



EXPERT SOLUTION FOR AUTHENTIC SECURITY

ID DOCUMENT SECURITY



ABOUT US

Joint stock company 'Krypten Research and Production' is specialised in the production of special security elements (diffractive optical variable devices) for security printing, labeling goods, accompanying papers, authenticity validation of manufactured products and documents with visual and technical control of its authenticity.

Krypten specialises in the development and production of diffractive optical security devices of all kinds:

- Self-adhesive security labels and holographic foil for hot-stamping.
- Holographic laminates of cold and hot stamping, holographic overlays, PC inlays.
- Security threads: straight and curvy thread, diving thread, multilayered thread including various combinations of visual and machine-readable features.



E-CATALOGUE

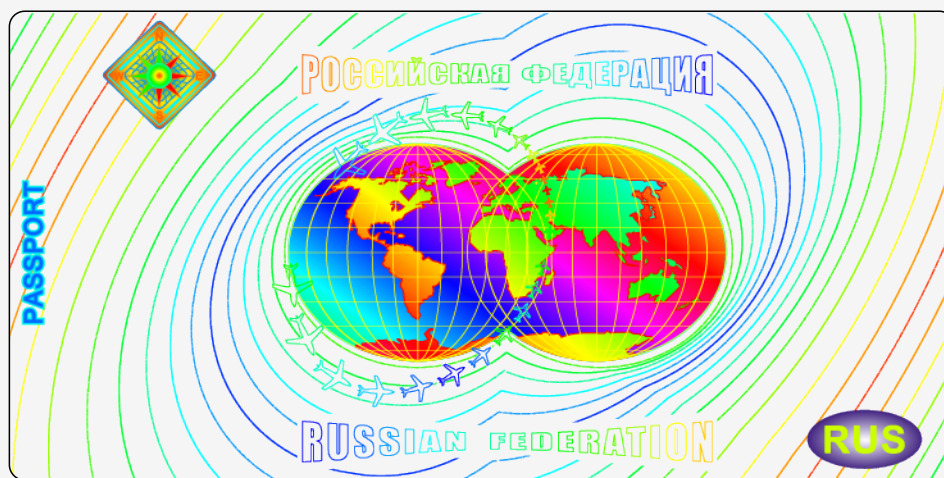
Try Krypten eCatalog App to compare the advantages of security elements, identify different security effects and select the solution for your document or product protection.



MASS PRODUCTION SECURITY LAMINATES & OVERLAYS

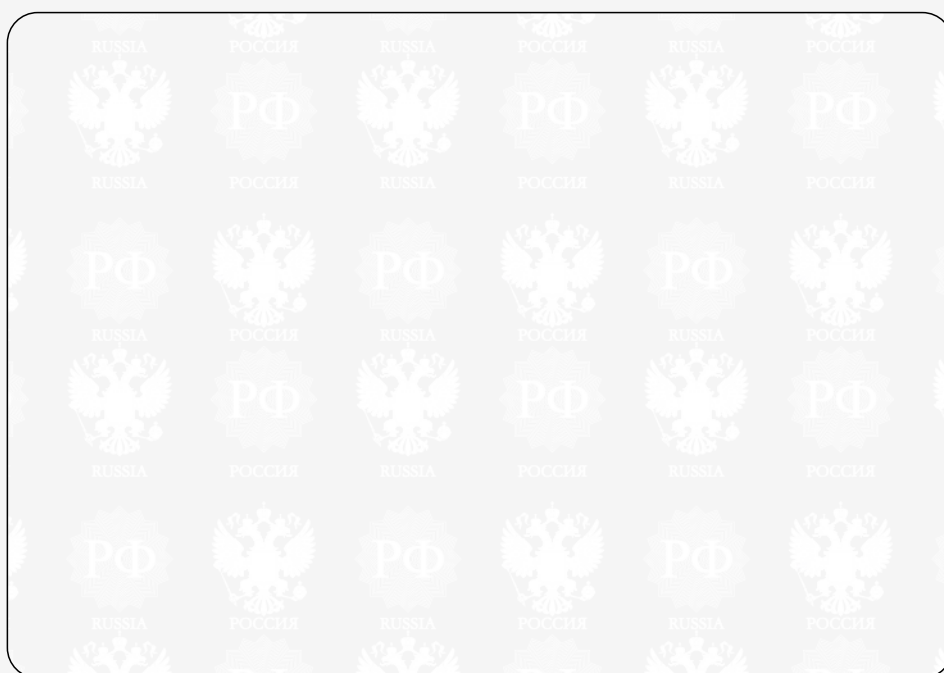
Holographic security overlay for «Transborder passport of a citizen of the Russian Federation» on PC base

Holographic overlay applied on polycarbonate base, designed as biometrical passport for validating ID of russian citizens traveling abroad. Sensitive information is printed on PC base and securely sealed by overlay with transparent HRI security hologram to prevent any tampering or forgery attempts.



Hot laminating film for internal passport of Russia

Hot laminating film on PET base designed for Russian National Passport. Holographic features enhance security complex with: kinetic effects, 2HR elements and guilloche lines.



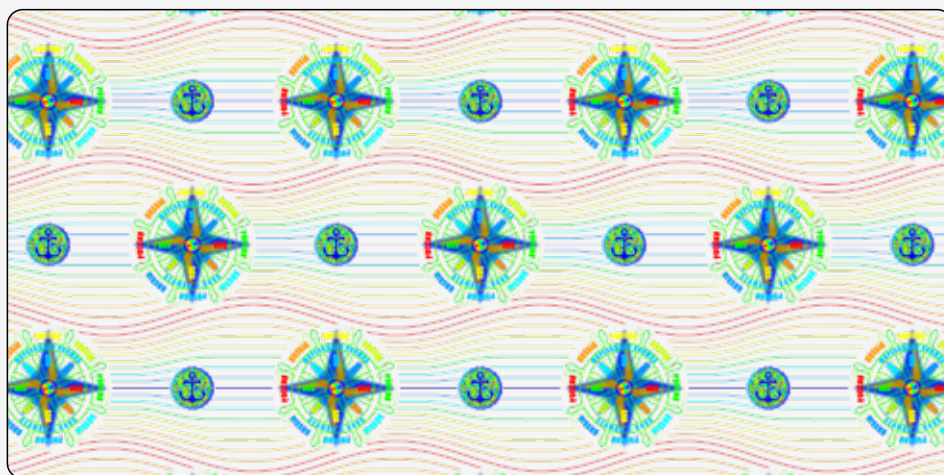
Hot laminating film for Russian driver's license

Hot laminating film on PET base designed for New Generation Russian Driver's License. Holographic features enhance security complex with: kinetic effects, ZHR elements, True color elements, 3D effects and guilloche lines.



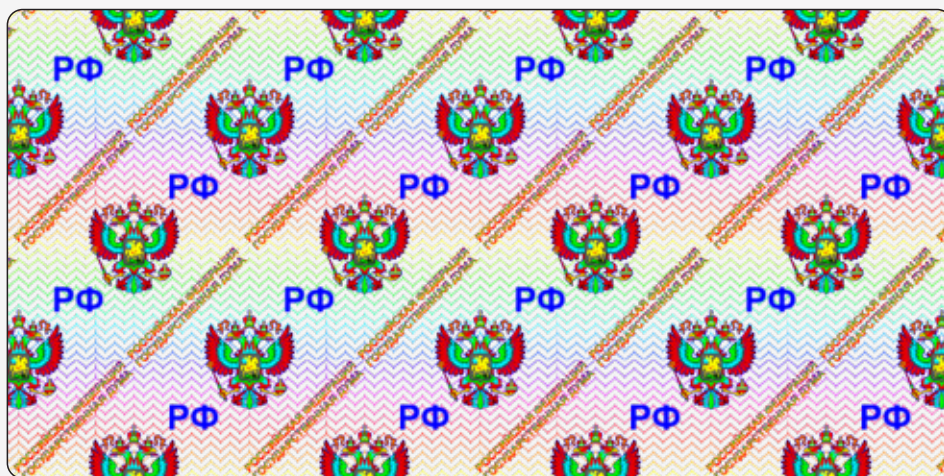
Self-adhesive cold laminating film for Seaman's book

Self-adhesive cold laminating film on PET base designed for Seaman's ID document security. Holographic features enhance security complex with: kinetic effects, micro lenses, 3D effects and guilloche lines.



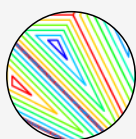
Self-adhesive cold laminating film for Deputy assistant ID

Self-adhesive cold laminating film on PET base designed for DEPUTY ASSISTANT ID document security. Holographic features enhance security complex with: kinetic effects, ZHR elements, 3D effects and guilloche lines.



MASS PRODUCTION SECURITY PATCHES

Hot stamping security patch with HPMD «Sochi 2014 Paralympic Games» / «Sochi Diamond»



Colorful guilloche ornament
with pulse effect



Repetitive diffractive microtext
«SOCHI 2014» 80 micron high



Diffractive microtext
«PARALYMPIC GAMES»
60 micron high



High resolution color logotype
with kinetic effect

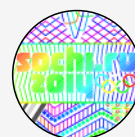


Text «SOCHI2014.RU» with dynamic contrast,
text «PARALYMPIC GAMES» with matte
grey effect and color contour



High resolution diffractive
image of «Olympic Rings»

Colorful thin lines forming
«SOCHI 2014» text



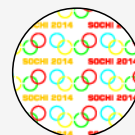
«Star» element with
dynamic contrast effect



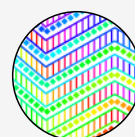
«Diamond» element with
dynamic contrast effect



Diffractive microimages of
«Olympic Rings» with repeated
text «SOCHI 2014» 70 micron high



Diffractive ornament
with kinetic effect



Custom holographic image design available.
Custom demetallisation image design available.
Holographic color permutation effect in different viewing angle.

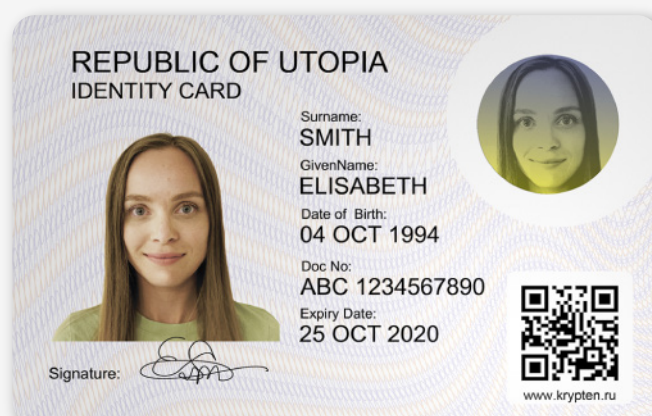


SAMPLE SECURITY PATCHES

Holographic patch with personalization

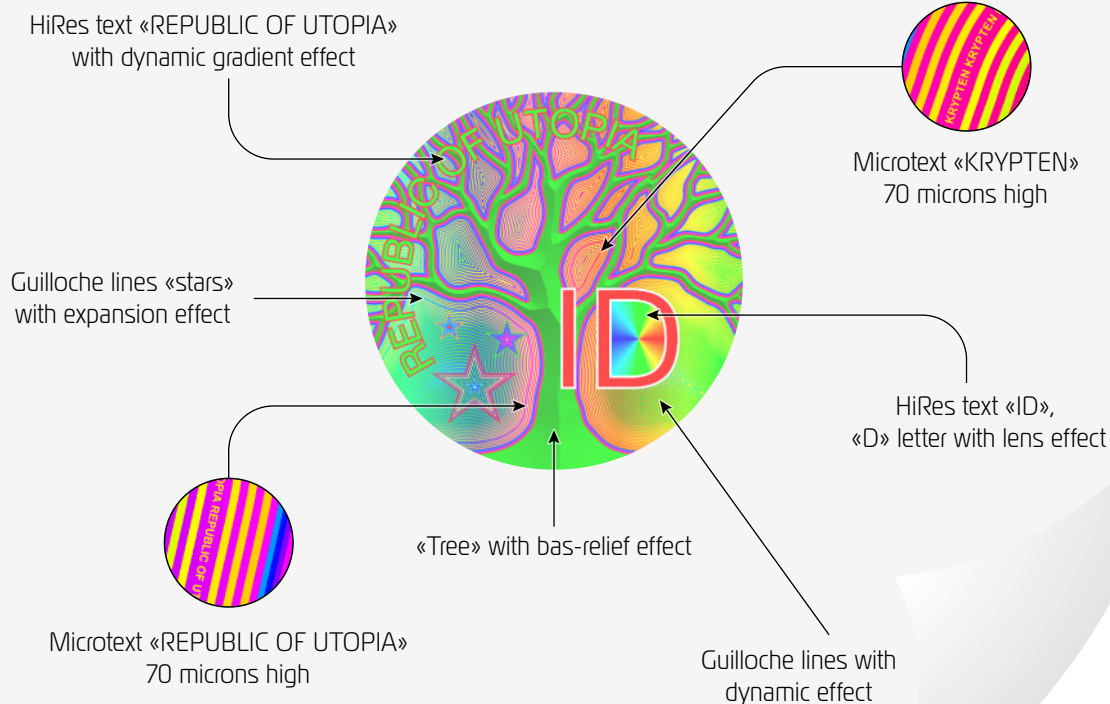
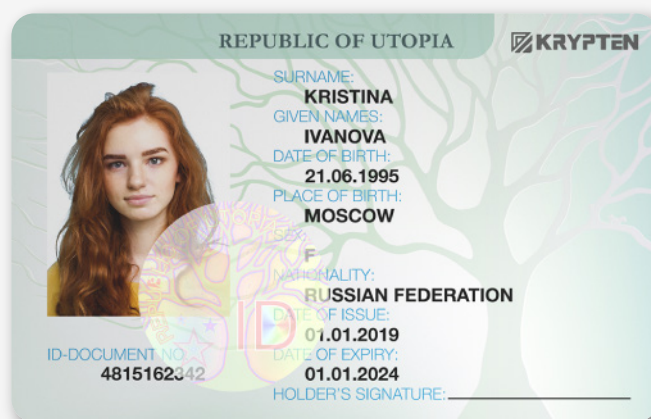
New security feature for polycarbonate ID cards – an item with a personalized portrait that demonstrates colour changing at different angles and positive/negative flip effect of the personalised image.

Personalised portrait patch ensures protection from photo replacement. It is fully embedded in a polycarbonate card. Card holder's portrait is visualised as an image with rainbow effect and positive to negative change effect. This feature which doesn't require any special equipment for identification and validation. This holographic patch may be pressed or laminated to the card in a conventional manner, photo personalisation is carried out by industry-standard hardware, no special equipment is required.



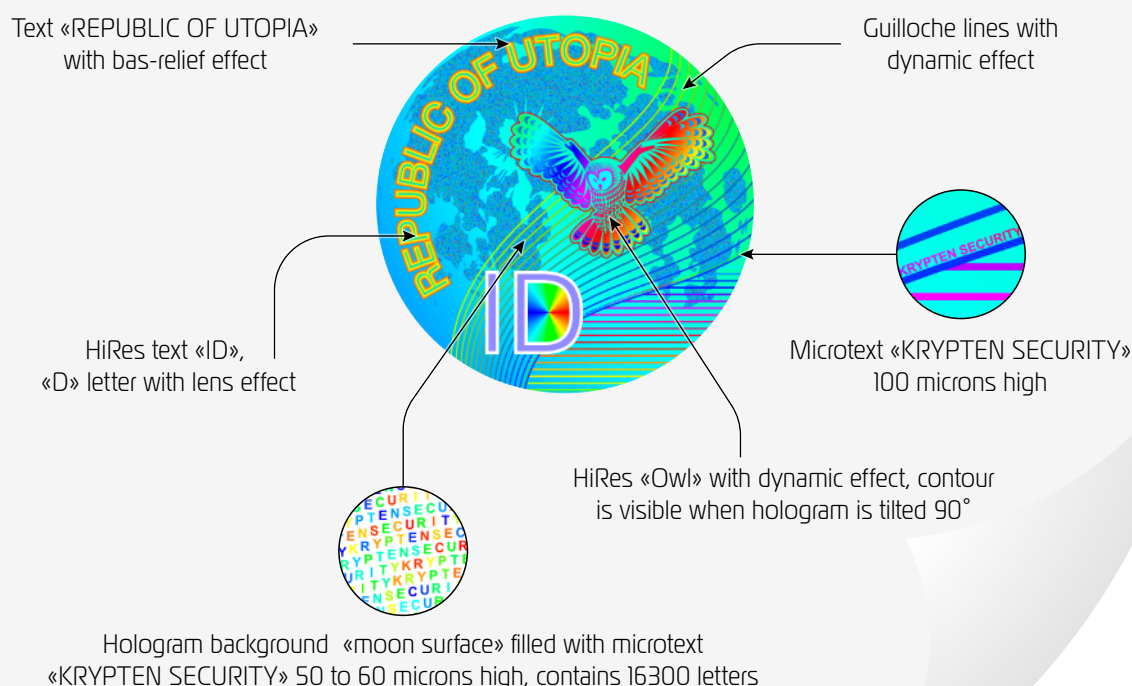
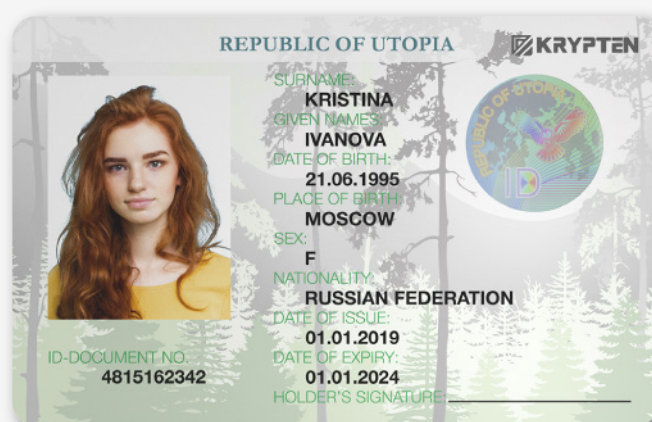
Jostick™ «Tree»

Jostick™ is a security feature specially designed for protection of polycarbonate ID-documents, it consists of base polycarbonate layer from one side and reinforced with PET film from another. Base polycarbonate layer that content holographic features provides perfect adhesion to protected internal layers of the card. Jostick's hologram can be done with any reflection layer, like HRI, aluminum, copper or with their combination. It can have demetallized pattern. Internal layers can contain fluorescent or other special paints and particles like photochrome ink, quantum dots, etc. At the attempt to remove top layers from the protected data, baked polycarbonate layer with hologram will stand over the data, making impossible to counterfeit a document invisibly.



Jostick™ «Owl»

Jostick™ is a security feature specially designed for protection of polycarbonate ID-documents, it consists of base polycarbonate layer from one side and reinforced with PET film from another. Base polycarbonate layer that content holographic features provides perfect adhesion to protected internal layers of the card. Jostick's hologram can be done with any reflection layer, like HRI, aluminum, copper or with their combination. It can have demetallized pattern. Internal layers can contain fluorescent or other special inks and particles like photochrome ink, quantum dots, etc. At the attempt to remove top layers from the protected data, baked polycarbonate layer with hologram will stand over the data, making impossible to counterfeit a document invisibly.

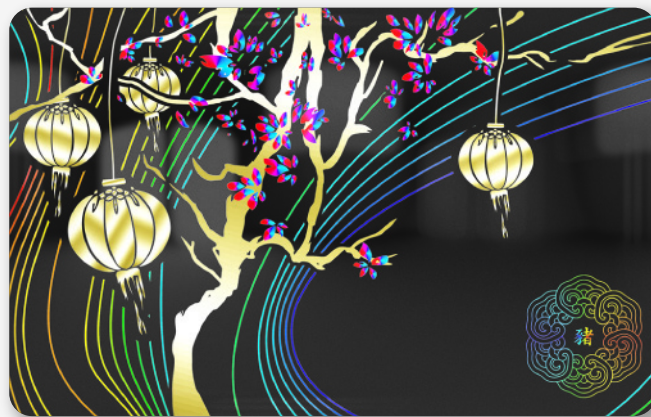


SAMPLE SECURITY LAMINATES & OVERLAYS

Bi-colour two sided hologram with micro-demetalization «Chinese summer»

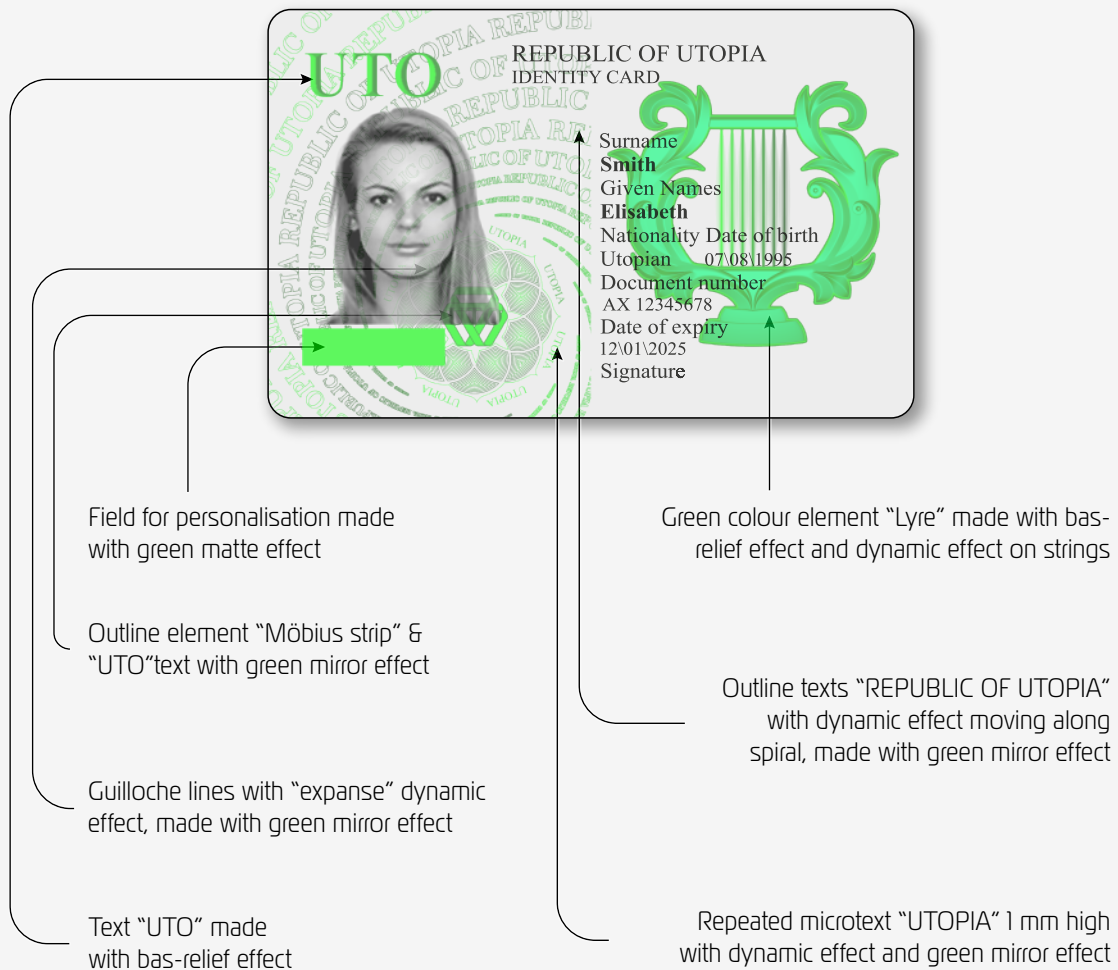
Hologram is demetallised by the technology of high-precision micro-demetalisation (HPMD). The key feature of a bi-colour HPMD hologram is a different colours on opposite sides of the same micro-demetalised image. The second colour of HPMD hologram significantly improves its security features.

Design of this card conveys the mood of early warm summer time. The wind wanders freely among the chinese lanterns and plays with budding leaves. The Chinese character in the corner of the composition designates the year of 2019 – a year of the pig according to the Chinese zodiac. The character is framed with traditional ornament.



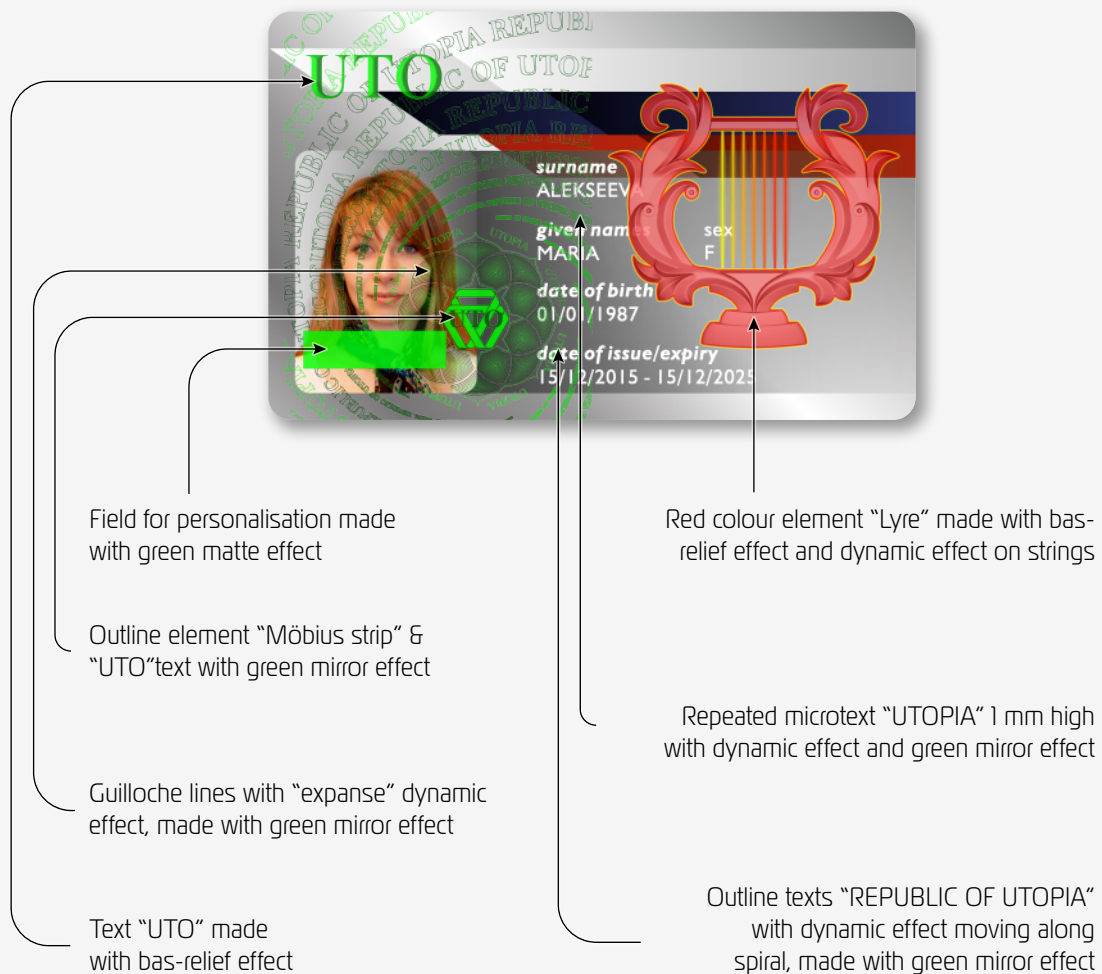
3D-Gram-M™ inlay «Republic of Utopia»

Photopolymer 3D-Gram-M™ inlay made with high selectivity Bragg gratings representing volume holographic image. «Republic of Utopia» is a mono-colour photopolymer inlay for ID cards. High security level is achieved by holographic layer placed inside the card.

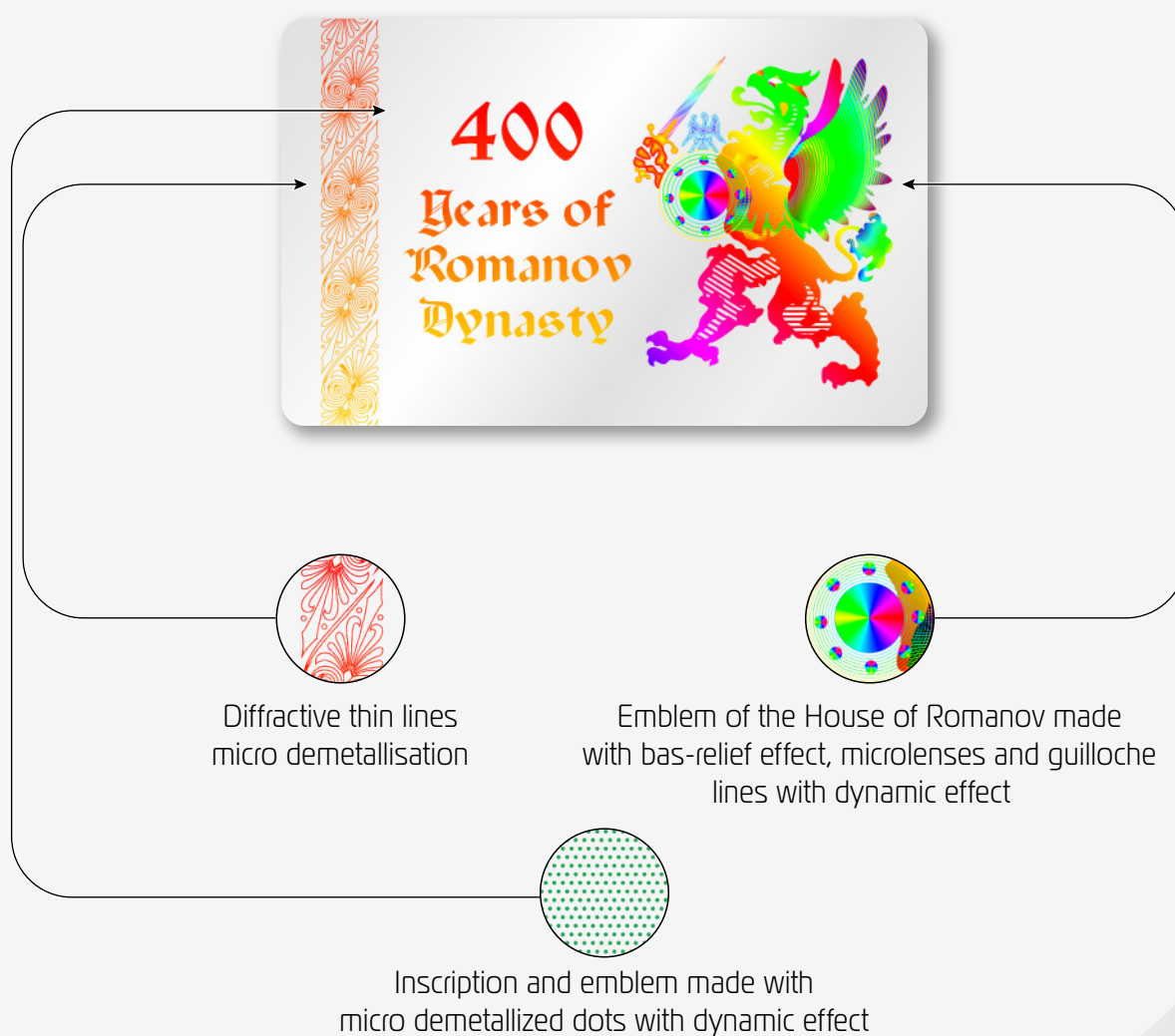


3D-Gram-C™ overlay «Republic of Utopia»

Photopolymer 3D-Gram-C™ overlay made with high selectivity Bragg gratings formed in volumetric photopolymer environment. «Republic of Utopia» is a bi-colour photopolymer overlay for ID cards. Security hologram is laminated on the top layer of ID card, protecting already printed personal data.



**Holographic PC overlay with micro demetallisation
«400 Years of Romanov Dynasty»**



Holographic PC overlay with micro demetallisation «Aeroflot ID»



Holographic image of «plane»
with TrueColor effect

Holographic map with kinetic effect
and holographic microtext «AEROFLOT»
190 microns, «RUSSIAN INTERNATIONAL
AIRLINES» 140 microns

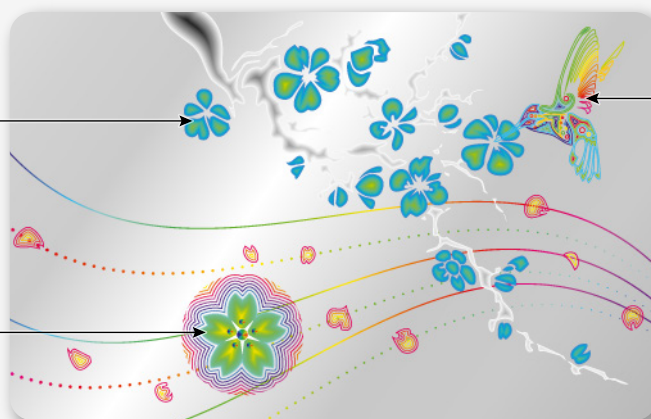
High resolution holographic text
«Russian International Airlines»
with kinetic effect

Hologram is demetallised
with HPMD technology

Custom holographic image design available.
Custom demetallisation image design available.
Holographic color permutation effect in different viewing angle.



HRI holographic PC overlay «Sakura»



Holographic image of «flower»
with kinetic effect and microlens

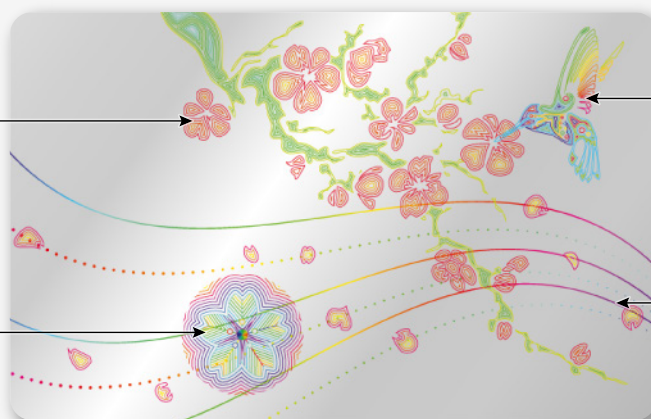
Holographic image of «petals»
and «branch» with volume effect

Diffraction image of «hummingbird»
made out of fine lines with kinetic effect

Custom holographic image design available.
Holographic color permutation effect in different viewing angle.



Holographic PC overlay with micro demetallisation «Sakura»



Holographic image of «flower»
with kinetic effect and microlens

Hologram is demetallised
with HPMD technology

Holographic image of «petals»
with expansion effect

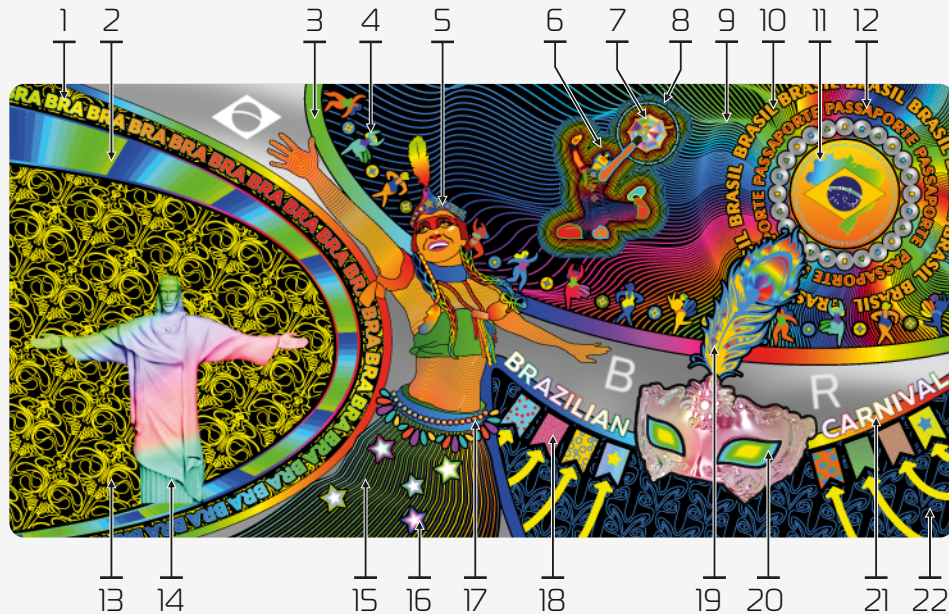
Diffraction image of «hummingbird»
made out of fine lines with kinetic effect

Custom holographic image design available.
Custom demetallisation image design available.
Holographic color permutation effect in different viewing angle.



Hot stamping passport overlay «Brazilian carnival»

The Brazilian carnival overlay is filled with vibrant visual effects that perfectly convey the atmosphere of this fiery holiday. The overlay is designed to provide intuitive authentication combining with high security. It incorporates a range of holographic security features: color change effects, high resolution images, switching images effect, microtexts, and a hidden machine-readable security feature. An animated hidden image of a flying parrot revealed using SLR device. The holographic overlay can be applied both for paper and pc based passport pages.

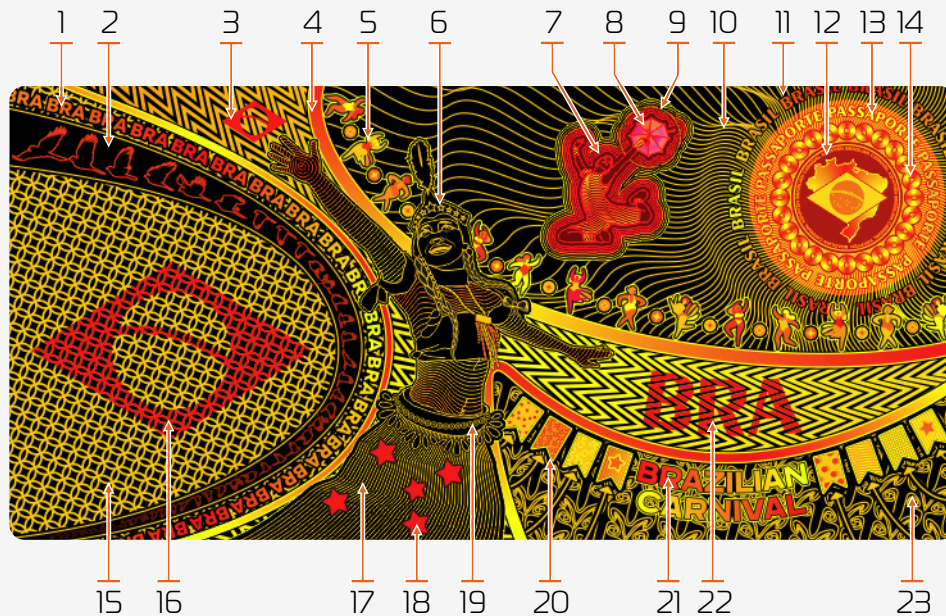


1. Holographic repeated text «BRA» with dynamic effect
2. CLR hidden image area with animated «parrot»
3. Holographic strip with kinetic effect
4. Repeated holographic images of «ladies» and «balls» dynamic color effect
5. High resolution image of «Native Brazilian Woman»
6. ZHR holographic image of «Dancer»
7. Achromatic «Umbrella» with volume effect
8. Holographic repeated microtext «REPÚBLICA FEDERATIVA DO BRASIL» 230 micron high
9. Guilloche lines with kinetic rotation effect
10. Holographic text «BRASIL»
11. Holographic element «Sun» with switching images effect in ± 30 degrees
12. Holographic text «PASSAPORTE»
13. Diffractive guilloche background
14. Color volume effect on holographic image of «Christ the Redeemer»
15. Kinetic effect on guilloche lines
16. Holographic «Stars» with expansion effect
17. Diffractive image «string of beads» containing repeated letters «BRA»
18. Pennant flags with kinetic color effect
19. Holographic image of «Feather» with kinetic effect
20. Diffractive «Eyes» with expansion effect observed in all angles
21. Holographic text «BRASILIAN CARNIVAL» with full color volume effect
22. Diffractive guilloche ornament



Passport overlay BiMetal technology «Brazilian carnival»

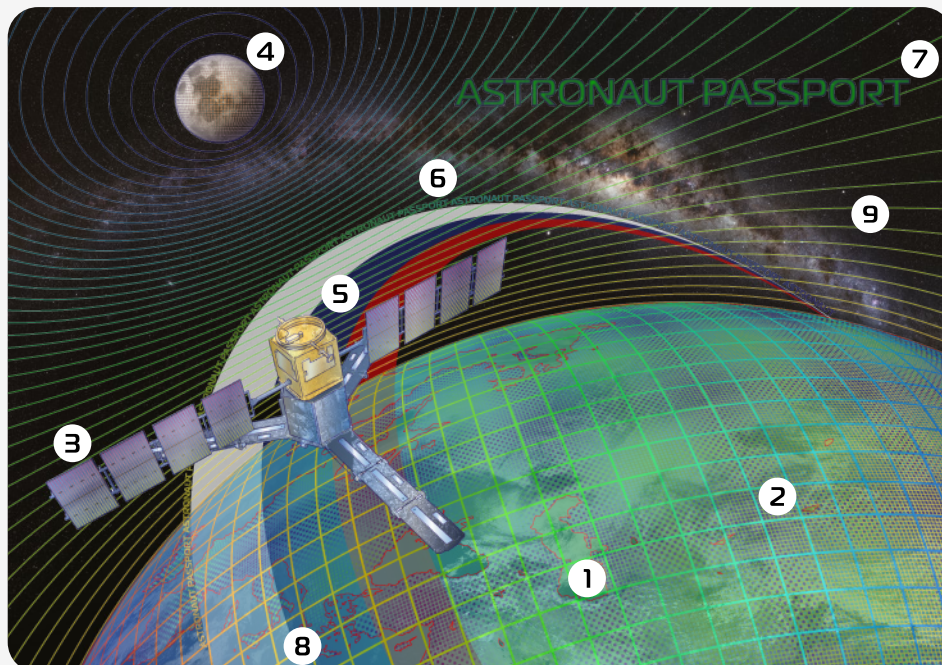
The Brazilian carnival overlay is filled with vibrant visual effects that perfectly convey the atmosphere of this fiery holiday. The overlay is designed to provide intuitive authentication combining with high security. High reflectance yellow metal located only where a diffraction grating is. In one microdemetallization mask perfectly registered two reflective layers with different colors. The holographic overlay can be applied both for paper and pc based passport pages.



1. Holographic repeated text «BRA» with dynamic effect
2. CLR hidden image area with animated «parrot»
3. The flag emblem of the FRB is made using BiMetal technology
4. Stripe element with dynamic effect
5. Repeated holographic images of «ladies» and «balls» dynamic color effect
6. High resolution image of «Native Brazilian Woman»
7. Holographic image of «Dancer» made using BiMetal technology with expansion effect
8. «Umbrella» element made using BiMetal technology with rainbow effect
9. Holographic repeated microtext «REPÚBLICA FEDERATIVA DO BRASIL» 230 micron high
10. Guilloche lines with kinetic rotation effect
11. Holographic text «BRASIL»
12. Holographic element «Sun» with switching images effect in ± 30 degrees (BiMetal)
13. Holographic text «PASSAPORTE» (BiMetal)
14. Colored microlenses with diffraction letters located in the center of each of them
15. Diffractive guilloche background
16. The flag emblem (big one) of the FRB is made using BiMetal technology
17. Kinetic effect on guilloche lines
18. Holographic «Stars» made using BiMetal technology with expansion effect
19. Diffractive image «string of beads» containing repeated letters «BRA»
20. Pennant flags with kinetic color effect
21. Holographic text «BRASILIAN CARNIVAL» with dynamic effect
22. The letters «BRA» are made using BiMetal technology with dynamic tone flow effect
23. Diffractive guilloche ornament



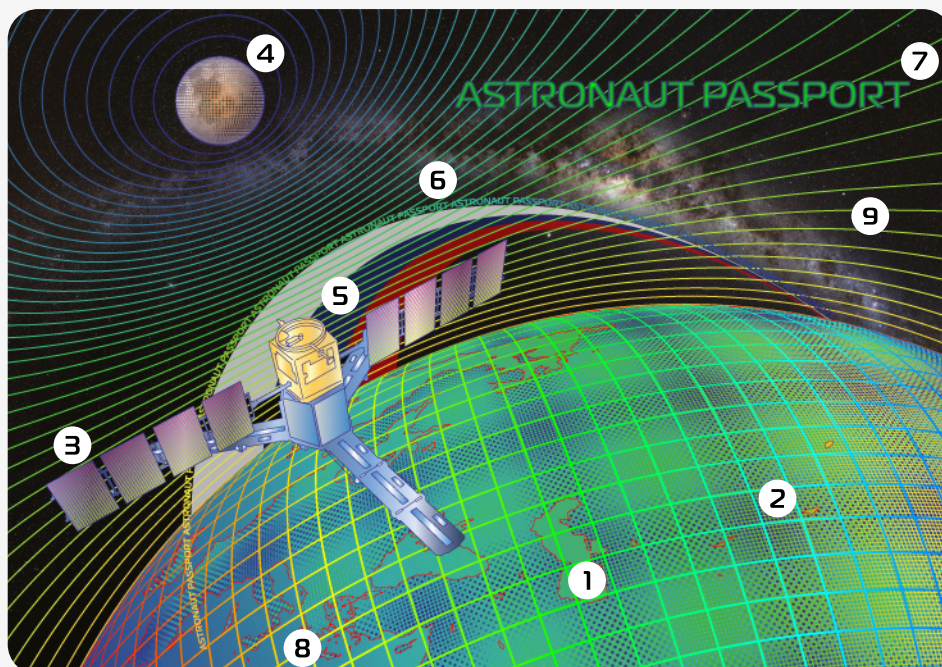
HRI holographic overlay «Astronaut Passport»



- 1 - Contour image viewable in narrow-angle
- 2 - Contour image of planetary surface with kinetic effect on raster
- 3 - High resolution dash lines on satellite solar paddle with kinetic effect
- 4 - Expansion effect on raster image of moon
- 5 - High-resolution holographic image of satellite
- 6 - Diffractive repeated text
- 7 - Holographic text with emboss effect
- 8 - Kinetic effect on planetary surface
- 9 - High-resolution guilloche lines



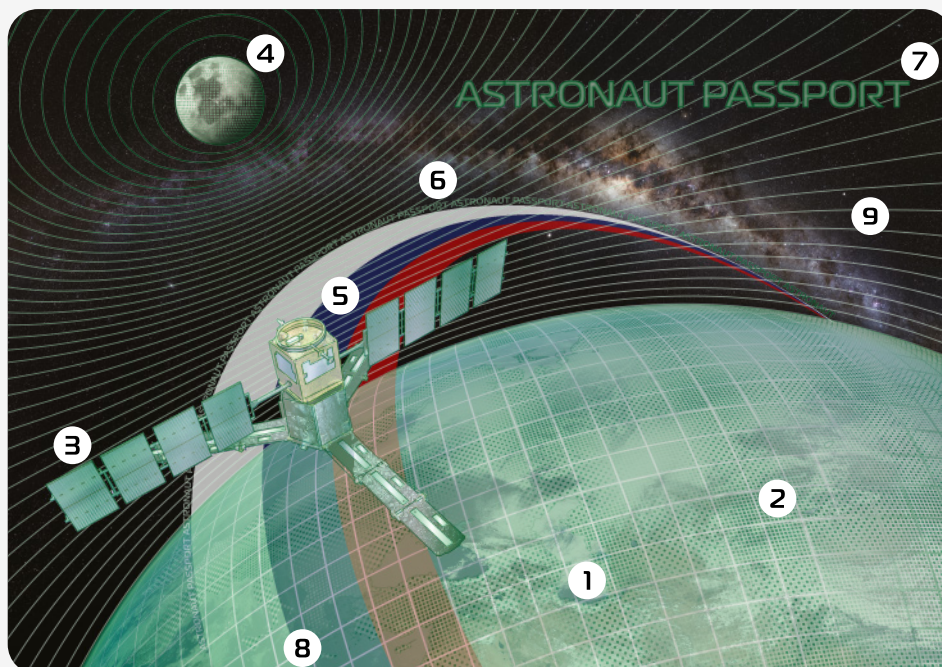
Holographic overlay with micro demetallisation «Astronaut Passport» (aluminium base / copper base)



- 1 - Contour image viewable in narrow-angle
- 2 - Contour image of planetary surface with kinetic effect on raster
- 3 - High resolution dash lines on satellite solar paddle with kinetic effect
- 4 - Expansion effect on raster image of moon
- 5 - High-resolution holographic image of satellite
- 6 - Diffractive repeated text
- 7 - Holographic text with emboss effect
- 8 - Kinetic effect on planetary surface
- 9 - High-resolution guilloche lines



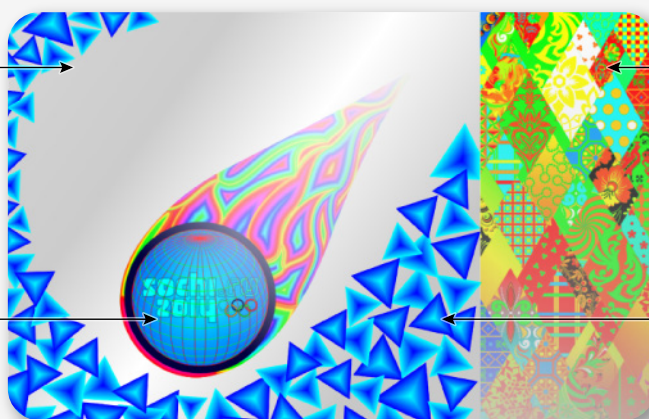
3D-Gram-M™ holographic overlay «Astronaut Passport»



- 1 - Contour image viewable in narrow-angle
- 2 - Contour image of planetary surface with kinetic effect on raster
- 3 - High resolution dash lines on satellite solar paddle with kinetic effect
- 4 - Expansion effect on raster image of moon
- 5 - High-resolution holographic image of satellite
- 6 - Diffractive repeated text
- 7 - Holographic text with emboss effect
- 8 - Kinetic effect on planetary surface
- 9 - High-resolution guilloche lines



Holographic overlay polymet (Al, Cu, ZnS) «Sochi Threemetal»



Diffractive image of
«COMET SOCHI 2014»
with kinetic effect on lines

Holographic «ice»
with expansion effect



The hologram uses three metal
transition with halftone effect:
Copper, Aluminium and ZnS

High resolution holographic image of
«SOCHI PATCHWORK QUILT»
with kinetic effect

Custom holographic image design available.
Custom demetallisation image design available.
Holographic color permutation effect in different viewing angle.









EXPERT SOLUTION FOR AUTHENTIC SECURITY

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