Press Release

Configurable AS3715 PMIC from ams supports platform designs for li-ion battery-powered devices

AS3715's features particularly well suited to action cameras and portable navigation devices

Unterpremstaetten, Austria (15 September, 2014), ams AG (SIX: AMS), a leading provider of high performance analog ICs and sensors, today introduced the AS3715, a configurable power management IC (PMIC) which enables OEMs to implement power circuits for multiple end products with the same hardware design.

The new AS3715 includes all the essential power management building blocks required to provide a power solution for handheld devices powered by lithium-ion batteries, such as action cameras, navigation devices, tablets, media players and gaming consoles.

Highly versatile, it offers the capability to program the start-up configuration, so that the operation of the power system can easily be adapted for different application processors. The programmability of the start-up sequence and of the built-in DC-DC converters' outputs allows design teams to accommodate changes in end-product specifications at any time without re-spinning their board design.

The power regulation blocks in the AS3715 include:

- three 4MHz DC-DC step-down (buck) converters with programmable outputs
- one DC-DC step-down controller
- two DC-DC step-up (boost) converters with programmable outputs
- eight LDOs

The device also offers eight GPIOs, a charger circuit supporting a 1.5A output, an I^2C interface, three current sinks, an ADC and a watchdog timer.

The DC-DC controller controls external power stages, allowing the user to maximize efficiency, simplify PCB routing and distribute power and heat dissipation over a wide board area. It supports configuration as either a single- or dual-phase controller, which means that the system's efficiency sweet spot can be adapted to the requirements and size constraints of the design. The DC-DC controller can manage an output current of up to 8A.

Two of the eight LDOs are low-noise devices well suited to RF modules, image sensors and other noise-sensitive circuits.

The AS3715's three high-voltage current sinks, which are intended for LCD backlighting, provide a programmable current output adjustable in 150µA increments in a range from 0A to 40mA. In addition, PWM input options provide a simple means to implement dynamic luminance scaling. The integrated 5V boost converter can supply power to HDMI interfaces or other 5V peripherals.

Other configuration options include the ability to implement either switched-mode or linear charging, depending on whether the design must be optimized for power efficiency or for space and cost.

Safety features include a customizable JEITA-compliant temperature supervision and voltage/current control circuit.

'Because the AS3715 is a very versatile PMIC, design engineers can easily use it as the basis for a single power system platform supporting a wide portfolio of products,' said Peter Kammerlander, product manager in the power and wireless business unit at ams. 'The flexible configuration capability of the AS3715 PMIC also allows developers to react quickly to late changes in the design specification. Even changing or upgrading the processor will not necessarily require a re-design of the power management circuit.'

The AS3715, which is available for sampling now, is priced at $3.68 for 1,000-unit quantities. It is housed in a space-saving 3.7mm x 3.7mm WL-CSP 91 package. It operates from a single 2.7-5.5V supply, and is rated for operation over a temperature range from -40°C to +85°C.

More information about the AS3715 may be found at
www.ams.com/Power-Management-Units/AS3715.

about ams

ams develops and manufactures high performance analog semiconductors that solve its customers' most challenging problems with innovative solutions. ams' products are aimed at applications which require extreme precision, accuracy, dynamic range, sensitivity, and ultra-low power consumption. ams' product range includes sensors, sensor interfaces, power management ICs and wireless ICs for customers in the consumer, industrial, medical, mobile communications and automotive markets.

With headquarters in Austria and 9 design centers world wide ams employs over 1,500 people globally and serves more than 7,800 customers around the globe. ams is listed on the SIX Swiss stock exchange (ticker symbol: AMS). More information about ams can be found at www.ams.com.

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