



# SmartHub - Battery Performance

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### How is the ClockedIn SmartHub Powered?

The ClockedIn SmartHub contains a lithium-Ion battery which is contained within the electronic device and is charged by a power cable supplied by Cube Purple

### What can happen to the battery as the SmartHub becomes older?

When batteries in electronic devices age, they can exhibit several side effects, impacting the performance of the ClockedIn SmartHub. Here are some common side effects:

#### 1. Reduced Capacity and Shorter Battery Life

- a. **Decreased Run Time** – As batteries age, their ability to hold charge diminishes. The ClockedIn SmartHub will require more frequent recharging, leading to shorter usage periods.
- b. **Increased Charge Cycles** – Batteries wear out after a finite number of charge cycles. Over time, they lose efficiency in retaining energy.

#### 2. Increased Heat Generation

- a. **Thermal Issues** – Older batteries may generate more heat during use and charging. This excess heat can affect the ClockedIn SmartHub's performance and potentially lead to component damage.

#### 3. Swelling and Physical Deformation

- a. **Battery Swelling** – Aging batteries particularly lithium-ion batteries, can swell when an error is detected with the battery. This is a safety protocol to stop the battery causing further damage and/or catching fire. This is identifiable by the screen changing colour and/or having a raised surface.
- b. **Pressure on Components** – Swollen batteries can apply pressure on internal components, leading to screen damage, malfunctioning buttons, or other hardware issues in the ClockedIn SmartHub.

#### 4. Unpredictable Shutdowns and performance Issues

- a. **Unexpected Power Loss** – As batteries degrade, they may cause the ClockedIn SmartHub to shut down unexpectedly even if the battery level is not fully depleted.

- b. **Slow Performance** – Older batteries can cause the ClockedIn SmartHub to throttle performance to conserve power, leading to slower processing and poor user experience.
- 5. **Inconsistent Charging**
  - a. **Longer Charging Time** – Aging batteries take longer to charge and may not fully charge, even when plugged in for extended periods.
  - b. **Inaccurate Battery Percentage** – The ClockedIn SmartHub may display inaccurate charge levels, causing the user to overestimate the battery's available capacity.
- 6. **Decreased Efficiency at Low Temperatures**
  - a. **Cold Sensitivity** – Older batteries may become less efficient at low temperatures, leading to faster discharge and limited performance in cold environments for the ClockedIn SmartHub.

### What Should We Do If There is an Issue with The SmartHub Battery?

1. Turn off the power socket & unplug the power cable to the ClockedIn SmartHub
2. Shut down the device using the power button
3. If possible, remove the device from the kiosk and store in a cool environment
4. Report the issue to the RLDatix Service Desk who will liaise with Cube Purple regarding a replacement ClockedIn SmartHub, subject to the warranty and support period.