



Not All Industrial Barcode Printers are the Same

KEY QUESTIONS TO CONSIDER IN EVALUATING YOUR OPTIONS

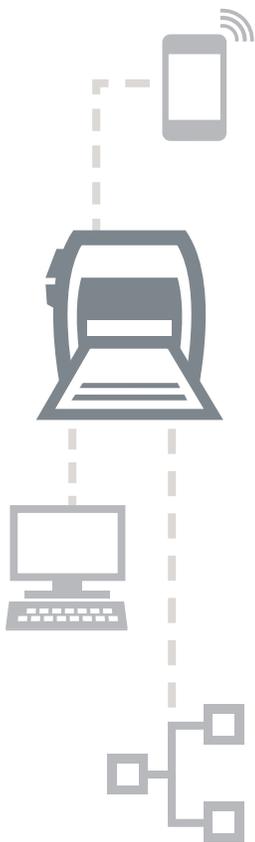
Thermal barcode printing has become an increasingly important business-critical part of any company's operations, and this is particularly true for enterprises in the manufacturing, retail, healthcare, and transportation and logistics industries.

If an e-commerce retail company can't print shipping labels, its products can't get to consumers. If a laboratory can't label its blood draws, potentially life-saving tests can't be processed efficiently. If an electronics manufacturer can't label its product components, it won't meet its fulfillment deadlines. Barcode printing is an integral part of business operations, and downtime can cost companies millions in lost productivity.

What You Should Know Before You Buy

Selecting the right industrial barcode printer can help you minimize downtime, improve efficiencies and cut costs. But the reality is that you can't judge a printer simply by its initial price or published specifications. Why? Because the cost of installing, maintaining and operating that printer can quickly drive up the total cost of ownership – and may leave you with a solution that doesn't meet your business needs.

In fact, according to Gartner, as much as 80 percent of the costs associated with an IT investment occurs after the initial purchase.* That's why it's important to ask the right questions about management, maintenance, reliability and quality before you invest in your next industrial barcode printer.



UNDERSTANDING PRINTER INTEGRATION

Is the printer flexible enough to integrate within a networked or non-networked environment?

Whether your industrial printers are connected via a wireless local area network (WLAN), are part of an Ethernet network or operate in a non-networked environment, they should be designed to easily “drop into” your existing operations to minimize initial deployment cost and time. A networked printer should also provide failover capabilities between wired and wireless networks to reduce the chance of any unexpected interruptions.

Is this printer compatible with my existing software systems?

A good industrial printer should easily integrate into existing operational systems such as your enterprise resource planning (ERP) software so that you can print labels directly from those systems. But the reality is that many of these software systems only support a limited number of print drivers. Before buying, make sure your printer is supported by all your appropriate operational software systems.

Is this printer compatible with other printers?

If your company is replacing only some of its existing printers, your new and old printers need to function on your existing network and with your application software at the same time. You should also be able to centrally manage all your printers using one consistent interface to avoid significant IT and retraining costs.

Does this printer easily fit into my existing space?

If you are purchasing a new printer to replace an existing one, make sure it fits in the current printer's space within your workflow. And if you've built an enclosure for your printer to protect it from dust or extreme temperatures, check to see if the printer's output slot matches up with the output slot on the enclosure to ensure that printed materials can be accessed outside the housing.

Is the printer backward compatible with my existing equipment?

When replacing a current printer, also consider whether the new printer can support the same printer language, label formats, and label materials you currently use. If not, you could be faced with time-consuming and often costly modifications such as reformatting labels, swapping out labeling materials or reprogramming your application software to support a different printer language.



KEY CONSIDERATIONS FOR PRINTER MANAGEMENT

Can I centrally manage this printer?

At a minimum, your printer vendor should provide tools that allow you to manage all aspects of your printers from one control screen. The tools should allow you to view and manage your printers from computers, tablets and smartphones — all with a user interface that is simple and straightforward.

Can I manage this printer using the cloud?

Increasingly, companies are connecting their business-critical assets such as computers, mobile devices and printers to the cloud to more cost-effectively manage these assets from one online interface. Even if your company is not connected to the cloud today, you may want to connect in the future. So be sure you are buying future-proof, cloud-compatible printers.

Can I use the cloud to connect this printer to my other industrial equipment via IoT?

Companies are also turning to IoT or “Internet of Things” platforms that enable them to use the cloud to not only manage devices but also to allow their various assets to “talk” to each other. For instance, a manufacturing organization may want to use IoT to connect all of its production lines and its barcode printers through the cloud, which allows the manufacturer to remotely monitor operating conditions. If an operational issue occurs, the IoT platform can be programmed to automatically stop the rest of the production.



MAXIMIZING PRINTER UPTIME

How easily can I diagnose and fix an operational error on my printer?

No matter how well a printer is built, technical issues can occur. Ask your manufacturer how you would access the information needed to self-diagnose and fix a problem. For instance, do you have to spend hours searching online to solve the issue? Or does your printer allow you to simply scan a QR code that takes you directly to a troubleshooting webpage and quickly solve the problem?

Is this printer resistant to environmental hazards such as dust?

Printers that are designed to draw air into the printer to cool the machines down are also drawing in dust, which can significantly reduce the life of your printer. Instead of selecting a printer that relies on a mechanical fan, look for a printer that uses other methods to control its internal temperature that doesn't introduce contaminants into the printer.

Does this printer provide advance warnings that allow proactive corrective actions?

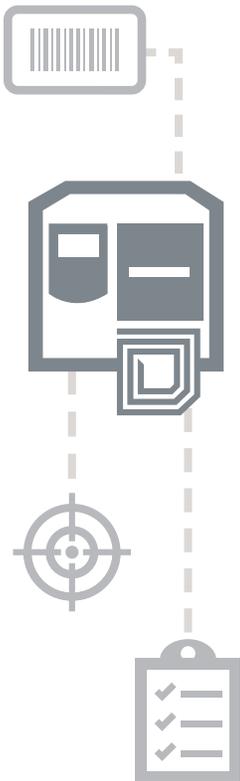
If your printer doesn't give an easy-to-interpret advance warning of a condition or situation so that corrective action can be taken, that can greatly increase downtime. In addition, a cloud-based management system allows you to cut downtime even further by setting company-wide parameters to guide proactive responses. For example, using the cloud, you can see from your main office in New York when a print head in China needs to be replaced – and make sure the local office replaces that part before it wears out.

How user-friendly is the printer's basic maintenance?

If your IT department has to be called or you need a special tool every time you need to replace a printer platen roller or print head, then your support and your downtime costs are both going to climb exponentially. Make sure the printer has a user-friendly design that allows basic maintenance to be performed without significant training. For instance, lights should turn on inside the printer when an individual opens the printer's door to more easily see inside the printer to replace a part, and part replacement should be both easy and intuitive.

Is your printer investment future-proofed?

In the past, hardware upgrades often required sending the printer back to the manufacturer. Today, well-designed printers can support hardware upgrades such as installing RFID or new WLAN features right from the field. This allows you to protect your initial printer investment while adding more capabilities as your needs change.



DETERMINING PRINT QUALITY

How consistent and accurate is the printed output?

The quality of the 1st barcode label produced by your printer should be as good as the 5,000th label printed in a batch run of labels. Print quality is largely determined by controlling the temperature of each individual element on the print head. If a printer is unable to monitor and control the print head element's temperature, you may experience inconsistent print quality.

How tight is this printer's registration?

If you print micro labels, look for a printer with tight registration, which is defined as the measure of the maximum image drift of the data printed on a label. Tight registration ensures that labels are readable and that barcodes are printed in the right location so that they can be reliably scanned. For more information on microlabel printing technology, [download the Zebra White Paper 'Small Labels Deliver Big Business Benefits' here.](#)

What specifications does this printer support?

The specifications you require depend heavily on your application. For instance, if your printer is part of a larger assembly line process, you don't necessarily require fast printing speeds. Instead, you need a printer that allows you to customize your printing speed. If you are labeling large objects such as chemical drums, you might need the ability to print labels much larger than the standard size 4" x 6" shipping labels. Another key factor to consider is the duty cycle, or the number of labels you need to print during a shift. Those organizations that produce a low-volume of labels will typically require a lower duty cycle printer than organizations that produce labels 24 x 7. This decision greatly impacts the required printer specifications and resulting product cost.

Selecting the Right Industrial Printer is Critical to Business

WHAT REAL-WORLD COMPANIES ARE SAYING



“...We are confident about the return on investment.”

“Zebra printers are reliable and robust, which means that their maintenance costs are also low. Industrial environments impose huge demands on printers. They must be able to operate properly in dusty environments and keep going almost non-stop. Given that we have been happy with our printers’ performance for more than seven years already, this shows that we are confident about the return on investment.”

JOHN BERGHS, ICT MANAGER AT FLEXTRONICS

Welch’s Turns to Zebra to Improve Supply Chain Tracking Efficiency

“On some production lines, the system processes one pallet per minute, so we needed high speed printers such as Zebra’s. Welch’s can now record and store in a database a complete genealogy of all products shipped. This capability has dramatically reduced the possibility of a ‘hold’ product (that is un-cleared for delivery) leaving the plant. It also makes it much faster and easier for Welch’s to target a product recall, if necessary, by lot or sub-lot number and delivery location.”

GORDON CONKLING, DATA COLLECTION PROJECT MANAGER FOR WELCH’S



Zebra: Delivering Flexibility that Leads to Innovation

When Copan Italia developed a revolutionary new way to perform blood and urine analysis, it turned to Zebra printers for support. The printers could be easily configured and equipped with specific options to print custom barcodes for the new application, which enables the analysis of 1,000 to 1,200 samples during a typical 8-hour shift.



Selecting a Printing Solution You Can Trust

Today, printers are a business-critical part of a company's operation – particularly in fields such as manufacturing, retail, healthcare, and transportation and logistics. Unreliable or hard-to-manage printers can result in increased IT costs and unexpected downtime that can cost a company millions.

But selecting the right printer to meet your needs is not always easy. That's why it's important to work with a trusted partner in the industry – one that can help you select the printer that best meets the demanding requirements of an industrial environment and can also provide strong local support.

Zebra has more than 2,000 local channel partners that work directly with you to help find and maintain the perfect printer and label solution for your company.

ZEBRA PRINTERS: DELIVERING DURABILITY, EASE-OF-USE, HIGH PERFORMANCE AND LOW TOTAL COST OF OWNERSHIP



ZEBRA Xi™ SERIES PRINTERS

Built for high-volume applications and harsh environments, Zebra's Xi™ Series label printers deliver superior print quality and reliability and low total cost of ownership – making them a smart investment for organizations with high-volume, mission-critical or specialty labeling applications.

Xi4 printers are specifically designed to boost your operational productivity with up to 40 percent faster print speeds on select models, faster 10/100 Ethernet connection speeds, and enhanced early warning systems for reduced downtime.



ZEBRA ZT400 SERIES PRINTERS

Zebra's durable ZT400 Series printers are designed to deliver years of high performance in a wide array of applications. Zebra's ZT400 printers combine the field-proven reliability of the Z Series with new advancements in print speed, print quality and connectivity options.

Designed for ease of use, the ZT400 Series printers offer an intuitive icon-based LCD graphical user interface and easy supplies loading. They also include standard USB, Serial, Ethernet and Bluetooth® capabilities. Expanded RFID capacities deliver greater tracking abilities, deeper visibility and enterprise insights.



ZEBRA ZT200 SERIES PRINTERS

Zebra's most affordable industrial printer, the ZT200 Series family of printers, features elegant space-saving design, effortless setup, intuitive user operation, and ease-of-service and maintenance. Whether you are adopting barcode technology for the first time or upgrading existing printer models, the ZT200 Series is the right choice for a variety of labeling applications.



ZATAR
ZEBRA TECHNOLOGIES

ZEBRA'S ZATAR: KEEPING YOUR BUSINESS-CRITICAL ASSETS IN THE CLOUD

Zebra's cloud-based software service, Zatar, makes it easy for businesses of all sizes to adopt and use an "Internet of Things" (IoT) solution in their operations. Enterprises around the world are turning to IoT to connect billions of devices and sensors, which in turn allows them to detect, manage and control vital aspects of their operations.

The Zatar platform makes it easy for applications and devices such as industrial printers to leverage data from other devices through standard application programming interfaces (APIs). The goal: Increasing enterprise asset intelligence to support more efficient operations.

For more information, visit www.zatar.com.

* <http://www.networkalliance.com/your-advantage/understanding-technology-costs>

**FOR MORE INFORMATION ON ZEBRA TECHNOLOGIES PRODUCTS
OR TO FIND A SUPPLIER NEAR YOU, PLEASE VISIT WWW.ZEBRA.COM**



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