



Collis Card Spy

*A must-have for every
Card Vendor, Issuer
(contact and contactless),
Acquirer, Processor or
Terminal Vendor*

*Award winner:
ACT Canada
Lorne Boates Award*

Behind the Scenes

What happens when the communication between your smart card and terminal does not go exactly to plan? When you need to investigate interoperability problems between a smart card and terminal?

Or what happens when you simply need to tap into the information that is passing from one source to the other and ensure that everything is running smoothly?

That is where the Collis Card Spy comes in. It is a crucial device for monitoring the communication and measuring the performance between a smart card (contact and contactless) and a terminal (ATM / PoS).

Collis Card Spy can also be used with e-Passports, e-Purses, healthcare cards, e-ID, e-ticketing cards and their prospective readers.

What's Going on?

Just like every relationship, the card/terminal relationship can also go through periods where one or the other party is not acting as they should.

Alternatively, the relationship may appear to be running smoothly from the outside, but a *spy* is required as an extra precaution.

This *spy* can tap into the internal communications and confirm that everything is (or is not) okay.

The Collis Card Spy is able to act as this 'go-between' enabling you to *listen in* and observe the interaction between a smart card and terminal.

Collis Card Spy - Key Benefits

- ◆ Understand the communication between a card (contact and contactless) and terminal
- ◆ Transaction performance measurement
- ◆ Easy-to-use
- ◆ Learn and pinpoint problems with interoperability
- ◆ Save time through fast analysis
- ◆ Backed by Collis' expertise and experience

Spying on Contact Cards

Functions



Collis SmartLink Box: A truly accomplished device

The Collis Card Spy provides an automatic interpretation of smart card commands and responses.

The tool shows the application protocol bytes that are being exchanged between a contact card and terminal, including ISO 7816 for T=0 and T=1 protocol, clock-changes and supply voltage events.

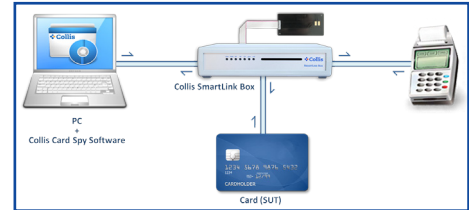
The result is given in a clear, logical, understandable manner on the screen. This gives a good, clear view of the facts. Furthermore, the time stamp feature allows for accurate time measurements on the byte level.

The current spy tool contains the following modules:

- ♦ **e-ID** analyses ISO 7816-3 and ISO 7816-4 (e.g. driving license, healthcare card, etc.)
- ♦ **Payment** analyses ISO 7816-3, ISO 7816-4 and EMV (e.g. e-purse, MasterCard, Visa, American Express, etc.)
- ♦ **Transit** analyses ISO 7816-3 (e.g. SAM, e-Ticketing card, etc.)

Contact Cards

How does the Collis Card Spy tool act as a spy with contact cards?



Collis Card Spy - Contact configuration

This is achieved by inserting the card into the Collis SmartLink Box which in turn is connected to both a smart card probe (or paddle) and a PC. The smart card probe enables the SmartLink Box to monitor the data and all signals (VCC, clock signal, RST and I/O) that are exchanged between the smart card and the terminal. The data is then displayed in a user-friendly way.

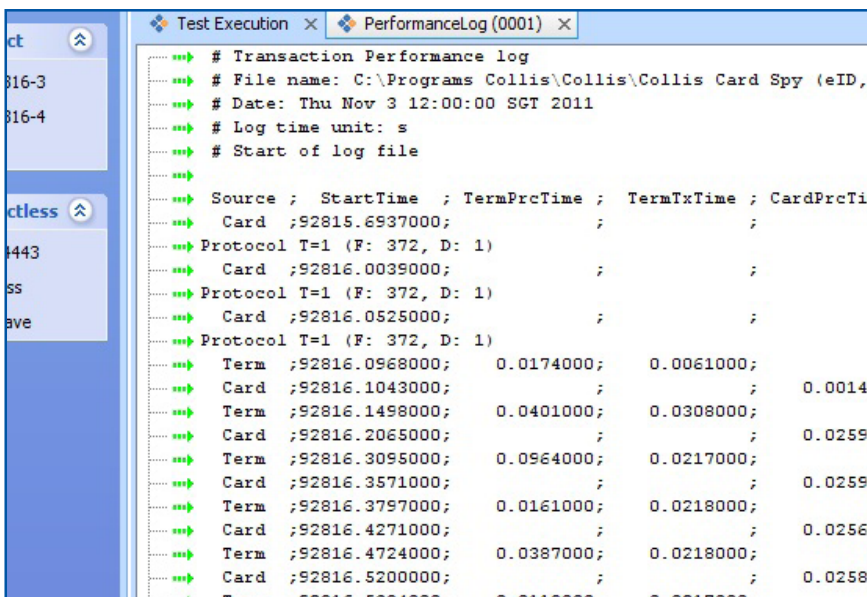
Collis SmartLink Box

The Collis SmartLink Box is vital component of the Collis Card Spy (contact cards applications). In this specific tool it is used for spying the communication between the card and terminal.

Measuring Performance

Collis Card Spy is able to accurately put timestamps on any message passing through the box. This means that accurate reports are available on how much time it takes for a card to convey information to a terminal and vice versa. Thus, it is possible to precisely and easily measure the performance of a smart card or of a terminal/reader.

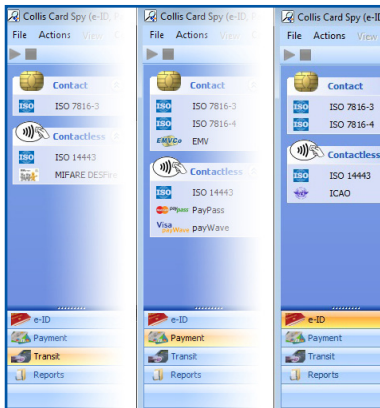
Collis Card Spy can be a useful tool for card and/or terminal benchmarking. It is ideal for measuring, tuning and optimising the performance of transaction systems.



Ultimate Performance Measurement

Spying on Contactless Cards

Contactless Cards

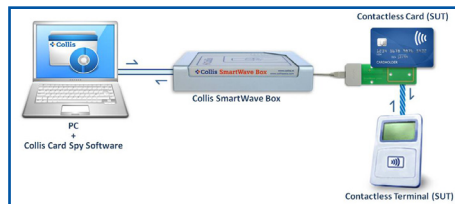


Collis Card Spy main modules: e-ID, Payment, and Transit

The Collis Card Spy can also be used to spy the communication between a contactless card and terminal.

In the **active spy** mode, the contactless card is placed on the Collis SmartWave Box. A probe simulating the contactless card is placed on or near the contactless terminal. This is used to view detailed transfers between a contactless terminal and card. All frames are shown with a timestamp.

In the case of **passive spy** mode, the contactless card is to tap together with the SmartWave probe on the contactless reader/terminal. This is used to spy the communication between the two.



Spying a contactless card-terminal communication - Passive Mode

Functions

This is also similar to that for contact cards, providing automatic interpretation of contactless card commands and responses.

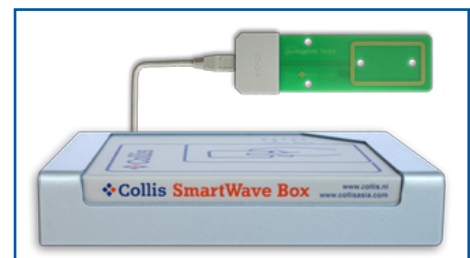
The Collis Card Spy shows the data that are being exchanged including ISO 14443 for either type A or type B card protocol, clock changes and supply voltage events. The tool also gives data interpretation in the three different modules:

- ◆ **e-ID** analyses ISO 14443 and ICAO which governs the e-Passport applications.
- ◆ **Payment** analyses ISO 14443, MasterCard® PayPass™ and Visa payWave.
- ◆ **Transit** analyses ISO 14443 and MIFARE DESFire.

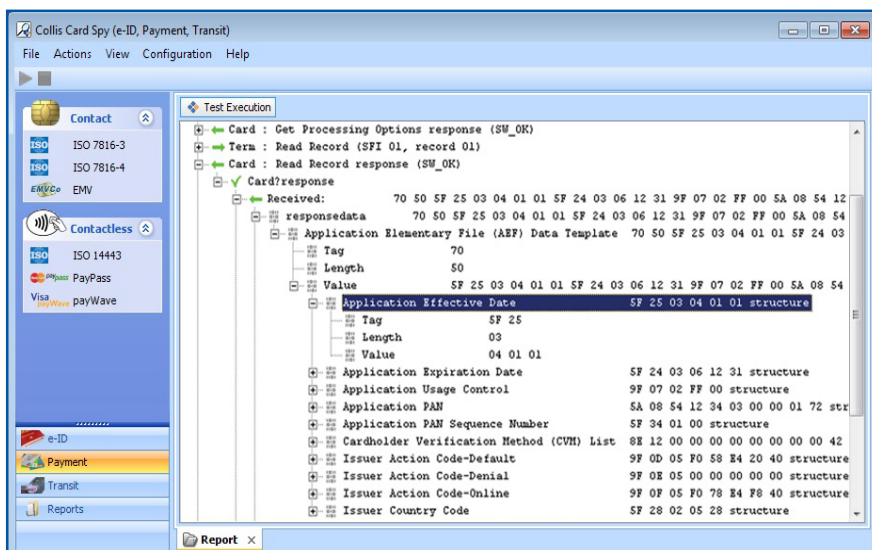
Collis SmartWave Box

The award winning* Collis SmartWave Box has been developed to meet the demands of those who are planning to implement contactless technology in their payment operations.

The Box is an in-depth and unique testing tool that helps you to analyse contactless communication.



*Award for one of 'The most innovative and advanced Payments Software/Hardware Product' at the EPCA/ECR 2008 Awards.



Understand the communication between your terminal and chip card with the Collis Card Spy

Product Range

- ◆ **Collis Card Spy**
Ref Code: C-Spy-P1
- ◆ **Collis SmartLink Box**
Ref Code: SLB-P1
- ◆ **Collis SmartWave Box**
Ref Code: SWB-P1

Additional Products

- ◆ **Collis Brand Test Tool**
Ref Code: GBTT-P1
- ◆ **Collis EMV Personalisation Validation Tool**
Ref Code: C-PVT-P1
- ◆ **Collis Card Image Editor**
Ref Code: CCIE-P1
- ◆ **Collis Card Simulator**
Ref Code: CCS-P1
- ◆ **Collis Host Test Tool**
Ref Code: CHTT-P1

Additional Services

- ◆ **Brand Testing Services**
- ◆ **EMV Training**
- ◆ **Contactless and Mobile 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.