



RTE8000 RFID ePassport Option



The requirement of the US Government that the 27 Visa Waiver countries start issuing biometric passports in 2005 will lead to a large increase in the circulation of ePassports. To cope with this Rochford Thompson has produced an RFID option for its RTE8000 full page passport scanner which creates a fully integrated OCR and contactless chip reader. In a single action the operator can place the ePassport on the scanner's glass window, the OCR codelines will be read, the data page imaged and the chip data retrieved, regardless of where the chip has been placed in the book. This simple process fully complies with the ICAO standards for "Basic

Access Control" (as mandated by the European Union's Digital Passport Project) thereby preventing skimming and eavesdropping.

The ePassport contains a contactless RFID chip and an aerial embedded in one of its pages. This chip contains an operating system, application program and a set of files conforming to the ICAO Logical Data Structure. The application provides security access and encryption whilst the data files contain a copy of the optical Machine Readable Zone data, document signer certificate, security hash codes along with the biometrics which must be at least a photo (in jpeg or jpeg2000) and optionally fingerprints or iris scans.

The RTE8000 RFID option uses an aerial mounted under the glass reading surface of the scanner to power and communicate with the contactless chip in the ePassport. The aerial along with the associated electronics are entirely mounted within the scanner's case and uses the scanner's single USB connection.



RTE8000 RFID ePassport Option

At the immigration booth the RTE8000 can speedily capture the images and data from both the optical data page and the chip. Taking less than 3 seconds for this process the RTE8000 significantly speeds up the immigration process. The OCR data page can be checked using differing light sources and the data validated whilst in parallel the chip data can have its hash codes and digital signatures checked. This data can then be sent to a host for cross checking against watch lists and issuance databases. The visible facial picture and OCR data can be compared with the versions on the chip. Finally there is the potential for automatically matching the person presenting himself with the facial image and fingerprints stored on the chip.

An ePassport book may contain, in addition to the passport chip, visas with contactless chips (eVisas). The RTE8000 has been designed to perform the anti-collision needed to read and select multiple chips in a book. This allows an officer to compare data from an eVisa as well as the optical and chip versions of the ePassport.

The RTE8000 RFID option is designed to ISO 14443, supporting type A and B contactless smart cards and is compliant with the ICAO LDS and PKI Technical Reports including Annexes I and K.

Adding the RFID option to the RTE8000 will significantly increase the efficiency of any immigration, customs or check-in process whilst performing enhanced ID verification and document validity checks.



Technical Specifications:

- ▶ 13.56MHz RF ISO 14443-2 Type A and B compliant.
- ▶ ISO 14443/3-4 protocol part A and B.
- ▶ Reads DG1, DG2, EF.COM and EF.SOD in under 2 seconds.
- ▶ Supports 106, 212, 424 and 848 kBits/s over-air data rates.
- ▶ Read distance up to 2 cm.
- ▶ Meets ICAO's Technical Reports for PKI v1.1 and LDS v1.7.
- ▶ Supports Passive Authentication, Active Authentication, Basic Access Control.
- ▶ Various hashing and digital signature algorithms to ICAO standards.
- ▶ Totally integrated inside the RTE8000 and requires virtually no additional power.
- ▶ Utilises the RTE8000's USB port for all communications. No additional ports required.
- ▶ The RTE8000 command and control protocol presents chip data directly to your application, you don't have to learn how to talk contactless card.
- ▶ Supported by the RTE8000 Software Development Kit.
- ▶ Standards UL, CE, EN60950, RF to EN 300 330.
- ▶ Optional Extended Access Control (contact factory).
- ▶ Optional support for MIFARE and other non-ICAO tags and cards for access control, ticketing, etc. (contact factory).