Industrial Case Printer, March 16, 2013
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Problem Definition

- Current industrial case encoding solutions do not offer the right combination of features at the right price for many industrial applications. Current affordable solutions have serious design flaws and are not very easy to work with.

- This problem spans all industrial corrugated case printing operations. This problem is especially relevant in wash down industrial environments.

- A solution to this problem would not be economically viable if it could not be ready for production before 2014. A working prototype would be needed by April of 2013.

- This project would require approximately $2,400 in component costs for a working prototype.

Solution Specifications

- **Main ECS Components:**
  - Valve Driver Circuitry
  - Print Head Processor
  - Message Encoding
  - Power Supply
  - Communication Wiring and Protocols

Competitive Analysis

- This printer will have a much more user friendly interface compared to existing products in a similar price range.

- None of the competition offers a waterproof design for rugged, wash down, industrial environments.

- No existing products are as extensible as this design in terms of both hardware and software. This is achieved through modularity in hardware design and a full-featured programming interface.

Potential Applications

- Case encoding in wash down industrial environments.

- Case encoding where the readability of key case coding information is more important than the clarity or volume of information.

- Case encoding applications where the ink expense of high definition printers is too great.

Future Improvement Ideas

- Add Wi-fi card to allow for wireless integration with existing process management software.

- Implement fast response drive circuit to improve valve response time.

Engineering & Computer Science Departments