

IT³ Prove!

Pre-Conformance Platform for Terminal Testing



IT³ Prove! is a digital smart card simulator designed to assist you in developing the card interface of terminals. With its ability to perform the same digital test cases used by UT³ Platform for device certification at GCF and PTCRB, IT³ Prove! is your tool for pre-conformance testing. Additionally, it is a cost-effective solution for regression testing of mobile phones.

IT³ Prove! also monitors and analyzes the data exchanged over the UICC interface and is even able to present and evaluate the electrical signals by the integrated digital storage oscilloscope. COMPRION SIMfony synchronizes IT³ Prove! with network simulators and is used as a very popular pre-conformance test platform for combined handset testing in 2G, 3G, and LTE environments.

01
04

Main Capabilities

- Pre-conformance terminal testing (digital) as specified by GCF and PTCRB
- Interoperability terminal testing as specified by ETSI, 3GPP, and 3GPP2
- Digital simulation of smart cards in accordance with ISO/IEC 7816 1-4
- Stand-alone operation and synchronization with network simulators (COMPRION SIMfony)
- Simulation modules for (U)SIM, (U)SAT, CCAT, ISIM, and CDMA2000
- Monitoring and analysis of communication between terminal and chip card
- Displaying communication on electrical, protocol, transport, and application layer
- Easy configuration of protocols and analyzers
- Easy test plan administration and execution

Use Cases

- Performing digital GCF and PTCRB conformance tests (pre-conformance level)
- Regression testing of mobile phones
- Terminal verification according to ETSI, 3GPP, and 3GPP2 standards
- Compliance testing according mobile network operator standards
- Terminal verification using customized tests
- Interoperability testing of terminals and smart cards
- Verifying the correct implementation of SIM Toolkit application commands

Specification

CAPABILITIES

Monitoring between Terminal and Smart Card

- According ISO/IEC 7816 1-4
- Translator modules for multiple applications
- Synchronized visualization of protocol-specific information displayed in
 - Physical layer view
 - Protocol layer view
 - Application layer view
 - Summary view
 - Info view

Terminal Testing / Smart Card Simulation

- According to ISO/IEC 7816 1-4
- Adjustable logical protocol and application parameters
- Simulation modules for multiple applications
- Error parametrization and simulation

TEST SUITES

Test Benches GSM (digital)

- GSM 3GPP TS 51.010-1
- SAT 3GPP TS 51.010-4
- IT³ Test Cases MNC

Test Benches W-CDMA (digital)

- USIM 3GPP TS 31.121
- UICC ETSI TS 102 230
- USAT 3GPP TS 31.124
- IT³ Test Cases IOT for 3G terminals

Test Benches LTE (digital)

- USIM 3GPP 31.121
- USAT 3GPP 31.124
- VZW LTE Testplan for USIM/USAT/ISIM

Test Benches CDMA2000 (digital)

- R-UIM 3GPP2 C.S0048-0
- CCAT stand-alone
- Open Market Handset (OMH) test plan
- VZW Testplan for CSIM/CCAT

Test Benches SmartCard Web Server

- ETSI TS 102 384

02
04

OPTIONS

COMPRION SIMfony

- Comprehensive test system for combined handset testing with air interface functionality (extra network simulator required)

COMPRION Terminal Automation

- Service to enable fully automated terminal testing

COMPRION OTAbility

- OTA end-to-end test solution for complex remote application and file management systems with simulated network and OTA backend server

IT³ SIMLink

- Tracing of communication between terminal and UICC (inserted in PC/SC reader)
- Reconfiguration of UICCs with extra software possible

IT³ Prove! Analog Scope

- Integrated 50 MHz digital storage oscilloscope for detailed electrical measurements and analysis
- Max. number of channels: 6 digital, 3 analog
- Analog voltage measurements (res. ~2.5 mV) contacts: VCC, RST, CLK, I/O
- Adjustable recording depth: 4 k - 128 k samples
- Combination of two trigger conditions supported

IT³ Live!

- Simulation of test cases in live network (live USIM inserted in PC/SC reader)

COMPRION MoVie

- Stand-alone viewing software for log files traced with COMPRION test tools (free of charge)

Specification

GENERAL FEATURES

- Supported smart card voltage:
1.2 V / 1.8 V / 3 V / 5 V
- Supported ISO/IEC 7816 protocols: T=0 and T=1
- Supported technologies: GSM, CDMA2000, W-CDMA, TD-SCDMA
- Input contacts (CLK, RST, I/O)
Voltage range: 0 ... 6 V, resolution ca. 6 mV
Impedance: min. 5 M Ω , max. 30 pF
- Open C++/C# API for analyzer and manipulator development
- Timing analysis of transmitted signals:
Resolution: 20 ns
Speed: max. 8 clock cycles/etu at 10 MHz
Measurement units: etu, seconds
- IT³ Prove! Remote Control: API that enables operating IT³ Prove! and COMPRION SIMfony from remote location
- Firmware can be updated via USB interface

SCOPE OF DELIVERY

- IT³ Prove!
- Flex adaptor types A-D (terminal connectors)
- Plug-in SIM adaptor (PISA)
- USB cable
- Power supply (12 V / 1 A DC) incl. Adaptor Plug Set

HOST REQUIREMENTS

- Processor operating frequency: min. 1 GHz
- RAM: min. 1 GB
- Hard disc: min. 300 MB
- USB Interface (with IT³ Live! 2 USB ports required)
- Supported OS: Windows 7 (32/64 bit), Windows 8.1, Windows 10

DIMENSIONS

- W x D x H: 185 x 125 x 40 mm
- Weight: 0.9 kg



COMPRION GmbH
Lise-Meitner-Str. 3
33104 Paderborn
Germany

Phone: +49 5251 6859 0
E-mail: info@comprion.com

www.comprion.com

© COMPRION GmbH | April 2017