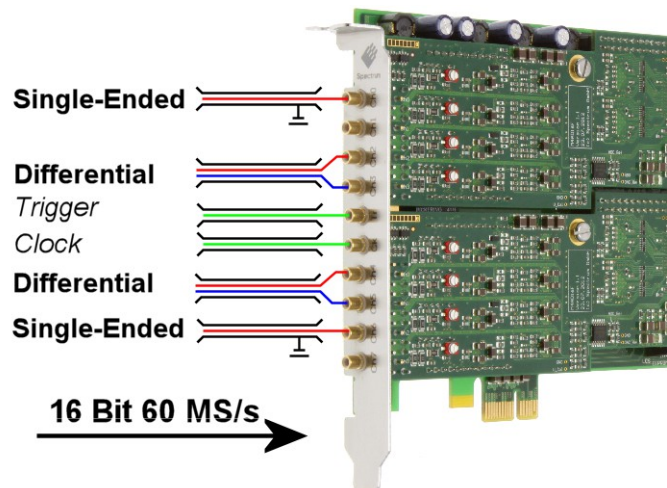


## Cost effective 16 bit digitizer with 4 x 60 MS/s

End of 2013 Spectrum GmbH has released two new models of its mid-speed 16 bit digitizer line. The new versions M2i.4960 and M2i.4961 are available for PCI/PCI-X and PCI Express and offer two or four synchronous channels with 60 MS/s sampling speed and a bandwidth of 30 MHz. Each channel can be individually switched between single-ended and true differential input mode. This allows to acquire single-ended and differential signals with just one digitizer at the same time.



The two new models are in full production end of January 2014 and offer a cost effective solution to acquire fast signals with full 16 bit resolution. This targets embedded systems and OEM markets as well as cost sensitive projects where the existing M2i.49xx versions with more channels and sampling rate multiplexing are not needed.

Each input channel can be software programmed for proper termination, user offset and input range and also includes an on-board calibration. Different acquisition modes like segmented acquisition (Multiple Recording), gated acquisition (Gated Sampling) or the streaming mode (FIFO) together with the versatile clock and trigger section allow the card to adopt to a wide variety of different applications. Multiple cards can be internally synchronized to get more synchronous channels or to directly synchronize to arbitrary and digital waveform generators or digital waveform capture cards.

A completely new designed digital input option allows to acquire up to 32 synchronous digital input channels by multiplexing them into the analog data in different ways. Each 16 digital inputs can either completely replace one analog channel or each 2/4 digital inputs can be stored together with the A/D sample by reducing its resolution.

All features of the new card are fully supported by Spectrum's own software SBench 6. SBench 6 has been optimized to handle several GByte large signals and is running natively under Windows and Linux, both 32 bit and 64 bit. This makes SBench 6 the first out-of-the-box measurement software with full Linux support. The internal software structure with separation between streaming engine and user interface makes it possible to take advantage of the full hardware performance, easily allowing to achieve a constant transfer rate to hard disk RAID array of more than 200 MB/s.

SBench 6 has been designed for the Spectrum PC instruments and supports all usage modes and settings of the hardware with comfortable set-up dialogs. The software is able to run the cards in oscilloscope mode as well as long time transient recording mode (streaming mode). A special feature of SBench 6 is the segmented view that allows to display segment based signals together with signals of a second timebase (ABA mode) as well as highly precise timestamps. In

addition to this SBench 6 has a lot of build-in features for comfortable data inspection and documentation like FFT analysis, a function interpreter, several integrated analysis functions, export to ASCII, Wave, MATLAB, comment functions for signals and display details, as well as a comfortable printout function.

Customers who want to write their own software can use the proven SPCM API for all 32bit and 64bit Windows and Linux which are included in the delivery. A set of standard programming examples is provided to illustrate the boards main signal capture functions. Extensive support includes C++, LabVIEW, MATLAB, LabWindows, VB.NET, Delphi, Python, C# and J# code.

A 2-year manufacturer warranty is standard for all Spectrum hardware products. Drivers, software and firmware updates are available free of charge as well as the support given directly by the developer engineers themselves.

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