Document authenticity verification device Regula 4205D

The device is intended for advanced authenticity verification of passports, ID cards, travel documents, visa stamps and seals, including but not limited to entry permits, driving licenses, vehicle registration certificates and other vehicle related documents, banknotes, revenue and special stamps, securities and other documents with security features.

Regula 4205D is constructed in a metal body as a standalone unit for desktop use. Control buttons on the front panel are responsible for the activation of light sources and adjustment of camera parameters in different examination modes.

The device has a spacious working area over the object stage, clamps for fixing examined documents, and a mount for fixing the device on a table (G-lock for anti-theft). The monitor angle and its brightness can be adjusted.

Regula 4205D is equipped with modules for reading MRZ, IPI, barcodes and RFID chips. It can be optionally supplied with an integrated information reference system to compare the examined document with the corresponding document template from the database.

Functionality

- **Examinations on different levels**
  - **protection of the document basis**
    - paper opacity, watermarks, security fibers, planchetes, security threads, holograms, foil stamping, pole feature, all types of windows, transparent vanish coating, shadow images, etc.
  - **printing methods**
    - *intaglio*: texts, guiloche frames, rosettes and vignettes, microprinting, latent images and moire patterns, signs for the visually impaired, blind embossing, colour shifting ink, including OVI with embossing and latent images, etc.
    - *letterpress*: serial numbers, texts, barcodes, etc.
    - *offset printing*including Orlov and rainbow printing: texts, microprinting, moire patterns, background and anti-copy patterns, etc.
    - *screen printing*: security features with optically variable effects, etc.
    - see-through register
    - perforation
  - **physicochemical protection**
    - UV luminescence
    - IR luminescence
  - **complex security features**
    - retroreflective protection
    - security features with IR-metameric ink
    - special polymer coating of security laminates
- **Additional examination of**
  - fragments of document images depending on the degree of absorption or reflection of IR light
  - document alterations such as erasure, etching etc.
  - traces of signature forgery
  - extraneous lines (do not originally belong to the examined object) that are performed with IR opaque inks
  - blurred, crossed out entries, texts and images
  - document mechanical defects such as cuts, tears, folds, etc.

Application

- Border control/immigration services
- Customs authorities
- Law-enforcement agencies
- Forensic laboratories
- Financial institutions
- Other agencies and organizations authorized to check documents

Functionality				Model		
				4205D.01	4205D.02	4205D.03
Light sources*	white	incident		+	+	+
		2 oblique		+	+	+
		coaxial		+	+	+
		transmitted		+	+	+
	ultraviolet, nm	incident	254			optionally
			313			optionally
			365	+	+	+
	infrared, nm	incident	870	+	+	+
			950	+	+	+
		2 oblique	870	+	+	+
		transmitted	870	+	+	+
	green incident 505 nm					+
MRZ reader					+	+
Barcode reader					+	+
IPI visualization module						+
RFID reader					+	+
Information reference system				optionally	optionally	optionally

* – All light sources are LEDs except ultraviolet 313, 254 nm

Video camera — 5 Mp, CMOS

Frame size, pixels:

- standard mode — 1024×638
- HDR mode — 2048×1276

Magnification on the monitor, times — 1.2 to 30

Field of view:

- maximum, mm — 180×112
- minimum, mm — 7×4.3

Monitor:

- diagonal, inch — 10.1
- resolution, pixels, min — 1280×800
- type — IPS Capacitive Multi-touch

Camera filter (automatically installed) — IR high pass with the threshold of 700 nm

RFID reader:

- standards — ISO 14443: A and B types
- PC/SC protocol support

http://www.regulaforensics.com/

- data exchange rate, Kbaud — 106, 212, 424, 848
- reading an RFID tag regardless of its position in a document
- anti-collision: reading an RFID tag according to the MRZ

Optionally: integrated information reference system (to compare the examined document with the document template from the database)

Maximum document size, mm — 190×280

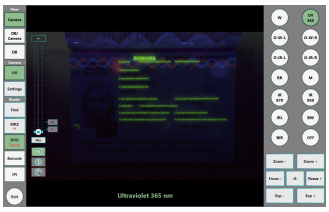
Dimensions (length×width×height), mm — 310×240×350

Weight, kg — 6

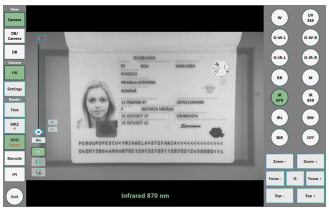
Power supply voltage, V — 100–240

Document examination in different operating modes

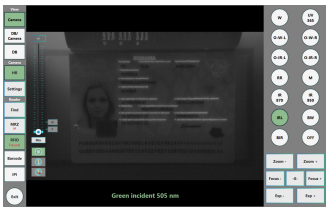
Incident white light



Incident UV (365 nm) light

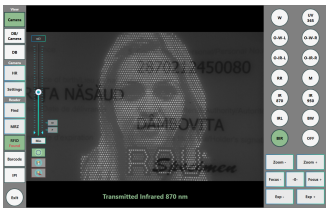


Incident IR (870 nm) light

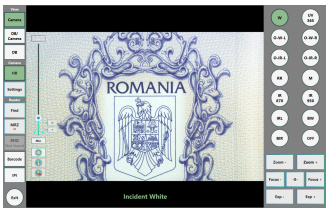


Incident green (505 nm)

Transmitted white light

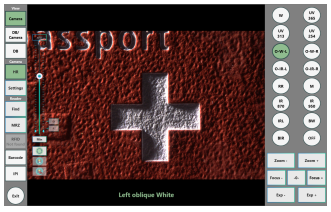


Transmitted IR light (870 nm)

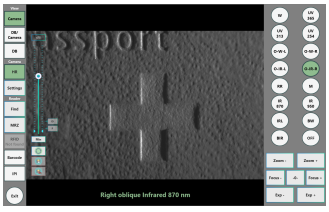


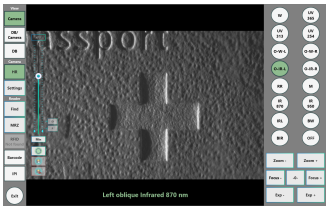
Incident white light, 8x magnification

Oblique white light, 30x magnification

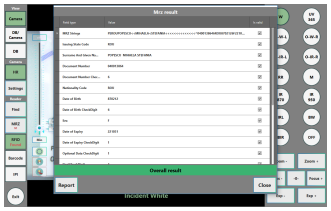


Oblique white light

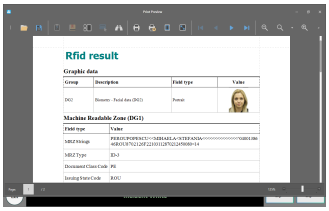




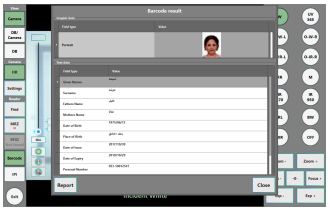
Oblique IR light (870 nm)



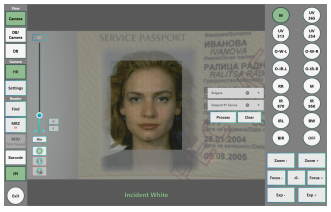
MRZ reading



RFID chip reading

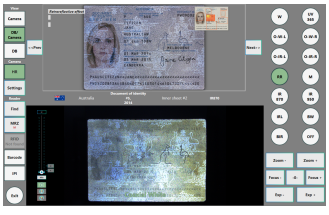


Barcode reading



IPI visualization

Comparing documents images with reference images from the database



Comparing documents images with reference images from the database