

## Product Bulletin

# TMS320DM64x™ Digital Media Development Tools

### Key Benefits

- Start application software development immediately
- Understand DSP functionality for video experts
- Build video, audio and Internet streaming functionality into existing designs
- Simplify overall system design
- Differentiate products with cutting-edge software
- Design flexibility to respond to evolving standards
- Choose development tool option that best meets your needs

TI offers multiple options to jump-start the development of multi-channel, multi-format digital media high-performance video and imaging applications. Depending on what you need, you can choose between two different tool sets that provide a fully software-programmable DSP platform to increase performance, flexibility and functionality of video and imaging systems. Based on the TMS320DM642 digital media processor, these tools are available today:

- DM642 Evaluation Module (EVM)
- DM642 Digital Media Development Kit (DMDK)

The DM642 EVM and DMDK include a comprehensive fully integrated development platform and an easy-to-use, robust tool suite. Leveraging the high-performance TMS320C64x™ DSP core, these development platforms support TI's TMS320DM642, DM641 and DM640 digital media processors.

These digital media tools are perfect for developers who have minimal experience with DSP as well as developers who are experienced with programmable DSPs and want to add multimedia functionality to an existing or new product/system.

### DM642 EVM and DMDK Hardware

Hardware includes DSP, memory, video capture and display, audio, connectivity and emulation and power:

- 600-MHz DM642 DSP
- 4-MBytes Flash, 32 MB of 133-MHz SDRAM and 256-kbit I<sup>2</sup>C EEPROM
- Three female RCA connectors for composite video input (NTSC, PAL)
- One female S-video connector for component (Y-C) video input (NTSC, PAL)
- Three female RCA connectors (one for composite video out-

put, and three for RGB output or HDTV output)

- One female S-video connector for RGB monitor output
- One female 15-pin VGA connector for RGB monitor output
- On-screen display support (OSD FPGA)
- Two channel line-in (stereo), 8 kHz to 96 kHz sampling rate
- Two channel line out (stereo)
- One microphone input (mono)
- PCI plug-in card or external power supply brick (+5 V)
- 10 Base-T or 100 Base-TX using single RJ-46 connector
- Dual-UART interface

### TMS320DM642 Evaluation Module



The DM642 EVM is available today from authorized TI distributors.

- Daughtercard interface for video port and memory bus expansion
- 14-pin JTAG for external emulation hardware support
- 60-pin, next-generation emulation header for advanced emulation features such as trace and high-speed, real-time data exchange
- Boot mode selection via switches
- Push button reset
- Eight user-defined LEDs and GPIOs
- On-board switching voltage regulators for adjustable DSP core voltage (+1.2 V to +1.4 V) and fixed +1.8 V (OSD FPGA) and +3.3 V

### **TMS320DM642 EVM and DMDK software**

Software includes host development tools, target software, demos and video-specific algorithms:

- Code Composer Studio™ Development Tools including DM642 chip support package, DSP/BIOS™ kernel support for new peripherals (video port, VIC, EMAC, MDIO)
- Device driver kit including drivers for DM642 video capture and display drivers for the DM642 EVM card, AIC23 audio codec driver, dual-UART driver,

#### **DM642 EVM also includes:**

- DM642 EVM board
- DM642 EVM software CD
- DM642 EVM Quick Start Guide
- DM642 technical reference
- 5-V/5-A power supply
- Multilingual regulatory compliance statement

#### **The DM642 DMDK also includes:**

- DM642 EVM board
- DM642 EVM software CD
- DM642 EVM Quick Start Guide

- DM642 EVM technical reference
- 5-V/5-A power supply
- Multilingual regulatory compliance statement
- NTSC or PAL camera
- Video cables (two RCA and one S-Video)
- Code Composer Studio v2.20 for the TMS320DM64x™ generation of processors only
- DSP/BIOS™ real-time kernel
- Advanced PCI emulator: XDS560™ Emulator

generic McASP data mover driver for TMS320C64x™ DSPs and PCI target-side driver

- eXpressDSP™ Reference Framework 5
  - Video application demos including source code for:
    - capture/display pass-through demos (composite/S-video In/Out)
    - on-screen display (OSD) and
    - audio loopback
  - Streaming media executable demos (with object code libraries), video loopback demos (H.263, MPEG-2 video and JPEG) and TCP/IP networking
- The DM642 EVM board has extensive daughtercard interface expansion capabilities for mem-

ory, peripheral and video port expansion. Three expansion connectors can be used to accept plug-in daughtercards, allowing users or third parties to build on the EVM, to extend its capabilities and provide customer and application-specific I/O. The specification is included in the DM642 EVM technical reference.

The XDS560 Emulator is a PCI-based, next-generation emulator that supports high-speed RTDX™ on an enabled processor for real-time data transfer rates over 2 MB/s. This provides an unparalleled level of real-time visibility into an executing application and assists developers in debugging real-time systems. Enabling code download speeds of up to more than 500 KB/s, the XDS560 Emulator increases productivity through faster start up for larger applications.

#### **Pricing and availability**

Start and finish your development quickly with this all-in-one tool suite. The DM642 EVM is available for U.S. \$1,995, and the DM642 DMDK is available at U.S. \$6,495. Both can be purchased through authorized TI distributors. For more information, visit [www.ti.com/dmtools](http://www.ti.com/dmtools)

### **TMS320DM642 Digital Media Development Kit**



**The DM642 DMDK is available today from authorized TI distributors.**

# TI Worldwide Technical Support

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## Internet

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## Product Information Centers

### Americas

Phone +1(972) 644-5580  
Fax +1(972) 927-6377  
Internet/Email [support.ti.com/sc/pic/americas.htm](http://support.ti.com/sc/pic/americas.htm)

### Europe, Middle East, and Africa

Phone  
Belgium (English) +32 (0) 27 45 55 32  
Finland (English) +358 (0) 9 25173948  
France +33 (0) 1 30 70 11 64  
Germany +49 (0) 8161 80 33 11  
Israel (English) 1800 949 0107  
Italy 800 79 11 37  
Netherlands (English) +31 (0) 546 87 95 45  
Spain +34 902 35 40 28  
Sweden (English) +46 (0) 8587 555 22  
United Kingdom +44 (0) 1604 66 33 99  
Fax +(49) (0) 8161 80 2045  
Email [epic@ti.com](mailto:epic@ti.com)  
Internet [support.ti.com/sc/pic/euro.htm](http://support.ti.com/sc/pic/euro.htm)

### Japan

Fax International +81-3-3344-5317  
Domestic 0120-81-0036  
Internet/Email International [support.ti.com/sc/pic/japan.htm](http://support.ti.com/sc/pic/japan.htm)  
Domestic [www.tij.co.jp/pic](http://www.tij.co.jp/pic)

### Asia

Phone  
International +886-2-23786800  
Domestic Toll-Free Number  
Australia 1-800-999-084  
China 108-00-886-0015  
Hong Kong 800-96-5941  
Indonesia 001-803-8861-1006  
Korea 080-551-2804  
Malaysia 1-800-80-3973  
New Zealand 0800-446-934  
Philippines 1-800-765-7404  
Singapore 800-886-1028  
Taiwan 0800-006800  
Thailand 001-800-886-0010  
Fax 886-2-2378-6808  
Email [tiasia@ti.com](mailto:tiasia@ti.com)  
Internet [support.ti.com/sc/pic/asia.htm](http://support.ti.com/sc/pic/asia.htm)

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