Document reader Regula 7017; 7027

The reader is intended for automatic scanning of passports, IDs, visas, driver's licenses and other identification documents.

The document reader provides the capability of text data recognition, reading the MRZ and barcodes.

A small-sized reader for desktop use. Hard plastic body. The device is connected to a PC via a USB cable. No moving parts. Reliable, convenient and easy-to-use.

The document reader allows capturing images of documents in white light. Model Regula 7027 is equipped with an RFID-reader. The device is supplied with software development kit (SDK) for easy integration into existing end-user systems.

Functionality

- Capturing and processing images:
  - supported document formats:
    - ID-1
    - ID-2
    - ID-3
    - other documents with maximum size 87×128 mm
  - automatic detection of a document in a scanning zone
  - automatic scanning after document detection
  - elimination of glare from laminate and holograms
  - search and cropping of a document image from a general image
- The MRZ detection and recognition
- Recognition and reading of 1D and 2D barcodes
- Automatic recognition of a document type
- Processing graphic fields

Operation

1. The optical reader automatically detects a document in the scanning area of the device.
2. Document images are captured in white illumination mode.
3. **Regula Document Reader SDK** processes data.
4. Results of the verification are ready for further use.

Application

- Visa support agencies and consulates
- Tourist agencies
- Car rental and leasing companies
- Cellular companies
- Event-agencies
- Financial institutions
- Ticket offices
- Insurance companies
- Casino security service

Additional functions

- Multicolour LED indicator of the device status: red, yellow, green

Delivery Set

- Regula Document Reader SDK
- USB cable for connecting the reader to a PC

Functionality	Model	
	7017	7027
Optical reader: white light source	+	+
Reader of radio frequency identification devices (RFID)		+

Optical reader

- Light sources:
  - white
- Scanning area, mm — 87×128: full passport page
- Video sensor:
  - type — CMOS
  - colour model — RGB
  - number of megapixels — 5
  - resolution, ppi — 470 ± 3%
  - frame size, pixels — 2592×1944

Reader of radio frequency identification devices (RFID) for model Regula 7027

- Supported standards — ISO 14443: type A and B
- Data exchange rate, Kbaud — 106, 212, 424, 848
- Reading an RFID tag regardless of its position in the document
- Anti-collision: reading an RFID tag according to the MRZ

Device technical specifications

- Overall dimensions (length×width×height), mm — 148×130×95
- Weight, not more than, kg — 0,8
- Power supply voltage from a USB port, V — 5
- Current consumption, A:
  - **Regula 7017**— 0,6
  - **Regula 7027**— 1

Document reader software development kit (SDK)

SDK consists of two modules:

- Basic – supplied together with a device by default
- VizOCR – reading textual fields from a document page

VizOCR module is optional and used to extend the functionality of Basic module.

Updates for SDK are provided regularly. Basic module has unlimited support. VizOCR is updated on subscription basis.

Functionality		SDK modules	
		Basic (supplied by default)	**VizOCR**
Document image capture and processing			
Document formats	• ID-1 (identity card) • ID-2 (passport card, visa) • ID-3 (passport) • other document formats up to 87×128 mm	+	
Scanning process	• document detection sensor • automatic scanning after document detection • elimination of glare from laminate and holograms for white illumination • search and cropping of a document image from a received image	+	
Machine readable zone (MRZ)			

Supported MRZ formats	• in conformity with ICAO 9303:
	  ◦ 44×2
	  ◦ 30×3
	  ◦ 36×2
	• in conformity with ISO IEC 18013 (IDL):
	  ◦ 30×1
	• support of special MRZ data structure for documents of certain countries
		+	

Features	• search for the MRZ along the whole document image • control of check digits and data structure in conformity with the requirements of ICAO 9303 and BSI TR-03105 Part 5.1	+	
Barcodes			
Supported formats	• 1D: Codabar, Code39 (+extended), Code93, Code128, EAN-8, EAN-13, IATA 2 of 5 (Airline), Interleaved 2 of 5 (ITF), Matrix 2 of 5, STF (Industrial), UPC-A, UPC-E • 2D: PDF417, Aztec Code, QR Code, Datamatrix	+	
Automatic document type recognition			
Order of document type recognition	• Country→Type→Series		+
Features	• receiving a document template from the SDK database containing the following information: ◦ text and graphic fields position		+

	◦ availability of barcodes and security features ◦ authenticity verification and its parameters ◦ RFID-chip availability ◦ a reference image from Information Reference Systems «Passport», «Autodocs», «Frontline Documents System» • processing of the received document images in compliance with the sample, including document image rotation by the angle given in the sample		
Graphic fields processing			
Types of graphic fields	• portrait of the document holder • signature • barcode	+	
Features	• cropping and displaying graphic fields as separate images in compliance with the sample of the corresponding document • automatic searching of faces on the document image and cropping the document holder portrait if the document type is not recognized • document image rotation according to the document holder portrait position	+	
OCR of the visual zone			
Recognition of character sets	• Central European and Eastern European Latin (1250) • Cyrillic (1251) • Western European Latin (1252) • Greek (1253) • Turkish (1254) • Baltic (1257) • other fonts of any size		+
Features	• dictionary support (name, surname, address, country, etc.) • automatic text division into separate fields (e.g. dividing the address into postal code, country, state, etc.) • recognition of dates with complex formats • recognition of characters from different character sets in one line		+
RFID SDK			
Supported RFID-chip standards	• ISO/IEC 14443-2 (type A and B) • ISO/IEC 14443-3 (MIFARE® Classic Protocol) • ISO/IEC 14443-4	+	
Data access modes	• Direct • BAC • EAC • PACE • SAC	+	
Authentication	• active (AA) • passive (PA) • chip (CA v1, CA v2) • terminal (TA v1, TA v2)	+	
Supported applications	• ePassport (DG1–DG16) • eID (DG1–DG21) • eSign • eDL (DG1–DG14)	+	

Certificate management	• local storage • receiving certificates online through the program interface • Master List, CRL support	+	
Features	• reading RFID chips with extended length support • reading RFID chips in compliance with ICAO LDS 1.7, PKI 1.1 data formats • certified by BSI TR-03105 Part 5.1, BSI TR-03105 Part 5.2	+	
Analysis and comparison of text data			
Document areas for cross-checking of the readout data	• MRZ • VIZ • RFID-chip • barcode	+	
Verification	• validity of any dates • authenticity of names and surnames according to lists of wordstops • zero numbers of sample documents	+	
Adjustment of formats and measuring units to those used in the user OS	• date • weight • height, etc.	+	
Features	• complete or partial comparison of fields • integration of data received from several document pages • calculated field support (age, etc.) • transliteration to Latin characters in compliance with ICAO 9303 standards for comparison with the MRZ	+	
Additional SDK functions			
Image formats	• .BMP • .JPG • .JP2 • .PNG • .TIF • other image formats are possible on request	+	
OS compatibility	• Microsoft Windows XP (SP3), Windows 7 (x86, x64), Windows 8, Windows 10	+	
Drivers	• Microsoft certified	+	
Software updates			
SDK	• twice a year	*	
Document template database	• monthly	*	

* – on request / individual agreement