

Collis SmartWave Box

 **Collis SmartWave Box**

Award winning
hardware for
implementing
contactless
technology in your
systems*

Contactless Challenge

Contactless technology is rapidly coming into use globally. Card Issuing Authorities are issuing millions of contactless credit and debit cards to consumers. E-Passports, with contactless electronic chips, are being issued world wide and Travel Cards are rapidly coming into the market issued by public transport companies.

There are several challenges for smooth contactless implementation. Interoperability is crucial for global usage. Contactless cards, passports and systems must conform to ISO 14443, NFC and application specific requirements.

Whilst very exciting, this is a relatively new and complex technology. There are many factors and parameters to consider to ensure smooth implementation.

Smart Solution

Testing is crucial to ensure contactless smart cards, e-Identification documents (such as e-passports, e-citizen cards) and terminals/readers work correctly. To ensure functionality and interoperability, testing tools are extremely useful. Thorough, in depth testing is the key to successful contactless migration.

The Collis SmartWave Box, a cutting-edge hardware device, is the perfect solution for testing contactless cards. It reads & simulates contactless smart cards and e-Identification documents.

The Collis SmartWave Box also analyzes the communication between a contactless card and terminal. With its various modes of operation, the Collis SmartWave Box is the most versatile tool available today for contactless testing.

Collis SmartWave Box - Key Benefits

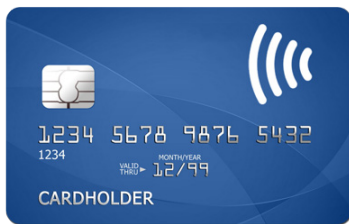
- ◆ Ensure interoperability
- ◆ Perfect for contactless card simulation (MasterCard® PayPass™ and Visa payWave)
- ◆ Ideal for ePassport/eMRTD testing and simulation
- ◆ Perfect for contactless terminal testing
- ◆ Shorten time-to-market
- ◆ Reduce costs by error-detection during development

*One of 'The most innovative and advanced Payments Software/Hardware Product' at the EPCA/ECR 2008 Awards

Features and Specifications



Probe to be used in combination with the SmartWave Box



EMV Card



ePassport

Features

The Collis SmartWave Box consists of a:

- ◆ Contactless reader (antenna) in the box
- ◆ Contactless card probe connected to the box
- ◆ Contactless probe in ID 1 card size
- ◆ LED's indicating status and communication
- ◆ Connectors for an oscilloscope

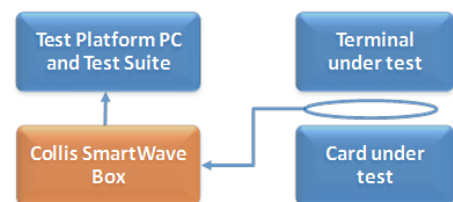
The Collis SmartWave Box is the testing tool to:

- ◆ Test a CL Card (ISO 14443 - 3/4/application)
- ◆ Test a CL Terminal (ISO 14443 - 3/4/application)
- ◆ Test the NFC Tags and NFC Device (ISO 23917)
- ◆ Analyse & spy on card-terminal communication

Modes of Operation

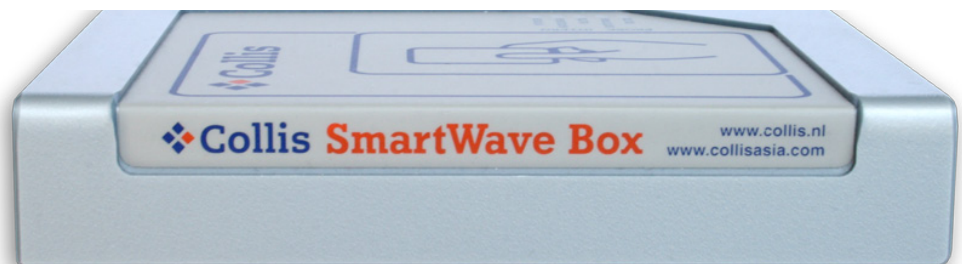
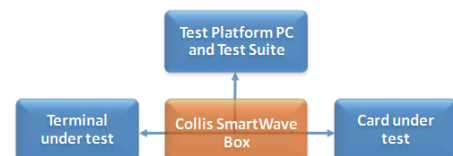
Spying Mode (Passive)

During the Spying Mode, you can capture data between a terminal and a contactless card with a special antenna in the contactless probe to minimise Radio Frequency (RF) power load. There is no disturbance to the existing communication between the terminal and the contactless card. All the frames are shown with a timestamp.



Analyze Mode (Active)

The Analyze Mode can be used to view transfers between a contactless terminal and a contactless card in detail. Use Collis Test Manager to view these transfers. In the Active Mode, each transferred frame has a timestamp. The Analyze Mode does not modify the terminal / card session from the application data perspective.



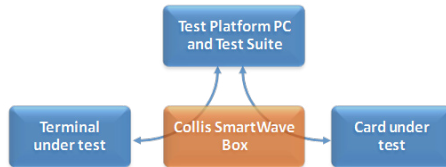
Front of Collis SmartWave Box



Terminal

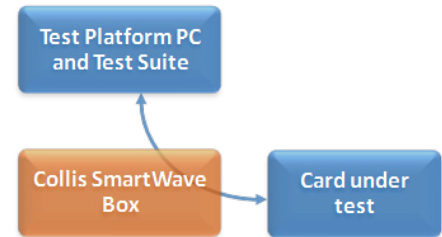
Intercept Mode

In the Intercept Mode, the frames between a contactless terminal and a contactless card are routed via the host PC, allowing the modification of data. All frames in this mode have individual timestamps. Due to timing restrictions, the layer 3 anti-collision part is followed in the Analyze mode and cannot be modified.



Contactless Card Reader Mode

The Collis SmartWave Box is used as a reader to check contactless cards under test. You can use Collis Test Manager to perform any layer 3, layer 4 tests and application tests with a contactless card. All frames have individual timestamps.

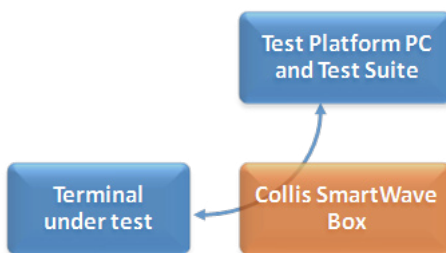


ENGINE

The Collis Test Manager is particularly suited for testing contactless set-ups in combination with the Collis SmartWave Box. Collis Test Manager is today's high-end development tool for protocol simulation and interface testing. Collis Test Manager is available as a separate product.

Contactless Card Simulator

The Contactless Card Simulator sees the probe being used as a configurable contactless card to exercise a terminal under test. Using Collis Test Manager, layer 3 and layer 4 behavior of a contactless card can be fully simulated. The transferred frames are shown with timestamps.



Customers

Terminal Vendors can use the Collis SmartWave Box to test specific parts of the Terminal/Contactless Reader. It is perfect for Card/e-ID emulation testing. It is a vital component of the new Visa payWave Test Tool that has been developed by in collaboration with Visa Europe.

Contactless Card/eMRTD Issuers. The well defined communication between the probe and the terminal in the Collis SmartWave Box allows Issuing Authorities to view card/eMRTD behaviour.

Radio Frequency

Frequency	13.56 MHz
Speeds	~106, ~212, ~424, and ~847 kbps

Supported Standards

Supported cards	<ul style="list-style-type: none"> ◆ ISO 14443 Type A ◆ ISO 14443 Type B ◆ ISO 18092 NFCIP-1
Possible supported cards with proprietary access and security protocol	<ul style="list-style-type: none"> ◆ MIFARE (Philips) = Type A ◆ FeliCa (Sony) = NFCIP-1 212 kbps
Ideal for testing and simulation of	<ul style="list-style-type: none"> ◆ ICAO e-Passport ◆ MasterCard® PayPass™ ◆ Visa payWave ◆ JCB J/Speedy

Contact Us

Product Range

- ◆ **Collis SmartWave Box**
Ref Code: SWB-P1

Additional Products

- ◆ **Collis Test Manager**
Ref Code: CTM-P1
- ◆ **Collis Card Spy**
Ref Code: C-Spy-P1
- ◆ **Collis Card Simulator**
Ref Code: C-Sim-P1
- ◆ **Collis Brand Test Tool**
Ref Code: C-BTT-P1
- ◆ **Collis Visa payWave Test Tool**
Ref Code: C-VpTT-P1
- ◆ **Collis Inspection System Test Tool**
Ref Code: C-ISTT-P1

Additional Services

- ◆ **Brand Testing Services**
- ◆ **EMV Training**
- ◆ **Mobile (Contactless) Payment Training**

Contact

The Collis and Aspects portfolio of test tools are developed by UL Transaction Security.

For sales enquiries, please contact us at info@ul-ts.com, visit www.ul-ts.com, or contact a UL Licensed Reseller.