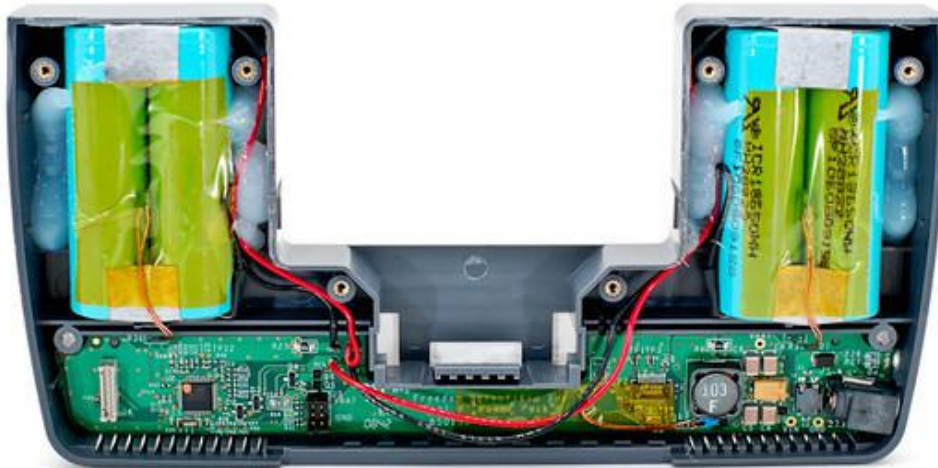


SMART BATTERY PACKS

A smart battery pack provides the device with information about its power status so that the device can conserve power intelligently. Smart battery packs can include many additional features and functionality such as fuel gauge integration, SMBus communication protocol, cell balancing, and protection circuitry.



The SMBus protocol architecture provides a means for keeping hardware costs low while also providing flexible functionality in a modular way. SMBus is a protocol that allows multiple nodes to respond to unique addresses. Details and specifications for SMBus can be found at <http://www.sunbest.net>

A smart battery can manage its own charging, report errors, inform the device of low-charge conditions, predict remaining run-time, provide temperature, voltage and current information and continuously self-correct to maintain prediction accuracy.

Added Value Electronics

As battery technologies continue to increase everyday, today's batteries can now be viewed more as power systems/power supplies than normal batteries. Smart battery packs can offer embedded electronics, which improves the safety, reliability, cycle-life and functionality of the battery while giving the end-product system engineer more options to make the end-product more reliable and user friendly.

Smart battery pack systems can now include:

- Embedded battery chargers
- Unregulated Input Power
- Wireless power (charging)
- System output power
- Fuel gauging
- GPIO options

With embedded battery chargers, batteries last longer by charging them to their ideal specifications and only within proper temperature limits.

Properly designed and accurate fuel gauges, batteries can be discharged to almost empty with confidence; hence, batteries do not need to be oversized making them smaller, lighter, and more dependable.

GPIO interface may provide access to information or functional control you had never thought possible.