AM389x Sitara™ ARM® Microprocessors

Overview

Texas Instruments (TI) expands its portfolio of industry-leading Sitara™ ARM microprocessors (MPUs) with new AM389x devices that dramatically boost performance and integration. Featuring the highest single-core ARM Cortex™-A8 performance in the market today, the AM389x Sitara ARM MPUs enable faster end products with complete system control, network connectivity, graphical user interfaces and display capabilities and the ability to run multiple applications simultaneously on advanced operating systems. Offering ARM performance at up to 1.5 GHz, the AM389x Sitara ARM MPUs are perfect for applications such as single-board computing, network and communications processing (gate ways, routers, servers, etc.), industrial automation and human machine interfaces (HMIs) and point-of-service (POS) interactive kiosks.

Key features and benefits

- The highest single-core ARM Cortex-A8 performance in the market, running at up to 1.5 GHz, offering speed, robust performance and advanced operating system (OS) support to enable application processing, user interface and system control.
- The extensive peripheral set provides seamless integration of network connectivity options and peripherals into a single chip, while simplifying the sourcing process and reducing develop time and cost.
- A display subsystem which supports dual high-definition displays, up to 1920 × 1280 resolution and HDMI output. A SGX530 graphics accelerator at up to 333 MHz (AM3894) is also integrated. Both of these features enable more complex graphical user interfaces (GUIs) and a seamless graphical multi-screen experience from one processor.
- TI's EZ Software Development Kit (SDK) allows easy evaluation of the device within minutes and easy development with a single installation that includes all software and tools required to start development.

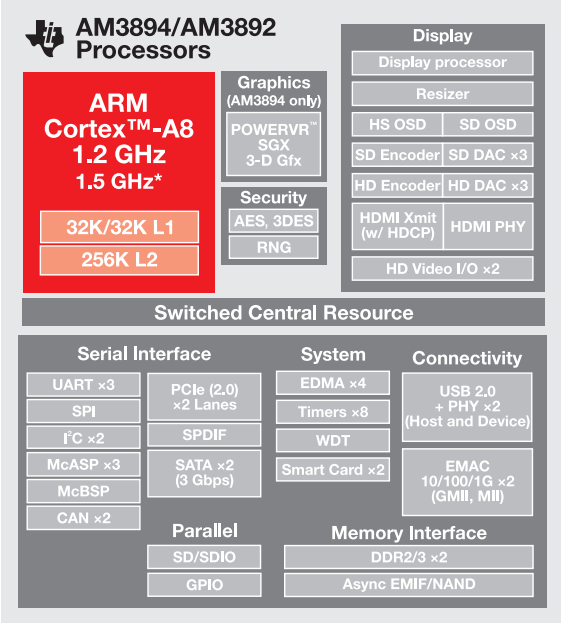
Technical details

The extensive peripheral set provides seamless integration reducing system cost and enabling more user-friendly features:

- DDR3 at up to 1.6-GHz data rate provides larger memory bandwidth, improving multi-programming and overall system responsiveness and performance
- Two-lane 5.0-GT/s PCI Express (PCIe) facilitates high-speed connection to computer back-planes, FPGAs, or expansion cards such as USB 3.0 and wireless 802.11n.
- Gigabit Ethernet, PCIe, HDMI TX, USB and video I/O enable customers to add connectivity to new designs.
- SATA interfaces for up to two external drives, enabling high-speed connectivity to abundant storage
- Two 10/100/1000 Mb/s Ethernet Macs (EMACs) that support a Gigabit Media Independent Interface (GMII), allowing customers to add connectivity to new designs
- Two-channel video I/O

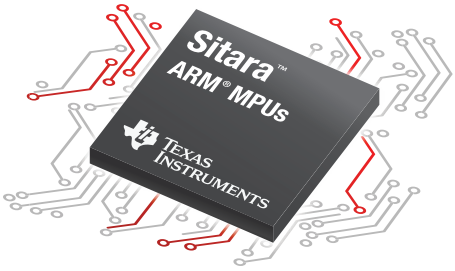
Scalability

With a broad portfolio of more than 70 product options available today, customers can migrate within the Sitara ARM MPU product line from earlier software-compatible AM1x ARM9™-based Sitara value-line devices to the ARM Cortex-A8 performance line of devices which includes the AM389x MPUs. Because they share common architectural elements, customers can migrate to software-compatible Integra™ DSP+ARM devices for precise, intense signal processing with integrated control capabilities or to DaVinci™ video processors to add multi-channel, full-HD video. This easy scalability is enabled by software



** Initial sampling will be for the XAM3894 1.2 GHz*

▲ *AM3894/AM3892 processor block diagram*



compatibility within the Sitara products and across other TI processor generations can quickly expand market opportunities for new end products and reduce development time.

Community support

AM389x Sitara™ ARM MPUs are supported by TI's online community at **e2e.ti.com**. Software support is available through the EZ SDK, which allows easy evaluation of the device within minutes and easy development with a single installation that includes all software and tools required to start development.

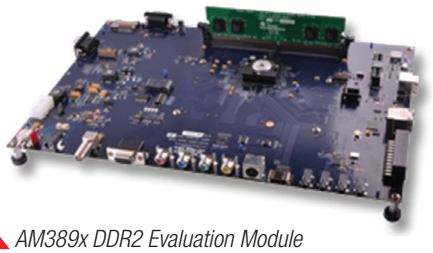
Get started today

The AM389x Sitara ARM MPUs are sampling today, available at **www.ti.com/am389x**. Samples for Sitara ARM MPUs enabling smaller form factor products are expected in 2Q 2011.

Development is easy and can begin in minutes with TI's all-inclusive evaluation modules (EVMs), which include a base EVM, LCD panel and TI's EZ SDK. Designers can begin development on the DDR2 version (**TMDXEVM8168DDR2**) today for $1,895. A DDR3 version with video capture capability is expected to begin shipping in 1Q2011.

Hardware, software and support to make development easy

- Evaluate the processor features on the included LCD touch screen within minutes of opening the EVM box
- Software and tools required for development are included with the EVM
- Linux today with Windows® Embedded® Compact 7 and Android™ 2.2 coming soon
- Responsive design support and active online TI E2E community: **e2e.ti.com**.



▲ *AM389x DDR2 Evaluation Module*

TI Worldwide Technical Support

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TI E2E™ Community Home Page
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