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for immediate release

TRINAMIC Teams with Actel's SmartFusion™ Intelligent Mixed Signal FPGAs for Motion Control

The power of full-custom SoC technology without the cost and leadtime on display at ESC Silicon Valley, Actel booth #930

Embedded Systems Conference, San Jose, CA – 27 April 2010. Trinamic, the industry leader in embedded motion control systems, today announced its partnership with Actel Corporation (NASDAQ: ACTL) for complete motion-control systems. The two firms will combine the power and flexibility of Actel's [SmartFusion™ intelligent mixed signal FPGAs](#) with Trinamic's industry-leading driver ICs for stepper motors and brushless DC (BLDC) motors. Trinamic and Actel are demonstrating the power of this combination at the Embedded Systems Conference Silicon Valley this week.

Small motors are used in applications ranging from printers and appliances to advanced medical diagnostic equipment. These motors require drive electronics, and Trinamic has established itself as the world leader in this market. The systems also require a microprocessor, and in the past have needed so-called 'glue' logic – extra components to connect the microprocessor to the rest of the system. By combining FPGA technology with the proven ARM™ Cortex™-M3 and programmable analog, Actel's SmartFusion family gets rid of the glue, saves cost, and reduces time-to-market.

"We see a big future for motion-control systems based on SmartFusion devices," says Michael Randt, founder and CEO of Trinamic. "We have development programs underway now for our own line of motion-control modules, and we believe other system designers will see the advantages of combining Actel's SmartFusion FPGAs and Trinamic's devices."

Trinamic's demonstration board supports the TMC603A for BLDC motors, and Trinamic's new TMC262 for stepper motors. The TMC262 implements Trinamic's coolStep™ technology, which intelligently manages the amount of drive current to the motor, so that the motor easily handles the load but does not consume extra power or generate excess heat. Among many applications, stepper motors are used in medical and laboratory instrumentation, where they offer precise motion control, but are not very power-efficient. Designers of biotech and medical equipment struggle to keep the heat of conventional stepper motors from damaging biological and chemical samples. Trinamic's TMC262 can reduce motor heat dissipation by as much as 80%, making the equipment more sensitive and more reliable.

For designs based on BLDC motors, the TMC603A combines intelligence and drive in one device. It integrates the power-driving MOSFETs and their gate driving circuits with short-circuit protection,

automatic commutation (switching), and many other functions.

Trinamic's demonstration board works with Actel's SmartFusion Development Kit (A2F-DEV-KIT). Actel's SmartFusion devices combine a 32-bit processor with an FPGA core, capable of implementing a wide range of peripheral functions. With its powerful 32-bit CPU and programmable logic, the SmartFusion FPGA can be paired with multiple Trinamic devices to control a mix of brushless and stepper motors. This reduces manufacturing costs and design time, especially in complex systems.

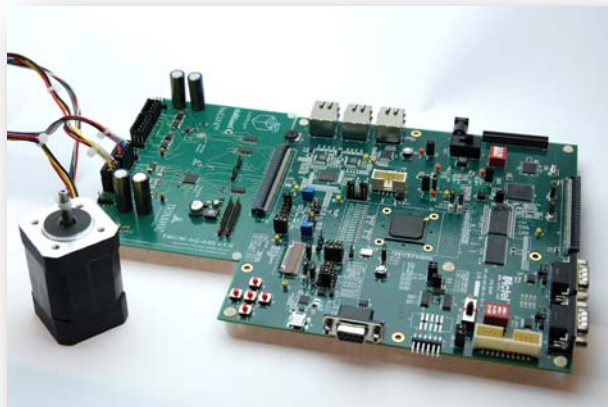
The demonstration system is at the Actel booth, #930, for the duration of the show, and engineers from both firms are available to answer questions and explain the synergy of the systems.

Picture Captions:

- (a) Trinamic's new TMC262 Stepper Motor Controller, with CoolStep.
- (b) Trinamic's demonstration board, paired with Actel's SmartFusion Development Kit.



(a)



(b)

Download-Area (with more content): <http://www.trinamic.com/press/>

About TRINAMIC

Trinamic provides high-precision motion control ICs and mechatronic systems to OEMs in biotech, medical, instrumentation, printing, robotics, and dozens of other markets and applications where precise control of motors is required. Based in Hamburg, Trinamic designs and sells its motion-control ICs board-level and system-level hardware modules and motion-control software all over the world. The modules combine Trinamic's dedicated stepper control and driver ICs with extensive experience in designing custom and off-the-shelf motion control solutions. Thus, Trinamic customers benefit from the company's extensive knowledge of motor physics and its library of intellectual property (IP), built over years of applications experience. The Trinamic product portfolio includes standard products and custom solutions, all of which reduce cost and time to market. This vertical, solution-orientated mix combined with its focus on precision control of small motors drives Trinamic's success.

The use of small motors is increasing rapidly in many different types of products, and wherever small motors are used there are applications for Trinamic products. In leading-edge industries such as biotech, lab automation, and semiconductor handling equipment, Trinamic products control complex multi-axis motion control systems. In industries such as textile and furniture manufacturing, Trinamic products enable the modernization of manufacturing processes by replacing complex, high-maintenance mechanical systems with network-based electronic systems that deliver better performance and are easier to maintain.

Customers rely on Trinamic products to provide high precision and exact control of electronics and

mechanics. Product development at Trinamic focuses on meeting customer demands for miniaturization, efficiency, diagnostic support, and protection, all of which ensure the reliability of the complete system. Trinamic's application driven approach means that customers do not need an in-depth knowledge about motors, DSPs, or control circuitry in general. Consequently, the design phase is simplified, resulting in significant labor and cost savings.

Trinamic's stepper motor drivers for example, offer the industry's lowest power dissipation, which eliminates the need for heatsinks or other cooling infrastructure, and enables system miniaturization and cost reduction. The patented StallGuard™ load detection enables precise and silent homing without any homing switches. Embedded diagnostic features can detect potential system faults to reduce downtime.

The Trinamic Motion Control Language (TMCL) makes it easy for non-specialists to develop motion control applications and allows for shorter development cycles and quick time to market.

Trinamic is ISO 9001:2000 and ISO 13485 (medical) certified and offers its products in compliance with the RoHS directive.

About ACTEL

Actel is the leader in low power FPGAs and mixed signal FPGAs, offering the most comprehensive portfolio of system and power management solutions. Power Matters.

Learn more at www.actel.com.

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Different language versions of this press release and shorter versions of the company background available at the press section of the Trinamic website:

www.trinamic.com/press

Press Contact:

TRINAMIC Motion Control GmbH & Co. KG
Ubbo Ronhardt, Michael Randt
Sternstrasse 67
D - 20357 Hamburg (Germany)
Phone: +49 (0)40 - 51 48 06 – 0
Fax: +49 (0)40 - 51 48 06 – 60
Internet: www.trinamic.com/press
e-Mail: pr@trinamic.com

Editorial:

TRINAMIC Motion Control GmbH & Co. KG
Sternstrasse 67
D - 20357 Hamburg (Germany)
Sitz u. Registergericht: Hamburg HRB 91746
Phone: +49 (0)40 - 51 48 06 – 0
Fax: +49 (0)40 - 51 48 06 – 60
Internet: www.trinamic.com
e-Mail: tmc_info@trinamic.com