

Prove 2

Terminal Testing on All UICC Interfaces



Prove 2 is a digital smart card simulator designed to assist you in developing terminals, contactless frontends (CLFs) and chip stacks. It covers all interfaces of the UICC: ISO/IEC 7816, SWP/HCI, and IC-USB. With its ability to perform the same digital test cases used by UT³ Platform for device certification at GCF and PTCRB, Prove 2 is your tool for pre-conformance testing. Additionally, it is a cost-effective solution for regression testing of mobile phones. Together with COMPRION's CLT One, a synchro-

nized simulation of contact-based and contactless communication allows comprehensive CLF testing of NFC-enabled phones and devices. The complete communication between terminal and smart card can be conveniently monitored and easily analyzed by help of translators. In addition, the integrated digital storage oscilloscope allows signal analysis even on the electrical level. COMPRION's user friendly Device Test Center software provides access to all functionalities of Prove 2.

01
04

Main Capabilities

- GCF/PTCRB pre-conformance platform
- Combined synchronized testing of contact-based and contactless interfaces (with CLT One)
- Automated handset testing in combination with network simulators (COMPRION SIMfony)
- Powerful card simulation
- Integrated oscilloscope
- Communication tracing on all UICC contacts (ISO/IEC 7816, SWP/HCI, IC-USB)
- Powerful analyzers for timing measurements and error identification

Use Cases

- GCF/PTCRB pre-conformance testing
 - CAT/SWP/HCI
 - USIM/USAT
- GSMA TS.27 NFC Handset Test Book
 - BIP
 - General Device Support
 - Remote Management
- Development/debugging of
 - Mobile phones
 - Chipsets
 - M2M devices
- Combined NFC/SWP/HCI testing
- Quality assurance

Specification

CAPABILITIES

CLF and Terminal Testing/Smart Card Simulation

- According to ETSI TS 102 613 (SWP), ETSI TS 102 622 (HCI), 3GPP TS 31.102 (USIM), and ETSI TS 102 600 (IC-USB)
- Logical protocol parameters adjustable
- Error simulation
- S1/S2-signal at C6 contact:
 - Adjustable current value for S2
 - Measurement of voltage (S1) and current (S2)
- Advanced SWP test features
 - Extended bit duration
 - Support of selective reject s-frame (SREJ)
- Basic ISO/IEC 7816 T=0 simulation and basic SIM/USIM application simulation
- IC-USB: ICCD simulation

ISO/IEC 7816 Monitoring

- Structured view of the terminal profile
- Timing information for each entry
- Translation of Remote File Management commands
- Supported ISO/IEC 7816 protocols: T=0, T=1

SWP/HCI Monitoring

- Based on ETSI TS 102 613/ETSI TS 102 622
- Based on proprietary SWP standard Inside Contactless
- SHDLC (Simplified High Level Data Link Control)
- Contactless tunneling (CLT)

IC-USB Monitoring

- Based on ETSI TS 102 600
- Advanced EEM interpretation
- Mass storage: SCSI command interpretation
- Monitor of bytes/frames/bus-states

General Monitoring Features

- Display and analysis of communication
 - During test case execution
 - Between terminal and smart card*
 - On physical, protocol, transport and application layer

02
04

OPTIONS

Universal Translator

- Supporting GSM, W-CDMA, LTE and CDMA2000 (incl. SIM/SAT, USIM/USAT, CSIM/CCAT, ISIM)

NFC Synchronization Package

- COMPRION SyncBus enables the synchronization with NFC testing devices CLT Move or CLT One

External I/O

- Interface for external I/O signals

COMPRION MoVie

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

Analog Scope/Analog Scope Viewer

- Integrated digital storage oscilloscope
- Quick measurements
 - Fall/rise times
 - Peak-to-peak
 - Top/bottom
 - Duty cycles
- Max. number of channels: 16 digital, 2 analog
- Analog voltage measurements (res. ~1.8 mV) on contacts VCC, RST, CLK, I/O and SWP
- Analog current measurements on contacts VCC and SWP

TEST SUITES

SWP/HCI Test Benches

- Prove 2 ETSI TS 102 694-1 SWP
- Prove 2 ETSI TS 102 695-1 HCI
- Prove 2 ETSI TS 102 695-3 HCI
- Prove 2 ETSI TS 102 384 CAT SWP HCI

ISO/IEC 7816 Test Benches

- Prove 2 ETSI TS 102 230 UICC
- Prove 2 3GPP TS 31.121 USIM
- Prove 2 3GPP TS 31.124 USAT

IC-USB Test Benches

- Prove 2 ETSI TS 102 922-1 IC-USB

GSMA TS.27 NFC Handset Test Book

- Prove 2 GSMA TS.27 General Device Support
- Prove 2 GSMA TS.27 BIP
- Prove 2 GSMA TS.27 Remote Management

GlobalPlatform Test Bench

- Prove 2 GlobalPlatform SEAC Device Test

SIMalliance Test Bench

- Prove 2 SIMalliance OMAPI

GENERAL FEATURES

- Supported smart card voltage:
1.2 V / 1.8 V / 3 V / 5 V
- Supported IC-USB modes:
ICCD, ethernet emulation module, mass storage
- Supported technologies: GSM, W-CDMA, LTE,
CDMA2000 and TD-SCDMA
- COMPRION Monitoring Remote Control
- COMPRION Remote Simulation Server
- Time-synchronization interfaces
 - High-speed COMPRION SyncBus
 - Trigger out: Connection between
Analog Scope and external oscilloscope
(1 V signal level at 50 Ω)
- Firmware updated automatically
via USB interface

03
04

SCOPE OF DELIVERY

- Prove 2
- Device Test Center
- Flex adaptor types A-D (terminal connectors)
- Plug-in SIM adaptor (PISA)
- USB cable
- AC power plug (100–240 V / 50–60 Hz, ±10 %)
for DC power supply (12 V, 2 A)

HOST REQUIREMENTS*

- Processor operating frequency: min. 2 GHz
(2 x 1.5 GHz dual core or more recommended)
- RAM: min. 4 GB (8 GB recommended)
- Hard disc (available space): min. 10 GB
- USB interface: min. USB 2.0 highspeed
- Supported OS: Windows 7, 8.1 and 10

* Host is not part of the delivery

DIMENSIONS

- W x D x H: 180 x 180 x 48 mm
- Weight: 2.2 kg



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

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