RFID_PAPER

Secure paper for active document management

Introduction

Paper is, and is becoming ever more, a medium that is easy to reproduce and duplicate in the forms and colours in which it is printed.

RFID technology, inserted within a standard sheet of paper (80100, 120g/m2), ensures every important sheet of paper is unique and non-duplicable, for use in sectors that require a high level of operational security.

Banking documents, guarantees, contracts, policy documents, notarial acts and public practices can, from now on, enjoy full security.

RFID_PAPER

The standard A4 sheet of paper with integrated RFID tag appears entirely identical to a normal A4 sheet. The RFID tag is visible only transparently.

The RFID tag insertion system allows uniform printing over the entire surface using the most common laser and inkjet printers.
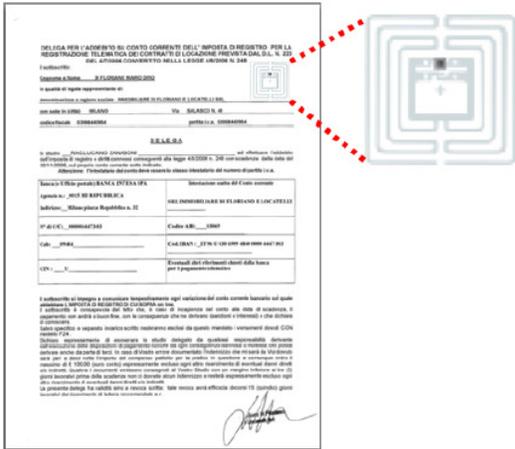
RFID tags integrated into paper are available as standard UHF EPC-GEN2 in short-range (21x21 mm) or medium-range format (93x23 mm).

RFID passive UHF EPC GEN2 technology, developed and applied worldwide by all the main goods distributors, ensures the best service currently available on the market (reading distance, quantity of tags that can be read at one time, resolution between

pairs of tags), combined with minimum costs as regards the individual RFID tag.

Readers for RFID_PAPER

RFID_PAPER can be read using any RFID UHF EPC GEN2 compatible reader. Eximia suggests readers in credit card machine format with a USB connection for readings from personal computers (supported by Linux, MacOSX and Windows operating systems).

These credit card machine-style devices guarantee a reading from just a few cm (around 2-5 depending on the type of tag) with 25 milliwatts of power, and up to 50-60 cm with 0.5 watts of EIRP.

Pos RFId UHF

Kyema suggests modified laser printers with an integrated micro module RFID UHF reader, fitted with an antenna, to read and write in the tag's memory at the same time as printing the document.

The software kit enables you to synchronise the printing of a single sheet with the reading/writing operations of the tag's memory.

Micromodulo RFID Uhf integrato nella stampante

In order to manage the automation of the office to best effect, as well as the RFID UHF device Kyema suggests using the document reader tray. The tray comprises a micro module RFID UHF reader and an

antenna in the base. Available with a USB 2.0 connection, the tray is able to read up to around fifty documents at the same time.
The software kit enables you to manage the individual readings and insert and remove pages.

Vaschetta Leggi-Documenti

The documents can be searched for within archives using laptop computers fitted with antennas and RFID UHF micro modules. The range of the reading varies from a few cm up to around 2 metres, depending on the power used.

HandHeld RFId UHF

Security

Through RFID technology, the level of security and of the quality of electronic identification of each individual sheet is raised considerably.
Each tag is marked with a unique identification code.
Furthermore, in the memory space it is possible to write the digital signature of the printed document.
The digital signature not only guarantees the document cannot be modified, but it also identifies unequivocally the originator (signatory) of the document and the certification authority
Combined signature models and algorithms (tag identifier, document text) for individual items and authorised copies of documents, ensure secure identification of any hard-copy document flow.

Workflow management

Kyema offers integrated solutions for document workflow management (DWFM) for the administration of flows of mixed digital and paper documents.
The presence of an RFID tag within the single sheet of paper allows it to be matched unmistakeably with the document record stored within the document workflow management products.
Software connectors used with the main DWFM products such as Documentum and Filenet, and digital signature products like VeriSign and CA X.509

generally ensure the RFID_PAPER product is extremely flexible and easily integrated into pre-existing solutions.
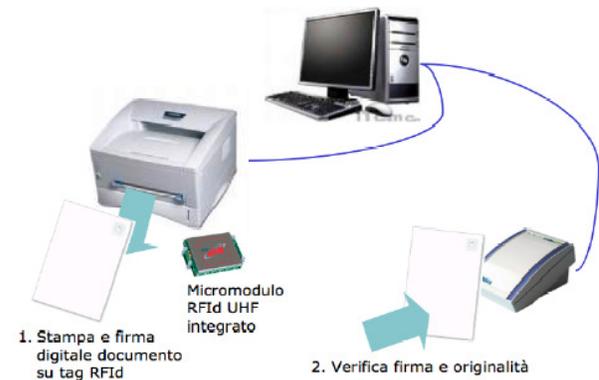
Standards

The RFID UHF standards are set at a global level by the ISO Standard Organisation. EPC GEN2 is based on standard ISO 18000C and can be used throughout the world. Usable power levels are regulated differently by each country. The power levels necessary for document management are available throughout the world.

Kyema: the Swiss RFID solution

Kyema is a solution provider specialising in Radio Frequency Identification technology (RFID).
Kyema is the main player in Switzerland and one of the few at a European level which, in combination with its partners, has supplied turnkey RFID solutions that are both transactional and use contactless card infrastructure.

Kyema's experience is unique throughout a wide variety of applications and sectors. Kyema is able to respond to clients' specific needs, supplying:

- *Advice on system architecture and integration with company systems and processes.*
- *Specific definition, selection and installation of hardware, software and middleware components.*
- *A specially realised design for the client where solutions are not already available.*

Kyema's partners

RFID solutions are the result of integrating various components which should produce the best possible result in relation to the sector and the type of application.
Kyema has developed a series of partnerships with the industry's leading companies, with which it collaborates to supply "best of breed" solutions.

Cisco, SIRIT, Oracle, Philips, ST Microelectronics, CAEN, Multispectral, Cardpos, Alien Technologies, Acient, LabId and Softwork

are just some of our more notable partners.