

Handset/Terminal testing

No other company can match COMPRION's comprehensive and established range of products for the testing and analysis of mobile devices with implemented chip card technology, based on ISO/IEC 7816 1-4, SWP (ETSI TS 102 613) and USB (ETSI TS 102 600). With COMPRION, you can test (U)SIM interfaces across the entire product development chain from the very first technological spark of an idea for a new "mobile phone" product all the way through to rollout. As NFC applications such as e-ticketing or mobile banking become more and more established in the mobile world, COMPRION offers test equipment based on ISO/IEC 14443 contactless technology. This ensures that your newest NFC developments conform to the latest standards.

Card testing

COMPRION has used its expertise in handset testing at the chip card interface and has developed test equipment for testing chip cards based on ISO/IEC 7816 1-4, SWP (ETSI TS 102 613) and USB (ETSI TS 102 600). With our test and measurement equipment, we support all development phases: chip development, Smart Card protocol implementation and application implementation. We make a point of developing standard card testing equipment with outstanding electrical measurement capabilities. Moreover, newest technologies such as ISO/SWP/USB have already been integrated into our card testing devices. And of course, contactless technology (ISO/IEC 14443) has become an important part of our card test equipment.

Supporting the entire product development chain

Development testing

R&D is the first stage for any new product, and the solutions offered by COMPRION ensure that all critical elements are properly tested – from the very outset.

Pre-conformance testing and Quality assurance

This stage is not just important for handset manufacturers who want to discover bugs before sending the mobile to approval or who want to ensure that the mobile is well prepared for GCF, PTCRB or customer approval. It's also important for card manufacturers who want to run test cases against their cards as a question of quality assurance.

Conformance testing

This phase is of particular interest to handset vendors who want to ensure that type approval is obtained first time, every time.

Interoperability testing

Do components interact properly? Is the communication complete? How to improve component cooperation? That's what interoperability testing finds out.

	Development	Pre-conformance/ quality assurance	Conformance	Interoperability
Handset/ terminal testing	IT ³ Prove! IT ³ Move! Move 2 CLT Move*	IT ³ Prove! COMPRION SIMfony	IT ³ Platform COMPRION SIMfony	IT ³ Move! Move 2 CLT Move*
Card testing	ICC Spectro IT ³ Move! Move 2 CLT Move*	ICC Spectro	N/A	IT ³ Move! Move 2 CLT Move*

*Contactless technology

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COMPRION GmbH is the global leading manufacturer of comprehensive standard test equipment for chip card interfaces with more than 15 years experience in Smart Card technology. COMPRION develops, manufactures and markets test and measurement equipment for terminal and chipset manufacturers, test labs, network operators as well as Smart Card vendors and issuers.
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COMPRION

Test equipment for chip card technologies

COMPRION portfolio

COMPRION GmbH is the world leading brand name manufacturer of test equipment for chip card interfaces. With over 15 years experience in the testing of the card interface of mobile handsets, we have now enhanced our product portfolio with products for card and contactless testing.

Handset/terminal testing

Contact testing:
– IT³ Platform
– IT³ Prove!
– IT³ Move!
– COMPRION SIMfony
– Move 2

Contactless testing:
– CLT Move

Card testing

Contact testing:
– ICC Spectro
– IT³ Move!
– Move 2

Contactless testing:
– CLT Move

Always at the forefront of innovation, COMPRION is shaping the future of mobile device testing through its involvement in a number of standardization and regulation organizations. This gives us the opportunity to pass on our competence and knowledge and to create the future technologies which are then visible in our products. We provide our customers with powerful products that meet their needs throughout the entire development process up to final product launch. It's no wonder our customers connect the name COMPRION with the following attributes:

Quality products

Technological features are worthless if you can't use them. Our solutions combine high technology with ease of use, something valued highly by our customers. The accuracy and reliability of our products combined with our sophisticated electrical measurement capabilities are unique in the market. Moreover, COMPRION is a one stop shop for SIM/USIM interface test equipment based on ETSI/3GPP standards with GCF and PTCRB validated test cases. We know what the standards demand – and our test systems ensure that your products conform.

High degree of innovation

COMPRION has always led the Smart Card interface testing market. With our newest products capable of ISO/SWP/USB testing and synchronization/automation requirements, we have once again proven that you can count on us as a reliable and competent partner for your future product development.

Excellent service and maintenance

To ensure ongoing high performance, we offer continuous software and test case updates, securing your technology investment well into the future. Our maintenance effort is based on specification and technology advancement as well as customer feature requests.



COMPRION

IT³ Platform

The industry standard for conformance testing, IT³ Platform, offers Smart Card simulation and communication monitoring for testing the mobile terminal on the chip card interface. In contrast to the IT³ Prove!, IT³ Platform performs electrical measurements. Validated test case packages for all relevant mobile telecom standards such as GSM, 3G and CDMA2000 are available.



Technical details and features: <ul style="list-style-type: none"> Card simulation based on ISO/IEC 7816 1-4 Validated test platform for: GCF, PTCRB Supported Smart Card Applications: SIM, USIM, ISIM, R-UIM, SAT, USAT, CCAT + Multi application Technologies: GSM, 3G/UMTS/W-CDMA/TD-SCDMA, CDMA2000 	Use cases: <ul style="list-style-type: none"> Type approvals Handset qualification 	Interesting Add-ons: <ul style="list-style-type: none"> Validated test case packages 3GPP TS 51.010-1 3GPP TS 51.010-4 3GPP TS 31.121 3GPP TS 102 230 3GPP TS 31.124 3GPP2 C.50048-0 Combined tests with COMPRION SIMfony
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IT³ Prove!

As a logical card simulator for the testing of different mobile equipment and chip card interface technologies, IT³ Prove! delivers quality assurance during your entire product development process with continuous testing and error simulation. Continually updated software and test case packages ensure that you are always up-to-date with the latest requirements.



Technical details and features: <ul style="list-style-type: none"> Card simulation based on ISO/IEC 7816 1-4 Development tests covering standards from: ETSI, 3GPP, 3GPP2 Supported Smart Card Applications: SIM, USIM, ISIM, R-UIM, SAT, USAT, CCAT + Multi application Technologies: GSM, 3G/UMTS/W-CDMA/TD-SCDMA, CDMA2000 	Use cases: <ul style="list-style-type: none"> Pre-defined test cases for the preparation of all relevant type approvals IOT Test cases (U)SIM Application testing Handset qualification 	Interesting Add-ons: <ul style="list-style-type: none"> IT³ Viewer – additional GUI tool for reading and interpreting IT³ files without available test hardware on-site Combined tests with COMPRION SIMfony
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IT³ Move!

An unbeatably stable tracer, IT³ Move! offers reliability, portability and accuracy when testing interoperability on the chip card interface. An integrated oscilloscope allows unfiltered recording and visualization of the signals measured.

Technical details and features: <ul style="list-style-type: none"> Interoperability tracer for ISO/IEC 7816 1-4 Smart Cards Supported Smart Card Applications: SIM, USIM, ISIM, R-UIM, SAT, USAT, CCAT + Multi application Technologies: GSM, 3G/UMTS/W-CDMA/TD-SCDMA, CDMA2000 	Use cases: <ul style="list-style-type: none"> Field testing End-to-End application testing Drive tests 	Interesting Add-ons: <ul style="list-style-type: none"> Analog Scope: Integrated oscilloscope for detailed electrical measurement and analysis
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Move 2

With Move 2 you can simultaneously monitor and analyse the ISO, SWP and USB interface of a chip card. The activation and communication of the different interfaces can be analysed on electrical, protocol and application level. It is also possible to monitor and display the dependencies between the protocols and to measure the cycle times.

Technical details and features: <ul style="list-style-type: none"> Interoperability tracer for simultaneously monitoring technologies: ISO/IEC 7816 1-4 SWP TS 102 613 USB TS 102 600 Supported Smart Card Applications: SIM, USIM, ISIM, R-UIM, SAT, USAT, CCAT + Multi application Technologies: GSM, 3G/UMTS/W-CDMA/TD-SCDMA, CDMA2000 	Use cases: <ul style="list-style-type: none"> Field testing End-to-End application testing Drive tests 	Interesting Add-ons: <ul style="list-style-type: none"> Analog Scope: Integrated oscilloscope for detailed electrical measurement and analysis Synchronized monitoring with Move 2 and CLT Move
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ICC Spectro

ICC Spectro provides terminal simulation for Smart Card testing. Due to the combination of both test system and measurement equipment, protocol requirements as well as electrical requirements can be measured and tested with only one device. It allows the adjustment and measurement of all relevant electrical parameters such as current, voltage and loads on all contacts. Timing and protocol parameters can be modified and analysed. ICC Spectro allows logical testing at the application level.



Technical details and features: <ul style="list-style-type: none"> Terminal simulator based on ISO/IEC 7816 1-4 	Use cases: <ul style="list-style-type: none"> Running of test case packages against diverse cards Open interfaces for creating individual test cases Quality assurance Development testing 	Interesting Add-ons: <ul style="list-style-type: none"> ICC Tracer: Monitoring tool and end-to-end analysis of communication between smart card and terminal on ISO/SWP/USB ICC Sequencer: Test sequence creator for developing customized APDU sequences and measurements and running them against a card ICC Testcases 3GPP TS 31.122 ICC Analog Scope: Integrated oscilloscope for detailed electrical measurement and analysis ICC Universal Translator: Translation tool for HEX data into logical content in a multi-technology environment (GSM, 3G and CDMA)
Simultaneously monitoring technologies: <ul style="list-style-type: none"> ISO/IEC 7816 1-4 SWP TS 102 613 USB TS 102 600 		
Standard tests & measurement on: <ul style="list-style-type: none"> Electrical level Protocol level Application level 		

CLT Move

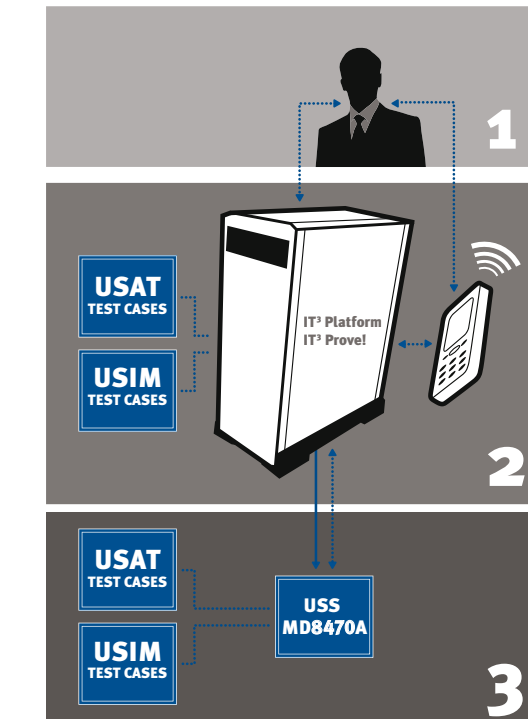
CLT Move is a portable tool for the analysis of communication based on ISO/IEC 14443 contactless technology. CLT Move allows interoperability testing by tracing and analysing the communication between an NFC Mobile Phone, a Smart Card operating with contactless communication and its corresponding reader. Thanks to our fail-safe antenna, CLT Move operates with great reliability and repeatable results; it lets the user perform in-depth protocol analysis and ensure interoperability between different contactless devices.



Technical details and features: <ul style="list-style-type: none"> Protocol analyser based on ISO/IEC 14443 contactless technology, Type A and Type B Interoperability tracer 	Use cases: <ul style="list-style-type: none"> Mobile banking e-ticketing Passport 	Interesting Add-ons: <ul style="list-style-type: none"> Synchronized monitoring with Move 2 and CLT Move Analog Scope: Integrated oscilloscope for detailed electrical measurement and analysis
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Combined handset testing with COMPRION SIMfony

COMPRION SIMfony is the definitive module for user-friendly combined handset testing. With an integrated air interface functionality, the system includes all 31.124 USAT tests listed in the Work Item 35 as well as the 3GPP TS 31.121 USIM tests. Operating with the system simulator Anritsu MD8470A, all procedures and tests are integrated, automated and controlled using the IT³ GUI. Both IT³ Platform for conformance and IT³ Prove! for pre-conformance testing are usable within the system.



Technical details and features: <ul style="list-style-type: none"> Validated for: GCF, PTCRB Supported Smart Card Applications: SIM, USIM, ISIM, R-UIM, SAT, USAT, CCAT + Multi application Technologies: GSM, 3G/UMTS/W-CDMA/TD-SCDMA, CDMA2000 	Use cases: <ul style="list-style-type: none"> Pre-defined test cases for the preparation of all relevant type approvals IOT Test cases (U)SIM Application testing Handset qualification Type approvals 	Interesting Add-ons: <ul style="list-style-type: none"> Test Cases 3GPP TS 31.124 Stages 1-2 Test Cases 3GPP TS 31.121 Stages 1-2 COMPRION 3GPP TS 31.124 USAT USS Set 1 COMPRION 3GPP TS 31.121 USIM USS
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