Simple Backup System for CPU09RAM

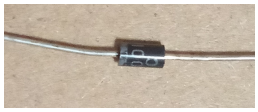
Using the following data:

The 74HCxxx VCC from 2V - 7V
The GAL VCC from 0.5 - 7V
The RAM VCC from 1.5 - 5.5V data retention
Li cell from 3.0V - 4.2V (fully charged)

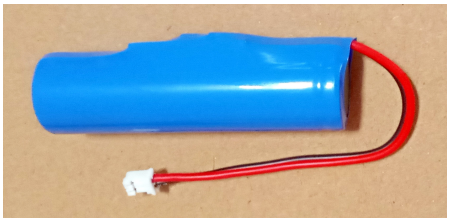
Because there are too many chips on the VCC trace, it is too complex to modify the board to use standby for just the ram chips.
So we just put the whole board in standby !

We use a Li-cell from 3.0V - 4.2V, we need to charge the cell outside the system.
And we have to test ourselves that the cell does not drop below the 3V.
Backup voltage will be from ~ 2.5V - 3.7V.

Place a 1N4001 in series with the + from the Li cell to prevent charging !
Cathode diode to pin 2 (VCC ram)
Li cell minus to pin 4 (ground)



1N4001



18650 3.7V 3600mA with protection

Standby on Li cell 3600/30 ~ 120 hour.
The ram card will use less power when the voltage drops.
Expected standby 180 hour, ~7 days.

A UPS system to charge the cell when the system is on
and an external 5V charging option is on the drawing board
and is now entering testing phase.
It must also generate a power loss signal and have a reset function.
After restarting FLEX and loading VIRTUAL, the driver will test for any power loss.