

RTC Backup for UMPC

Application Note



RTC Backup Battery

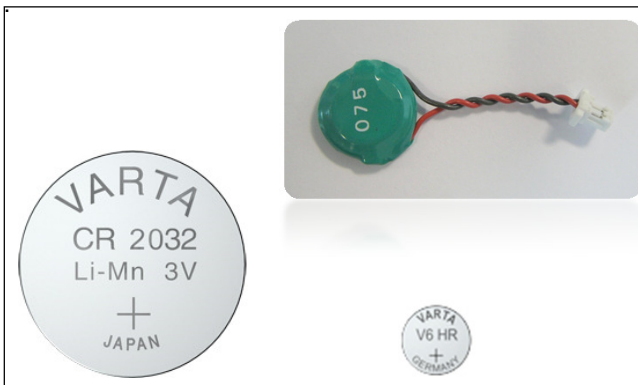
New generation of **Ultra Mobile PC** and **Netbooks** require new solutions regarding **size, weight and cost** of all components inside a system. The battery can take a significant share in this and will reduce the required **board space** from 314mm² for the CR2032 → **36mm²** for the **V 6 HR** cell.

Battery challenge

The main challenges for the battery are lifetime in the application, used **board space, easy charging, cost** and service. Ni-MH batteries for RTC backup allow low system voltage for low energy demand and high overcharge stability for simple charging solutions. The **low self discharge** and **high deep discharge stability** of the cell fulfils the demand for extended shelf life specially for high tech consumer products.

Technical solution

The V 6 HR cell out of the powerful family of Ni-MH button cells from VARTA Microbattery is specially designed for low discharge currents and reliable backup solutions with cell thickness in the height of SMD semiconductor components.



Characteristics	V 6 HR
Voltage level	1.2V (other voltages possible)
RTC discharge current	< 6 uA
Capacity	> 6 mAh
Discharge Temperature range	-20°C to +65°C
Overcharge capability	0.18mA continuous
Weight	0.29g
Size	Ø 6.8 mm x height 2.3 mm

RTC Backup Battery

VARTA Microbattery's Ni-MH V 6 HR batteries (powerful family) and V15H (robust family) offer rechargeable battery solutions with reliable power for supplying new generation of RTC chip solutions for small and ultra small mobile computing applications.

- wide temperature range from -20 to +65°C
- long lifetime – up to 6 years and above
- high reliability
- high capacity capability up to 8 mAh @ 6uA

- simple charging system continuous charging possible
- UL recognized cell
- environmentally friendly Ni-MH technology