



Microsemi Announces Comprehensive Solar Technology Portfolio

SmartFusion and IGLOO FPGAs Provide Flexibility; Maximize Efficiency and Integration

IRVINE, Calif., March 8, 2011 (GLOBE NEWSWIRE) -- **Microsemi Corporation** (Nasdaq:MSCC), a leading provider of semiconductor technology aimed at building a smart, secure, connected world, today announced the immediate availability of its solar technology portfolio. Microsemi's products for renewable energy applications include SmartFusion™ and IGLOO® FPGAs; analog, mixed signal devices such as bypass diodes/switches, MOSFETs, FREDs and IGBTs; DC-DC converters, and pulse width modulation (PWM) modules. The extensive portfolio enables the efficient, reliable and cost-sensitive implementation of the entire range of photovoltaic (PV) applications, including power harvesting, power management, power switching and power monitoring.

"As PV designers strive to keep up with the demands for continuous innovation while meeting the cost and performance pressures of the solar industry, access to the latest technology is vital," said Russ Garcia, Microsemi SoC Group General Manager and Executive Vice President of Sales & Marketing. "The availability of Microsemi's comprehensive toolbox, from programmable devices and standard off-the-shelf parts to full custom ASICs, gives designers of photovoltaic applications a strategic partner that shares their technical and business goals."

Microsemi has decades of experience in delivering innovative and highly reliable devices coupled with long product lifecycle availability. Continued product development focuses on flexibility, security and cost effectiveness, and provides the growing community of PV application designers with everything they need to quickly take their designs to market.

- **Solar Bypass Diodes for Power Harvesting**

The LX2400 IDEAL™ Solar Bypass Device with Microsemi's patented CoolRUN™ technology provides a bypass path in PV module applications. With the industry's lowest forward voltage drop, resulting in negligible heat generation and temperature rise during operation, the LX2400 is best in class for reliability and robustness, in applications that require currents on the order of 10 amps or more through a module's junction box.

At only 0.74 mm high, Microsemi's new Schottky Barrier PV bypass diodes are the thinnest in the world, allowing customers to integrate them under the glass, eliminating the need for junction boxes. Alternatively, the ultra thin dimensions can be used to shrink the size of the junction box. Designed specifically for solar panels, the SFDS series of 10 amp diodes are packaged with unique flexible copper leads that offer satellite-proven reliability.

Alongside the unique packages presented above, Microsemi also offers a wide range of Schottky bypass diodes in axial, surface mount and thru hole devices. The standard current range is 10 A to 18 A with voltages ranging from 20 V to 45 V, but the possibility to design and build custom devices up to 60 A and up to 200 V also exists.

- **SmartFusion and IGLOO FPGAs for Power Management and Control**

Microsemi's flash-based architecture utilized in SmartFusion mixed signal FPGAs and IGLOO low power FPGAs is ideal for helping inverter designers maximize efficiency and integration of board-level functionality into a smaller footprint. Functions and algorithms such as increased number of PWM state machines, Maximum Power Point Tracking (MPPT) and Power Factor Correction (PFC) can be partitioned in the embedded 32-bit ARM® Cortex™3 or within logic gates to suit the individual design requirements.

- **IGBTs, MOSFETs, FREDs and DC-DC Converters for Power Switching**

The new 600 V CoolMOS™ C6 devices feature fifth generation high voltage superjunction technology for extremely low conduction and switching losses, enabling the design of switching systems that offer new levels of efficiency and power density.

The new MOS 8™ IGBT has been optimized for low frequency operation (10 KHz- 30 KHz), where conduction loss dominates overall system losses. The MOS 8 PT IGBT portfolio provides low conduction loss options at 2.0 V (600 V BR(CES)) and 2.5 V

(900 V BR(CES)).

Microsemi also offers IGBTs, MOSFETs and FREDs in addition to other power semiconductor devices in a wide variety of power module electrical and mechanical configurations that facilitate the implementation of new and more efficient converter topologies such as three-level inverters, interleave PFC boost converters and matrix converters.

In addition, Microsemi's growing DC-to-DC product family supports up to 40 V input voltages across a wide range of current output, up to 40 amps. The family includes switching regulators with built-in power FETs as well as controllers that use external power FETs and can operate at frequencies up to 2 MHz.

- **FPGAs for Power Monitoring**

SmartFusion intelligent mixed signal FPGAs include an analog front-end, embedded ARM Cortex-M3 processor and programmable logic fabric in a single IC platform. This flexibility gives designers the ability to develop low power, adaptable platforms for accurate real-time load data monitoring while addressing a variety of secure connectivity protocols.

More Information

Complete information on Microsemi's Solar Technology Portfolio can be found at www.actel.com/solar.

About Microsemi

Microsemi Corporation (Nasdaq:MSCC) offers the industry's most comprehensive portfolio of semiconductor technology. Committed to solving the most critical system challenges, Microsemi's products include high-performance, high-reliability analog and RF devices, mixed signal integrated circuits, FPGAs and customizable SoCs, and complete subsystems. Microsemi serves leading system manufacturers around the world in the defense, security, aerospace, enterprise, commercial, and industrial markets. Learn more at <http://www.microsemi.com>.

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The Microsemi Corporation logo is available at <http://www.globenewswire.com/newsroom/prs/?pkgid=1233>

"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995: Any statements set forth in this news release that are not entirely historical and factual in nature, including without limitation statements related to the immediate availability of its solar technology portfolio, and its potential effects on future business, are forward-looking statements. These forward-looking statements are based on our current expectations and are inherently subject to risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. The potential risks and uncertainties include, but are not limited to, such factors as rapidly changing technology and product obsolescence, potential cost increases, variations in customer order preferences, weakness or competitive pricing environment of the marketplace, uncertain demand for and acceptance of the company's products, adverse circumstances in any of our end markets, results of in-process or planned development or marketing and promotional campaigns, difficulties foreseeing future demand, potential non-realization of expected orders or non-realization of backlog, product returns, product liability, and other potential unexpected business and economic conditions or adverse changes in current or expected industry conditions, difficulties and costs of protecting patents and other proprietary rights, inventory obsolescence and difficulties regarding customer qualification of products. In addition to these factors and any other factors mentioned elsewhere in this news release, the reader should refer as well to the factors, uncertainties or risks identified in the company's most recent Form 10-K and all subsequent Form 10-Q reports filed by Microsemi with the SEC. Additional risk factors may be identified from time to time in Microsemi's future filings. The forward-looking statements included in this release speak only as of the date hereof, and Microsemi does not undertake any obligation to update these forward-looking statements to reflect subsequent events or circumstances.

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