



by Schneider Electric

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# DC Battery Backup for Server Power Supply

Capstone 2011/2012 Project

## Project Description

The group tasked with this project will create a new, unique server power supply that contains a battery backup system on a DC power bus. In creating this, we will reduce the power lost in conventional battery backup technologies for servers. The server power supply should allow ample time for a server to properly shutdown if no other power backups (e.g. facility-wide UPS, generator) are available.

## Responsibilities

This project requires two electrical engineers. The responsibilities of the EEs assigned to this project will be as follows:

- 1) Understand how a modern server power supply operates
- 2) Select a battery technology to be used
- 3) Determine optimal battery charging circuitry
- 4) Evaluate current power filtering and surge protection technology

The project will require at least one computer engineer. The responsibilities of the CE(s) will be as follows:

- 1) Develop a communication protocol for inter-module communications
- 2) Design a test harness to interface with the communication bus
- 3) Write a Java front-end for the test harness

## Skills Requested

- 1) Analog/digital circuit design
- 2) Java
- 3) PIC programming
- 4) Basic concepts of sensors

## Contact Information

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## Press Release (p. 2)

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