

### Reliability characteristics

MTBF:	5000 hours
Operating life:	30000 hours
Operating mode:	enduring

The full service life – 5 years including a one year of storage time in the producer package.

### Operating conditions

Operating temperature	+5 to +40 C.
Relative humidity:	20% to 85% (non-condensing).
Storage temperature:	+5 to +35 C.

### C o n t a c t

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# E-Passport Reader of ID documents



### Purpose

The E-Passport Reader is a modern full page ID document reader. The Reader provides optical scanning of any ID documents that comply with ICAO 9303 requirements in infrared (IR), visible and ultraviolet (UV) illuminations. The Reader is able to detect contactless memory chips embedded in new electronic ID documents and read RFID data without any operator intervention. Optical and RFID data are transmitted through the High Speed USB 2.0 interface to a computer for the final identification.

### Main features

The Reader consists of two devices: the optical scanner and the RFID reader. The optical scanner provides scanning of a document page in IR, visible and UV illuminations and transmission of captured images through the High Speed USB 2.0 interface to a computer. The RFID reader provides contactless reading of RFID data from a chip (A or B type) embedded in a document and complied with the ISO 14443 standard and ICAO requirements and then transmission of RFID data through the USB interface to a computer.

Power supply:	AC 100V-240V, 50/60Hz via an external power supply adaptor 12V/1.5A
Power consumption:	max 1A for 12V.
The Reader size:	340 x 248 x 200 mm.
Weight:	less than 4kg.

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## Features of the optical scanner (Part 1)

Optical scan format of an ID document page:	128 x 88 mm
Size of the operational scanning area (size of the window glass):	130 x 90 mm
Size of the image sensor,	5 Megapixels
Image type:	RGB and Gray-level
Image resolution:	500 ±10 dpi

MTF value across an image on both directions and on any area within view – more than 0.25 for 4 cycles per mm

Distortion level, less than:	±3 %
Image format:	2590 x 1800 pixels
Bitmap depth, bits:	24-RGB

Features of the embedded combined illuminator:

- dominant wavelength of the UV emission source, 365 nm
- dominant wavelength of the IR emission source, 87 nm
- color of the visible emission source white (color temp.7000K)
- optical scanning time of a document page in three illumination modes is about 2 sec;

## Executing functions

the scanning mode starts automatically after detection of a document presence on the scanning surface, or after pressing of the "Scan" button on the Reader case by an operator, or programmatically after receiving the command from an application software. Image brightness for every illumination mode is controllable by an application software.

## Features of the RFID reader:

Full compliance with the ISO 14443 standard for chips of A and B types and execution of all functions that defined by the standard up to level 4; Automatic detection of embedded in ID documents RFID chips that comply with the ISO 14443 standard regardless of chip's location on passport pages; Automatic reading of RFID data from a chip and transmission to a computer; The driver of the RFID reader complies to the PC/SC-lite specification; size of the reliable reading area: 139 x 179 mm horizontally; 15 mm vertically. RFID data reading time from a document's chip is less than 15 sec.

## The Reader software

Drivers and libraries operate under OSs: Windows XP, Windows 2000, Linux with Kernel 2.4, Linux with Kernel 2.6. The Reader software operates on an IBM-PC compatible computer with the next minimal requirements:

Processor:	Pentium IV 1.4GHz or above;
USB Port:	available embedded USB 2.0 High Speed port;
RAM:	512 Mb
Video RAM	32 Mb

## Design characteristics

The Reader is a desktop device, but the Reader design allows to embed the Reader on the table cover. Operator indicators – two status LEDs to display power on and scanning modes. The Reader has the cover that provides a possibility to press a document to the window glass by hand during scanning and an access to the full surface of the window glass for its cleaning. The Reader design does not limit a document thickness.