

Document Reader

Regula 70X4M

Regula
forensic science systems

for desktop use



Full page passport reader for automatic reading and authenticity verification of passports, IDs, visas, driver's licenses and other identification documents.

Optical character recognition, reading of barcodes, RFID and Smart card chips.

Features

- Capturing images of documents in multiple illumination modes
- Reading and recognition of the MRZ, 1D and 2D barcodes from documents
- RFID chip reading
- Smart card chip reading
- Optical character recognition of different fonts and languages
- Automatic authenticity verification of obtained document images against 14 000+ document templates
- Can be optionally equipped with a flip-top cover
- Glare and external light compensation

regulaforensics.com

Specifications

Regula 70X4M

Image capture and processing

Document formats — ID-1 (identity card), ID-2 (passport card, visa), ID-3 (passport), other document formats up to 88×128 mm

Imaging

- Light sources — white, infrared 870 nm, ultraviolet 365 nm, coaxial white
- 5 Mp camera (70X4M.XXX-5A):
 - Resolution — 470 ppi
 - Frame size — 2592×1944 pixels
- 18 Mp camera (70X4M.XXX-18):
 - Resolution — 860 ppi
 - Frame size — 4908×3684 pixels

Machine-readable zone (MRZ)

Parsing MRZ from ICAO 9303 and ISO 18013 compliant documents, support of non-standard MRZ formats of different countries

Barcodes

- 1D: Codabar, Code39, Code93, Code128, EAN-8, EAN-13, IATA 2 of 5, Interleaved 2 of 5, Matrix 2 of 5, STF, UPC-A, UPC-E
- 2D: PDF417; on request: Aztec Code, QR Code, Datamatrix

RFID

- Fully compliant with ICAO 9303, ISO 18013, BSI TR-03105 Part 5.1 and 5.2
- Operating frequency — 13.56 MHz
- Supported RFID chip standards — ISO/IEC 14443-2, -3, -4
- Supported data access mode — Direct, BAC, EAC, PACE, SAC
- RFID chip verification procedures — PA, AA, BAC, EAC v1.11, EAC v2.0x
- PC/SC protocol support

Smart card

- Supported standards — ISO/IEC 7816-1, -2, -3, -4; EMV2000 4.1, Level 1
- Data exchange rate, Kbaud — 2–500
- Smart card type — asynchronous, T = 0 and T = 1

Automatic authenticity verification

- Checking UV luminescence
- Checking luminescence of UV security fibers
- Checking MRZ printing contrast
- Checking image patterns in white, IR, UV lights
- Visualization of IPI
- Detection of holograms (OVD), OVI

Analysis and comparison of data

- Cross-checking of the data obtained from MRZ, VIZ, RFID chip, Smart card chip, barcode
- Verification of dates, names and surnames, detection of zero numbers of sample documents
- Capturing of holder's portrait, signature, barcode, fingerprint, etc.
- Multipage document processing
- Transliteration into Latin characters (in compliance with ICAO 9303) for comparison with the MRZ

Technical specification

- USB 2.0 connection interface (compatible with USB 3.0)
- Multicolour LED indicator
- Dimensions (L×W×H) — 190×160×99 mm
- Weight — not more than 0.82 kg
- Power supply voltage — 5 V

Illustrations

Regula 70X4M

Document data readout: textual data readout

Visual zone

Visual Inspection Zone (OCR VIZ)

Barcode (personal data)

Machine Readable Zone (OCR MRZ)

Invisible text (OCR Security text)

White

IR

UV

RFID-chip (Radio-frequency identification)



Document data readout: graphic data readout

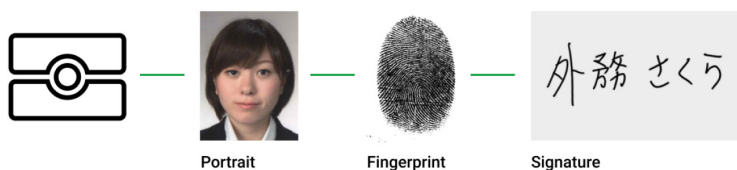
Visual zone

Portrait

Signature

"Ghost" portrait

RFID-chip (Radio-frequency identification)



Regula 70X4M

Performed security checks in white light

White



Performed security checks in infrared light

White

IR

Regula 70X4M

Performed security checks in ultraviolet light

Checking photo embedding type: printing or attachment

Inkjet printing
Photo embedding type



"Ghost" portrait

IR visibility photo
Photo embedding type



UV dull paper photo
Photo embedding type



Retroreflective protection



Illustrations

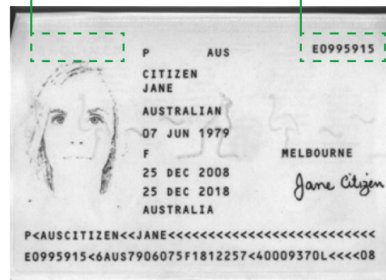
Regula 70X4M

Checking the blank of the document

White



IR visibility elements in blank



IR

UV

UV pattern

False luminescence
in blank
UV dull paper blank



Coaxial white

Retroreflective protection



Checking the personal data

White

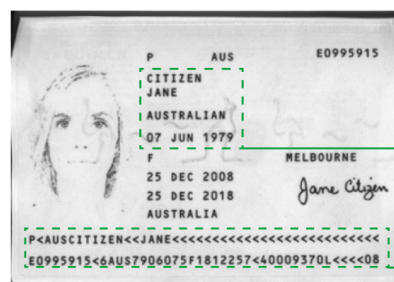
Personal data comparison



IR

IR visibility fill

IR B900



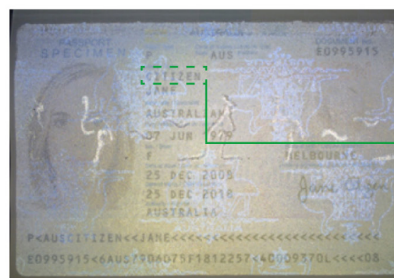
UV

UV dull paper in MRZ
False luminescence
in personal data



Coaxial white

Retroreflective protection



Regula 70X4M

Viewing the passport from IRS database



Text data comparison of the passport

[illegible]