Power management IC delivers up to 12A from six DC/DC converters

Dialog Semiconductor plc announces the most powerful and most integrated configurable power management IC (PMIC) for ARM quad-core and dual-core application processors. The DA9063 can deliver up to 12A from its six DC/DC converters. It simultaneously powers the processor (the core at up to 5A plus other processor supplies), external memories, wireless communications (WLAN and Bluetooth), GPS and FM receivers, and data modems. The DC/DC converters can be paralleled to provide 3A and 5A rails. This means that the PMIC is scalable and adaptable for different system requirements in smartphones, tablets and embedded applications. It comes in an 8 x 8mm BGA package that facilitates simple routing, allowing low-cost, 2-layer PCBs to be used for some designs.

The DA9063 has 11 SmartMirror LDOs, 16 GPIOs and two rail switches, in addition to the six main DC/DC outputs. Any start up sequence, output voltage and DVC ramps can be programmed, giving unprecedented opportunities for designers to minimise their system energy consumption. For example, the application can be completely powered down and started again under the DA9063's supervisory function. The PMIC further maximises battery life by providing dynamic voltage scaling (DVS), something that is not available with discrete solutions. Furthermore, its multimode buck converter runs at 3MHz switching frequency, enabling inductors just 1mm high to be utilised, while maintaining the high peak current.

The wide supply range of 2.7V to 5.5V enables the use of single cell lithium-ion batteries as well as a standard 5V supply or a USB power supply. This is especially important for non-mobile systems.
The operating temperature range is -40 to +85 degrees C. The device is available now.

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