

## Product Bulletin

# DaVinci™ Technology Overview

DaVinci technology makes breakthrough innovation possible in digital media devices for the hand, home and car. DaVinci technology is the first integrated portfolio of Digital Signal Processing (DSP) SoCs, software, tools and support optimized for digital video systems. These integrated components are the industry's first complete offering of an open platform.

### DaVinci Processors Reduce System Cost

The portfolio of DaVinci processors consists of scalable, programmable DSP SoCs, accelerators and peripherals optimized to match the price, performance and feature requirements for a broad spectrum of digital video end equipments. The DaVinci processor portfolio includes:

- **TMS320DM644x digital media processors** – are highly integrated SoCs based on an ARM926 processor and the new TMS320C64x+ DSP core. The TMS320DM6446 and TMS320DM6443 processors are ideal for applications such as videophones, automotive infotainment, digital still cameras, streaming media and IP set-top boxes.
- **TMS320DM643x digital media processors** – are also based on the new TMS320C64x+ DSP core and priced as low as U.S. \$9.95. The TMS320DM6437, TMS320DM6435, TMS320DM6433 and TMS320DM6431 processors are ideal for cost-sensitive digital media applications and include special features that make them

### Key Features

- Integrated portfolio of Digital Signal Processing SoCs, software, tools and support
- Optimized for digital video systems, DaVinci technology accelerates innovation
- A complete portfolio of TI-developed digital media software is now widely available to further simplify design

suitable for automotive video applications such as lane departure and collision avoidance as well as machine-vision systems, robotics and video security.

### Complete System Tools and Support Get You to Market Faster

Developers can get started today with DaVinci-based software and development tools tailored to simplify design in video applications, including:

- **TMS320DM644x Development Tools**
  - **Digital Video Evaluation Module (DVEVM)** – Comprised of both hardware and software, the DVEVM enables developers to start instantaneous evaluation of DaVinci processors and begin building digital video applications.
  - **Digital Video Software Development Kit (DVSDK)** – The DVSDK is designed to tune complex DaVinci-based digital video systems quickly and efficiently. The DVSDK significantly improves software integration and system visibility by incorporating tools such as the:
    - eXpressDSP™ Configuration Kit



<b>Operating Systems and Device Drivers</b>	
<ul style="list-style-type: none"> <li>• MontaVista Linux LSP</li> <li>• Open Source Linux</li> </ul>	
<b>Multimedia Application Programming Interfaces (APIs)</b>	
<ul style="list-style-type: none"> <li>• Industry-recognized APIs</li> <li>• DaVinci APIs</li> </ul>	
<b>Middleware</b>	
<ul style="list-style-type: none"> <li>• CODEC abstraction</li> <li>• Interprocessor communication</li> <li>• Audio/Video frameworks</li> </ul>	
<b>Multimedia CODECs</b>	
e = encode d = decode	
<b>Available Now</b>	<b>Available 1H07</b>
H.264 MP d D1	WMV9 MP / VC1 d D1
H.264 BP e/d D1	WMV9 MP / VC1 e D1
MPEG-4 SP e/d D1	WMA8 e
MPEG-2 MP d D1	AAC HE e
JPEG e/d D1	AAC LC e
AAC LC d	G.729 AB e/d
MP3 d	G.726 e/d
G.711 e/d	G.723.1 e/d
HE-AAC d	
AC3 d	
WMA9 d	

**Table 1. DaVinci™ Software – Optimized for Simplified and Efficient Innovation**

- TMS320DM644x SoC Analyzer
- MontaVista™ Linux Operating System
- **Digital Media Software** – To simplify development and reduce cost in your digital media application, a complete portfolio of TI-developed digital media software is now widely available.
- **TMS320DM643x Development Tools**
  - **TMS320DM6437 Digital Video Development Platform (DVDP)** – Rapidly accelerate the development time of your low-cost Digital Video application with the new DaVinci™ TMS320DM6437 DVDP. Available today for U.S. \$495, the DVDP includes both hardware and software and enables immediate evaluation of the DM6437 digital media processors.

DaVinci products are backed

by TI's third party network that is able to offer video system expertise to customers worldwide. In addition to DaVinci products, TI offers a complete portfolio of high-performance analog products for video applications.

### For More Information

Visit [www.ti.com/davinci](http://www.ti.com/davinci) for complete details, such as:

- Technical specifications for the TMS320DM643x and TMS320DM64x digital media processors
- Digital video white paper library
- Blogs, such as:
  - *How to Avoid the Video Tower of Babel*
  - *I'm an HD Snob and Proud of It*
- Podcasts, such as:
  - DVEVM technical demonstration
  - DSP market trends
- Digital video webcast series
- DaVinci benchmarks
- And more...

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