

Datamax-O'Neil H8308p Thermal Printer Effortlessly Replaces Laser Printers for Improved Productivity

High-volume, real-world tests of new H8308p PCL-compliant thermal printer verify effortless system interface and significant cost savings ■ ■ ■



The new Datamax-O'Neil H8308p PCL-compliant thermal printer proved an easy “plug and play” substitute for existing laser printers and resulted in significant labor and cost savings.

For over a decade, laser and inkjet printers have been used extensively in many packing and shipping-related functions because of their ability to easily interface with the company's databases and enterprise systems in order to print reports, packing lists and other related documents. Conversely, thermal printers, which are faster and more efficient than laser and inkjet printers, have been relegated to specialized printing functions, such as barcodes and mailing labels, because of their inherent incompatibilities with company database systems and software.

Datamax-O'Neil has challenged these traditional printer functions by engineering its new H8308p PCL-compliant thermal printer so that it interfaces with enterprise software and databases with the same ease as laser and inkjet printers, while offering the cost savings and efficiency of a thermal printer.

To help illustrate the advantages the H8308p thermal printer can provide, Datamax-O'Neil conducted independent H8308p beta tests in the shipping and packaging departments of two large companies prior to the product release, which is slated for November 2014. Extensive user evaluations verified that the new printer easily handled rigorous printing demands, increased operational efficiency, decreased supply costs, reduced labor time and integrated easily with existing software systems.

Printer Evolution ■ ■ ■

In the early years of industrial printers, laser and inkjet printer manufacturers adopted Printer Command Language (PCL), a page-description language (PDL) developed by Hewlett-Packard in 1984, as their standard printer protocol. In the ensuing years, PCL became the de facto industry standard for more than 90% of the printers on the market.

Thermal printer manufacturers, however, chose not to adopt the PCL standard, and instead created and utilized their own PDLs. As a result, each PDL is generally incompatible with others and with any PCL-based applications. This caused thermal-printer users to become captive to one manufacturer in order to maintain compatibility.



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This also created a significant barrier for companies that sought to integrate diverse thermal-printer PDLs with their Enterprise Resource Planning (ERP) systems. As a result, companies were often unable to utilize thermal printers globally with their existing systems, which would prohibit them from benefiting from the use of thermal printers in key operations where they could provide cost and efficiency savings.

The Datamax-O'Neil H8308p Solution ■ ■ ■

In 2012, a customer approached Datamax-O'Neil to discuss the thermal-printer PDL incompatibility issue. The customer made the case that 8-inch/A4 thermal printers had the potential to replace less-efficient laser and inkjet printers in many applications, but the PDL incompatibility prevented utilization.

In response to that suggestion, Datamax-O'Neil has developed the H8308p thermal printer, which is the first 8-inch/A4 high-speed thermal printer that utilizes industry-standard PCL to provide effortless integration with existing ERPs, databases and standalone PCL-based applications. The overriding objective behind the development of the H8308p was to combine operating economy, reliability and efficiency with the integration ease formerly available only with laser and inkjet printers.



The H8308p integrated flawlessly with the multiple software applications during both beta tests.

Beta Test Site One ■ ■ ■

The first beta test site for the H8308p was in the shipping department of a large manufacturer with numerous complex software applications. The department's printing-equipment configuration consisted of a combination of thermal printers that are used to produce shipping labels, and laser printers for the creation of user instructions, packing lists, shipping logs and shipping reports.

The challenges the department faced were inefficiencies caused by laser-printer toner-cartridge issues, laser-printer jams and multiple printers occupying the same space.

The laser printers also had inherent operating requirements that adversely affected department productivity and material expenditures. For instance, the shipping department needed to stock extra toner cartridges at all times so they would not run out at critical moments. With toner cartridges needing to be replaced at the end of the day when product-shipping volume was heaviest, the department estimated that 20% of the toner cartridges that were discarded were partially full, resulting in wasted toner and increased operating costs.

Problems with print quality and consistency from the laser printers were also important issues. Consistently outputting clear, dark prints on both sides of a sheet was critical to prevent time-consuming reprinting of documents. In addition, toner buildup also resulted in laser printers periodically not printing second sides of sheets. Another critical inefficiency was caused by the complex paper path of the laser printers that resulted in a minimum of two paper jams per day, which halted shipping while the jam was cleared and the printer restarted.

In the search for a solution, the shipping department replaced its laser printers with the H8308p in order to evaluate its capabilities and qualities in printing lists, logs and reports, as well as how easy it was to integrate into its system.

Installation consisted of connecting the H8308p to the existing driver on the network. The user tested it extensively with SAP Crystal Reports, Citrix, Visibar, UPS Shipping System, FedEx

Shipping System, Access database and Excel. In every case, all packing lists and reports printed exactly as they did on the laser printer with no lost information, formatting changes or font substitutions.

Throughout the beta test, the shipping department increased production efficiency by 5% to 10% as a result of the advantages of the thermal-printing technology over the laser printer. Specific efficiency increases were seen with the elimination of printer jams and the need to monitor and change toner cartridges. The printing-speed productivity also increased substantially with the H8308p's ability to print more than 43 pages per minute compared to the much slower 10 pages per minute of the laser printer.



Increases in production efficiency of 5-10% were achieved through the thermal-printing advantages of the H8308p over existing laser printers.

The H8308p also contains an intuitive color touchscreen that is significantly larger than the screens on the laser printers. Users found the H8308p's larger screen easier to read and use compared to the laser printer screens, which also contributed to increased productivity and fewer errors.

The print-quality consistency of the H8308p was also superior to the laser printer. The department found the H8308p reliably provided crisp, readable prints, which also enhanced productivity by eliminating the periodic requirement to reprint documents of substandard quality



The intuitive color touchscreen of the H8308p is larger than laser printer screens, which contributed to increased productivity and fewer errors.

Beta Test Site Two ■ ■ ■

The second site for a beta test was a large mail-order pharmaceutical company that tested the H8308p in its packing and shipping departments. Its configuration consisted of a combination of thermal printers for barcoding and laser printers for receiving document data from a Linux-based system using a generic version of the Common Unix Printing System (CUPS). Department staff had used both thermal and laser printers side-by-side for years and, while fully understanding the advantages of thermal printers in their production environments, had not been able to replace the less-efficient laser printers because of software-compatibility issues.

Nearly identical productivity and cost concerns at Beta Test Site One were also present at Beta Test Site Two. However, the second test site had additional productivity challenges resulting from employees transferring laser toner to white shipping boxes and equipment after changing toner cartridges or clearing jams. Unless they washed their hands each time they worked on the printer, they would transfer the toner, requiring costly disposal of soiled boxes or time-consuming cleaning of equipment.

Having challenges similar to the first site, Beta Test Site Two experienced the same significant cost and production improvements with the H8308p. Employees of both departments praised its reliability, speed and high print quality when compared to the laser printers.

Interfacing the H8308p into the Linux-based system was similarly easy and took less than five minutes. All documents were printed without error and at a faster rate for increased productivity.

Conclusion ■ ■ ■

The new H8308p printer from Datamax-O'Neil bridges a major gap in printer technology to provide the print quality, reliability and productivity benefits of a thermal printer and the system-interface capabilities of laser and inkjet printers. Having proven its ability in shipping and packing environments, the H8308p can effortlessly interface with operations, applications and systems utilizing the industry-standard PCL language to cost-effectively enhance print efficiencies in organizations of all sizes.