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Presented by

<u>Suppliers</u> 2015

anti-counterfeiting & product security tecêologies

Sustainable Development presents the latest ID WORLD annual directory featuring the world's leading suppliers of anti-counterfeiting technologies. Focusing on active players who provide products and services for instantly validating product authenticity. Solutions include RFID chips, tags and labels, holograms, smart technology, tamperevident closures,

special inks, nano-materials, readers, printers, recognition equipment, software solutions and more for manufacturers and governments to help them protect brands and revenue.

This best selling ID WORLD directory reaches more than 12,000 qualified contacts worldwide and is circulated to the participants of key events and shows.

Research shows rise in demand to beat fakes

Increased focus from government authorities on food crisis management and product authentication are driving market growth in anti-counterfeit technologies

> very year millions of people are deceived into buying counterfeited food and beverages, posing significant health and safety risks. This has led to a rising demand for anti-counterfeit packaging (ACP), the market for which is expected to reach US\$62.5 billion globally by 2020. The Asia Pacific region is projected to be the fastest growing area, with an estimated CAGR of 18.1% from 2015 to 2020.

> Research released by Allied Market Research highlights the growing adoption of track-and-trace technologies, such as RFID and barcode, in premium product segments, such as wine and spirits. RFID technology is expected to exhibit the fastest growth (20.4% CAGR) during the forecast period; however, its penetration is still hindered by lack of awareness for authentication solutions among local manufacturers and the high cost of the technology, according to the

report, titled 'Global Anticounterfeit Food & Beverage Market-Indus-Packaging try Analysis, Size, Growth, Trends, Opportunities, and Forecast, 2020'.

Conventional authentication technologies still account for the highest revenue in the global ACP market, owing to their economic pricing and ease of application. Barcodeenabled product tracking helps in maintaining the supply chain integrity, while emerging tracking technologies, such as DNATrax, exhibit the highest potential in tracking food products with minimal side effects on human health

North America accounted for about 50% of the global anticounterfeit food packaging market in 2014, with increasing counterfeiting practices from European and Asian regions, higher adoption rates of anti-counterfeit technologies, the rise in healthcare concerns and growing

awareness for tracing technologies the most significant factors in the growth of the market. The increasing focus from government authorities towards food crisis management and the rising awareness for authenticated food products across middle income populations are driving the market growth among developing regions.

This Top 25 Suppliers of Anticounterfeiting & Product Security Technology Directory presents active players who also assist in these efforts by providing products and services for instantly validating product authenticity. Solutions include RFID chips, tags and labels, holograms, smart technology, tamper-evident closures, special inks, nanomaterials, readers, printers, recognition equipment, software solutions and other forms of relevant auto ID technology for manufacturers and governments to help them protect brands and revenue.

Technology

Sector



anti-counterfeiting & product security tecêologies		Tax stamps	lds, cards & secure doc.	Jewelry & luxury goods	Pharmaceuticals	Currency	RFID	Holograms	BŠmetrics	Security print	Software	Taggants (Other)	Government & Public S	Manufacturing & RetaÕ	Healthcare	Electronics
Advanced Track & Trace	www.att-fr.com			~	~					~	V			~	~	V
Alien Technology	www.alientechnology.com			~	~		~							~	~	~
Alp VisŠn	www.alpvisŠn.com			~	V						~			~	~	V
Applied DNA Sciences	www.adnas.com			~	~						~	~		~	~	~
ATL Security Label Systems	www.atlco.com			~	~			~		~	V	~		~	~	~
Atlantic Zeiser	www.atlanticzeiser.com		~	~	~					~	~		~	~	~	~
Authentix	www.authentix.com	~		~	~	~				~	~		~	~	~	~
Datamax-O'NeÕ	www.datamax-oneÕ.com			~	~					~				~	~	~
DSS	www.dsssecure.com		~	~	~					~	~		~	~	~	~
Dupont AuthenticatŠn Systems	www2.dupont.com			~	~			~		~	~		~	~	~	~
Edaps Overseas	www.edaps.ua	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
EM Microelectronic	www.emmicroelectronic.com		~	~	~		~							~	~	~
FNMT - RCM	www.fnmt.es/smart_cards		~							~			~			
Giesecke & Devrient (G&D)	www.gi-de.com		~		~	~				~			~		~	
IAI	www.iai.nl		~			~				~		~	~			
Impinj	www.impinj.com			~	~		~							~	~	~
InkSure Technologies	www.inksure.com	~	~	~	~	~					~	~	~	~	~	~
Microtag Temed	www.microtag-temed.com			~			~				~	~		~		~
Morpho	www.morpho.com		~						~				~			
Oberthur Technologies	www.oberthur.com		~						~	~	~		~	~	~	~
Prooftag	www.prooftag.net	~	~	V	~					~	V	~	~		V	~
SICPA Security SolutŠns	www.sicpa.com	~			~					~	~	~	~			
U-NICA Group	www.u-nica.com	~	~	~	~	~		~		~	~	~	~	~	~	~
WISeKey	www.wiseauthentic.com		~	~	~						~		~	~	~	~

Target/Product

Advanced Track & Trace

www.att-fr.com info@att-fr.com

LUX, P, SP, SW, MR, HC, EL

99 Avenue de la Châtaigneraie 92504 Rueil-Malmaison - France

Tel. +33 147 166 472

The high increase in counterfeiting activities, parallel markets, hacking and other illegal practices is due to the disparity of laws, production conditions. Advanced Track & Trace offers industrial solutions that use advanced technologies for concealing information and encoding built in data in products packaging, printed documents, images... etc. in compliance with legal requirements.

Alien Technology

www.alientechnology.com sales@alientechnology.com

LUX, P, RF, MR, HC, EL

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Alien Technology Corporation is a leading provider of Radio Frequency Identification (RFID) products for global customers in government, retail, manufacturing, pharmaceuticals, transportation, and other industries. Using its patented manufacturing process, Fluidic Self Assembly Alien manufactures EPC tags in very high-volumes. The company provides a family of RFID readers for a variety of applications including supply chain management, logistics, and anti-counterfeiting.

Alp Vision

www.alpvision.com avinfo@alpvision.com

LUX, P, SW, MR, HC, EL

Rue du clos 12, 1800 Vevey - Switzerland

Tel. +41 21 948 6464

AlpVision helps design the most efficient invisible anti-counterfeiting and track & trace program for brand protection and document security. Services include contract R&D, security printing technologies, software development, Internet/Intranet online solutions, patents filing, quality assessment protocols and dedicated hardware and electronics development.

Applied DNA Sciences

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LUX, P, SW, TAG, MR, HC, EL

25 Health Sciences Drive, Stony Brook, NY 11790 - USA

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Applied DNA Sciences delivers counterfeit protection, brand authentication, combats product diversion, and offers its award-winning programs against cash-in-transit crimes, all using the proven forensic power of DNA. With impenetrable taggants, high-resolution DNA authentication, and comprehensive reporting, our botanical DNA-based technologies deliver the greatest levels of security, deterrence and legal recourse strength.

ATL Security Label Systems

www.atlco.com info@atlco.com

LUX, P, SW, TAG, H, SP, MR, HC, EL

W140 N9504 Fountain Blvd., Menomonee Falls, WI 53051 - USA

Tel. +1 262 255 6150

ATL Security Label Systems can offer you the latest solutions in track and trace technology. Choose from a broad selection of overt and covert label features including invisible forensic taggants, holograms, color-shifting inks, and tamper-indicating materials. Mass serialization capabilities (2-D barcodes and custom codes) assist in supply chain management. ATL's "mix and rotate" approach combines multiple technologies in one label, changing with each production run.

Atlantic Zeiser

LUX, P, SP, SD, SW, GP, MR, HC, EL

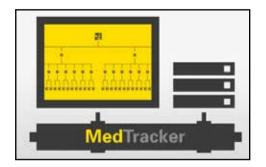
Coding, serialization and tracking of products



Atlantic Zeiser offers technically superior processing equipment to track and trace cosmetic products throughout your entire supply chain. Our total security system solutions have been successfully installed in governments and manufacturing industries around the world. Counterfeiting and parallel trade are fueling the demand for sophisticated processing equipment to track products and documents through the supply chain.

The implementation of serialization is today one of the biggest challenges in the pharmaceutical industry. The list of requirements is long and can range from coding of single items to the central management of multiple packaging lines or sites. In addition to printing and camera technology for efficient and reliable coding and verification of primary and secondary packages and the aggregation of single items, the integration of appropriate software is the key to ensure a successful implementation of a sustainable track & trace solution.

Atlantic Zeiser has the necessary experience, know-how and product portfolio to offer tailored one-stop solutions for the pharmaceutical industry, their suppliers or service partners - from serialization of pre-printed card board cuts over the coding of primary packages to manual or automatic aggregation. Furthermore Atlantic Zeiser provides with Medtracker a modular and scalable software solution that allows to manage and control the entire process of serialization and track & tracing in a safe and audit-proof way.



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Authentix

www.authentix.com

TAX, LUX, P, C, SP, SW, GP, MR, HC, EL

4355 Excel Parkway, Suite 100 Addison, TX 75001 - USA

Tel. +1 469 737 4400

As a global leader in authentication, Authentix provides brand protection and supply chain security solutions for the oil and gas, pharmaceutical, consumer, tobacco, spirits, and agrochemical industries, as well as excise tax recovery for governments and banknote processing solutions for central banks worldwide. Authentix offers advanced authentication and security technology platform offerings, from on-package and in-product authentication features, covert security inks to supply chain security and traceability solutions.

TARGET/PRODUCT

TAX = Tax stamps

SD = Ids. cards & secure documents

=Jewelry & luxury goods LUX = Pharmaceuticals

=Currency

TECHNOLOGY

= RFID

н =Holograms В = Biometrics SP =Security print

SW =Software = Taggants (Other)

SECTOR

=Government & Public Sector GP MR = Manufacturing & Retail

HC = Healthcare = Flectronics

POLLY-SERVICE

A new generation track and trace system helps governments in the global challenge to secure supply chains



Target/Product

- Tax stamps
- Ids, cards & secure documents

Technology

- RFID
- Holograms
- · Biometrics
- Security print
- Software
- Taggants
- Track&Trace

Sector

- Government & Public Sector
- Manufacturing & Retai
- Banking

Tax Stamps and Track & Trace Systems

Counterfeiting and smuggling of alcohol and tobacco products are the global challenge. The recommendations of WHO, EU, FCTC, SEATCA are that countries should consider reviewing and revising their policies. The World Bank, the WHO, the EU's Tobacco Products Directive and the IMF see the introduction of anti-counterfeiting measures, such as forgery-proof tax stamps and track & trace systems, as a must in combatting tobacco smuggling and counterfeiting. To comply, it is essential to establish a new generation system to help governments to track the supply chain of the tobacco and alcoholic products. Such "Track&Trace" system has been developed by Polly-Service Ltd

Cost-effective Track&Trace solution

The system implementation cost at a national level does not require substantial budget expenditures, though the effect is significant. The system monitors and provides authorities with information on the tax payment and of alcohol and tobacco legitimacy. Tax and customs authorities may track the following data: date and amount of paid taxes; date of products release; codes of products, manufacturer and importer. Track&Trace system helps to maximise tax revenue, improve tax collection governance through better financial control and operational efficiency.

Solution for the revenue protection

- Combat illegal distribution of tobacco and alcohol products;
- · Assess all applicable taxes to be paid on all tobacco and alcohol products;
- · State authorities control over the authentication process.

Benefits to state authorities

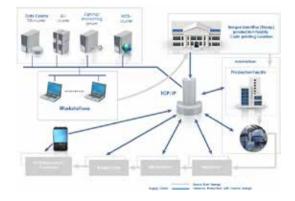
- Profitable financial model no initial investment is required for delivery of Track&Trace system
- Comprehensive approach based on regulatory framework for issuance, circulation and verification of smart control stamps;
- · Ease of use excise stamps to be applied with existing equipment. Excise stamp authenticity is easily verified, tracked and traced.

System components:

- Excise stamp with enhanced security features holographic security element with secure spectral component
- · Hand-held control device electronic device to validate the hologram spectral component
- Integrated management information system comprehensive system for product control throughout the supply chain



- 1. Excise stamp to identify goods electronically and visually:
- · Hologram with spectral component
- Offset printing
- · Anti-scanner background grids and pseudo-embossed image
- Microprinting
- · Security Ink
- Unique ID Number, generated by the database system, stamped
- · QR-code, facilitates tracking and tracing of tax stamps throughout the supply chain with the code components (product ID, issue date, manufacturer's code, importer's code, other data)
- 2. Hand-held device to check spectral component of a secure hologram:
- · Holograms remain one of the most reliable means of visual authentication
- The core technology is spectral analysis, hidden spectral marks
- Secure holograms cannot be reproduced or copied
- An electronic device for hologram automatic validation to be used
- 3. Integrated Management Information System:
- · ID's, QR's, batch ID's issuance
- · Digital authentication, confirmation via internet, phone, SMS
- · Monitoring the amount and origin of products throughout the supply chain
- · Online reporting and accounting of products / excise stamps
- Secure data exchange / storage
- · Cost saving and time saving solution
- · RFID tags can be used optionally.



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Datamax-O'Neil

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LUX, P, SP, MR, HC, EL

4501 Parkway Commerce Blvd., Orlando, FL 32808 - USA

Tel. +1 800-816-9649

Datamax-O'Neil delivers a value-driven printing solution that minimizes risk and maximizes efficiency, safety, and quality. We design, manufacture and market one of the industry's most complete line of stationary and portable label and receipt printing solution products. These printing solutions enable manufacturing and supply markets to capture the benefits of automated product identification and automated legal and financial transactions.

DSS

www.DSSsecure.com info@DSSsecure.com

LUX, P, SD, SP, SW, GP, MR, HC, EL

28 Main Street East, 15th Floor, Rochester, NY 14614 - USA

Tel. +1 585 325 3610

Document Security Systems, Inc., a leading developer and integrator of secure cloud computing and security printing technologies, has created a comprehensive, component based system that protects your brand in four ways: a point authentication tool, a product locator service, e-commerce verification and customer connectivity capabilities. This system includes AuthentiSite, a unique digital signature which reduces phishing attempts and counterfeit websites selling diverted or grey market goods as well as AuthentiGuard which combines our industry-standard secure printing with digital world access.

Dupont Authentication Systems

www2.dupont.com

LUX, P, H, SP, SW, GP, MR, HC, EL

Wilmington, DE - USA

Tel. +1-800-998-5775

DuPont anti-counterfeit solutions provide market leading brand protection programs, anti-counterfeit solutions, and document security systems to large corporate and government entities. These solutions use a combination of market leading technologies to safeguard the world's largest brands and government organizations from the damaging affects of counterfeiting.

EM Microelectronic

www.emmicroelectronic.com info@emmicroelectronic.com

SD, LUX, P, RF, EL, HC, MR

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Tel. +41 32 755 5111



EM Microelectronic is a semiconductor manufacturer specialized in the design and production of ultra-low power, low voltage integrated circuits dedicated for consumer, automotive and industrial applications. Our RFID and NFC product portfolio integrates innovative solutions for product authenticity and anti-counterfeit functions on devices like EM4237 and NF4 by adding cryptographic features, key diversification mechanisms and authentication certificates. As a provider of secure product solutions, the company has developed EM4394, a new secure reader IC embedding state of art security technologies.

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HC = Healthcare EL = Electronics

FNMT - RCM

www.fnmt.es/smart_cards tarjetas@fnmt.es

SD, SP, GP

Jorge Juan 106, 28009 Madrid - Spain

Tel. +34 91 566 67 39

For a long time, FNMT-RCM has been working for public and private organizations, providing custom-made solutions, designing and manufacturing documents that incorporate the most advanced security measures. Its activity encompasses security paper manufacturing, printing of banknotes, postage stamps, security labels, identification documents, passports, minting of coins, development and manufacturing of smart cards and electronic certificates and services associated with the implementation and full development of national identification systems. Identification documents is one of FNMT-RCM's business lines of great importance.

Giesecke & Devrient (G&D)

www.gi-de.com security-printing@gi-de.com

SD, P, C, SP, GP, HC

BPrinzregentenstrasse 159, P.O. Box 80 07 29, 81607 Munich – Germany

Tel. +49 89 4119 18 37

Giesecke & Devrient (G&D) is a global technology leader that offers cutting-edge solutions in telecommunications, electronic payment, healthcare, identification, and IT security. The company is a technological trendsetter in banknote processing and in the production of banknotes and security documents. As one of the world's largest banknote manufacturers, we specialize in developing and producing security paper, security foil, innovative security elements and anti-counterfeiting technologies.

IAI industrial systems

www.iai.nl info@iai.nl

SD, C, SP, TAG, GP

De Run 5406, 5504 DE Veldhoven, 5500 AE Veldhoven - The Netherlands

Tel. +31 40 254 24 45

IAI is an independent equipment supplier to the Security Printing industry. We provide high level security features based on advanced laser technology. Examples are MicroPerf for banknotes (a perforated number with miniscule holes), ImagePerf (a perforated photograph) for passports and identity cards, and LogoPerf (a perforated logo) or NumberPerf (a perforated number) for other valuable documents, such as certificates, bank cheques, tax excises, diploma's etcetera. Our technology is used in leading security documents worldwide.

Impinj

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LUX, P, RF, MR, HC, EL

701 N. 34th Street, Suite 300, Seattle, WA 98103 - USA

Tel. +1-206-517-5300

Impinj has leveraged its deep RFID knowledge to help our pharmaceutical industry partners deliver highly reliable RFID-enabled solutions for brand protection, anti-counterfeiting and more. Impinj is a leading provider of UHF RFID solutions for identifying, locating and authenticating items. Leading retail, apparel, pharmaceutical, food and beverage, technology and logistics companies as well as government agencies rely on our GrandPrix platform.

InkSure Technologies

www.inksure.com info@inksure.com

TAX, SD, LUX, P, C, SW, TAG, GP, MR, HC, EL

589 Fifth Ave., Suite 401, New York, NY 10017 - USA

Tel. +1-646-233-1454

InkSure Technologies is the industry leader in machine-readable technology for brand protection and anti-counterfeiting. InkSure's taggant technology is applied to tens of billions of consumer items and high-value documents annually. The company is a thought leader, regularly speaking at industry conferences and introducing cutting-edge new products. InkSure is currently the only company on the market offering covert hologram authentication via smart phones. InkSure is based in New York City, SEC regulated, and publicly traded under the symbol INKS.OB.

MicroTag Temed

www.microtag-temed.com david@microtag-temed.com

LUX, RF, TAG, SW, MF, EL

Rotem Industrial Park, Arava 86800 - Israel

Tel. +972 4 837 2288

MicroTag Temed is a provider of top security authentication and anti-counterfeiting technologies for the most demanding Brand Protection applications. The company possesses a high-level R&D expertise in solid-state physics, chemistry, materials science and signals processing, which served as the basis for MicroTag own invented and developed novel and unique authentication technology, now patented worldwide.

Oberthur Technologies SD, B, SP, SW, GP, MR, HC, EL

Securing technologies and enabling mobility



Oberthur Technologies (OT) is a world leader in digital security solutions for the mobility space. OT has always been at the heart of mobility, from the first smart cards to the latest contactless payment technologies which equip millions of smartphones.

Present in the payment, telecommunications and identity markets, OT offers end-to-end solutions in the smart transactions, mobile financial services, machine-to-machine, digital identity and transport & access control fields.

Lasink enables to generate a laser engraved color picture within the depth of a polycarbonate credential. The technology is available as well for polycarbonate cards and passport polycarbonate data pages.

OT's Lasink solution offers an awesome level of security, with a card body which is impossible to delaminate, a picture which is very easy to authenticate and 'printing' technology which is impossible to counterfeit.

With Lasink, OT is the first company to introduce this kind of innovative solutions, enabling to give access to governments and national printers to the most secured anti-counterfeiting picture inside pure polycarbonate for all ID crededials.



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www.oberthur.com

TARGET/PRODUCT

TAX = Tax stamps

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HC = Healthcare

=Electronics

Morpho

www.morpho.com

SD, B, GP

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Morpho is part of the international high technology group Safran. Morpho delivers products and solutions targeted at governments, national agencies and administrations dedicated to law enforcement and border control, as well as private companies in need of secure physical or logical access control Morpho comprises three divisions: identification, e-Documents and detection.

Prooftag

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TAX, SD, LUX, P, SP, SW, TAG, GP, HC, EL

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Prooftag offers solutions to trace and authenticate products and documents at the item level thanks to the Bubble Tag technology. Each Bubble Tag is unique and impossible to replicate, even by Prooftag. The Bubble Tag is controllable visually on PC or mobile phone and electronically with dedicated readers. The technology is available to be integrated into plastic cards or tamper evident seals. It has been successfully implemented to secure wines, spirits, electronics, cosmetics, jewelry, watches, in brand protection and various administrative documents.

SICPA Security Solutions

www.sicpa.com security.solutions@sicpa.com



TAX, P, SP, SW, TAG, GP

Av de Florissant 41, 1008 Prilly - Switzerland

Tel. +41 21 627 61 55

At the core of SICPA's security expertise are high-performance security inks that protect the majority of the world's banknotes, security documents and value documents from counterfeiting and fraud. SICPA's Government Security Solutions Division enables Governments to protect tax revenues and deliver associated policy objectives by providing unique and secure authentication and traceability solutions. SICPATRACE® combines material based security with state-of-the-art information technology which enables our partner Governments to secure revenue and protect consumers. SICPA is a pioneer in this field and has successfully implemented and operated nationwide track and trace solutions for Governments worldwide.

U-NICA Group

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TAX, SD, LUX, P, C, H, SP, SW, TAG, GP, MR, HC, EL

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As leading specialist for innovative security solutions, U-NICA offers holographic features for plastic products, security taggants and digital solutions that allow product authentication with common smart phones to the industrial and commercial sectors. Governments trust U-NICA's intelligent inks for currencies and value documents. We also provide an ID protection system that securely links personalized text with the bearer's picture, for verification with a smart phone or passport reader. Operating from locations in Europe, USA and Asia, absolute reliability, confidentiality and discretion is guaranteed.

WISeKey

www.wiseauthentic.com sales@wisekey.com



SD, LUX, P, SW, GP, MR, HC, EL

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WISeKey developed with an innovative technology solution suite, already implemented at several prestigious luxury brands. Based upon the digital certification, WISeAuthentic is a three in one solution suite that provides: Brand protection, Sellout management and Real Time Monitoring, and Direct marketing through a private Social CRM. The end-client can easily check the authenticity on the web or on its mobile with contactless secure NFC, a marketing link to deliver information and bound with consumers. Remotely control any item already sold.