Overview
Software and hardware engineers can easily design more media-rich, portable applications utilizing the new DaVinci DM37x video processors. The DM3730 and DM3725 processors with their ARM® Cortex™-A8 and TMS320C64x+™ DSP core, imaging and video accelerator (IVA), 3-D graphics processor (DM3730 only) and high-performance peripherals (USB 2.0, SD/MMC) integrated on a single system-on-chip (SoC), are suitable for applications requiring HD video processing or a large amount of data processing. These applications include navigation systems, media players, medical patient monitoring devices, industrial test and measurement devices, industrial vision and portable communications.

Technical details
- The DM3730 and DM3725 video processors are pin compatible and software compatible with each other, as well as with Sitara™ AM3715 and AM3703 processors. Each device can be configured to operate at multiple operating points enabling low power or high performance modes.
- 800-MHz C64x+™ DSP with 720p 30 frames per second (fps) HD video encoding and decoding, which offers numerous price, feature and power options to enable a range of end products from a single software and hardware investment.
- The DM3730 processor has a POWERVR™ 200-MHz graphics accelerator, supports OpenGL® ES 2.0 and renders 20 million polygons per second, coupled with the advanced display subsystem, which allows intensive signal analysis and processing and seamless HD video decoding for multi-media applications.
- Allows developers to create a user interface enabling stunning 3-D graphics navigation with life-like effects.
- 20 percent increase in LPDDR controller performance and 100 percent increase in L1 cache compared to OMAP3530 processor (increased memory bandwidth) to provide increased multi processor performance and reduces latency.

Community support
Helping make development easier, customers can start developing their designs today with:
- TMDXEVM3730 EVM, which includes a TI Bluetooth® WiFi™ module.

Key Features and Benefits:
- C64x+ DSP adds signal processing and 720p video and audio
  - High-resolution audio/video decoding and encoding
  - DSP allows advanced signal processing and algorithms
  - DSP offloads ARM processor, providing additional application headroom to run more intense, high-level applications
- Offering higher performance, lower power and compatibility with OMAP3530 processor
  - Software compatible with OMAP3530 and AM37x processors
  - Offering higher performance, lower power and compatibility with OMAP3530 processor
  - Allows access to technical development forums (blogs and online communities) to aid design (Sitara™, BeagleBoard-xM, ARM)
- Comprehensive SDK provides quick demo and development
  - SDK contains everything developers need to evaluate and begin development on the DM3730 EVM quickly
  - Unique software offering helps leverage the DSP easily
  - Includes free A/V codecs and software for DSP-accelerated signal processing algorithms

- The SDK includes Linux kernel 2.6.32 board support package (BSP) complete with graphical user interface, graphics, applications, demonstrations and development utilities. The SDK also offers a royalty-free library of DSP-optimized signal-processing algorithms accessible from the
ARM processor through a set of easy-to-use application programming interfaces (APIs). The DSP library contains more than 80 algorithms, including multi-media decoders and encoders, math functions, digital filtering including Fast Fourier Transform (FFT), and image processing including image filtering and analysis.

- Support for the Linux and Android™ operating systems is available today. Windows CE™ support will be available in 4Q10.

Get started today
Customers can begin designing by downloading the DM3730 software for use on the DM3730 evaluation module, TMDXEV3730, available for $1,495 USD from TI. Customers may also develop on the BeagleBoard-xM, a low-cost, open-source community board equipped with the DM3730 processor, available for $179 USD from Digi-Key. The DM37x processors will be available for purchase starting at $22.65 USD in 1,000 unit quantities (1 KU) at www.ti.com/dm3730-pbpf.
IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of TI.

Reproduction of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

TI products are not authorized for use in safety-critical applications (such as life support) where a failure of the TI product would reasonably be expected to cause severe personal injury or death, unless officers of the parties have executed an agreement specifically governing such use. Buyers represent that they have all necessary expertise in the safety and regulatory ramifications of their applications, and acknowledge and agree that they are solely responsible for all legal and regulatory requirements concerning their products and any use of TI products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by TI. Further, Buyers must fully indemnify TI and its representatives against any damages arising out of the use of TI products in such safety-critical applications.

TI products are neither designed nor intended for use in military/aerospace applications or environments unless the TI products are specifically designated by TI as military-grade or "enhanced plastic." Only products designated by TI as military-grade meet military specifications. Buyers acknowledge and agree that any such use of TI products which TI has not designated as military-grade is solely at the Buyer's risk, and that they are solely responsible for compliance with all legal and regulatory requirements concerning such use. TI is not responsible or liable for any such statements.

TI products are neither designed nor intended for use in automotive applications or environments unless the specific TI products are designated by TI as compliant with ISO/TS 16949 requirements. Buyers acknowledge and agree that, if they use any non-designated TI products in automotive applications, TI will not be responsible for any failure to meet such requirements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

<table>
<thead>
<tr>
<th>Products</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplifiers</td>
<td>Audio</td>
</tr>
<tr>
<td>Data Converters</td>
<td>Automotive</td>
</tr>
<tr>
<td>DLP® Products</td>
<td>Communications and Telecom</td>
</tr>
<tr>
<td>DSP</td>
<td>Computers and Peripherals</td>
</tr>
<tr>
<td>Clocks and Timers</td>
<td>Consumer Electronics</td>
</tr>
<tr>
<td>Interface</td>
<td>Energy</td>
</tr>
<tr>
<td>Logic</td>
<td>Industrial</td>
</tr>
<tr>
<td>Power Mgmt</td>
<td>Medical</td>
</tr>
<tr>
<td>Microcontrollers</td>
<td>Security</td>
</tr>
<tr>
<td>RFID</td>
<td>Space, Avionics &amp; Defense</td>
</tr>
<tr>
<td>RF/IF and ZigBee® Solutions</td>
<td>Wireless</td>
</tr>
</tbody>
</table>

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2010, Texas Instruments Incorporated