

News Release

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Summit Expands Programmable RESET Controller Family with Tiny 1.2mm X 1.8mm Chip-Scale Device

Fully programmable solution increases design flexibility and application range while integrating innovative features

San Jose, CA – April 25, 2005 – Summit Microelectronics has introduced the SMR 101 programmable RESET controller, a new device in a growing family of flexible integrated RESET circuits (ICs). Using Summit's GUI-based programming technology, system designers can customize the SMR101 to address hundreds of unique combinations of voltage and timing requirements. This unique method is a vast improvement over conventional "fixed" RESET ICs where the customer must specify, procure and inventory a unique part number for each application.

The SMR101 offers dual RESET outputs that respond to either an external manual pushbutton input or an internal voltage monitor. The "soft" RESET output will assert under one of the following conditions: 1) when the monitored voltage falls below the user programmed threshold of 2.30V to 4.50V; or 2) when the external input is asserted and held for a user-programmed hold time of 0.125s to 10s. The "hard" RESET output will assert when the external input is asserted and held for a user programmed hold time of 0.5s to 40s. Both RESET outputs are held valid for a "timeout" duration that is user programmable from 1ms to 200ms.

The SMR101's dual RESET output capability allows the system designer to implement a two-level RESET function, thereby providing an initial "soft" RESET before completely shutting down the system with the "hard" RESET. In a typical application the "soft" RESET would apply to volatile registers in an embedded controller while the hard RESET would result to a full power cycle without the associated power-up delays. Alternatively the dual RESET outputs can be linked to the system power-up sequence and allow multiple system start-up modes such as "normal" and "diagnostic".

This innovative functionality of the SMR101, combined with the long duration (up to 40s) of the input hold-down time, prevents accidental RESET operation and eliminates the need for many consumer electronics to hide the push-button. Consequently, this feature improves user-experience and application usability. To ensure robust system operation the manual RESET input is “de-bounced” to suppress noise from manual pushbutton switches. Furthermore, an integrated time domain glitch filter provides power supply transient immunity, thereby avoiding false RESET assertions.

The SMR101’s small size, low power and high level of programmability make it ideal for a wide variety of applications in consumer and customer-premises equipment. These include set-top boxes, GPS devices, home DSL routers, cable modems, video equipment, POS terminals, digital cameras, and other handheld computing devices.

Packaging, Pricing, and Availability

The SMR101 operates from +2.7V to +5.5V and consumes only 40_μA. It is offered in a tiny 6-bump 1.2mm x 1.8mm Ultra CSP package, making it more than 70% smaller than conventional SOT-23 solutions. An 8-lead SOIC package is also available. Both packages are available as lead-free and RoHS-standard compliant. The operating temperature range for the SMR101 is -5C to +70C. Available now in production quantities, the SMR101 is priced at \$0.56 each in quantities of 10,000 units for the CSP package and at \$0.76 each in quantities of 10,000 units for the SOIC package.

Design Software and Programmer for Prototype Development

To speed user product development, Summit offers customers the SMR101EV companion evaluation board providing a graphic user interface (GUI) software so designers can quickly see the features and benefits and design a prototype power monitoring system with the SMR101. This is a complete development tool that lets designers easily manipulate the characteristics of their systems. The SMR101EV 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 SMR101 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).

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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