

## News Release

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## **Summit Introduces Industry's First Four-Channel Loss-Less Power Supply Tracking and Sequencing Controller**

*Highly flexible solution eliminates need for external FETs and reduces system board space and cost*

**San Jose, Calif. – June 22, 2005 – Summit Microelectronics** has expanded its communications power management family with the introduction of an innovative power supply management controller. The SMT4504 combines three of the most essential power management functions – voltage tracking, supply sequencing and voltage monitoring - in a single chip. Furthermore, this new device eliminates the need for external MOSFET switches, thereby reducing board space and cost. Using Summit's SMT4504, system designers can tailor their power control circuit to the system requirements by digitally programming the most essential functions and parameters.

The SMT4504 provides a complete quad supply rail management, while incorporating a level of programmability and integration previously missing in power management offerings. The device can track or sequence up to four external DC/DC converter ICs with programmable sequence ordering and delay times, without the need for any external components. In addition, when supplies are assigned to the same sequence position, the SMT4504 allows these rails to be tracked at the same or different (ratiometric) slew rates – a very useful feature for applications requiring supplies to be started at the same time but to ramp up at different rates.

The SMT4504 is the first true “loss-less tracker” on the market, eliminating the need for external series MOSFETs by interfacing directly to the converter's TRIM input pin. This allows designs to reduce board space, component count and power dissipation. Moreover, the elimination of MOSFET switches results in improved load regulation, a critical performance parameter in applications utilizing low core voltages.

Continuing the tradition of offering high levels of design flexibility, the SMT4504 allows

many of the essential parameters to be programmed and therefore adjusted to new design requirements. This allows original equipment and original design manufacturers (OEMs and ODMs) to reduce their development time and engineering investment and bring products to market faster and more reliably.

The SMT4504 incorporates Summit's proprietary "Link" function that provides seamless expanding operation when more than 4 supplies are involved. This allows several SMT4504 devices to control up to 48 power supplies in a single system. Furthermore, it offers the ability to accurately (1%) monitor each channel for detecting under- and over-voltage conditions. These voltage trip-points, as well as the fault trigger conditions and output polarities, are programmable, allowing for great design flexibility. Programmable slew rate control is also available to enable power supply rails to rise and fall at different rates.

The SMT4504 can work with point-of-load (POL) and monolithic DC/DC converters making it ideal for modern designs that require tracking, sequencing and voltage detection. Applications include Datacom/Telecom equipment, servers, storage and other equipment utilizing multi-voltage CPUs, DSPs and ASICs.

Programming is achieved via a convenient I<sup>2</sup>C bus and configuration data is safely stored in non-volatile EEPROM memory. 4k bytes of EEPROM memory are available for user data storage allowing customers to store data, such as board serial number, manufacturing date, revision number, etc. The devices can be programmed during development and then used in a "fixed" configuration or they may be re-programmed in-system via the I<sup>2</sup>C interface.

### **Packaging, Pricing, and Availability**

The SMT4504 device can operate directly from a +2.7V to +5.5V logic supply rail or from an 8V or 12V intermediate bus. It is offered in both the commercial and the industrial operating temperature range and packaging is the 48-lead TQFP. Available now in production quantities, the SMT4504 is priced at \$6.80 each in the commercial temperature range and \$9.63 each in the industrial temperature range in quantities of 1,000 units.

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

To speed user product development, Summit offers customers the SMT4504 companion evaluation board is provided with a graphical user interface (GUI) software so designers can quickly see the features and benefits and design a prototype power supply system

with the SMT4504. This is a complete development tool that lets designers easily manipulate the characteristics of their systems. The SMT4504EV design kits 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 SMT4504 kit 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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