



# SUNDANCE - The DSP & FPGA Development Force

October 2008

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## 'Hitch a ride with Sundance...'

We wouldn't tell you to do something that we wouldn't do (see next story), so you'll be comforted to know that Sundance has begun its roll-out of PXIe compliant products and solutions. We'll be debuting our SMT7 series of PXIe solutions at the [Embedded Systems Show in Birmingham](#) where we will be joined by our specialist PXIe partner [Kane Computing](#).

Our SMT7 Series covers more than 25 modular PXI Express DSP/ FPGA solutions. Showcased at ESS will be our Dual - ADC PXI Express Hybrid Peripheral Module, the [SMT702](#). It provides 8-lanes of PXI Express and features 2 channels of 3 GHz ADC that can be combined to deliver 6 Gbps, and high density Xilinx Virtex 5 LXT FPGA devices optimized for logic and serial I/O.

The generic product building block for the 7 Series is the [SMT700](#) that introduces extreme FPGA acceleration to the PXI Express standard. The SMT700 features a Xilinx Virtex 5 FPGA with connectors for serial interfaces, Gigabit Ethernet and fibre optic modules... amongst others.

With this new series of products we have increased our ruggedized offering and can better service customer where PXI compliance is critical. If you want a sneak preview of the SMT7 Series see us at the ESS show, view the [press release](#) or contact your [local Sundance Office](#).



## ...and get on board the PXI Express

PXI, or PCI eXtensions for Instrumentation is a modular instrumentation platform originally introduced in 1997 by [National Instruments](#). PXI is designed for measurement and automation applications that require high-performance and a rugged industrial form-factor. With PXI, you can select 3U or 6U modules from multiple vendors and easily integrate them into a single PXI system. PXI uses PC-based technology and an industry standard governed by the [PXISA](#) ensures ruggedness and system interoperability.



PXI adds a number of features not found in the basic 132-Mbyte/s PCI interface, including a star trigger that allows precise synchronization between devices and a 10-MHz reference clock to all boards. There also is a dedicated trigger for each module. And, PXI has a propagation delay of less than 5 ns.

In its 'Express' incarnation, PXI Express is moving test and measurement into its next generation. It builds on the PXI standard, offering higher performance and backward compatibility. As PXI was based on the PCI bus, [PXI Express](#) is built on the PCI Express high-speed serial interface. PXI Express gains much of its backward compatibility because of the compatibility between PCI Express and PCI. Importantly PXI and PXI Express boards can interact.

So what's in it for you? PXI Express does more than just offer faster transfer rates, incremental lane expandability, and all the other features of PCI Express; it can also tackle new application areas such as video and software radio. With PXI Express timing and synchronization features are expanded. PXI Express uses a 100-MHz differential reference clock and provides differential triggers. Each PXI Express board can have up to a x8 PCI Express fabric connection, though the standard supports x1 through x8 connections. A PCI Express switch card or switch on the system controller provides host access to each card. Each hybrid PXI Express board has a PXI connector as well. This supplies access to the 10-MHz clock and star trigger support.

A key new feature is the PXI Express hybrid slot that delivers support for both PCI and PCI Express signaling by taking advantage of available pins on high-density backplanes. This creates a level of backward compatibility not available in even desktop PC card-edge connectors.

PXI Express uses the same driver and OS model as PCI, which ensures complete software compatibility for PXI Express. You don't need to revise driver software or application software for PCI Express-based systems. So in addition to providing hardware compatibility through the hybrid slot, PXI Express systems also helps you preserve existing software investments.

If you still need more information on PXI Express or want data on our SMT7 PXI Express modular solutions, contact your local Sundance Office or email [enquiries@sundance.com](mailto:enquiries@sundance.com)



## Sundance hits the Road

Continuing with the travel theme of this month's eNews, during the last quarter of 2008 and into the first quarter of 2009 you can visit Sundance and view our latest product innovations in the four corners of the world.

We have organized a packed trade show and technical conference agenda where we can get up-front and close to our customers, and meet those who are new to Sundance or are interested in the multiprocessing juggernaut. We'll be visiting Germany, Japan, Switzerland, the UK and USA. If you want to come and talk to us please see our schedule of events below, or email [enquiries@sundance.com](mailto:enquiries@sundance.com) for more information. The Embedded Systems Show sees the launch of our SMT7 series PXIe solutions... don't miss it!

If you can't make it to one of our events, remember we have Offices in China, continental Europe, the UK and USA. You can find your [local Sundance Offices here](#).

And of course you can always catch us online, 24 hours a day via our YouTube Channel @ <http://www.youtube.com/user/SundanceVideos>

Date	Event	location	Web link
1st - 2nd October 08	<a href="#">Embedded Systems Show</a>	NEC, Birmingham, UK	
26th - 30th October 08	<a href="#">Embedded Systems Conference</a>	Hynes Convention Center - Boston - Mass, USA	
11th - 14th November 08	<a href="#">Electronica Automotive Conference</a>	New Munich Trade Fair Centre, Germany	
16th - 19th November 08	<a href="#">UK@CERN 2008</a>	CERN (European Organization for Nuclear Research), Switzerland	
19th - 21th November 08	<a href="#">Embedded Technology 2008</a>	Pacifico, Yokohama, Japan	
3rd - 5th March 09	<a href="#">Embedded World 2009</a>	Nuremberg, Germany	

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