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7 Things You Must Know to Add Cost-Effective Printing Technology to Your OEM Equipment

WHITE PAPER

INTRODUCTION

Many original equipment manufacturers (OEMs) of in-line production equipment want to sell end-to-end solutions that incorporate four-color printing technology. These OEMs build machinery such as packaging equipment, material movement tables, label converting and finishing systems, and book binding equipment that frequently requires customized digital color printing. End-use customers for these products typically prefer integrated printing capability to avoid the need for offline or third-party services.

THE PROBLEM: Most OEM machine builders do not have the knowledge or capability to add this printing technology to their equipment. Plus, many of these OEM systems require quick changeover and custom printing capabilities that were previously unavailable at affordable prices. OEMs recognize the value that integrated printing technology can add to their solutions, and today are exploring ways to provide this option to customers.

This management brief explains the critical issues involved with incorporating printing systems in OEM production machinery. It reviews the market drivers and trends that are driving in-line printing technology, and explains how adding that capability can create attractive new revenue streams.

Customer Needs Are Driving In-Line Printing Capability

There are several key customer needs that are driving OEMs to add printing technology to their solutions. The first trend is the end-users' desire for four-color printing. More than ever, companies want to project their brands in vivid color across containers, labels, and packaging.

They also want cost-effective, on-demand printing for small batches. Food and beverage processors and consumer packaged goods providers are striving to meet consumer demands for more personalized and niche-oriented products. These offerings are typically produced in smaller quantities that require high-quality yet short printing runs.

A related trend is the growing need for customized printing. End-users want to print a company's logo, graphics, or message in small runs on a bag, box, or label. Customized printing has become popular in the food delivery, party, and events industries. For example, a consumer products company may want to print a special message on its packaging such as "Spring Sale" or "Happy Holidays." Offering customized printing capability as part of the production machine solution eliminates the need for the end user to go outside for expensive, small-run custom printing.

Sustainability and environmental responsibility are also driving the OEM market. In-line printing enables direct-to-packaging or direct-to-product printing that is in demand for unique applications such as book or box printing. This type of printing supports companies' sustainability goals by permitting printing directly on boxes and packaging, eliminating the cost and waste of color wraps.

Adding Printing Technology to Your Production Machine: What You Must Know

When evaluating printing technology for your production machinery, there are seven critical issues that must be considered. These factors will dictate your success in fulfilling the end-use customer's printing needs.

1. Select an OEM specialist.

Some suppliers specialize in offering printing systems tailor-made for the OEM market. These companies have deep experience serving OEM machine builders. They are staffed with mechanical engineers and software developers, and have products that focus on providing a total solution around the print head. Specialist companies recognize that each production line presents its own specific printing requirements. Their teams will help you identify the printing technology your equipment needs and develop the specifications and functionality that can provide competitive advantage for your machinery.

OEM specialists can simplify integration and add functionality and capabilities that dramatically improve the user experience. In addition, these suppliers will accept smaller unit sales with just-in-time deliveries, plus offer the inks, consumables, paper, and labels that provide the OEM with a supplemental revenue stream (more on that important benefit later).

2. Consider the supplier's engineering and technical resources.

Integrating printing technology in production equipment is not a plug-and-play exercise. Most OEMs desire a unique set of functions and capabilities that addresses their end-use customers' needs and enhances the user experience. The result is a customized printing solution that requires strong in-house or external engineering resources for machine integration.

Most small to mid-size machine builders do not have the internal printing expertise to perform a successful integration. That means the chosen supplier must have deep experience in providing OEM printing solutions. Their resources should include in-house mechanical and software engineering support. These two disciplines must work together seamlessly to achieve a successful integration and develop the required printing features and capabilities.

3. Demand simple and convenient integration.

Incorporating full-featured printing technology in OEM production machinery can be a challenging task. Suppliers focused on integration convenience and simplicity will take the guesswork out of the installation plus accelerate the OEM's time to market.

The supplier should have printing systems for the OEM market that are designed for easy integration. First, their products will have undergone intense testing and validation processes that prove their field readiness. From a design standpoint, their printers should make it easy for OEM partners to add unique marketing identification properties, such as brand names and logos, to differentiate their products in the market. The printers should have fewer connections and touch points that enable rapid installation, plus incorporate I/O communications ports that integrate with the OEM's machinery. Form factors should be lightweight and compact to fit in small spaces. The supplier should also provide quick and easy access to relevant technical documentation, including CAD files, software APIs and SDKs. As mentioned above, the supplier's staff should have dedicated mechanical and software engineers to support the OEM's integration process.

4. Remember customer support.

The OEM is responsible for providing first-line technical support for the end-use customer's printer-related issues. The printing supplier's engineering resources will be critical to ensure the OEM can provide responsive and competent service. The supplier's technical resources should be globally positioned for availability across worldwide time zones and offer regional locations for rapid shipment of spare parts and supplies.

The printer supplier also should offer remote support and analytic functionality in its technology to provide on-line technical support and product optimization. Some suppliers, such as AstroNova, provide Web-based portals that give OEMs accessibility to their printing products' operation in the end-use customer's production environment. These portals enable OEMs to analyze the operating costs and performance of the printing technology, plus optimize consumables consumption.

5. Ensure cost effectiveness over the long term.

Four-color printing solutions with small batch and custom printing capabilities are available today that are highly affordable. However, it is important to consider the customer's total cost of ownership as well as the price. Evaluate the amount of training required to operate and maintain the printing system. Select products that have lower changeover times and costs. Recognize that smaller printing solutions will not have the waste or high operating costs of larger presses. These hidden expenses can significantly impact the end-use customer's total cost of ownership. Plus, they can affect the OEM's technical support and warranty costs.

6. Add a recurring revenue stream.

Incorporating printing technology in you production machinery unlocks an attractive new revenue source. Beyond the price of the printing equipment, the OEM will build an ongoing stream of high-value spare parts, ink, media, and other consumables. A responsible printing supplier will set up the OEM in this line of business and provide the products for resale. It will provide technology for the OEM to secure its revenue stream.

7. Support the customer's sustainability goals.

Today, manufacturing companies are emphasizing sustainability and focusing on environmental, social, and governance priorities. The printing technology in their production equipment should be aligned with these goals. This means in-line printing solutions must reduce waste by incorporating direct-to-product and direct-to-packaging printing technologies where possible. As mentioned above, smaller printers eliminate the startup and changeover waste inherent in larger presses. The printing technology also should employ environmentally responsible consumables and inks.

Conclusion

The end-use market is driving OEM machine builders to add color printing technology to their production systems. Customers desire four-color systems that offer new features such as small batch customization, direct-to-product and direct-to-packaging printing, and web-based technical support and analytics.

For small to mid-size companies, incorporating printing solutions in their equipment can be a daunting and time-consuming effort. An OEM printing specialist can simplify and accelerate the integration process and provide products that add both competitive advantage and complementary revenue streams.

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