POWER ID

Empowering RFID

BAP and Passive Modes

Application Note

October 2009

POWER ID
Empowering RFID

Battery-Assisted, Passive (BAP) Mode and Passive Mode Operation

This application note explains the differences between the two possible operating modes of PowerID's labels: BAP (Battery-Assisted, Passive) mode and passive mode.

BAP Mode
In BAP mode, the label's battery supplies the power required for the ASIC (chip) operation, thus enabling superior performance compared to passive mode.

Passive Mode
When the label battery is depleted, the label operates as a regular passive label. In this mode the PowerID label ASIC is powered by the interrogator radiation RF energy which limits the read range and reliability significantly. In passive mode the read range of the tag memory content is < 4 meters.

Low Battery Alert
Using a simple read command, the end-user may check for a "Low Battery Alert." The Low Battery Alert indicates that the maximum remaining life expectancy of the battery is 2 months; this means that the tag should be replaced at soon as possible.

The Low Battery Alert can be read by sending a read command which reads memory bank 3, physical page 60_{10}, bit 1. The Low Battery Alert is active when bit 1 has been set to 1.

Memory name bank	SYSTEM / 11_2															
Physical page	60_{10}															
Bits (MSB first)	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Content	N/A														Battery-low	N/A

If you have any questions on this application note, please contact support@power-id.com