

# PRESS RELEASE

September 8, 2004

SUNDANCE

## Sundance launches a new wave of data acquisition systems



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**RENO, NEVADA** – September 8, 2004 - Sundance, the industry solution provider of high performance systems for a wide range of signal processing and reconfigurable computing applications, today released its new high-speed digital-to-analog data acquisition (DAQ) system. The [SMT381](#), one of the industry fastest DAQ systems, converts memory provided digital inputs at the exceptional performance of one giga sample per second (GSPS). Alternately the data could be come via two external digital inputs and converted at 840 mega samples per second (MSPS). A 1 GSPS-rated Fujitsu MB86064 drives the digital-to-analog dual channel conversion and provides the exceptional performance characteristic of the SMT381.

The single width expansion module SMT381 is a daughter board that plugs into a base module the SMT338-VP. This base module provides, via a high performance Sundance Low Voltage Differential Signaling (LVDS) bus, the digital inputs to be converted by the SMT381. The base module is managed by a Xilinx® Virtex-II Pro™ FPGA that handles the data transfers to a variety of communication channels such as ComPorts, Sundance High-speed Bus (SHB), or RocketIO Serial Links. These interfaces are compatible to a wide range of Sundance processors and I/O modules. The FPGA outputs data at 840MHz to the SMT381 or to its onboard memory from where it can be converted at 1 GSPS"

"Our customers have an ever-increasing need for high speed conversions in their wireless and waveform applications, and the SMT381 is the ideal solution for their software defined radio design challenges" said Flemming Christensen, Managing Director of Sundance. "With our extensive family of compatible high performance

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signal processing systems we have been instrumental in the success of our OEM customers".

The SMT381 leverages its modular designs by assigning the control of all digital functions to the base module, while the Fujitsu MB86064 DAC on the daughter module handles conversions. There are two DAC cores on the SMT381, hence two channels, that receive data through a number of paths, and the most efficient one is a direct path from the LVDS input buffers. Two 14-bit LVDS ports on the DAC convert the data and the sampled data can either be supplied to the DAC cores externally via the LVDS data bus or internally from the Waveform Memory.

"Availability of the new SMT381 module from Sundance, incorporating Fujitsu's MB86064 Dual 14-bit 1GSa/s DAC, provides true high performance digital to analogue converter functionality to enhance existing platforms." said Paul Maddox, Mixed Signal Technical Marketing Manger of Fujitsu Microelectronics Europe, going on to highlight that "the MB86064 is designed to meet the needs of multi-carrier, multi-mode communications systems and as such makes it ideally suited to SDR development and evaluation. It certainly takes full advantage of the many features of our DAC and it also provides a level of design and performance that is indicative to Sundance's technical expertise and is just one example of the wealth of technology at Sundance"

The digital data stream is transmitted by the base module to the SMT381 directly from the FPGA two RocketIO Serial Link interface for real-time applications. Another stream could be provided by the Sundance High-speed Bus (SHB) interface or from the DDR SDRAM memory for non-real-time applications. Each data stream is then conditioned and sent to the SMT381 via the daughter card connector.

"The introduction of such a high-performance DAC to the market underscores Sundance's ability to work closely with leading suppliers such as Fujitsu and to deliver innovative technology," said George Fang of Mitsubishi Electric Research, "The level of performance and flexibility that the SMT381 can provide is indicative of Sundance's breadth of technical expertise in signal processing"

The SMT381 has two clock packages to achieve the DAC's full range of input frequencies. The first clock package is a synthesizer that has a range of up to 400MHz, while the second clock is a voltage-controlled oscillator that is connected to a phase lock loop. Alternatively the user can provide the module with an external LVPECL clock or an external RF clock. The SMT381 has an immediate availability and is priced at \$3,515 USD. Evaluation units and OEM pricing are available on request.

#### About Sundance

Sundance is a UK-based, ISO 9000 Compliant, independent company headquartered Chesham, U.K., and with offices in the United States and Italy. The company designs, develops, manufactures and markets high performance signal processing and reconfigurable systems for original equipment manufacturers in the wireless and signal processing markets. Leveraging its multiprocessor expertise and experience, Sundance provides OEM with modular DSP and FPGA-based systems as well as, Data Acquisition, I/O, Communication, and interconnectivity products that are so essential to multiprocessor systems where scalability and performance are important. With over fifty different modules and carriers for PCI, cPCI VME and Stand Alone platforms, Sundance is a solution provider to semiconductor, pharmaceutical, and factory automation industries. Sundance, founded in 1989 by the current directors, is a Xilinx Xperts and MathWorks' Connection program member.

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