

Large Potential Market with Quick Payback for End-User

Application Focus: Replace costly preprinted labels and outdated date and time coding equipment with low-cost, high-resolution direct to case coding equipment.

Target SICS:		Key Benefits Eliminate Label Inventory 	
Frozen Specialty Foods	2038 2099	 Eliminate Label Application labor or machine costs 	
Frepared Foods		 Sharply reduce box coding cost 	
Target Customers:		• Replicate preprinted label with single ProSeries 768 printhead	
Food Preparation Manufacturers Institutional Food Suppliers		 Quickly and easily change label format by scanning product barcode 	

Application Brief: A large number of customers continue to use high-priced preprinted labels in order to code boxes that require extensive blocks of text such as ingredient or product information. However, using preprinted labels also requires the use of a variable coding device to indicate variable information such as date and time codes on the box. In the past, it was not possible to code large amounts of data using direct to case ink-jet printing without using multiple printheads because the printheads were limited to five lines of print. Now, with the inception of the ultra-high resolution ProSeries 768 printhead, all information can easily be replicated with one printhead in a single pass coding both fixed information as well as any required variable information.

Equipment List:





Application Analysis

Customer:	High-Volume Institutional	pizza manufacturer	located in the northeast
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Customer Goals:1. Reduce Box Coding Costs2. Maintain or Beat Label Coding Quality3. Simplify Existing Carton Coding Process

Customer's Currentl Carton Coding Process: Currently, the customer utilizes a dual-coding system. A costly pre-printed label provides the fixed product information and is hand applied offline by one or more production workers. In addition, the customer is using outdated lowresolution inkjet coders to print variable date and time information. Before each batch, workers must hand apply labels to the shipping boxes as well as update the correct date and time information to be printed online by the inkjet printers. Many times, a greater number of boxes are labeled than are actually used or conversely, the production line must be halted to label more boxes because not enough were initially created. The customer also has to maintain an entire room and inventory system for the pre-printed labels.

Example of Customer's Current Label Layouts:



Proposed System: By installing a Marksman Pro controller married with a ProSeries 768 printhead, the manufacturer will be able to faithfully reproduce the preprinted labels at nearly the same size and same quality. Instead of using manual labor to hand-apply the labels then using outdated equipment to print time and expiration date codes, the Marksman Pro will produce all of the label information and variable date and time information in one single pass. Mounting the ProSeries 768 printhead on the existing production line will eliminate all manual labor costs involved. In addition, per box costs will be sharply reduced. The PSC PowerScan Hand scanner will allow the production line workers to simply scan a barcode to change to a new message format making the entire coding system simple to operate. All label inventory and costs associated with maintaining the inventory will be purged.



Installation Details

Installation Brief: After receiving and reviewing the print samples that were designed to replicate the customer's existing labels, the customer agreed that print quality was equal to the label print quality. In all, the customer installed three production lines as detailed below. Each line took approximately 6-8 hours to install and train line workers to operate and maintain. In addition, the production line supervisor, who is responsible for all message design, spent a few hours with the distributor technician learning how to create, edit and otherwise manage the message database.

Equipment Layout:

See Figure on Right

- 1. Marksman Pro Controller
- 2. ProSeries 768 Printhead
- 3. Conveyor Belt System*
- 4. Pizza Box*
- 5. Bracketry System
- 6. Encoder
- 7. Ink Bottle
- 8. Photosenser
- 9. APS Waste Collection Bottle
- 10. Encoder Cable
- 11. Strobe Beacon
- 12. APS Data Cable
- 13. Printhead Data Cable

Not Shown

- 1. PSC PowerScan Scanner
- 2. Controller Power Cable
- *Customer Supplied Equipment



Total System Cost: \$18,000 including one day installation and training labor. (Per Line)

Payback: Payback occurred at just over **11** weeks with annual savings of **\$80,000**. (Per Line)







Reformatted code produced with the ProSeries 768 printhead



Standard Industrial Classification Code

2038: Frozen Specialties, Not Elsewhere Classified

SIC Code Description:

Establishments primarily engaged in manufacturing frozen food specialties, not elsewhere classified, such as frozen dinners and frozen pizza. The manufacture of some important frozen foods and specialties is classified elsewhere. For example, establishments primarily engaged in manufacturing frozen dairy specialties are classified in Industry Group 202, those manufacturing frozen bakery products are classified in Industry Group 205, those manufacturing frozen fruits and vegetables are classified in Industry 2037, and those manufacturing frozen fish and seafood specialties are classified in Industry 2092.

Product Examples:

Dinners, frozen: packaged French toast, frozen Frozen dinners, packaged Meats, frozen Native foods, frozen Pizza, frozen Soups, frozen: except seafood Spaghetti and meatballs, frozen Waffles, frozen Whipped topping, frozen

2099: Food Preparations, Not Elsewhere Classified

SIC Code Description:

Establishments primarily engaged in manufacturing prepared foods and miscellaneous food specialties, not elsewhere classified, such as baking powder, yeast, and other leavening compounds; peanut butter; packaged tea, including instant; ground spices; and vinegar and cider. Also included in this industry are establishments primarily engaged in manufacturing dry preparations, except flour mixes, consisting of pasta, rice, potatoes, textured vegetable protein, and similar products which are packaged with other ingredients to be prepared and cooked by the consumer. Establishments primarily engaged in manufacturing flour mixes are classified in Industry Group 204.

Product Examples:

Almond pastes Baking powder Bouillon cubes Box lunches for sale off premises Bread crumbs, not made in bakeries Butter, renovated and processed Cake frosting mixes, dry Chicory root, dried Chili pepper or powder Chinese noodles Cider. nonalcoholic Coconut, desiccated and shredded Cole slaw in bulk Cracker sandwiches made from purchased crackers Desserts, ready-to-mix Dips, except cheese and sour cream based Emulsifiers, food Fillings, cake or pie: except fruits, vegetables, and meat Frosting, prepared Gelatin dessert preparations Gravy mixes, dry Honey, strained and bottled Jelly, corncob (gelatin) Leavening compounds, prepared Marshmallow creme Meat seasonings, except sauces Molasses, mixed or blended-mfpm Noodles, fried (e.g., Chinese)

Noodles, uncooked: packaged with other ingredients Pancake syrup, blended and mixed Pasta, uncooked: packaged with other ingredients Peanut butter Pectin Pepper Pizza, refrigerated: not frozen Popcorn, packaged: except popped Potatoes, dried: packaged with other ingredients Potatoes, peeled for the trade Rice, uncooked: packaged with other ingredients Salad dressing mixes, dry Salads, fresh or refrigerated Sandwiches, assembled and packaged; for wholesale market Sauce mixes, dry Sorghum, including custom refining Spices, including grinding Sugar grinding Sugar, industrial maple: made in plants producing maple syrup Sugar, powdered-mfpm Syrups, sweetening: honey, maple syrup, sorghum Tea blending Tofu, except frozen desserts Tortillas, fresh or refrigerated Vegetables peeled for the trade Vinegar Yeast