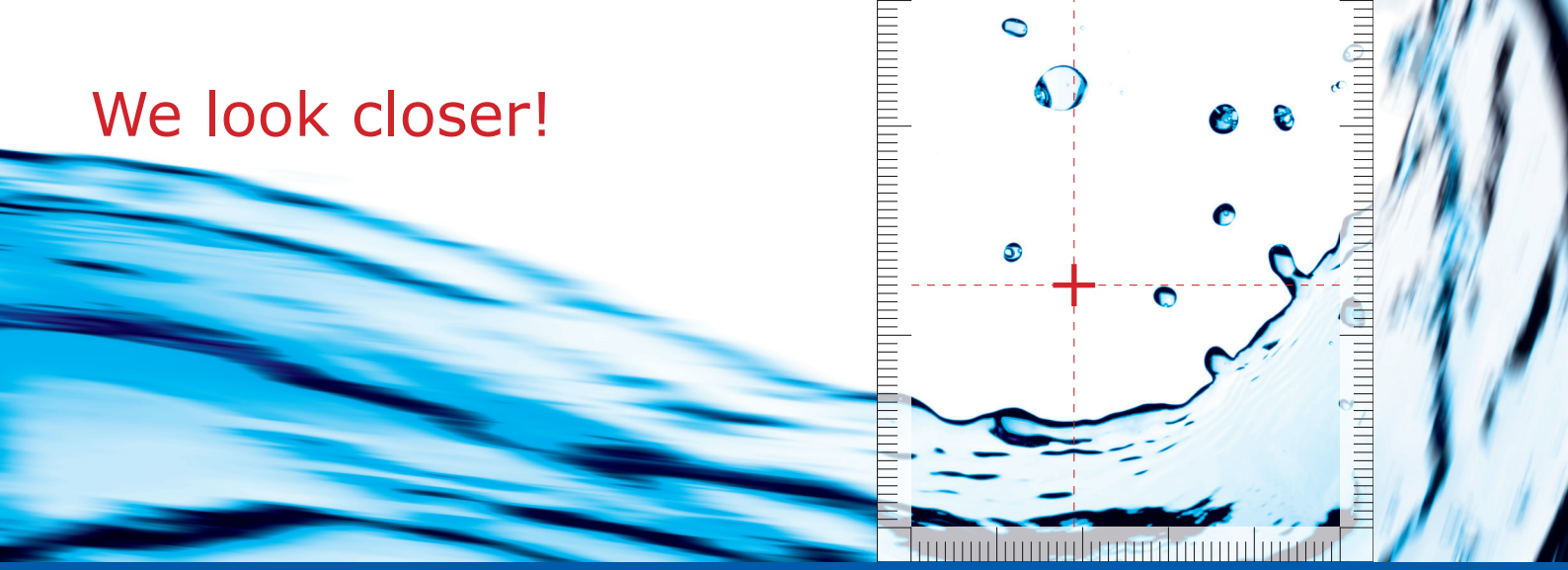
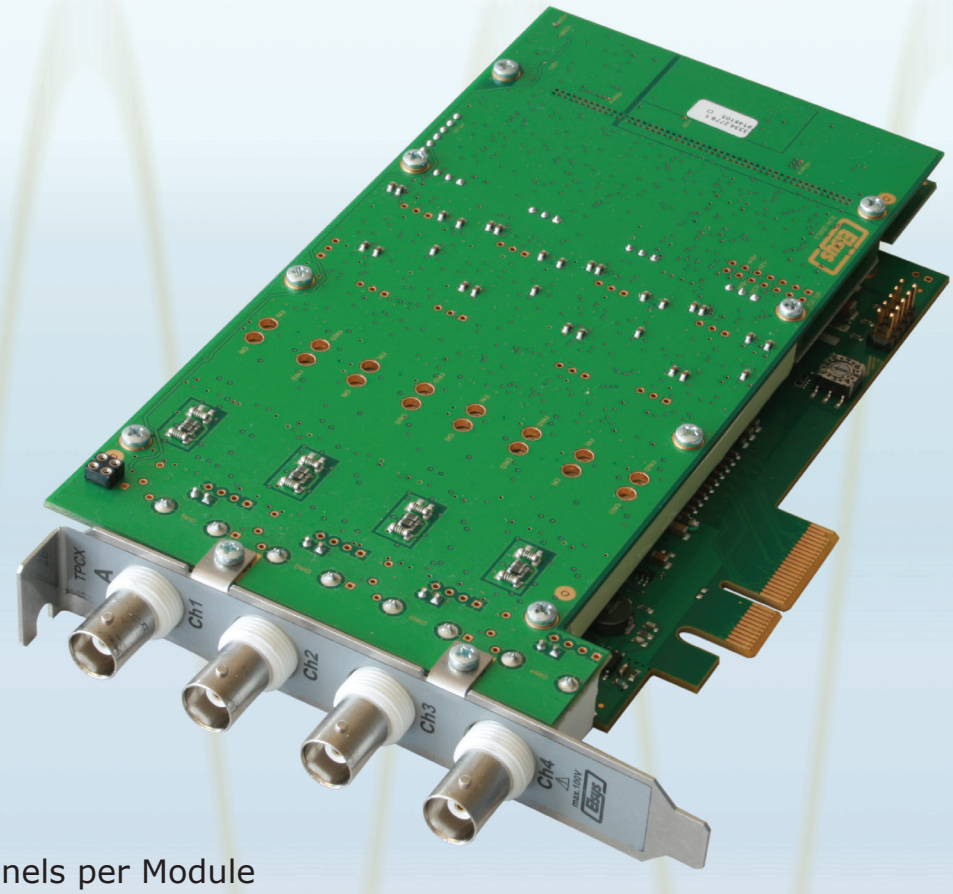
We look closer!



Elsys TPCE
PCIe Data Acquisition Modules

Fast, High-Precision, and High-Resolution
PCI Express Data Acquisition Modules



- 4 or 8 Channels per Module
- Up to 240 MS/s @ 14-bit Resolution
  Up to 60 MS/s @ 16-bit Resolution
- Single-Ended and Differential Inputs
- PCIe 1.1, 2.5 GBit/s, 4 Lane
- Up to 640 MB/s data transfer to the host computer

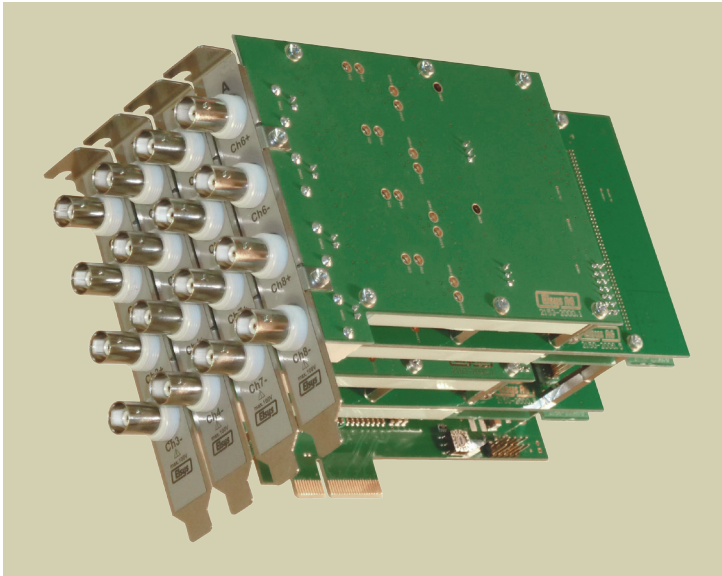
Elsys

Elsys TPCE Data Acquisition Modules

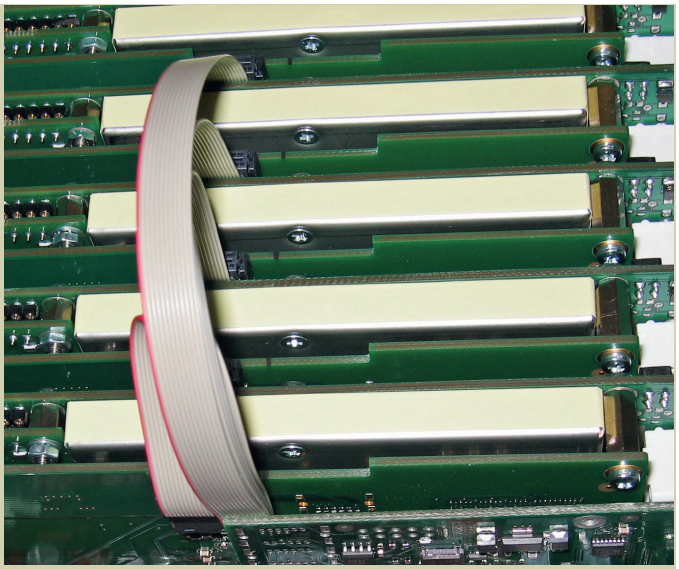
The Elsys TPCE Data Acquisition modules are high-precision and high-resolution digitizers with sophisticated features such as advanced trigger mode, continuous data acquisition mode, differential inputs, digital input lines (Markers) and ICP coupling for powering piezo sensors.
The various TPCE modules are compact short-form PCIe boards. A scalable data acquisition system may be started with one or several modules that can be extended in the future to build a solution with up to 64-channels in one housing. This is the advantage of a modular data acquisition system. Modules with different sample rates and different resolution may be mixed to match the application needs.
An engineer can either be efficient the very first day by taking advantage of the powerful Elsys Data Acquisition application software TranAX 3 or start the development of a custom software based on the C++/C# driver with sample programs for Windows and Linux. Especially for ATE and integrated system applications there is an IVI Scope Class driver available. In both cases, the client-server architecture of the software allows to remotely control the TPCE modules over Ethernet with access from one or several clients.

Key Capabilities

- PCIe 1.1, 2.5 GB/s, 4 Lane
- Up to 640 MB/s data transfer to the host computer
- 4-, or 8-channels SE and Diff modules
- Systems with up to 64-channels can be built in one device with proprietary starhub
- Up to 240 MS/s sample rate
- 14-bit and 16-bit vertical resolution
- Up to 128 MS memory per channel
- High-precision typ. 0.03% of FSR
- Continuous data recording
- Multiblock data acquisition mode with up to 16'000 blocks
- Advanced trigger for debugging
- Very low input noise
- High differential CMRR
- Turnkey solution combined with powerful TranAX 3 Transient Recorder application software
- Device drivers C++/C# for Windows® and Linux with sample programs
- IVI Scope Class driver with sample programs for C++/C# and LabVIEW



8 Channel Differential Inputs on one PCIe module.



Starhub to distribute clock and trigger for synchonized acquisitions

TPCE Modules Order Information

Model Unit [1]	# of Channels	Max. Sample Rate/ch [MS/s]	ADC Resolution (16-bit up to 1/4 of max. sample rate)		Memory [MS/ch]	
			Standard	Optional	Standard	Optional
TPCE-ffbb-4S	4 SE, 2 Diff	10, 20, 40, 80, 120, 240	14-bit	16-bit	32 MS	128 MS
TPCE-ffbb-4D	4 Diff					
TPCE-ffbb-8S	8 SE, 4 Diff	10, 20			16 MS	64 MS
TPCE-ffbb-8D	8 Diff					

1) Replace "ff" with Max. Sample Rate and "bb" with Vertical Resolution. Example: Sample Rate = 40 MS/s, Resolution = 16-bit -> TPCE-4016

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