

Smart Battery

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A **smart battery** or a **smart battery pack** is a rechargeable battery pack with a built-in battery management system (BMS), usually designed for use in a portable computer such as a laptop. Besides the usual plus and minus terminals, it also has two or more terminals to connect to the BMS; typically minus is also used as BMS "ground". BMS interface examples are: SMBus, PMBus, EIA-232, EIA-485, MIPI BIF (<http://mipi.org/specifications/battery-interface>) and Local Interconnect Network.

The smarter battery can internally measure voltage and current, and deduce charge level and SoH (State of Health) parameters, indicating the state of the cells. Externally the smart battery can communicate with a smart battery charger and a "smart energy user" via the bus interface. The smart battery can demand that the charging stops, ask for charging, or demand that the smart energy user stop using power from this battery. There are standard specifications for smart batteries: Smart Battery System^[1] and many ad-hoc specifications.

See also

- Battery charger
- CMOS battery
- Rechargeable battery

References

1. <http://mipi.org/specifications/battery-interface> MIPI BIF

External links

- Smart Battery System Specifications (<http://sbs-forum.org/specs/sbdat110.pdf>)
- MIPI BIF Battery Interface for mobile devices (<http://mipi.org/specifications/battery-interface>)
- BMZ GmbH, system provider and specialist for smart battery solutions (<http://www.bmz-gmbh.de/home/0,2,44.html>).

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Categories: Smart devices | Rechargeable batteries | Battery charging



Almost all laptops use smart batteries.



Smart battery components

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