

# Medical/Scientific Image Processing TMS320DM642 Digital Media Processor

## Design Note #31



Image processing from Orchid Technologies takes you to the stars.



“Medical image processing using TI’s new cutting edge media processor, the TMS320DM642, makes this the hottest medical image processing board available anywhere! With design and implementation completed in under eight weeks!”

- Director Engineering

### Advanced Medical Image Processing

Orchid Technologies’ newest TMS320DM642 design offers unprecedented video number-crunching abilities. Intended for Scientific and Medical Imaging use, this TMS320DM642-based design features 2500 volt input image isolation, a unique camera input interface, pixel and frame-oriented processing, PCI, and Firewire video outputs, as well as standard S-Video, NTSC and digital video outputs. This board is the Swiss-Army-Knife of video processing technologies.

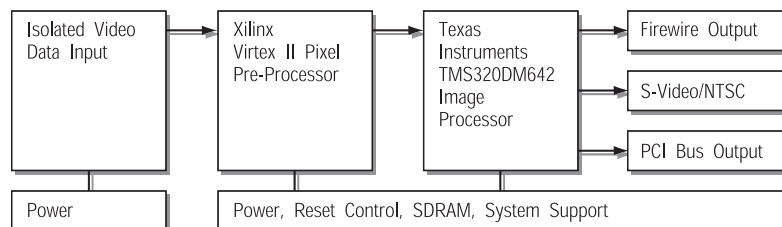
### TMS320DM642 Digital Media Processor

The Texas Instruments TMS320DM642 Digital Media Processor is the heart of this medical image processing board. With 64 Megabytes of high speed SDRAM, and three VIP Video Ports, the 600 MHz TMS320DM642 races through image processing algorithms, such as convolution, filtering, motion detection, interlace/deinterlace functions, color conversion, image enhancement, MPEG and JPEG image compression and expansion, and much more.

### Xilinx Vertex II Imaging Support

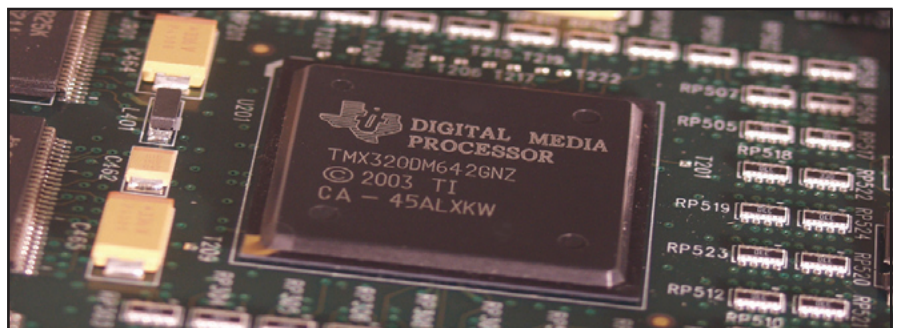
And just in case the TMS320DM642 is not enough, this board features a Xilinx Virtex II digital video front-end setup to perform input-video preprocessing at the pixel level. “The Xilinx Virtex II component performs all pixel-related processing, such as color conversion and LUT lookup, leaving the TMS320DM642 free to perform high-bandwidth image-manipulation functions,” says Orchid Technologies’ president and lead engineer Paul Nickelsberg.

### An Innovative Medical Imaging Architecture



### Orchid Technologies Delivers

The development of custom electronics technology solutions for our OEM clients is Orchid’s entire business. High-end digital signal processor based designs with rapid design cycles, demanding technical requirements, and unforgiving schedules set us apart. Call Orchid Technologies today. We’ll put a custom imaging product design in your hands tomorrow!



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**Custom Engineering From Concept to Production**

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