



Building practical hybrid label production

How Weigang and Hybrid Software Helix are helping converters simplify digital adoption

Expanding beyond conventional printing

Label converters are under increasing pressure to manage shorter run lengths, faster turnaround times, and growing product-code variation while maintaining production efficiency and profitability. Yet while many converters recognize the value of digital printing for short-run and variable-data applications, integrating digital production into established workflows can be both complex and costly.

For Zhejiang Weigang Technology Co, the challenge is clear: help converters adopt digital printing in a way that complements, rather than disrupts, existing flexo and offset production environments.

“Our customers are looking for scalable ways to introduce digital printing while continuing to maximize the value of their existing flexo and offset equipment,” said Ryan, CEO at Weigang. “For many converters, hybrid production is becoming the most effective path forward.”

Choosing the right digital workflow platform

Recognizing that success in digital printing depends on more than press hardware alone, Weigang sought

a software partner with proven expertise in digital workflow technology. As the company expanded into digital label production, it required a platform that could simplify color management, automate production processes, and help converters integrate digital printing alongside existing flexo and offset operations.

“As this is a new technology for us, we researched the global leaders in this sector and discovered Hybrid Software Helix, then known as Global Graphics Software,” explains Ryan. “The company has a strong reputation for its Harlequin RIP®, and partnering with them would give our customers confidence in our digital inkjet printing solution. We knew their SmartDFE would be an excellent fit for Weigang.”



SmartDFE from Helix is a digital front end platform for high-speed, single-pass, label and packaging inkjet presses.

The digital platform

SmartDFE is a digital front end (DFE) for high-speed single-pass inkjet production. The platform combines job preparation, prepress workflow automation, ColorLogic color management, variable-data processing, and production optimization within a single connected environment. Its patented AI-based architecture continuously optimizes system performance to reduce waste, minimize downtime, and improve production efficiency.

“Digital adoption depends not only on print quality, but also on workflow efficiency and repeatability,” said Bob Zhang, OEM Sales Manager, Hybrid Software China. “Converters need systems that enable them to manage increasing job complexity without creating additional operational bottlenecks, and SmartDFE was developed specifically for that environment.”

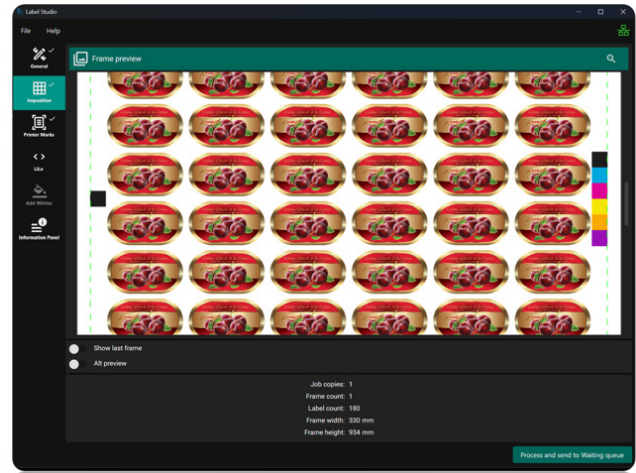
A key component of SmartDFE is Smart Media Manager, which simplifies color management across different substrates and production conditions. By automating media characterization and color optimization workflows, converters can achieve predictable print quality quickly while reducing the expertise traditionally required to manage digital color production. This helps ensure consistent reproduction of critical brand colors across repeat jobs and multiple production environments.

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Ryan, CEO of Zhejiang Weigang Technology Co. Ltd

The solution also includes Label Studio, Helix’s operator interface for digital label production. Label Studio provides a centralized environment for job setup, production monitoring, and workflow management, helping operators manage digital production efficiently while reducing training requirements.

“Many of our customers are introducing digital printing alongside established flexo and offset operations, so ease of use is extremely important,” said Ryan.



SmartDFE includes Label Studio, providing label press operators with the flexibility to prepare jobs directly at the press – ideal when access to the prepress department isn’t available.

“Label Studio gives operators a clear production environment that reduces setup time and helps maintain consistent output, enabling converters to become productive more quickly.”

Ryan, CEO of Zhejiang Weigang Technology Co. Ltd

With the option to bundle Hybrid’s PACKZ for PDF editing and variable-data job preparation, and printhead drive electronics from sister company Meteor Inkjet, Weigang customers gain an end-to-end production workflow spanning file preparation, prepress automation, color management, and press output. The integrated environment reduces reliance on multiple software systems and helps streamline digital production.

Engineering a faster route to market

Beyond supplying the SmartDFE platform, Hybrid Software Helix worked closely with Weigang through its BreakThrough Services program to accelerate product development and commercialization. Helix engineering teams collaborated directly with Weigang’s R&D organization to implement custom workflow and press features, helping the company address market requirements quickly and bring new digital label solutions to market faster than would have been possible through a standard OEM integration approach.

The resulting portfolio enables converters to integrate digital printing into conventional production environments while selecting the level of capability

that best matches their business requirements. The WGS 230 digital press supports short-run production, sampling, and variable-data applications with reduced setup requirements compared to traditional printing methods. For higher-volume applications, the WG S350 Pro and ZJR S350 Ultra combine digital printing with inline flexo capabilities, allowing converters to balance digital flexibility with the productivity and finishing efficiency of conventional processes.

Hybrid production in practice

The benefits of this hybrid production approach can already be seen at Zhongshan Chuang Sheng Printing Factory in China, where a WGS 230 system is installed to support labels for small household appliances and variable-data applications.

By shifting short-run and high-variation jobs to digital production, the company reduced setup inefficiencies associated with conventional printing while improving responsiveness for smaller customer orders. Conventional presses remain focused on longer production runs, helping optimize overall pressroom utilization rather than replacing existing equipment.

“In practical terms, converters can process short-run jobs more efficiently, maintain repeatable color output, simplify operator workflows, and integrate digital production more smoothly alongside their conventional printing technologies,” concludes Ryan.

The installation demonstrates how converters are increasingly using digital printing to absorb production complexity while maintaining the efficiency and stability of conventional workflows. Rather than replacing conventional technologies, digital presses are becoming an important complement, enabling greater flexibility, customization, and responsiveness while preserving the productivity of established production environments.



Weigang's WGS 230 digital press, used by Zhongshan Chuang Sheng Printing Factory to print variable-data labels for small household appliances.

About Zhejiang Weigang Technology Co. Ltd

Founded in 1996, Weigang has built its reputation in the global label industry through offset and flexo printing technologies, with installations in more than 6,000 factories across more than 100 countries. As customer requirements have evolved, the company has expanded into digital printing, focusing on solutions that allow converters to adopt digital production incrementally alongside existing conventional equipment.

Since entering the digital label market in 2023, Weigang has installed more than 100 digital label presses worldwide, reflecting broader industry demand for production environments that combine conventional efficiency with digital flexibility.

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