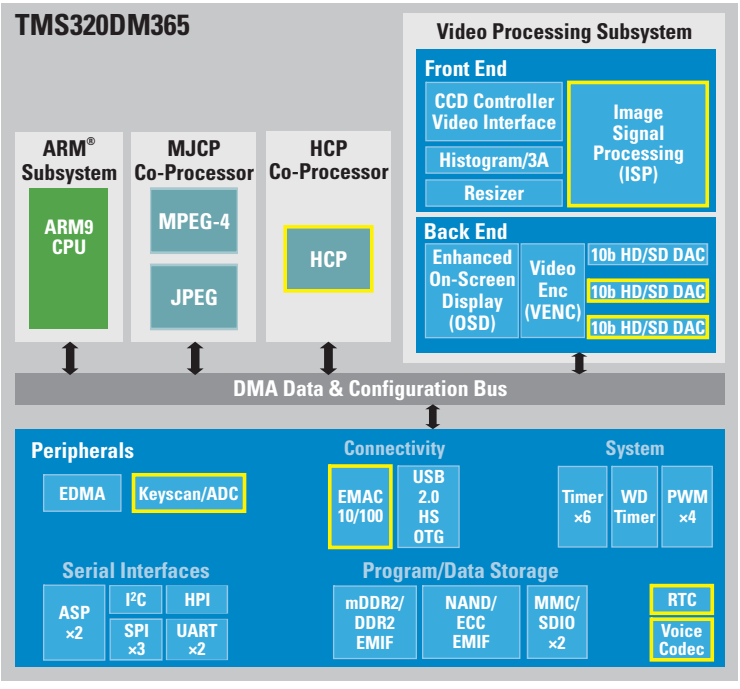
DaVinci™

TMS320DM3x Digital Media Processors

TMS320DM3x Digital Media Processors with DaVinci™ Technology

The TMS320DM3x processors are powered by an ARM9 core and a video processing subsystem (VPSS). The DM335 processor is a low-cost, low-power processor providing advanced graphical user interface for display applications that do not require video compression and decompression. Optimized for HD video, the DM355 processor integrates an MPEG-4/JPEG co-processor to enable ultra-low power consumption. The new DM365 processor includes Image Signal Processing (ISP), production-ready codec bundles and integrated peripherals to provide pixel-perfect 1080p HD video.

- **TMS320DM335 digital media processors** – Include an integrated video processing subsystem and an ARM926 processor at clock speeds of 135, 216 or 270 MHz. The DM335 processor is optimized for targeted end equipments such as video-enabled universal remote controls, Internet radio, e-books, video doorbells and digital telescopes. The DM335 processor is a low-cost, low-power processor providing advanced graphical user interface for display applications that do not require video compression and decompression.



The boxes highlighted in yellow show differences with the TMS320DM355 processor.

TMS320DM365 digital media processor block diagram For more information, visit ***www.ti.com/dm365***

- **TMS320DM355 digital media processors** – Include an integrated video processing subsystem, an MPEG-4/JPEG co-processor plus an ARM926 processor and is available in clock speeds of 135, 216 or 270 MHz. The DM355 is optimized for targeted end equipments such as video doorbells, baby monitors, digital cameras and wireless IP network cameras. Driving the market growth for next-generation, portable, high-definition (HD) video products, this digital media processor provides HD video performance and double the battery life of today's comparable portable products.

- **New TMS320DM365 digital media processors** – Include an ARM9, a video processing subsystem (VPSS) including Image Signal Processing (ISP), production-ready codec bundles and integrated peripherals. The DM365 processor allows developers to: access H.264 and other video formats for a variety of resolutions including 1080p HD and reduce system cost up to 25 percent with peripheral and software integration. The DM365 processor is ideal for digital signage, IP network cameras, video doorbells, baby monitors, DVRs and many others.

TMS320DM3x Digital Media Processors

Device	CPU	Frequency (MHz)	L1/ SRAM (Bytes)	L2/ SRAM (Bytes)	ROM (Bytes)	External Memory I/F	EDMA	Video Ports (Configurable)	Serial I/F	Connectivity I/F	Program/ Data Storage	Voltage (V) Core	Voltage (V) I/O	Packaging	100-U Price[1]
TMX320DM335ZCE135 TMX320DM335ZCE216	ARM9, DaVinci Video	135 216	32	–	8K	1 16-/8-Bit EMIFA, 1 16-Bit mDDR/DDR2	64 Ch	1 Input, 1 Output	3 SPI, 2 ASP, 3 UARTs, I^2C	USB 2.0 HS	Async SRAM, mDDR/DDR2 SDRAM, OneNAND, NAND Flash, SmartMedia/xD	1.3	1.8/ 3.3	337 BGA 13 × 13 mm	10.50 11.90
TMX320DM355ZCE216 TMX320DM355ZCE270	ARM9, DaVinci Video	216 270	–	–	8K	1 16-/8-Bit EMIFA, 1 16-Bit mDDR/DDR2	64 Ch	1 Input, 1 Output	3 SPI, 2 ASP, 3 UARTs, I^2C	USB 2.0 HS	Async SRAM, mDDR/DDR2 SDRAM, NAND Flash, SmartMedia/xD	1.3	1.8/ 3.3	329 BGA 13 × 13 mm	16.51 19.58
TMS320DM365ZCE270 TMS320DM365ZCE300	ARM9, DaVinci Video	270 300	32	–	8K	1 16-/8-Bit EMIFA, 1 16-Bit mDDR/DDR2	64 Ch	1 Input, 3 Outputs	5 SPI, 2 ASP, 2 UARTs, 2 SD MMC, I^2C	USB 2.0 HS, EMAC	Async SRAM, mDDR/DDR2 SDRAM, OneNAND, NAND Flash, SmartMedia/xD	1.2/ 1.35	1.8/ 3.3	338 BGA 13 × 13 mm	22.32 29.02

[1] *Prices are quoted in U.S. dollars and represent year 2009 suggested resale pricing. All prices are subject to change. Customers are advised to obtain the most current and complete pricing information from TI prior to placing orders. TI may verify final pricing prior to accepting any order.*

New devices are listed in red.

TMS320DM3x Development Tools

- **Digital Video Evaluation Module (DVEVM)** – DVEVMs are comprised of both hardware and software, and enable developers to start instantaneous evaluation of DaVinci processors. DVEVMs come complete with a demo version of MontaVista Linux Pro 4.0, drivers, Codec Engine, evaluation codecs and an evaluation board. While customers developing on an ARM926 processor can go into production with a DVEVM, it is not recommended or supported by TI. Customers developing on a DSP will require a DVSPB in order to go into production. Available DM3x-based DVEVMs:
- TMS320DM355 DVEVM (part number TMDXEVM355)
- New TMS320DM365 DVEVM (part number TMDXEVM365)

Development Tools for TMS320DM3x Processors

For Evaluation:

Description	Part Number	$U.S.[1]
TMS320DM355 Digital Video Evaluation Module (DVEVM)*	TMDXEVM355	495
TMS320DM365 Digital Video Evaluation Module (DVEVM)*	TMDXEVM365	595
Code Composer Studio™ IDE*	TMDSCCSALL-1	3,595[2]
Blackhawk XDS560™ JTAG PCI Emulator (optional)	TMDSEMU560PCI	2,995
Blackhawk XDS560 JTAG USB Emulator (optional)	TMDSEMU560U	2,999

For Production:

Digital Video Software Production Bundle (DVSPB)[3]* MontaVista Pro Software and TI DVSDK	TMDSDVSPBA9-L	8,995
DVSPB w/ MontaVista ProLinux, CCStudio IDE and XDS560R Emulator	TMDSDVSPBA9-3L	12,995
Code Composer Studio IDE*	TMDSCCSALL-1	3,595[2]
Blackhawk XDS560 JTAG PCI Emulator (optional)	TMDSEMU560PCI	2,995
Blackhawk XDS560 JTAG USB Emulator (optional)	TMDSEMU560U	2,999

[1] *Prices are quoted in U.S. dollars and represent year 2009 suggested resale pricing. All prices are subject to change. Customers are advised to obtain the most current and complete pricing information from TI prior to placing orders. TI may verify final pricing prior to accepting any order.*

New tool shown in red.

[2] *Free trial version of Code Composer Studio IDE available as part of the free evaluation tools found at* ***www.ti.com/ccstudiofet***

[3] *Requires prior purchase of DVEVM*

* *Required for digital media software evaluation and/or production*

The platform bar, DaVinci, Code Composer Studio and XDS560 are trademarks of Texas Instruments.

© 2009 Texas Instruments Incorporated

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 the third party, or a license from TI 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, regulatory and safety-related 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 in connection with such use.

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 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:

Products		**Applications**	
Amplifiers	amplifier.ti.com	Audio	www.ti.com/audio
Data Converters	dataconverter.ti.com	Automotive	www.ti.com/automotive
DLP® Products	www.dlp.com	Broadband	www.ti.com/broadband
DSP	dsp.ti.com	Digital Control	www.ti.com/digitalcontrol
Clocks and Timers	www.ti.com/clocks	Medical	www.ti.com/medical
Interface	interface.ti.com	Military	www.ti.com/military
Logic	logic.ti.com	Optical Networking	www.ti.com/opticalnetwork
Power Mgmt	power.ti.com	Security	www.ti.com/security
Microcontrollers	microcontroller.ti.com	Telephony	www.ti.com/telephony
RFID	www.ti-rfid.com	Video & Imaging	www.ti.com/video
RF/IF and ZigBee® Solutions	www.ti.com/lprf	Wireless	www.ti.com/wireless

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2009, Texas Instruments Incorporated