

Advantages of PCL-Enabled Thermal Barcode Printers in Distribution and Transportation: Cutting out the Middleware

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About This Whitepaper

Starting with the basics, barcode technology has a heavy impact on the distribution and transportation industry. The barcode industry benefits not only employees who handle over thousands of packages every day, but customers, who ship those packages. The use of barcodes in these two industries allows daily supply chain activities to be streamlined, therefore, reducing complexity and simplifying the communication between channels. An added benefit of using ST barcode printers for these activities is the security of using Printer Control Language. PCL is the industry standard and allows for easy integration into your current operating system. PCL also supports dozens of scalable fonts, which, eliminates the need for customized middleware interfaces and prevents the possibility of an unsuitable font from being substituted. Localization of fonts is also included in PCL, and supports many languages including the characters of Hebrew, Arabic, Chinese, Japanese, and Korean.

PCL easily integrates to existing software, therefore, the cost of maintenance is lower and eliminates the need for middleware software, customization due to the standardized command language, and the need to maintain or upgrade custom printer drivers. In addition to the software advantages, ST performance printer models offer cutting-edge durability and operational features not available with any other thermal printer provider in the market.

Continue reading this paper to explore the advantages of PCL-enabled thermal barcode printers.

Demands of Event-Driven Supply Chain Management

Usable, actionable data is crucial in any supply chain. With the advent of event-driven data warehousing in the distribution and transportation industries, many businesses are now employing enterprise dashboard platforms designed to give executives up-to-the-minute reports on inventory counts, provide traceability accountability, statuses of product deliveries and passenger arrivals worldwide. The movement of goods and people demands accurate, detailed and timely data that can only be as good as the weakest link in the chain: the barcode.

In today's competitive economic environment, ensuring direct and efficient communication between systems, organizations and customers is imperative in controlling operational costs and improving customer relationships with a company's products and brand. Barcodes and the equipment that generate them are essential to ensuring the channels of communication and data flow remain open and accurate.

Having standardized font formatting on every label ensures accuracy of barcode scans and reduces operating costs of inventory audits.

Eliminate Complexity, Simplify Communication with PCL-Enabled Thermal Barcode Printers

One important way to remove complexity from your barcode printing processes is to install Printer Control Language (PCL) enabled thermal printers. An industry standard in LaserJet printing since 1984, businesses have been slower to adopt PCL in thermal printing because legacy, proprietary printing languages have kept them locked into using specific products for their barcode needs. Here are just a few reasons to make the switch to PCL thermal barcode printers:

- PCL is standardized to run on a variety of operating systems: Microsoft, Mac, Linux and others, so it is independent of any application software running on a computer. This ensures faster and easier plug-play integration, getting your printer systems up and running sooner.
- PCL supports dozens of scalable fonts. This eliminates the need for customized middleware interfaces needed to decipher fixed-width fonts and prevents the possibility of an unsuitable font from being substituted. Having standardized font formatting on every label ensures accuracy of barcode scans and reduces operating costs of inventory audits.
- PCL supports localization of dozens of language characters including Hebrew, Arabic, Chinese, Japanese, and Korean¹. Being able to immediately print international pallet and package barcode labels and pick lists, with no custom coding required, greatly increases global inventory and traceability responsiveness.

¹ PCL supports text formatting for these languages, however, the fonts used must be added as an option or provided by the user in TrueType format

Total Cost of Ownership Middleware vs. PCL-Enabled Printing

Another sizable benefit of using PCL-enabled thermal printing is its lower overall cost of ownership. Here is a general overview of the differences in cost between middleware and PCL-enabled thermal printing.

Associated costs tied to the purchase and maintenance of middleware:

- Middleware purchase costs
- Lifetime custom code development and maintenance to maintain congruency with operating systems and printer hardware
- Middleware upgrade and recertification costs

Associated costs tied to the purchase and maintenance of PCL:

- Plug and play, standardized command language integration, no customization required.
- No custom printer drivers to maintain upgrade or certify.

Source Technologies' printer models offer cutting-edge durability and operational features not available with any other thermal printer provider in the market.

Source Technologies Thermal Printers: Benefits of User-Optimized Hardware

Along with the flexibility of PCL-enabled printing functionality that allows for 50 scalable fonts and support of dozens of barcode formats used in distribution, logistics and transportation, Source Technologies' printer models offer cutting-edge durability and operational features not available with any other thermal printer provider in the market.

The ST Performance Series printers feature:

- Die cast frame, metal covers designed specifically for harsh work environments.
- Full-color touch screen controls: makes printer menus easier to see and operate in dark or low light areas.
- Standard ethernet connectivity: increases printer network speed, making data spooling and batch printing jobs faster.
- Automatic label loading for seamless, continuous label printing.
- 300 dpi printhead: allows for the crisp reproduction of fine detail in small, detailed bar and QR codes. Prevents loss of data or misread codes when scanned.

The newest addition to the Source Technologies thermal printing line, the STp. 1120n, also offers:

- Near edge printing: full use of the label allows customers to design and code barcodes that support detailed information.
- Flexible multi-media, printing: allows labels to be printed on synthetics, tags, self-adhesive and plastics. Gives users the ability to integrate barcode printing across a variety of applications.

To learn more about the thermal Performance Series printers for the distribution and transportation industries, call 800-922-8501 or visit us on the Web at www.sourcetech.com

About Source Technologies

For over 25 years, Source Technologies has engineered reliable and easy-to-use specialized printing solutions helping organizations streamline operations.

True workhorses of the industry, ST thermal printers perform effortlessly in some of the harshest settings and are based on the industry standard language PCL, allowing for seamless integration into any environment. Our mobile label and receipt printers are rugged and dependable enough to keep workforces moving.

MICR laser printers from Source Technologies are renowned for their security features and ability to print negotiable documents on-demand, inclusive of all variable data using blank stock in a single printer pass. Laser barcode and secure document printers produce shipping labels, invoices, order forms and time and information sensitive documents. Clients include Fortune 1000 companies as well as nine of the TOP 10 U.S. Banks and many of the world's largest security organizations.

Printing solutions from Source Technologies improve processes in a wide range of business environments including warehousing and distribution, transportation and logistics, healthcare, hospitality, retail and finance.



To Learn More About Our Printing Solutions:

Source Technologies | 2910 Whitehall Park Dr. | Charlotte, NC 28273

(800) 922-8501 | (704) 969-7500 2910 | Sourcetech.com