# Mixed Mode Option for Digitizers and AWGs

16 additional digital lines on a piggy-back module

GROSSHANSDORF, GERMANY, September 18, 2019 / EINPresswire.com/ -- [Spectrum Instrumentation](link) has released an optional module for its latest range of 16-bit digitizers and AWGs that adds 16 synchronous digital lines to the analogue data. The additional digital lines extend the four multi-purpose XIO lines that are already standard on these digitizer and AWG cards. This makes, in total, 20 fully programmable XIO lines that can run as synchronous digital inputs for a digitizer, synchronous digital outputs for an AWG, or asynchronous I/O lines, status lines, or even additional trigger inputs.
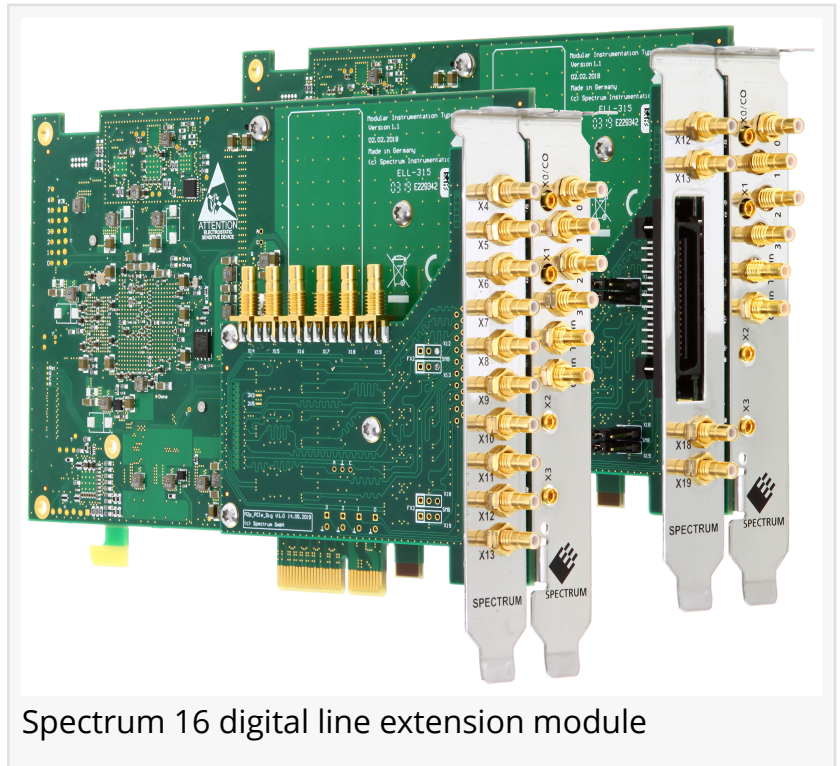
Spectrum 16 digital line extension module

The digital option is a piggy-back module for the PCIe cards that occupies the panel of a second slot. It comes in two different versions, one with SMB connectors and one with an FX2 flat-ribbon connector. The SMB-version (M2p.xxxx-DigSMB) offers ten connectors on the front panel plus six more that are available internally and can be used for PC-internal cross connection or external connection via an empty slot bracket. The FX2-version (M2p.xxxx-DigFX2) guarantees compatibility with predecessor products from Spectrum and allows parallel connection of all lines with a single connector.

These modules fit on the 16-bit digitizers of the M2p.59xx series, offering 20 different PCIe-cards with 1 to 8 channels and 20 to 125 MS/s. They also fit on the 16-bit AWGs of the M2p.65xx series, consisting of 8 PCIe-variants, again with 1 to 8 channels and the choice of 40 or 125 MS/s. Mounted for example on an M2p.5968-x4 digitizer-card, the combination can be operated with 8 analog channels in parallel with up to 19 synchronous digital channels (actually 20, but one on the main card is output only). Using the same module on an M2p.6568-x4 AWG-card provides 8 analog AWG channels and up to 20 synchronous digital outputs or marker outputs.

Digital data is stored inside the analog samples by reducing the resolution. Software drivers allow customized setups that can generate perfectly matching mixed mode solutions. The option is fully supported by the complete software development kit (SDK) which includes programming using C++, C#, VB.NET, Python, JAVA, LabVIEW or MATLAB. The SDK is included as standard with every unit. Spectrum's own software, SBench 6, also supports the major part of the option's functionality.

Both versions of the digital option are available with immediate delivery with Spectrum's 5 years' warranty included. The option can be updated in the factory for cards already in the field. It can also be made available, on a customized basis, for the LXI/Ethernet version digitizerNETBOX DN2.59x and generatorNETBOX DN2.65x instruments. Please contact Spectrum for further

discussion on this option.

About Spectrum Instrumentation
Spectrum Instrumentation, founded in 1989, uses modular design to create a wide range of digitizer and generator products as PC-cards (PCIe and PXIe) and stand-alone Ethernet units (LXI). In 30 years, they have gained customers all around the world, including many A-brand industry-leaders and practically all prestigious universities. The company is headquartered near Hamburg, Germany, and known for their outstanding support that comes directly from the design engineers. More information about Spectrum can be found at www.spectrum-instrumentation.com

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