

# PRESS RELEASE

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## NEW IMAGE PROCESSING DEVELOPMENT PLATFORM EMPOWERS SYSTEM DESIGNERS

SUNDANCE



**London – England** A new FPGA and DSP co-design platform for developing image processing equipment, the [SMT339](#), has been launched by Sundance Multiprocessor Systems. At the core of the new board are the lightning fast Texas Instruments (TI) TMS320DM642 DSP-based digital media processor and Xilinx Virtex-4 FX-60 FPGA.

TI's TMS320DM642 processor has been specially designed to optimise image processing performance with a stunning capability of 5760MIPS at a clock rate of 720MHz. The Xilinx Virtex-4 FX-60 FPGA boasts 622Mbps to 10.3125Gbps serial transceivers for high-speed serial input/output. The huge processing power of the FPGA speeds functions such as colour space conversion (CSC) and discrete cosine transforms (DCT), while Fast Fourier Transforms (FFT) and convolution can be implemented without using any of the DSP's resources. Boosting performance there is 16MB of fast ZBTAM and 128MB DSP SDRAM.

"Sundance DSP is a valued partner of Xilinx and have a strong track record of delivering high performance development platforms. The SMT339 seems well positioned to complement the portfolio with a platform that demonstrates the dramatic performance boost that FPGAs bring to a co-processing environment," enthused, Mark Oliver, marketing manager multimedia video and imaging, of Xilinx's DSP division.

Image processing is an essential part of everyday life. At home, HD TV, interactive gaming and media streaming is now common. In hospital, scanning equipment is delivering instant and more accurate images for doctors. In industry, simulators of all kinds enable complex and often hazardous tasks to be practiced in artificially created worlds. Security systems from iris scanning to automatic number plate recognition all depend on image capture, processing and interpretation. Many applications also rely on the ability to achieve high data compression rates specified by H.264 and MPEG-4, the natural replacement for the overworked MPEG-2 standard.

"In designing the SMT339, we have listened carefully to our customers: system engineers, researchers and scientists interested in imaging systems and optics – working in fields as diverse as aerospace, medical, security, military, broadcasting and video editing. They all share a common need for a fast

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DSP/FPGA design platform tailored to the demands of image processing,” commented Sundance systems manager Justin Wheatley.

The [SMT339](#) also features a Phillips SAA7109AE/SAA7108AE video decoder/encoder. This accepts most PAL and NTSC standards and can output processed images in PAL/NTSC or VGA (1280x1024, or HD TV Y/Pb/Pr).

Software support is from TI’s Code Composer Studio Integrated Development Environment (IDE) and 3L’s Diamond FPGA. These allow SMT339 users to quick-start their development of cutting-edge image processing functions with live processed image output. The hassle associated with integrating industry-leading hardware is eliminated.

“Sundance, a member of the TI DSP Third Party Network, continues to offer high-quality solutions based on TI’s processor and tools technology,” commented Rich Faust, worldwide DSP third party network manager. “Sundance’s video and imaging expertise coupled with the reliability of TI’s high-performance processors will facilitate innovation across a variety of imaging applications.”

The SMT339 module can be plugged into a standard single width TIM slot and can be accessed by either a standard comport or RSL interface. The module can also run stand-alone – making it an ideal platform for embedded applications.

As a powerful, versatile COTS image processing development platform, the SMT339 is unrivalled and is essential for the creation of advanced digital imaging products. Designers wanting technical details should visit [www.sundance.com/smt339](http://www.sundance.com/smt339).

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About the Texas Instruments DSP Third Party Network:

Sundance Multiprocessor Systems is a member of the TI DSP Third Party Network, a worldwide organization of independent companies that offer products and services supporting TI DSPs. TI third parties provide expertise across a variety of applications, including audio, control, telecommunications, video and imaging and wireless communications. Third party products and services include a broad range of application software, development hardware and software, and consulting services that support original equipment manufacturers' efforts to bring differentiated products to the market quickly. For more information about the TI DSP Third Party Network, please visit [www.ti.com/3p](http://www.ti.com/3p).

#### Acronyms

COTS – commercial off the shelf

DSP – digital signal processing

FPGA – field programmable gate array

HDTV – high definition TV

MIPS – million instructions per second

MPEG – moving picture experts group

NTSC – national transmission standards committee

PAL – phase alternation line

RSL – rocket serial link

TIM – Texas Instruments module

ZBT – zero bus transfer