TMS320DM3x DaVinci Video Processors

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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 DM365 processor includes a more enhanced co-processor and video processing subsystem over its predecessors, free, multi-format codecs and

integrated peripherals to provide pixel-perfect HD video. The DM368 processor includes all of the great features of the DM365, while providing users with 44 percent increased ARM head-room and the ability to achieve full HD video resolution.

- **New TMS320DM368 DaVinci video processors** – Include an ARM9, a video processing subsystem (VPSS), free audio, video, imaging and speech codecs and integrated peripherals. The DM368 processor allows developers to: access multiple video formats including crystal clear 1080p H.264 at 30 fps and reduce system cost up to 20 percent with peripheral and software integration. The DM368 processor is ideal for video surveillance, HD video communications, real-time DVRs and digital signage and many others.

- **TMS320DM335 DaVinci video processors** – Include an integrated video processing subsystem and an ARM926 processor at clock speeds of 135 or 216 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.

- **TMS320DM355 DaVinci video 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 DaVinci video processor provides HD video performance and double the battery life of today's comparable portable products.

- **TMS320DM365 DaVinci video processors** – Include an ARM9, a video processing subsystem (VPSS), production-ready, multi-format codecs and integrated peripherals. The DM365 processor
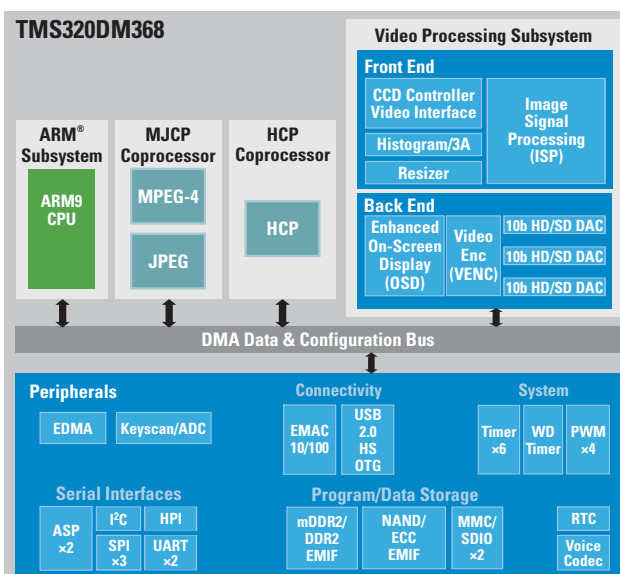
*TMS320DM368 DaVinci video processor block diagram For more information, visit **www.ti.com/dm368***

* DM368 supports H.264 up to 1080p at 30 frames per second (fps) encode and closed-looped decode

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	I/O	Packaging	100-U Price[1]
TMS320DM335ZCE135 TMS320DM335ZCE216	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	10.00 11.30
TMS320DM355ZCE135 TMS320DM355ZCE216 TMS320DM355ZCE270	ARM9, DaVinci Video	135 216 270	–	–	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	12.75 14.40 20.50
TMS320DM365ZCE270 TMS320DM365ZCE270 TMS320DM365ZCE300	ARM9, DaVinci Video	216 270 300	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	16.25 20.95 23.05
TMX320DM368ZCE432	ARM9, DaVinci Video	432	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	32.05

[1] Prices are quoted in U.S. dollars and represent year 2010 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.
Please visit **www.ti.com/dm3x** for a complete listing of TI's DM3x devices.

New devices are listed in red.

allows developers to: access H.264 and other video formats for a variety of resolutions including 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 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:

Description	Part Number	$U.S.[1]
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 2010 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.
[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

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