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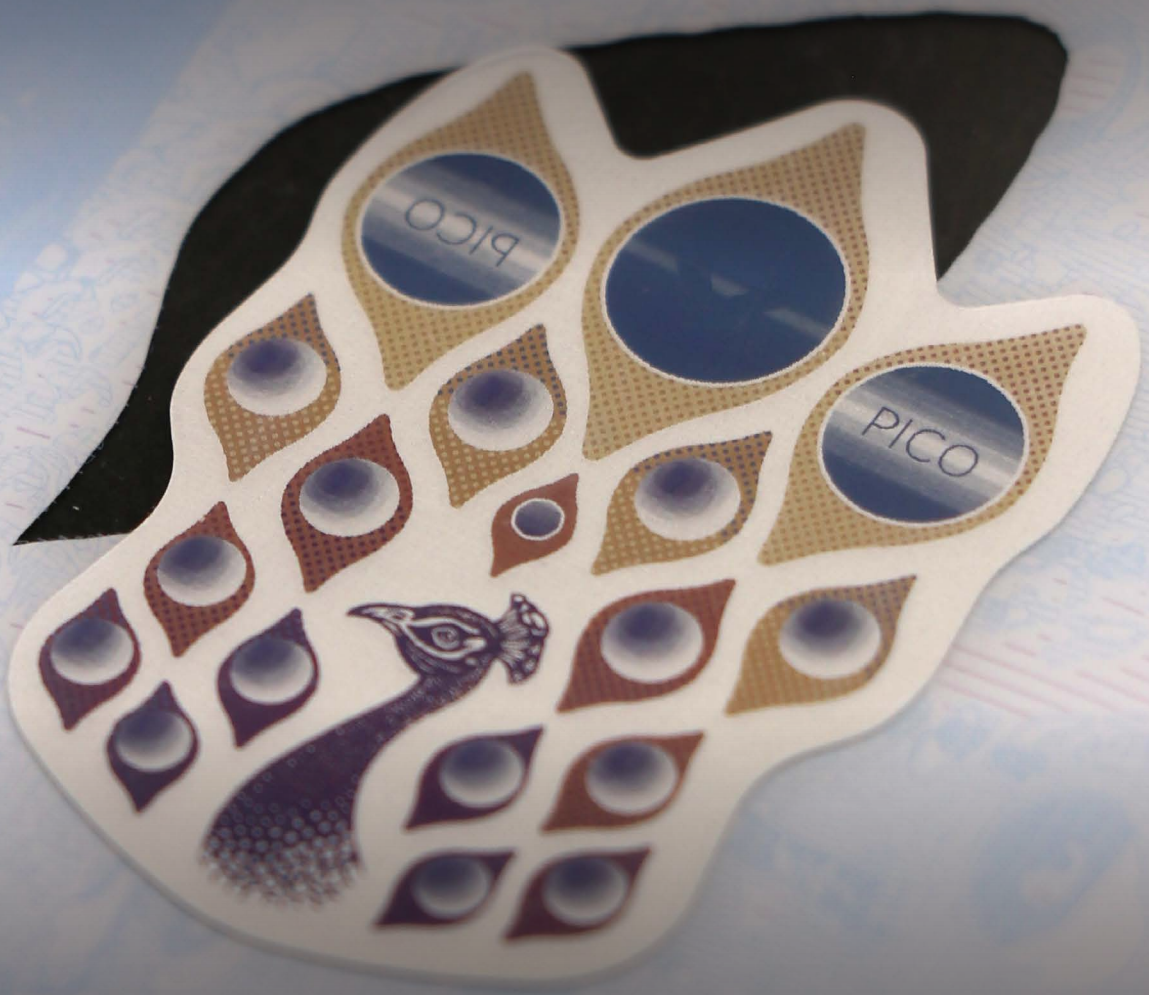
Authentix®
The Authority in Authentication



PICO secure™

Next Generation Optical Security for embedded document security

WHY ARE PICO SECURE OVDS EASY TO IDENTIFY BY FRONTLINE LAW ENFORCEMENT AND BORDER CONTROL?

Authentication and visual confirmation of travel documents upon crossing borders is of utmost importance for national security. Optical Variable Devices are part of a larger set of standardized security features across countries to protect and verify identity documents. Their optical characteristics are designed to be easily detectable by border control officers without the need for specialized equipment. The combination of OVDs and other security features forms a robust defense against forgery and enhances the security of international travel.

WHY ARE OVDS IMPORTANT IN IDENTITY DOCUMENTS?

Optical Variable Devices (OVDs) are crucial for government document inspectors and passport border control personnel due to their ability to provide a unique and non-replicable identifier for each document. OVDs are embedded in a secure substrate and can change effects, colors or patterns on tilt or under different light conditions. Legacy solutions like holograms, color changing inks, stamps, and UV dull paper are commercially available, can be harvested and widely used by counterfeiters to create fakes.

There is a need for next generation optical security features that are always on, visible in multiple lighting conditions and look completely different from any attempted counterfeits, that are easy to identify by frontline law enforcement, airport border controls and inspectors. Their proprietary algorithms and specialized manufacturing techniques make it impossible for counterfeiters to replicate the features accurately, thus reducing the risk of fraud and ensuring the integrity of security features. Next Generation Nano Optics for embedded document security can be a key tool against forged documents.

PICO SECURE™ : A BREAKTHROUGH IN EMBEDDED DOCUMENT SECURITY

Developed by Authentix, **PICO secure™** is the first nano-optic, plasmonic OVD in the market offering always-on-structural color and movement. This is a major advancement in document security - the first successful integration of nano-optic plasmonic structures into polycarbonate, unlocking a new class of overt, intuitive, and tamper-resistant security for national ID cards and passports. PICO secure represents a new era of overt document security, where light itself becomes the protective mechanism.

This is the next generation of **identity document security** as it provides high engagement and enhances any document theme with highly customizable, intuitive authentication effects. Pure plasmonic color pixels patterned on ultra-thin microstructures create 'always-on' effects that are unique, simple to understand, memorable, and highly secure for document authentication.

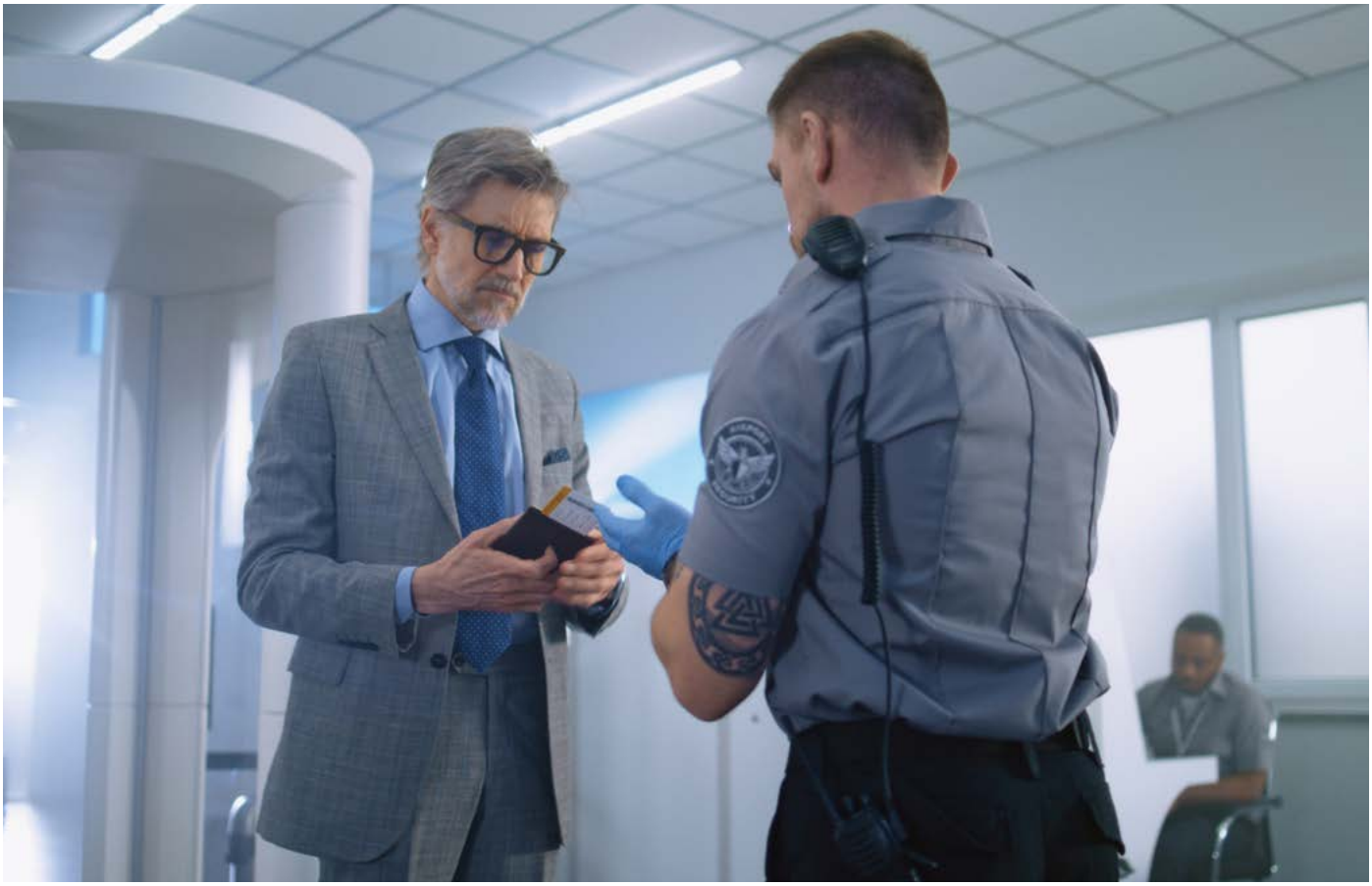
WHY IS IT EASY TO IDENTIFY BY FRONTLINE LAW ENFORCEMENT?

- High Visibility: Complete customization of multi-color design and effects that are visible even in low lighting conditions

- Dual Sided Protection: Effects are viewable from both sides through a window, securing two sides of the document

- Ease of Authentication: Simple, intuitive effects - Hide & reveal, depth, photo realism - with unambiguous and consistent colour

- Ultimate Integration: Can be applied on all substrates like polycarbonate, paper, composite or polymer with unmodified industry equipment - and can be further customised using typical laser personalisation techniques



THE FUTURE OF EMBEDDED IDENTITY DOCUMENT SECURITY

Secure identity is a cornerstone of national trust. Traditional and aging OVD technologies used in many identity documents today, such as holograms and diffractive optical elements, rely primarily on diffraction and interference effects. While effective, these technologies have become increasingly vulnerable to counterfeiting due to advances in fabrication techniques now becoming more widely available.

Surface plasmon-based OVDs like **PICO secure** offer several advantages including extreme sensitivity to fabrication parameters, complex multi-parameter dependencies, and the ability to create effects that are fundamentally impossible to properly replicate without precise nanoscale control. The integration leverages the inherent thinness and stability of the nano-structured film, enabling:

- Durable, tamper-evident embedding during lamination
- Window integration with effects visible from both sides
- Laser personalization compatibility for enhanced document-level trust

This level of integration ensures the feature is not surface-applied or added post-production, but bonded into the core of the document, delivering true security-by-design. It provides high public engagement and enhances any document theme with highly customizable, intuitive authentication effects. Contact one of Authentix OVD experts today to **request samples** to learn more about using this Nano Optic technology for your next security document, passport or national identity card.

North America | Europe | Middle East | Africa | Asia

The first nano-optic, plasmonic OVD offering always-on-structural color and movement.

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