November 2016

Microsemi FPGA TechBytes

Microsemi Power Matters.

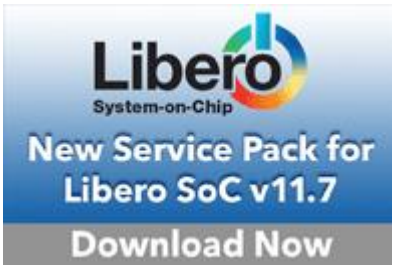
Feedback | Microsemi FPGAs & SoCs | Issue 3

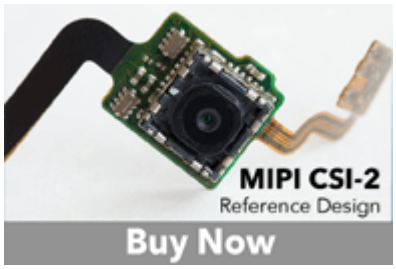
Buy Now

Create, Develop, Deploy Workshop Series

Future Electronics is hosting a hands-on seminar series featuring their Creative Development platform based on the IGLOO2 or SmartFusion2 SOC FPGAs. Attendees will learn firsthand how to use the Libero tool and Creative Board. The session includes three labs: Design Flow with Enhanced Constraint Flow, Chip Planner and Smart Debug, and IP Configuration and Smart Design. Attendees completing the course will take home their own Creative Development Kit ($50 value) to start their own designs.

Register for Seminars





Microsemi FPGAs Consume up to 50% Lower Power

Flash-based FPGAs have significantly lower static power than SRAM FPGAs due to 1000x lower leakage. Combine this with 70 mW per SERDES channel running PCIe Gen2 and Flash*Freeze ultra-low-power mode, with a standby as low as 12 mW, and you can reduce your design's total power consumption by up to 50%

View Webinar Now

LiteFast: Lightweight Protocol for High-Speed Serial Communication

LiteFast is Microsemi's serial, point-to-point, lightweight protocol for high-speed serial communication. LiteFast enables designers to easily implement high-speed serial links using the SERDES blocks available in Microsemi's SmartFusion2, IGLOO2, and RTG4 devices.

Learn More

Low-Density Devices for CPLD Applications

Microsemi offers more capabilities in low-density devices. Microsemi's portfolio of IGLOO and ProASIC3 families addresses a broad range of CPLD requirements for various markets such as consumer, industrial, communications, gaming, and medical applications. These products provide a breakthrough in performance and features for applications that are constrained by cost, area, and power budget.

Learn More

Trinamic EtherCAT Solution

Trinamic's EtherCAT solution includes a plugfest-tested EtherCAT intellectual property (IP) and chip solution (TMC8460) for SmartFusion2 SoC FPGA. The EtherCAT solution is suitable for applications such as programmable logic controllers (PLC), motor drive/motion drive control, safety input/output (I/O) modules, and other applications where EtherCAT communications are required.

Learn More

Libero SoC v11.7 Service Pack 2

This release offers RTG4 production timing and power that enable users to go to production with RTG4 devices, as well as new packages for Automotive-grade and SSN package support for the SmartFusion2 and IGLOO2 families.

View Release Notes and Download Options

In The News

- Microsemi Space Solutions On Board Juno Spacecraft
- Microsemi Announces New Addition to its Imaging/Video Solution to Support Growing Demand for MIPI CSI-2 Interfaces
- Microsemi Announces LiteFast Serial Communication Protocol to Reduce Customers' Design-In Efforts and Time to Market
- Microsemi Announces Imaging/Video Solution Providing a Secure, Reliable, Low Power Device for Imaging Applications
- Microsemi Sponsors Design Training for Embedding RISC-V in its SmartFusion2 SoC FPGAs During Hands-On Tutorial Session

Recent Articles

EE Times Programmable Logic DesignLine:
Microsemi FPGAs Support Growing Demand for MIPI CSI-2 Interfaces

Electronic Engineering Journal:
The Quiet FPGAs: Microsemi Soldiers on Silently
"...perhaps the best choice - for many application sockets."

EE Times Internet of Things DesignLine: Startup Debuts Open Source SoCs

Center of Excellence

Programming, Design Security, and Data Security–Ming-Hoe Kiu

Q) How did you gain your deep knowledge of FPGA programming and security?
A) started at Lattice Semiconductor as a Software Engineer in the Programming group, where I had the chance to re-architect the software and eventually work closely with the silicon design team on their SRAM-based FPGA programming and debug architecture. I joined Microsemi (then Actel) in 2003, where I had the opportunity to design, test, and bring up the new programmer (FlashPro 3) with First Silicon Solutions (FS2). Through firsthand validation of the programming and security functionally on ProAsic3E 3000, I gained deeper knowledge with Microsemi's Flash Programming. Finally, as part of the Security Workgroup I get to work closely with Ken Irving and Richard Newell to design SmartFusion2 security features, so I seize every opportunity to learn from both of them.

Q) What are the most important design details engineers need to follow to ensure a successful programming interface?
A) Engineers should design the system with programming in mind right from the beginning. They also should ensure that the system has stable supply voltage and signal integrity. They need to have system-level understanding of how the device is controlling or interfacing with rest of the system to correctly set the I/O state during programming to avoid issues while transitioning into, during, and out of programming. Lastly, if programming uses an embedded processor, engineers must make sure that they have accurate delay function implemented to ensure a required minimum delay time.

Q) Tell us something about yourself that we would be surprised to know.
A) About 10 years ago, I traded my addiction to martial arts for Argentine Tango.

Microsemi Corporate Headquarters
One Enterprise, Aliso Viejo, CA 92656 USA
Within the USA: +1 (800) 713-4113
Outside the USA: +1 (949) 380-6100
Sales: +1 (949) 380-6136 . Fax: +1 (949) 215-4996
email: sales.support@microsemi.com . www.microsemi.com