ST’s battery-management IC ensures longer-lasting lithium power in portable equipment, light EVs, and UPS units

Featured for increased precision and faster balancing across full temperature range



ST's L9962 lithium-battery management IC

GENEVA, SWITZERLAND, September 7, 2026 /EINPresswire.com/ -- STMicroelectronics’ L9962 lithium-battery management IC delivers superior precision by integrating a 12-bit analog-digital converter (ADC), coupled with generous cell-balancing current of 70mA, to ensure rapid voltage correction for improved battery health.

Designed for lithium-ion (Li-ion) and lithium-polymer (Li-Po) battery packs with up to 10 series-connected cells, the L9962 provides monitoring, balancing, and protection to optimize performance and enhance safety and stability. It is suitable for cordless power tools and other portable and semi-portable equipment, including medical devices, light electric vehicles like e-bikes and scooters, and backup energy storage such as UPS. Its ultra-low quiescent current maximizes runtime and permits power-saving modes including 5µA standby and 2µA deep-sleep for products in transit.

The L9962 measures individual cell voltages on a continuous cycle with programmable loop time and activates balancing and cell protection upon detecting overvoltage or undervoltage. In addition, plausibility checking compares the total stack voltage with the number of cells. While ensuring cell voltages remain tightly aligned, the L9962 maintains voltage-measurement accuracy across the full operating-temperature range.

By integrating a high-accuracy current-sense amplifier for stack-current measurement using Coulomb counting, the L9962 detects excessive charge and discharge currents and provides short-circuit discharge protection. Easily calibrated with a single point on the production line, the L9962 maintains 0.25% current-measurement accuracy over the full temperature range. Thermal

monitoring with an NTC thermistor provides accurate ratiometric measurements to detect battery-pack over-temperature and under-temperature.

Additional integrated features add value and save external circuitry, including battery-pack fuse management and configurable high-side/low-side pre-drivers for battery-pack relays. There is also a 3.3V low-dropout regulator (LDO), which remains turned on in standby mode, to provide power for external components such as a microcontroller or indicator LEDs. An I2C interface lets the host system configure device parameters such as the voltage-measurement interval and read back information such as battery state-of-charge (SOC) and state-of-health (SOH).

The L9962 is in production now, packaged as a 7mm x 7mm 48-pin TQFP, from $2.89 for orders of 1000 pieces.

For more information visit www.st.com/l9962

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