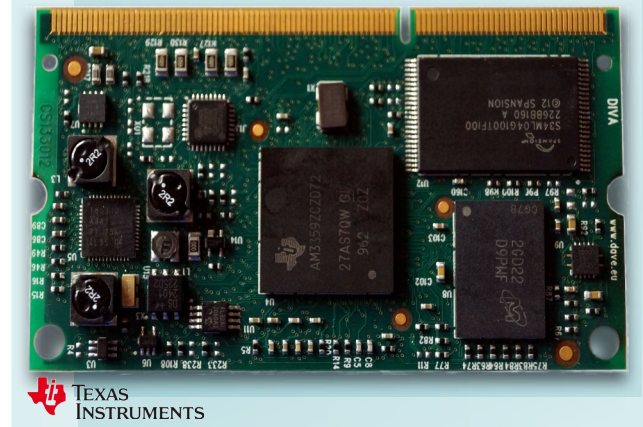


## TEXAS INSTRUMENTS "Sitara" AM335x CPU MODULE

- Texas Instruments AM335x Cortex-A8 processors family
- LITE Line - ARM Cortex-A8 architecture @ up to 1000 MHz
- NEON Multimedia Coprocessor and PowerVR® SGX Graphics Engine
- Dual Programmable Real-Time Unit and Industrial Communication Subsystem (PRU-ICSS)
- Crypto Hardware Accelerator (AES, SHA, PKA, RNG)
- SO-DIMM 204-pin form factor
- Rich interfaces set including Dual CAN and Ethernet
- Wide range PSU 3.6V-5.5V Evaluation Board available with exhaustive Development Kit



DIVA is a ready-to-use CPU module by DAVE Embedded Systems, based on Texas Instruments Cortex-A8 application processor from AM335x (Sitara) family.

DIVA is the top product of DAVE Embedded Systems' LITE Line.

DAVE Embedded Systems proposes at the customer an high flexibility using an ARM cortex -A8 scalable from 300 MHz to 1GHz.

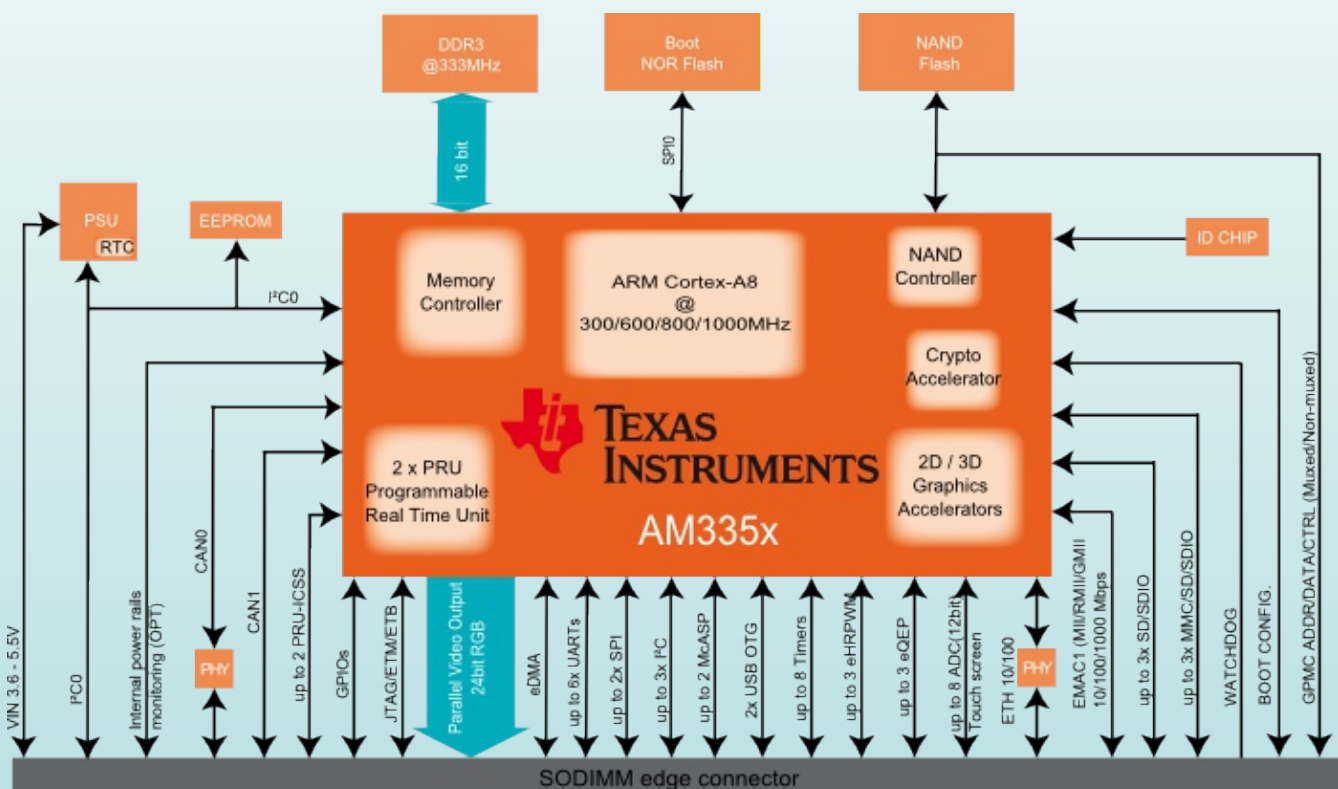
This processor offers feature high processing performance, low power, lots of graphics, processing, peripherals and industrial interface options, allowing customer to implement cost-effective designs.

The dual Programmable Real-Time Unit and Industrial Communication Subsystem (PRU-ICSS) adds further flexibility and enables additional peripherals interfaces and real-time protocols such us EtherCAT, Profinet, Ethernet/IP, Profibus, Ethernet Powerlink.

The wide range PSU 3.6V- 5.5V enables designers to create smart products suitable for harsh mechanical and thermal environments, allowing for the development of high computing and reliable solutions. DIVA is designed in order to keep full compatibility with the LITE Line CPU modules where quality and reliability are important factors.

AM335x provides Cryptographic Acceleration, which operates separately from the CPU core: all the cryptographic processing is offloaded from the ARM core to distinct security hardware accelerators, reducing the overall computational load and letting the CPU focus on user interface, graphics, the WiFi wireless communications stack and most software application.

DIVA is suitable for high volume applications where the price/quality ratio is important such as Home Automation, portable solutions, Human Machine Interfaces and Industrial Automation, Profibus, EtherCAT slaves, moreover Medical applications (thanks to the internal voltage feature).



<b>CPU</b>	Texas Instruments AM335x ARMv7 architecture Cortex A8 @ up to 1000 MHz
<b>Coprocessor</b>	NEON Media Technology (Advanced SIMD coprocessor) PowerVR SGX 530 3D Graphics Accelerator Up to 20 Mpoly/s, support for OpenGL ES 1.1/2.0 and OpenVG 1.0.1 Crypto Hardware Accelerator (AES, SHA, PKA, RNG)
<b>Supervisor</b>	On board power supply supervision and power sequencer Watchdog and RTC

## Memory

<b>Cache</b>	L1: 32Kbyte instruction, 32Kbyte data L2: Unified data/instruction, 512 KByte
<b>SDRAM</b>	Up to 512MB DDR3 @ 333MHz
<b>NOR</b>	Bootable SPI NOR 16, 32 MB
<b>NAND</b>	All sizes, on request
<b>SRAM</b>	64 KByte
<b>EEPROM</b>	Yes

## Interfaces (full-spec models) \*

<b>LAN</b>	Ethernet 10/100 Mbps (PHY on board) Additional MII/RMII/RGMII Interface
<b>UART</b>	up to 6x UART ports
<b>CAN</b>	2x CAN controller (version 2 part A, B)
<b>USB</b>	Up to 2x 2.0 OTG ports
<b>PRU</b>	Up to 2x Programmable Real-Time Units (PRU-ICSS)
<b>SDIO</b>	Up to 3 x SD/MMC card
<b>Audio</b>	Up to 2x McASP interface
<b>Video Output</b>	24-bit, up to 2048x2048 LCD controller TFT/RGB
<b>Debug</b>	JTAG IEEE 1149.1 Test Access Port ETB port EMU port
<b>Other</b>	Up to 3x I <sup>2</sup> C channels Up to 2x SPI channels GPIOs available Up to 8x 12-bit ADC channels

## Mechanical

<b>Connectors</b>	204-pin SO-DIMM
<b>Size</b>	67.5 mm x 38.3 mm
<b>Temperature</b>	Commercial (0°C / +70°C) temperature range Industrial (-40°C / +85°C) temperature range

## PSU

<b>Input</b>	3.6 - 5.5V, voltage regulation on board
--------------	---

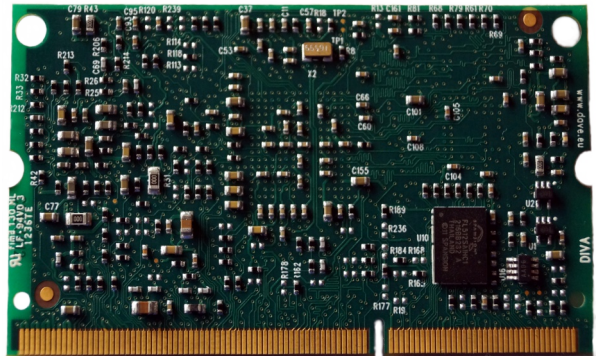
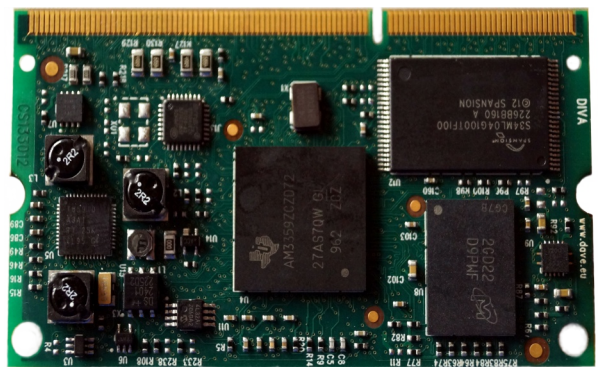
## Software

<b>Bootloader</b>	U-Boot
<b>Multitasking</b>	Linux 3.12.xx

## Evaluation Kit

DIVA evaluation kit is available in a development kit that includes a SOM, a carrier board and all accessories required for immediate start-up.

\*: interface availability depends on pin multiplexing.  
Please contact your local FAE.



## Product code configurator \*

Family	Processor	NOR flash	DDR RAM	NAND flash	[FIX]	Temp. range
DD	A: AM3352 300Mhz	0: No NOR	7: 128MB	0: No NAND	22**	I: -40 / +85°C
	B: AM3354 600Mhz	4: 16MB	8: 256MB	7: 128MB		Industrial temp.
	C: AM3352 1Ghz	5: 32MB	9: 512MB	8: 256MB		C: 0 / 70°C
	D: AM3356 600Mhz	6: 64MB		9: 512MB		Commercial temp.
	F: AM3359 800Mhz			1: 1GB		
	G: AM3352 600Mhz			2: 2GB		
	H: AM3354 1Ghz					

\*\* Standard configuration. For further information, please contact your local FAE



© 2014 DAVE S.r.l.

All trademarks and registered trademarks are the property of their respective owners.  
All features and specifications subject to change without notice.



**DAVE S.r.l.**  
Via Talponedo, 29/A  
33080 Porcia (PN) - ITALY  
Ph +390434921215  
Fax +3904341994030

[www.dave.eu](http://www.dave.eu)  
[wiki.dave.eu](http://wiki.dave.eu)  
[sales@dave.eu](mailto:sales@dave.eu)  
[support-diva@dave.eu](mailto:support-diva@dave.eu)