WHERE DIGITAL SECURITY PRINT MEETS THE PACKAGING WORLD

Offering security print solutions commonly used by the Government, digital print processes and technologies could be employed to solve the growing problem of counterfeiting in the packaging industry, says Ian Monksfield

Ian Monksfield is Strategic Account Manager at IIJ

Security print is commonly thought of as printing high stakes products such as passports, ID cards or driving licences. These products require the highest standards of printing and can only be undertaken by the most secure, trustworthy and technically competent companies.

These print firms must be capable of making products with layered security features such as special holograms, fibres, tamper-proof materials and electronic information as well as multiple print technologies including digital print. This complex mix of capabilities has resulted in a market comprising a relatively small number of dependable and respected suppliers.

There is, however, a desire to develop some of these processes and technologies and adopt them in the packaging industry due to the growing problem of counterfeiting, which doesn't affect just the Governmental document industry – wide ranging products from personal electronics through to nail varnish are all being counterfeited in large scale.

Tax stamps (e.g. for export) can benefit from all the security print solutions digital print has to offer

'The Organisation for Economic Cooperation and Development (OECD) and the EUIPO (European Union Intellectual Property Office) jointly published a 2019 report, "Illicit trade: trends in trade in counterfeit and pirated goods", based on 2016 world seizure data of counterfeit and pirated goods that attempts to measure the scale of the problem. Based on their findings, the international trade in counterfeit and pirated products could have amounted to as much as $509 billion in 2016, estimated to be 3.3% of world trade'.[1]

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SECURITY INKS

Securing the packaging of products gives product owners a quick and easy way to detect if a product being sold (either online or in store) is a counterfeit. As such, security inks rightly have a place within the packaging industry.

Security inks can range from low level security features such as a UV fluorescent mark, or they could be an invisible barcode that links to a secure track and trace system.

These systems add the track and trace information to pharmaceutical products, for example. The requirement is to print a unique identifier to the primary packaging e.g. the blister foil or pill bottle, allowing it to be traceable at every step from the point of manufacture through to the end customer. This identifier can be printed with either conventional inkjet inks or covert security inks depending on the requirements.

The regulations demand traceability not just of the individual item, but also the outer packet, the bulk carton and the shipment pallet – each of these being printed with 'specific and secure' variable information. While the data being printed is normally visible rather than hidden, the data itself is tracked back to a secure database which is therefore difficult to replicate.

In addition to track and trace systems, packaging suppliers can employ less complex brand protection and tax stamp measures (which often require security print, sometimes to a level that gets close to currency) to print secure variable features using a range of security inks, thus making reproduction of convincing counterfeit products difficult to achieve.

DUAL FUNCTION PRINTING

As with high end security print products, manufacturers of high value commercial products such as mobile phones and other desirable electronics are now looking at layered security print, working in conjunction with track and trace. An example of this could be using dual function barcode inks.

Industrial Inkjet Ltd (IIJ) has worked in every conceivable area of digital inkjet printing, including the niche application of security print for the last 10 years. In partnership with secure ink manufacturers such as Luminescence Sun Chemical Security, IIJ has the capability to print 2D data matrix codes, which when read with a standard mobile phone will give one string of data, and when read with a special security device will show a completely different string of data, giving customers a way of securing batch details and keeping products traceable all the way back to the source of manufacture.

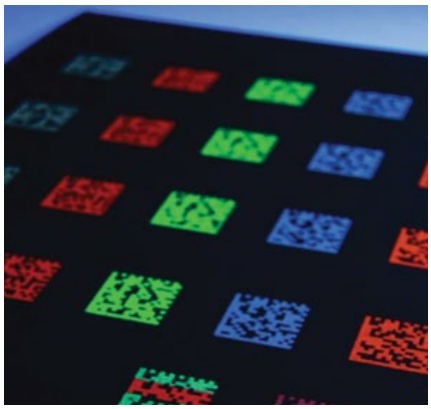
"Such security inks rightly have a place within the packaging industry"

Counterfeiters may copy the overt code but are unlikely to be aware of the *covert* code and even more importantly, are not likely to have access to the ink to print it due to the tight supply chain controls operated by the security ink manufacturers.

PRODUCT OFFERING

Working with Luminescence Sun Chemical Security, Industrial Inkjet can currently offer the following inkjet inks for the packaging market:

- UV fluorescent inks
- Dual function barcode inks



UV-visible tax stamps

- Special IR feature inks
- High durability CMYK inks
- Protective varnishes

Tom Mitchell, International Sales Manager at Luminescence is quoted as saying: "We at Luminescence Sun Chemical Security see the product authentication market growing over the coming years, and inkjet is clearly being used more and more in the packaging industry for product authentication. It feels only right that we are continuing the development of further security features to support brand owners in their endeavour to stop the counterfeiter. As well as world-leading R&D we also have very stringent supply chain processes to stop our inks falling into the wrong hands, and work with our partners across the industry to keep these inks secure."

As with any area of security printing

"Counterfeiters may copy the overt code but are unlikely to be aware of the covert code"

there is a constant drive to keep ahead of the counterfeiters. Security printing has become one of the main areas of growth at IIJ and has been steadily increasing year on year. Industrial Inkjet and its partners are continually working on new features utilising the latest printhead technology and new security ink formulations. ■

Ian Monksfield is Strategic Account Manager at IIJ

1 Source: https://www.worldtrademarkreview.com/global-guide/anti-counterfeiting-and-online-brand-enforcement/2021/article/counterfeiting-and-piracy-in-2021-the-global-impact

Further information:
Industrial Inkjet Ltd., Cambridgeshire, UK
tel: +44 1954 232023
email: jocarruthers@industrialij.com
web: www.industrialij.com