

Keysight Technologies

Anite Conformance Toolset



Accelerate Your Time to Market

Keysight has a strong track record of delivering the most comprehensive coverage of the GCF and PTCRB certification requirements, minimizing the amount of testing you need to perform on alternative test platforms. Conformance Toolset supports a complete portfolio of test cases for all GSM-evolved technologies, from GSM through HSPA+ up to the very latest LTE-Advanced and IMS test cases, enabling devices to be fully tested on a single test system. Keysight's leading roadmap allows Conformance Toolset users to perform conformance testing earlier in the development cycle.

Get results you can trust

Widely recognized as the most stable and reliable conformance test solution, Conformance Toolset minimizes the amount of time it takes to successfully test a device. Furthermore, Keysight's rigorous test case implementation enables you to identify device issues that are often undetected on competitor's test platforms.

Simplify conformance testing and increase productivity

Quarterly software releases, each fully revalidated by both GCF and PTCRB, ensure regular access to a complete portfolio of up-to-date test cases, including the latest industry-approved change requests. A continual program of software enhancements, focusing on productivity and ease-of-use, helps to maintain Conformance Toolset's position as the most user-friendly conformance test solution. Conformance Toolset users also have access to up-to-date test case status information, including the current GCF/PTCRB requirements, the latest validation status, and details of any known issues. This allows you to intelligently construct test campaigns and minimize the time spent configuring test cases or debugging already known issues.

Create an integrated solution with automation and remote control

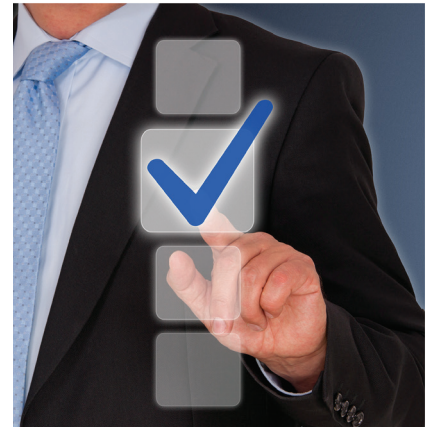
Unattended campaign execution is supported by allowing the MMI and AT commands issued by test cases, along with custom commands entered by users, to be routed either directly to the device under test or to external applications or hardware. In addition, the Remote Control Interface supported by Conformance Toolset allows the execution of test cases to be controlled by third-party software. Together, these features provide a high degree of flexibility when integrating Conformance Toolset into proprietary automated test environments.

Reduce your cost of test with a modular platform and flexible licensing

Licenses may be shared across test systems, or even across sites, allowing cost-effective use of assets. Keysight's modular product structure allows the test system capabilities to be extended at any point. For example, additional signaling units or other Keysight test solutions such as Development Toolset and SAS can be easily added to the system at a later date. The modular nature of Keysight's test systems also allows them to be split up into smaller separate systems with fewer cells, or combined together into a single larger test system to run more complex test scenarios.

Address evolving needs with a future-proof, cost-effective test solution

The introduction of LTE and carrier aggregation has led to an explosion in the number of frequency bands, with yet more being defined each quarter by 3GPP. FDD and/or TDD versions of Conformance Toolset test case batches include all current and future frequency bands supported by the test platform, making them a future-proof and cost-effective investment.



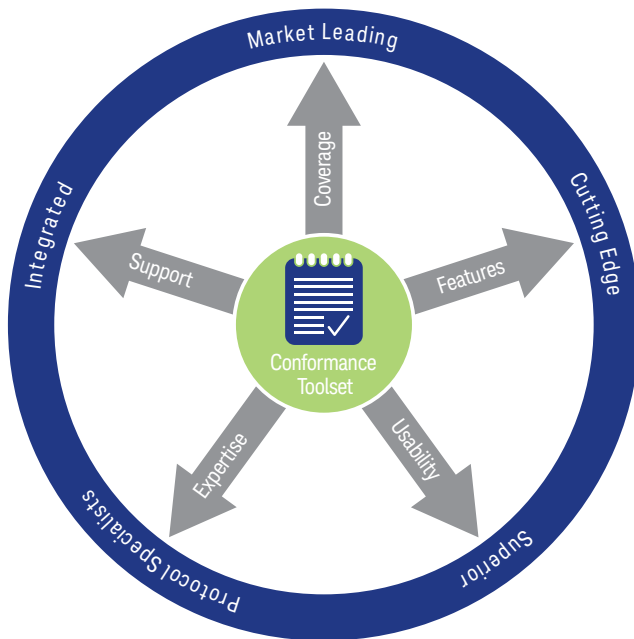
Rely on Keysight: the Expert in Protocol Testing

Chipset vendor collaborations

Keysight collaborates closely with all leading chipset manufacturers, helping them identify and resolve chipset issues via early pre-conformance testing. This ensures that Conformance Toolset software releases are fully regression-tested against those chipsets and minimizes the number of issues found in devices based on the same chipsets. This makes Conformance Toolset the test solution of choice for leading chipset vendors, and when Conformance Toolset is also used for device testing the likelihood of swift issue resolution by the chipset vendor is therefore maximized.

Protocol testing expertise

Keysight has a long track record in protocol testing, extending back to the introduction of GSM. This long-term focus on protocol testing has resulted in Keysight contributing with more LTE test case verification submissions to 3GPP RAN5 than all other vendors combined. You benefit from this level of expertise through superior quality test cases, leading availability of test cases for new features, and a support organization that is quickly able to identify and resolve any issues. Keysight's regional support teams are on hand to provide local on-site support when required, and a new helpdesk management system allows you to raise and track the progress of support issues. This continued emphasis on customer services has led users to rate Keysight best-in-class for customer support in successive satisfaction surveys.



Keysight provides you with better test case coverage, cutting-edge features and integrated support

Easily Configure and Execute Campaigns and Analyze Test Results

Minimize setup and configuration times

Globally recognized as the easiest to use conformance test solution on the market, Conformance Toolset users spend less time configuring test campaigns, compiling and analyzing test results and debugging test case failures than they would using an alternative solution.

Simplify testing with an intuitive, easy-to-use user interface

Conformance Toolset's easy-to-use graphical user interface supports all test case types and technologies. It offers numerous features including device configuration, campaign management, parameter management, results reporting and campaign automation.

Quickly analyze test results

The Log Viewer logs all messages exchanged between the device and network simulator. Its advanced features, such as message decoding and comparison, protocol layer filtering, PDU tracing and links to TTCN-3 source code, enable quick and easy analysis of results and debugging of test case failures.

View and modify test case source code

The integrated TTCN-3 editor allows viewing and/or modification of the supplied TTCN-3 source code, and its links to the Log Viewer enable debugging from messages in the generated log files to the corresponding test steps in the TTCN-3 code.

Simplify parameter management

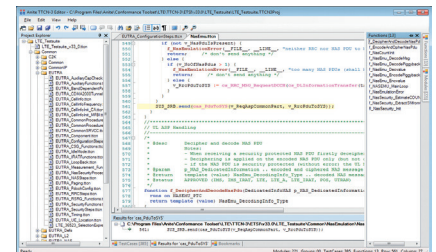
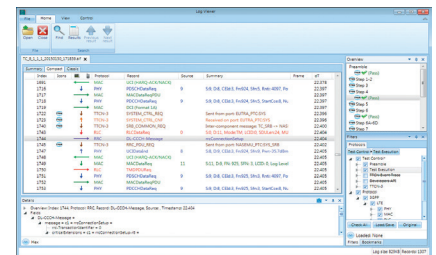
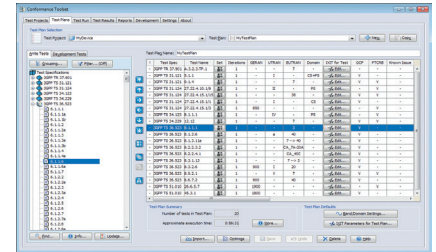
Conformance Toolset simplifies the configuration, and management of hundreds of applicable test case PICS/PIXIT parameters via an embedded Parameter Editor. Features such as automatic device capability enquiries and sophisticated import/export options make the task of setting, updating and comparing parameter values effortless.

Monitor test case progress

Messages exchanged between the device and test system are displayed in real-time during test case execution, enabling users to monitor test case progress and immediately identify issues.

Generate reports and create new test plans

Conformance Toolset includes a number of reports for summarizing the results obtained during device testing. It also provides the ability to easily create new Test Plans based on report output.



Assure the Quality of your Mobile Devices

Certify your devices with GCF and PTCRB approved test cases

Leading mobile network operators require mobile devices to be certified by either the Global Certification Forum (GCF) or the PCS Type Certification Review Board (PTCRB) prior to market introduction. All test cases supported by Conformance Toolset are validated by an independent test laboratory and approved by both GCF and PTCRB for device certification testing.

GCF/PTCRB Test Platform IDs for Anite Conformance Toolset and the test case types that are validated against each one.

GCF / PTCRB Test Platform ID	Test Platform Details	Test Case Types
TP 113	Anite Conformance Toolset	LTE, IMS, UMTS, GERAN and inter-RAT protocol
TP 125	Anite Conformance Toolset + COMPRION IT ³ / UT ³	SIM, SAT, USIM, USAT
TP 128	Anite Conformance Toolset + Starpoint SP6300	LTE<>TD-SCDMA inter-RAT

Use the most current 3GPP test cases to speed the certification of your devices

Conformance Toolset supports test cases from a wide range of 3GPP test specifications

Test Specification	Test Case Type
3GPP TS 36.523-1	LTE and LTE-A protocol test cases
3GPP TS 34.229-1	IMS test cases (incl. VoLTE IR.92, SMS over IMS, Emergency Call, Video IR.94)
3GPP TS 34.123-1	UMTS protocol test cases
3GPP TS 51.010-1	GERAN protocol test cases and SIM test cases
3GPP TS 51.010-4	SIM Application Toolkit test cases
3GPP TS 31.121	USIM test cases
3GPP TS 31.124	USAT test cases
3GPP TR 37.901	LTE Data Throughput Performance test cases

Anite 9000 Mobile Test Accelerator

Conformance Toolset uses the powerful Anite 9000 Mobile Test Accelerator signaling unit. All GCF and PTCRB protocol, SIM and performance test cases are supported on a test system containing two Anite 9000 units¹.

Anite 9000 Key Features

- Support for all of Keysight's key test solutions: Development Toolset, Conformance Toolset and SAS
- LTE (FDD and TDD) (2 cells)
- UTRAN (W-CDMA) (4 cells)
- GERAN (4 carriers)
- 375 MHz to 6 GHz frequency range
- All currently-defined 3GPP frequency bands
- 2x2 MIMO, 4x2 MIMO, 4x4 MIMO, SIMO or SISO configuration

Carrier aggregation

- 2 component carriers (with a single unit)
- 3/4 component carriers (with two units)
- 20 MHz bandwidth per component carrier

Data throughput performance testing

- Baseband fading with standard 3GPP fading profiles
- CAT7 data rates (with a single unit)
- CAT12/13 data rates (with two units)



1. Additional hardware may be required, as follows:

- COMPRION IT³/UT³ Platform – required for SIM/UICC testing
- Starpoint SP6300 – required for TD-LTE, TD-SCDMA and Inter-RAT testing

Evolving

Our unique combination of hardware, software, support, and people can help you reach your next breakthrough. **We are unlocking the future of technology.**



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