

## NEWS RELEASE

### **Contacts:**

#### **Marketing:**

Abid Hussain  
Summit Microelectronics, Inc.  
T: 1 408 436 9890  
[ahussain@summitmicro.com](mailto:ahussain@summitmicro.com)

#### **Media:**

Barbara Kalkis  
Maestro Marketing & Public Relations  
T: 1 408 996 9975  
[kkalkis@compuserve.com](mailto:kkalkis@compuserve.com)

## **Summit IC Powers Portable Consumer Products**

*Digital cameras/camcorders, DVD, GPS and MP3 players are first products to benefit from programmable power management flexibility*

**San Jose, Calif. – November 30, 2004 -- Summit Microelectronics** has announced a new concept in power supply design that gives system design engineers unparalleled flexibility and ease of implementation. Using the new Summit SMB120, designers can now digitally program the entire multiple output power supply and associated power management functions with a few clicks of a mouse compared to the tedious iterative hardware design of conventional analog power solutions.

The SMB120 nine-channel programmable DC-DC converter is the first in a family of new devices optimized for increasingly complex consumer electronics applications such as digital still cameras/camcorders (DSC/DCC), DVD/MP3 players/recorders, handheld and automotive GPS terminals, personal digital assistants (PDAs), portable LCD TV's, as well as the next generation of "smart" mobile phones.

"The SMB120 is Summit's first device in a series of increasingly integrated configurable precision power products for the consumer electronics market and, as such, sets a new direction for the company," stated Chuck Berghoff, Summit president and CEO. "Consumer electronics OEMs are under intense pressures to

release more products to market with shorter development cycles than ever before. Summit's proven programmable analog technology creates a 'platform' solution that allows OEM's to develop designs dramatically faster and with fewer engineering resources than with conventional offerings. Our new consumer products leverage Summit's programmable precision control technology, supplied for years to the world's leading communication market equipment OEMs. They integrate power conversion functions to a level not seen before. Initial customer adoption is exceeding expectations."

Incorporating a level of programmability, integration and precision previously missing in power management integrated circuits, the SMB120 utilizes the I<sup>2</sup>C bus as a management bus, providing a digital, simple-to-use GUI software-driven programming interface. Capability includes the ability to independently sequence on/off each output with precisely controlled timing and slew rate and program or arbitrarily adjust "on-the-fly" (margining) output voltages with +/-0.5% accuracy. The adjust function can be used as a brightness or audio level control.

Additionally, complete power system diagnostics and monitoring is provided via the digital interface. These include input and output monitoring for under/over-voltage (UV/OV), low/missing battery detection, AC adapter detection and RESET output. All configuration data for the SMB120 is stored in on-chip EEPROM memory of which 96 bytes are available for user data storage. Enhancing flexibility ever further, the device can be programmed during development and then used in a "fixed" configuration or it may be re-programmed in-system via the I<sup>2</sup>C interface.

The SMB120 incorporates a total of nine-channels of power conversion: four pulse-width modulated (PWM) DC-DC step-down (buck) converters, three PWM DC-DC step-up (boost) converters, one PWM DC-DC inverting step-up/down (buck/boost) converter, and one low-dropout linear LDO regulator. All PWM

channels are digitally programmable for output characteristics and monitoring, including voltage output levels to +/- 0.5% accuracy.

This array of converters is well suited and configurable to powering components commonly found in digital consumer electronics such as LCD-TFT displays, CCD imagers, DSP's, embedded CPU's, LED backlighting, motor drives and memory arrays. The outputs are easily scalable for output current due to external MOSFET switches further enhancing the flexibility of application for various designs.

The SMB120 operates directly from +2.7V to +5.5V input making it ideally suited for 1-cell Li-Ion battery applications. Higher input voltages (2-cell Li-Ion) can be accommodated in many cases with simple applications configuration. The operating temperature range is +0C to +70C and is available in the 64-pad QFN-64 package that is lead-free and RoHS-standard compliant. Available now in production quantities, the device is priced at \$5.95 each in quantities of 1,000 units.

### **Design Software and Programmer for Prototype Development**

To speed user product development, Summit offers customers the SMB120EV companion evaluation board providing a graphic user interface (GUI) software so designers can quickly see the features and benefits and design a prototype power supply with the SMB120. This is a complete development tool that lets designers easily manipulate the characteristics of their systems. The SMB120EV design kit includes menu-driven Microsoft Windows® graphic user interface (GUI) software to automate programming tasks and also includes all necessary hardware to interface to the parallel or USB port of a laptop or PC.

Once a user completes design and prototyping, the SMB120EV automatically generates a HEX data file that can be transmitted to Summit for review and approval. Summit then assigns a unique customer identification code to the HEX

file and programs the customer's production devices prior to final electrical test operations. This ensures that the device will operate properly in the end application. The design kit software can be downloaded today from Summit's website ([www.summitmicro.com](http://www.summitmicro.com)).

**About Summit Microelectronics: *"Programmable analog for a digital world"*.**

Summit Microelectronics supplies semiconductors that manage and provide power functions in networking/communications, storage/computing, industrial, military, and consumer products. Customers can very rapidly tailor Summit's programmable analog technology to multiple applications by programming the same part.

Founded in 1997, Summit is headquartered in San Jose, California. The Company is ISO 9001 certified.

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Summit Microelectronics  
1717 Fox Drive  
San Jose, CA 95131  
T: 1.408.436.9890  
[www.summitmicro.com](http://www.summitmicro.com)