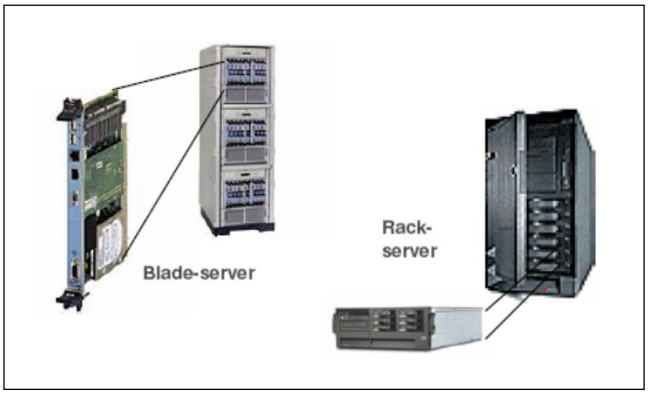
Server Backup Battery

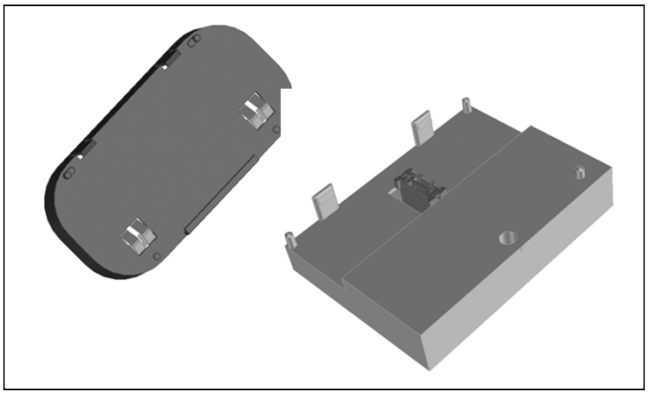
Application Note



RAID Server backup.
RAID (redundant array of independent disks) servers stand for safety critical data storage schemes that divide and replicate data among multiple hard disk drives with the target to improve **data reliability** and **I/O performance.** A battery is protecting the write cache, mostly solving the risk of data loss in case of unexpected power down.

Battery challenge.
The function of the system is heavily influenced by the availability and the reliability of the backup battery. Important features for this battery are **slim** form factor due to server board architecture, **charge efficiency** at extended ambient temperature from 45 to 55 °C, reliable energy supply for a **backup time of 48-72h**, high **reliability** for a secure **life expectancy up to 3 years**.

Technical solution
The V 500 HT as well as new V 650 HRT cell out of the powerful85 family of Ni-MH button cells from VARTA Microbattery is specially designed for extended reliability and high charge and discharge currents at extended temperature requirements.



Characteristics	4/V 500 HT Battery
Voltage level	4.8V (other voltages possible)
Capacity	500mAh
Discharge Temperature range	45°C to +55°C
Overcharge capability	0.03CA continuous
Cell thickness	6.6mm
Weight	56g

Server Battery
VARTA Microbatterys Ni-MH HRT batteries (powerful85 family) offer rechargeable battery solutions with reliable power for supplying backup power to RAID server systems up to 72h at average ambient temperature of 45°C to +55°C.

- **wide temperature range -20 to +85°C**
- **up to 50% increased charge efficiency at extended temperature**
- **high reliability – by special sealing construction with new synthetic sealing materials**
- **high current capability**
- **design flexibility on battery shape side-by-side or stacked**
- **simple charging system, continuous trickle charging possible with proprietary charging algorithm**
- **ROHS compatible**
- **Halogen and Perchlorate free**
- **UL recognized cell**
- **environmentally friendly Ni-MH technology**

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