



Bringing innovation to **Control Counterfeiting**

Offering maximum high protection for anticounterfeiting

With our unique five in one multilevel security printing

Keep counterfeiters on toes with art of distraction

Global Threat to Brand Security

Ever escalating problems of

- Unreported products
- Counterfeited products
- Covered smuggling
- Counterfeiting of stamps
- Ineffective conventional documentary stamps

Have resulted into

- Unprecedented losses in Govt. tax collection
- Significant losses for private labelers due to counterfeiting, and
- Heightened health risks for customers



protecting label and packaging AGAINST COUNTERFEITING

\$1.5 billion dollars a year is lost in revenues across the world as a result of counterfeiting. That is 7 - 8% percent of world trade! More than 200,000 jobs are also estimated to be lost worldwide and hundreds of people die or suffer major health problems due to ineffective or faulty counterfeited goods.

Counterfeiting today isn't restricted to luxury goods, as used to be the case. Drugs, electrical goods, cigarettes, spectacles, sun block cream, fireworks, oil heaters, food, jewelry, clothing, household chemicals: criminal organizations copy or tamper with all kinds of products to trick consumers and make a huge profit.

Counterfeiting can involve the entire product, including packaging and labeling, but it can also mean the reuse of genuine packs and labels with counterfeit products. Sometimes criminals counterfeit ownership documents, guarantees and certificates of warranty to pass off fake goods as genuine.

DIGITAL PRINTING AND BRAND PROTECTION

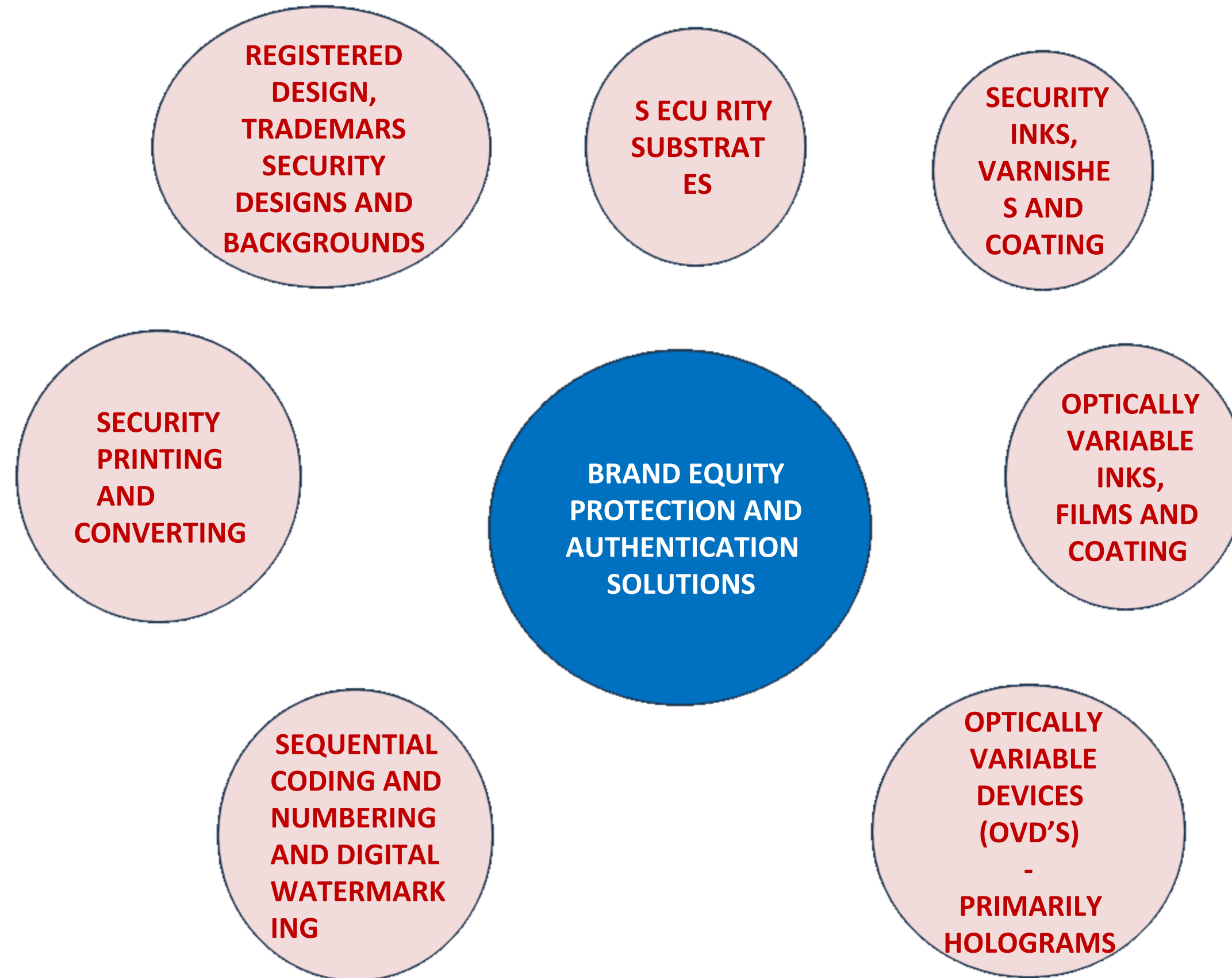
In other words, counterfeiting is a huge global problem that needs to be addressed today. Fortunately, thanks to evolutions in technology, brand owners now have quite an extensive range of "weapons" at hand to counter counterfeiting, especially when it comes to packaging. Digital printing has made it relatively easy and cheap to make every label or pack unique, such as through sequential coding, numbering or marking. In this publication, we will look into some of the best solutions against counterfeiting and discuss the most effective brand protection strategies. Our focus will be to protect customers from counterfeiting criminals.

how to prevent COUNTERFEITING?

Technology is both a blessing and a curse in the fight against counterfeiting. Today, technological advancements in (Hybrid digital) printing are spreading fast and are with complex. Very Difficult to recreate cheap replicas of their products and packages. Printers and brand owners need to be aware that fighting counterfeiters is an ongoing battle. Continuous innovations are required in order to stay one step ahead of organized crime

THE ROLE OF THE DESIGNER To do so effectively implies that brand owners and converters/printers work together right from the very beginning to build one or more counterfeit deterrence, product authentication and/or brand protection technologies into the original design of the label or pack. This way, the price can be kept at a minimum because designers can take into account brand protection at the drawing table. For example, if the right security design or software package is used in the design and origination of a label or pack, it is possible to incorporate various security background designs, microtexts, hidden images, etc., which are extremely difficult or impossible for the counterfeiter to copy or scan.

KEY BRAND PROTECTION AND AUTHENTICATION TECHNOLOGIES TO BRAND OWNERS



variable printing:

SEQUENTIAL NUMBERING

and varying images

The following pages will cover some of the most effective anti-counterfeiting techniques and explain how they can be combined with digital printing. Since most of these techniques are part of the hybrid digital workflow,

SERIALIZED DATA AND SEQUENTIAL NUMBERING

Variable data printing is one of the major benefits of digital presses. Using personalized information on labels and packaging not only creates additional appeal to the end user, it is also an effective tool in the battle against counterfeiting. Serialized data and sequential numbering, for example, is a widely used technique, for both tracking and authentication purposes. Printers can use a standard or specific toner to represent the numbering but it becomes even harder to copy when multiple colors are used.



SCATTERED DOTS AND CRYPTOGLYPHS

Not only numbers are used to deter counterfeiters, varying images and illustrations is another example of variabilization through digital printing. A very effective application is the use of scattered dots graphics or cryptoglyphs. In this case, a series of printed dots is randomly placed on the package forming a shape that can only be recognized or authenticated by using a digital scanner and specific software.

guilloches —
HARD TO COPY
complex patterns

Guilloches are special line drawing designs in highly irregular and complex patterns that are very hard to copy. This anti-counterfeiting measure isn't restricted to banknotes, passports or ID cards, it can also be used to help protect products and packaging against counterfeiting. Additionally, when printed in a spot color, copiers have reproduced them in CMYK which almost immediately introduces easy to spot visible inaccuracies.



UV reflected toner CLEAR TONER

Clear toner allows for added invisible text, codes or shapes that can only be read when placed under a UV light source or a black light emitting in the 350nm-385nm light range. This type of anti-counterfeit measure is very hard to copy because it requires the substrate to hold no optical brighteners. On the other hand, it is easy and cheap to check the authenticity of a labeled or packaged goods by simply holding a print sample under a light source.

raised images and illustrations – TACTILE ANTI-COUNTERFEIT PROTECTION

Using relief is another effective way to protect brands against counterfeiting. Printing specific images or illustrations in black with 4 toners on top of each other inside a black field in one black layer, creates a distinct tactile difference which is hard to copy. The easy to feel height difference can be used to authenticate the document.

24



26



variable printing:

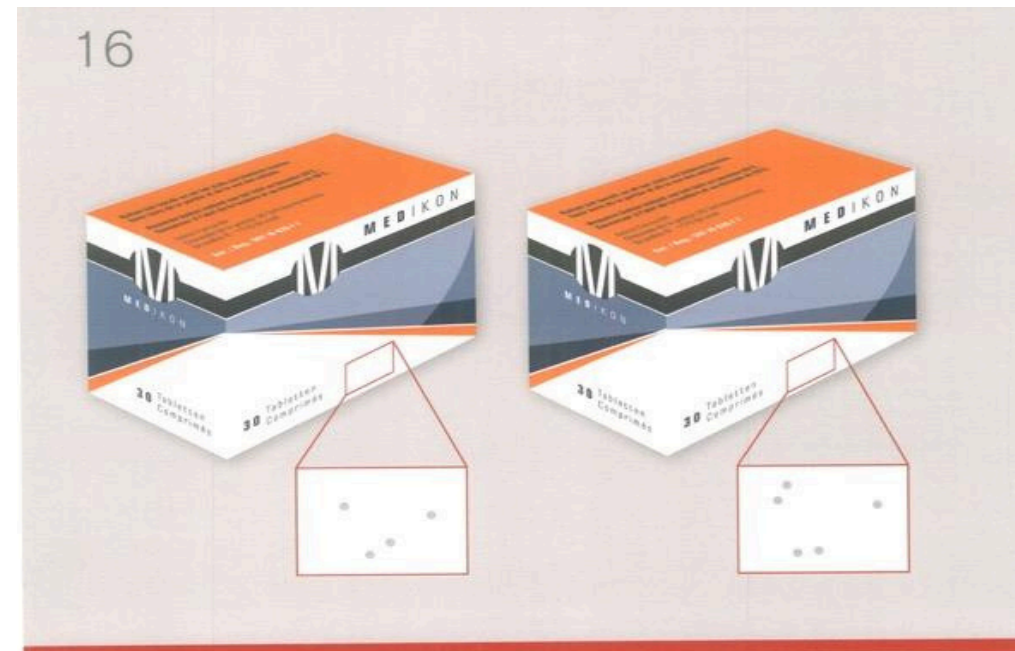
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custom colors –
**PROPRIETARY BRAND
TONER**

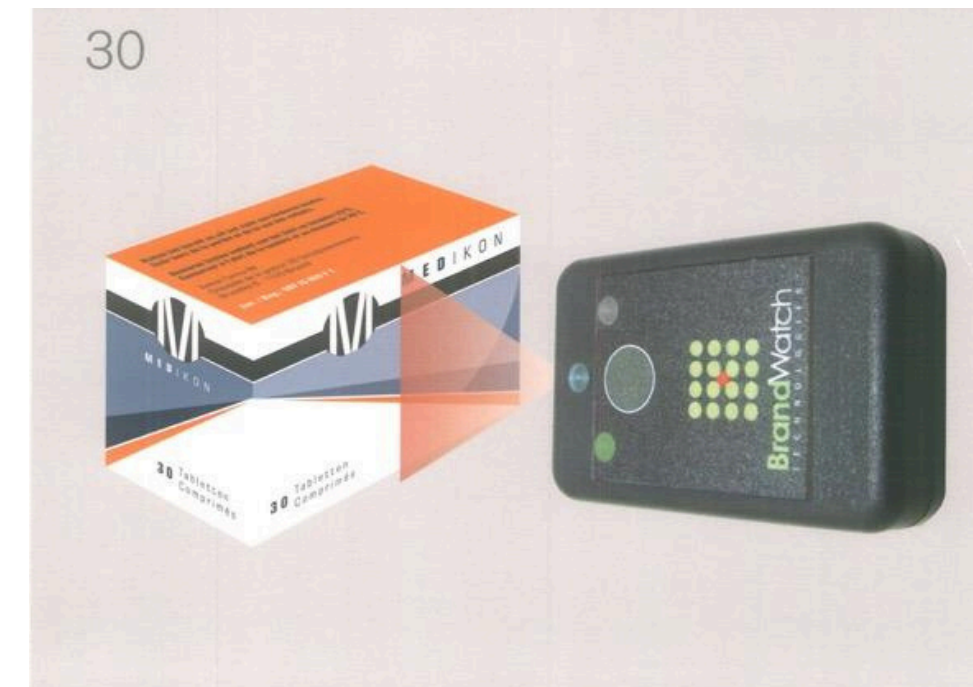
Color can be used to make unlawful reproduction harder. Some brand owners use proprietary spot colors which are impossible to reproduce with CMYK toners or inks. The difference is immediately noticeable for the trained eye. Printing guilloches in custom colors, for example, makes fraud a lot more difficult.

security toner –

ADDING TAGGANTS

or other markers

Adding one or more taggants or chemical or physical markers to the substrate or the toner allows for various forms of verification. They are invisible to the naked eye, are permanently present and cannot be removed from the toner or substrate. They can only be detected with special equipment. In this sense, they bring unique benefits to the package or product.



custom colors –
**IMAGE MANIPULATION
FEATURES**

Covert images, alerts or codes can also be revealed by putting them under an infrared light source. The approach is again to hide information inside the images used in a printed piece. The brand protection feature as such becomes an integral part of the software file used to print the document. You can only reveal the hidden message by holding the document under a light source in the infrared range of electromagnetic radiation. The benefits are of course first of all the very low impact on production cost. Also, a printed piece with a built-in IR security protection cannot be reproduced without losing the IR characteristics.



Any scanning, filming or graphic reproduction editing destroys the internal information structure that has been programmed as a targeted IR effect. Infrared scanning is also easy to set up. Many owners of printed applications already benefit from the addition of brand protection or security characteristics into applications such as labels, packaging, admission tickets, membership cards, certificates, credit cards, bank securities etc. The image on the left was produced using the software tools of INFRAREDESIGN'

custom colors – OPTICALLY HIDDEN IMAGES

Hiding covert images into the artwork of the protected item is what this is all about. These hidden images only become visible by using special verification keys, typically comprising a film or plastic lens. The keys can be image specific or client specific.

The verification keys are typically only available for inspectors or trained staff.

As part of the artwork creation, the use of hidden images does not influence the cost of production. Several images can be combined into the same or into different parts of the design. They can be revealed by either the same or different keys. Typical use is in tickets, packages, wine and luxury product labels, clothes and textile labels, hang tags.

TRACK AND TRACE

In order to protect documents or products, GCP digital printing technology enables solutions that combine authentication, identification and track & trace capabilities. Every single product gets a unique identity that enables verification; to prove that the selected product is authentic.

Especially in luxury goods, printers are confronted with a brand owner's request for tools to trace the genuine products throughout the supply chain. In order to verify if the right product is at the correct place at the right time, products can be tracked from design through production and distribution until point of sale. The high resolution of GCP enables the integration of a high-security variable printed code onto documents or packaging.



Our Solutions for Brand Security

We specialize in production methodology that offers high volumes in shorter production cycles. This cost-effective approach delivers security labels from which end users gain true protection and added benefits.

- Maximum security to reduce risk of fraud
- Controlled with complex & Unique hologram.
- Patented IG designs created with security software at our Intergraph accredited site
- Overprint holograms and paper simultaneously with various inks all in register using specialist UV techniques
- A range of overt and covert security numbering techniques
- Multiple layers of complexity within design and physical characteristics
- Patented technologies, which are currently protecting high-value documents all around the world from counterfeit and alteration fraud

For more information, please contact us to discuss your security print requirements.

multiple strategies **AND SOLUTIONS** against counterfeiting

There is not one solution against counterfeiting. Instead, brand owners need to implement multiple strategies and solutions to reduce the risk of counterfeiting. Counterfeit detection technologies, such as security substrates, inks, backgrounds, holograms, etc. should be combined with anti-tamper technologies like sequential coding or numbering. Hybrid Digital printing is making all this relatively easy to achieve, plus it throws in even newer solutions to the traditional technologies.

A COORDINATED APPROACH

There are over a hundred brand protection and security solutions available to brand owners. However, few printers and converters make use of them. Why? Often there is no coordinated approach that allows brand equity owners, designers, press manufacturers, printers, suppliers, etc. to work together in creating suitable packaging and labels to deter the counterfeiter. Here is what's needed:

- Build counterfeit deterrence, product authentication and brand protection technologies into the design of the label or pack from the very beginning.
- Combine technologies so as to provide the most effective overall brand protection solution.
- Try and make each individual pack or label unique.
- Change the solutions used on a frequent basis in order to keep ahead of the counterfeiter.

Our Solutions for Brand Security

Printed Label/ Foil/ Paper with Security Band

1. Detailed Description Our invention is an integration of two security products. One is ink based security print and the other is laser based transparent images and depiction of this integration on printed aluminum foil.
2. Ink based security prints include guilloché patterns and relief prints which are customized for each customer with specific patterns, similarly complex holographic images are created by laser rays which are also customized. Both have been integrated into the pet film.
3. So it becomes a security thread having transparent laser based images and security prints together. Laser images are created on the transparent pet. Now, the security thread will be subjected to different coatings so that both images can be deposited on the surface. After coating, these images are deposited by heat and pressure onto the surface of the printed aluminum foil.

Our Solutions for Brand Security

Rx Pantoprazole Tablets IP

XXXXXX-40

Each enteric coated tablet contains:
 Pantoprazole Sodium IP
 equivalent to Pantoprazole 40 mg
 Excipients q.s.
 Colours: Ferric oxide (Yellow) USP-NF,
 Titanium Dioxide IP
 Dosage: As directed by the Physician.
**Tablet should be swallowed whole
 and not to be chewed or crushed.**
 Store at room temperature,
 protected from light and moisture.

SCHEDULE H PRESCRIPTION DRUG
CAUTION: Not to be sold by retail without
 the prescription of a Registered Medical
 Practitioner.

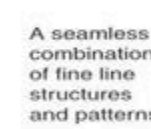
M.L.: M/000/0000
 Manufactured in India by:
 XXX XXXXXXX XXXXXXX XXX.
 Plot No. 107-108, Namli Block,
 P. O. Ranipool, East-Sikkim-737 135.
 ® Registered Trade Mark



Metallization in register with other spot colours



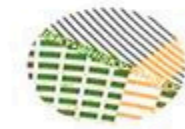
Variable number partly metallized



A seamless combination of fine line structures and patterns



A combination of Rotaballs and Trafo Pattern



Positive and negative micro text



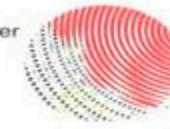
Batch year



Multiply Tool



Special Raster



Arziro Authenticate



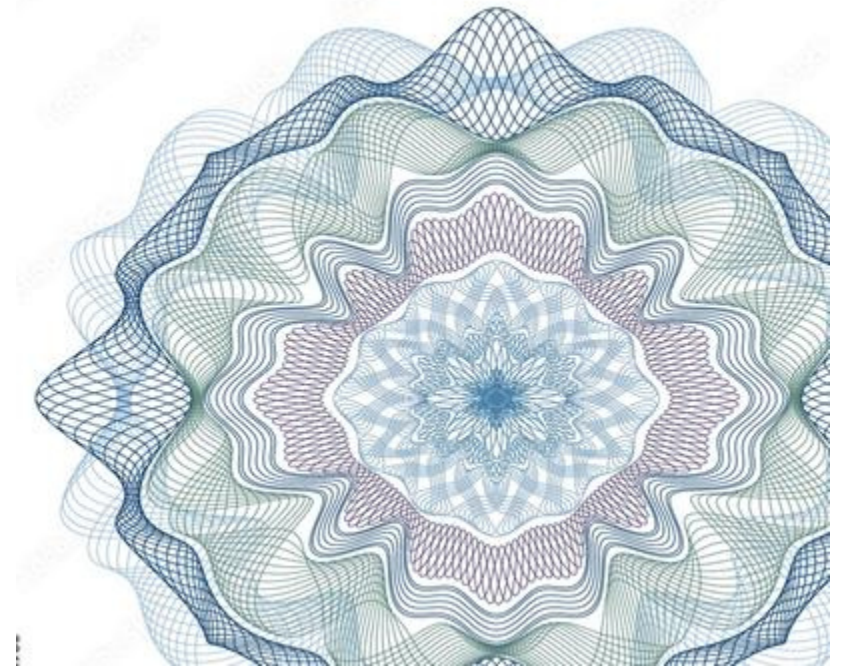
Variable number with white outline



Blend Tool



Auto-Void of paper waste



Our Solutions for Brand Security

We proud to announce our most recent product line of lenticular security labels which allow an image to be shown with an optical illusion, movement, elevation, and depth in a variety of viewing angles.

The advantage of our lenticular more effects is that they are made with extremely thin substrates and can be used for automatic labeling and lamination for packaging. It can also contain encrypted security information as well as tamper-evident properties.

Lenticular material can be overprinted with full color as well as stamped with cold or hot stamping.

Micro optics lenticular technology can be used in carton packaging wit tamper-evident grade adhesive with security encrypted elements.

This think lenticular technology can be made with frangible or tamper evident material destruction on attempted removal.

We can include variable data on the lenticular label such as variable numbers, wr codes, barcodes.

We are one of the only manufacturers that can include fully customization on the lenticular micro optic effects and design.

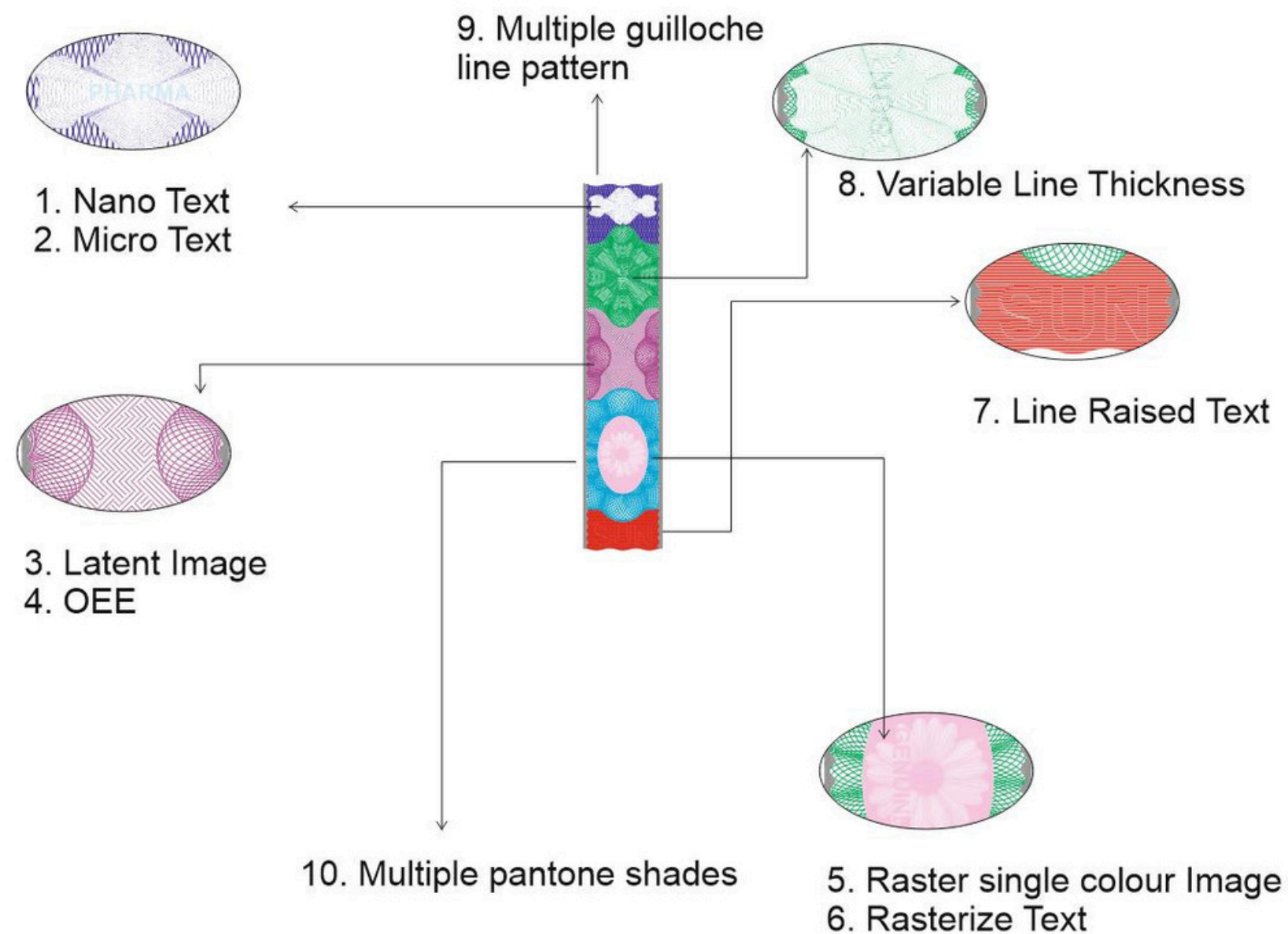
Great for sectors needing a high security product such as Pharma and government.

The possibilities are endless due to our proprietary security algorithms.

We offer many effects that can be made in any size die cuts.

Level .

This process is a combination of



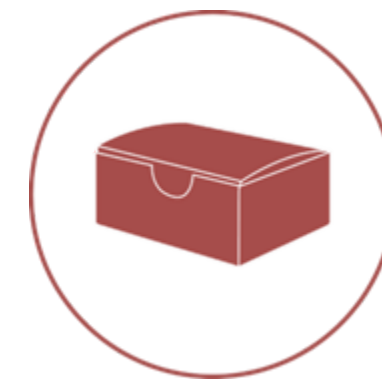
- 1.Special analog design software,
- 2.Design specific algorithm
- 3.HD In-house Pre-press system (Plate making)
- 4.Custom formulated high security special inks (which are not available in open market)
- 5.specialized anilox.
- 6.Hybrid printing machines

Conclusion

- 1.HD Printed anticounterfeiting for brand protection
- 2.No one can print look a like

Our Solutions for Brand Security

We personalize every aspect of the label including the holography, encrypted security information, custom tamper pattern, label structure, and more for all sectors





Thank You

For Your Attention