card, which plugged into early PCs, was released in 1991. The product was so successful, it remained in the product portfolio for 17 years.

Spectrum soon added an AWG to complement the digitizer, subsequently developing a portfolio of more than 500 products to provide a “perfect fit solution” for each customer’s need. Spectrum provides this customization quickly and for a reasonable cost using a modular approach that combines common platform boards with modules tailored to the performance needs of the application. Spectrum supports all industry standard form factors and offers its own NETBOX for benchtop or rack mounting.

Spectrum’s digitizers are available in single and multichannel versions, with sampling rates from 1 MSPS to 5 GSPS, maximum bandwidth exceeding 1 GHz and resolution from 8 to 16 bits. Similarly, the AWGs have single and multichannel options with rates from 40 MSPS to 1.25 GSPS, maximum bandwidth greater than 500 MHz and resolution from 8 to 16 bits. Spectrum supports all industry bus standards, including PCIe, PXIe, PXI and Ethernet-LXI. All products use the same measurement software, SBench 6, an easy-to-use interface for controlling the digitizer or AWG. All Spectrum products are designed and manufactured in Germany, in the small town of Grosshansdorf near Ham-

burg. Proud of the heritage of German quality, Spectrum stands behind all products with a five-year warranty.

During the company’s three decades, it has supported many interesting applications. Spectrum cards are used in a Leibniz Institute atmospheric measurement system operating in the ice and snow of Antarctica; 140 of its digitizers control the complicated shut-down procedure for the Large Hadron Collider at CERN. Oliver Rovini, Spectrum’s CTO, says of the hundreds of applications he has seen in his 25 years at Spectrum, the inertial confinement fusion research being conducted at First Light Fusion is perhaps the most extraordinary. A Spectrum 256-channel digitizer is helping First Light develop a reactor—in only four years—that will generate more energy than it uses.

Asked about her goals when she started the company, Hassler says, “It was personally important to me to make my ideas work and to live my values.” These values are embedded in Spectrum’s culture: friendly, cooperative and conscientious, with open communication. This is reflected in the way the company corrects errors. “The focus is not on who made the mistake but rather what we can change so that it cannot happen again,” Hassler says. She wants the company to feel like a family. “The well-being of our employees is very important to us.” This regard extends to customers. Spectrum’s commitment to them is providing fast and high-resolution digitizers and AWGs, built with German quality and supported by outstanding service—meaning direct access to the company’s hardware and software engineers. Thirty years and more than 500 products seem like a solid endorsement of Spectrum’s success.

www.spectrum-instrumentation.com