

COMPRION



Solve Interoperability Problems in NFC Use Cases

Whether mobile payments at the POS or access control in public transport or buildings: Wherever NFC technology is used, errors can happen. Readers and devices may not function properly when interacting. In order to solve these communication problems in the field, COMPRION has developed TraceCase, a mobile trace tool that comes with a powerful software. It supports debugging in the best possible way.

Automated Testing

TraceCase Toolbox provides a command-line and web interface for remote operation. This helps to integrate TraceCase in existing test environments.

Field Tracing

The easy setup and handling allow you to start tracing instantly. TraceCase records contactless communication discreetly and reliably at the NFC terminal during daily business – without unsettling vendors or customers. Once collected, the transaction data can be transferred to the technical lab via email or cloud. With TraceCase Viewer, the recorded data can be analyzed in-house or by a third party. Since not only digital but also analog signals are displayed and analyzed, by our sniffing tool, errors on all layers can be recognized.

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Key Features

- As small as a deck of cards:
 - Discreet tracing in the field
 - Captures real transaction problems without disrupting daily business
- Controlled by smartphone app:
 - Easily operated even by untrained staff
- Free-of-charge software updates
- Visualization and analysis software for analog and digital signals:
 - Identification of technical issues
 - Analysis of recorded NFC sessions on application level
- TraceCase Toolbox & API:
 - Integration in your existing test automation

Who Is It For?

- Developers, consultants & test engineers of:
 - Mobile device, chipset & card manufacturers
 - POS terminal manufacturers
 - Test houses
- Providers of test services and solutions:
 - Mobile payment
 - Access control
 - Public transport
 - Automotive
 - Internet of Things (IoT)

Features

TRACECASE APP

Comprehensive control is provided by the TraceCase app running on your smartphone.

- EMVCo translator
 - Trace quality analyzer
 - Export NFC logs
 - Integrated PDF reporting
 - Available for Android & iOS
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- Timing information:
 - Start, stop, duration & delay time
 - Add meta data:
 - Pictures, date, GPS & comment
 - NFC data on-the-fly:
 - Live monitoring of NFC traffic
 - Firmware and FPGA image:
 - Remotely updatable



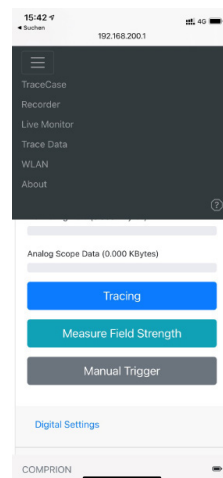
- Comprehensive analog triggers
- Carrier field strength & frequency measurement
- View protocols on APDU and frame level
- Sort & filter sessions by trace quality analyzer

Features

TRACECASE TOOLBOX

TraceCase Toolbox is an optionally available command-line remote control interface, offering an integration in your existing test automation.

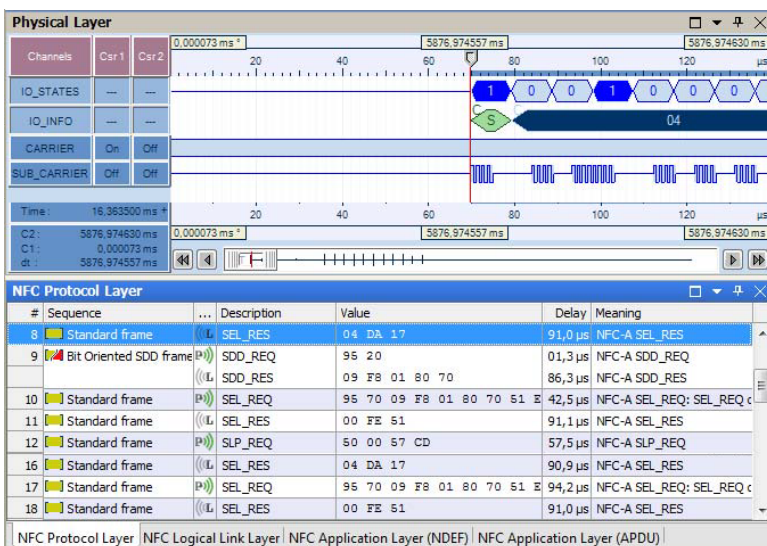
- Remote control functions
 - Start, stop & download trace file
 - RESTful web API with on-the-fly NFC frame data
- Data conversion
 - XML, PDF & CSV export
- Web interface
 - Remote access via any browser



TRACECASE VIEWER

Digital

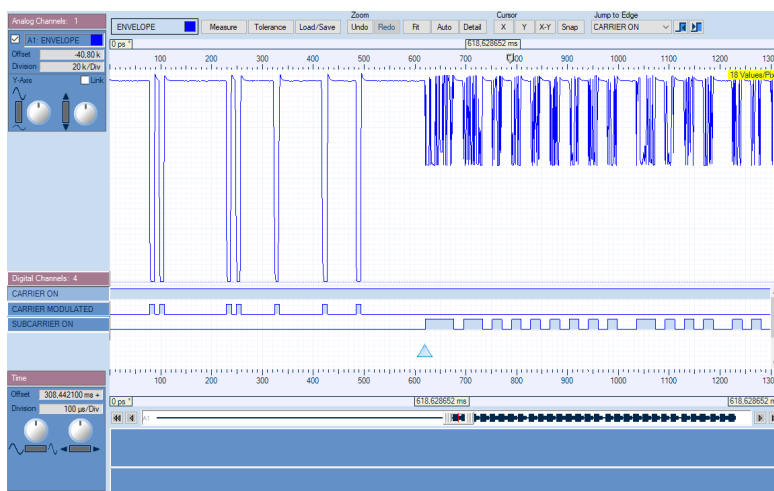
- Synchronized views
 - Physical layer
 - Frame layer
 - APDU layer
 - NDEF application layer
 - Summary
- Evaluation of time dependencies
- Search functions & powerful filters
- Translators
 - ISO 7816
 - MIFARE
 - FeliCa
 - EMVCo
 - Car Connectivity Consortium™
- User defined C# analyzers



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Analog

- Visualization of the envelope signal
- Quick measurements
 - Modulation index
 - Waveform characteristics
 - Frequency spectrum
 - Fall/rise times
 - Peak-to-peak
 - Top/bottom
 - Duty cycles
 - Overshoot, undershoot
 - Low level, mid level, high level



Specification



FEATURES

Supported NFC Protocols

- ISO/IEC 14443 A/B
- ISO/IEC 18092
- NFC Forum A/B/F/V

Supported Tag Types

- NFC Forum Type 1, 2, 3, 4 A/B, 5 Tags

Interfaces

- MCX antenna connector
- Micro-USB (for recharge)
- Wi-Fi
 - IEEE802.11 b/g/n; 2.4 GHz
 - Access point mode for smartphone
 - Client mode for existing networks
- Multifunctional button

Sampling Times

- ADC sample rate: 54.24 MHz
- ADC time base accuracy:
 - Frequency tolerance: ± 1.00 ppm
 - Frequency stability: ± 0.50 ppm
 - Aging: ± 1 ppm max over 1 yr @ 25°C

Analog Scope Recording

- Up to 8192 k samples
- Sample rate: 13.56 MHz (1/fc) to 424 kHz (32/fc)
- Recording length: 0.6–20s (depending on sample rate)

Digital Recording

- 32 MByte Total Digital Memory
- 2 Mbit NFC communication data (16 Byte compressed format with timestamp)

OPERATING SYSTEM

- TraceCase App
 - Android 7.0 or higher
 - iOS 12, iOS 14 & iOS 15
- TraceCase Viewer
 - Windows 10 & 11

TECHNICAL DATA

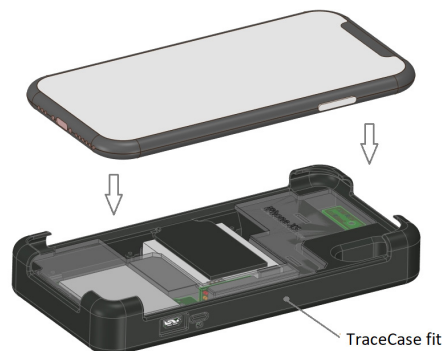
- Dimensions: 94 x 58 x 14 mm
- Weight: 75 g
- Power
 - Rechargeable battery: 3.7 V, 1,100 mAh
 - Up to 6 hours of battery life

SCOPE OF DELIVERY

- TraceCase
- Li-Ion battery
- Micro-USB cable
- Antenna M-Type 04/05
- TraceCase Viewer & App

TRACECASE FIT

- TraceCase is also available as TraceCase Fit hidden in a smartphone case for:
 - iPhone 14 Pro & Pro Max
 - iPhone 13 Pro & Pro Max
 - iPhone 12 Pro Max
 - iPhone 11
 - iPhone X/Xs
 - iPhone 8/8+



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