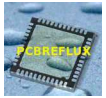
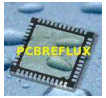


- Battery Management

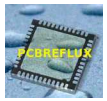
- Power on ESP32 when Battery drop down to a specific level
- Level should indicate Batteries end of charge but high enough to power up the ESP32
- ESP32 send a notification indicate „Battery Low“
- ESP32 then go to deep-sleep for a time and then indicate again (like 1,2 or 4 hours)



- The Battery

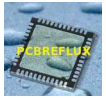
  not rechargeable
  ...

  rechargeable
  LiPo – cheap but LDO or buck converter needed
  LiFePo4 – not cheap but no voltage regulator needed



LiFePo4

- LiFePo4 Voltage range 2.5V up to 3.6V
- ESP32 (Recommended Operating Conditions) 2.8V to 3.6V
- microprocessor supervisory circuits
  DIO6809S (3.2µA)/APX809S(10µA)/MAX809S (17uA)
  RESET THRESHOLD 2.93V



LiFePo4

Deep-sleep vs. supervisory circuit

- ESP32 Deep-sleep 6.x µA but need wake up periodically
  150mA up to 500mA while running

- supervisory circuit 3.2µA .. 17µA
  no wakeup if not need