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IT³ Prove - The terminal test tool for the ISO 7816 interface

Brand: COMPRION
Product Code: SMAC100113

Short Description

IT³ Prove! is your tool for pre-conformance testing as it is able to perform the same digital test cases used by UT³ Platform for device certification at GCF and PTCRB. Additionally, it is a cost-effective solution for regression testing of mobile phones.

Description
The terminal test tool for the ISO 7816 interface

- 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

Pre-conformance testing

IT³ Prove! is your **tool for pre-conformance testing** as it is able to perform the same digital test cases used by UT³ Platform for device certification at GCF and PTCRB.

Additionally, it is a cost-effective solution for regression testing of mobile phones.

- 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 to 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

IT³ Prove! synchronized with network simulators is used as a very popular pre-conformance test platform for combined handset testing in 2G, 3G, and LTE environments

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

Capabilities
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

Options - General Features - Scope of Delivery
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

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?, 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