PRISMA’s extensive experience in the mobile wireless testing field, spanning more than a decade, has led to the creation of the industry’s most flexible and easy-to-use radio simulation systems. Our platforms are modular and easily scalable, allowing tailored solutions for any testing need.

Fully Load the Radio Interface with Real Mobile Applications

PRISMA’s unique multiterminal and multistandard radio testing solution allows the generation of real applications’ radio load from thousands of concurrent mobiles operating real voice and data sessions. Additionally, the integration with PRISMA’s SIM array enables the use of real SIMs to replicate full load conditions with real users profiles.

Increase Efficiency and Reduce OPEX with Test Automation

PRISMA provides an unrivalled set of ready-to-use test case suites which can be run right out of the box, enabling the execution of complex test plans and mobility scenarios, quickly and with the minimum effort. All tests can be designed, managed and executed in few clicks with the use of a dedicated Graphical User Interface (AirMosaic) or by already existing test automation suites, with different levels of integration.

Reach Peak Performance over the Radio Interface

Based on the powerful PRISMA Software Defined Radio architecture, the new multistandard platform has expanded the scope of solutions to Radio Interface Testing of the entire range of 3GPP interfaces used in mobile networks.

Protect your Investment in Testing Equipment

PRISMA offers the only multiterminal simulation system on the market specifically designed to support different wireless standards on a single platform. This solution ensures a full protection of investment in testing equipment. SDR hardware and software releases follow the ever-evolving official standards, making the new features immediately available for deployment.
A key requirement for all 3GPP standards is the interoperability between different Radio Access Technologies. PRISMA offers a multiterminal, multistandard solution (for 2G, 3G and 4G standards) supporting all Inter-RAT procedures, ensuring voice and data services continuity in live networks.

Load Multiple Sectors with a Single System

PRISMA’s radio systems configuration is modular and easily scalable. The SDR units can load multiple cells and carriers per unit and the AnyBand radio modules support the full radio spectrum for any 3GPP standard.

Concurrent Radio/Core Network Simulation and Monitoring

Our radio solutions can be part of a comprehensive test system when integrated with other PRISMA modules. Simulation and concurrent monitoring capabilities over the radio interface can be completed with complementary solutions over additional Access and Core Network interfaces (e.g. Abis, A, Gb, Gi, Iub, Iu and S1/X2) to provide end-to-end testing systems.

Verify Radio Performance and New Features

Often evaluating and testing new features can be difficult, due to a lack of terminals embedding the required capabilities. PRISMA’s multi-standard solution enables testing over the radio interface in advance of pre-commercial terminal availability.
AirMosaic is optimized for the generation of impressive graphic KPIs test results and overall system performance

Reliable Applications and Real Propagation Easy Reporting and Analysis

Create, Manage and Execute Complex Test Scenarios in One Click

The scenario managing capabilities available in the AirMosaic GUI dramatically reduces the effort required to create large and complex scenarios consisting of thousands of mobile devices differing in traffic profiles, radio conditions and mobility. AirMosaic offers impressive test result granularity: the user has the ability to select the level of detail, ranging from a simple Pass/Fail indicator (which could be on a per cluster, cell, mobile or application basis) to the complete trace of each message at any protocol layer.

Evaluate Test Results with Specific Real Time Counters and KPIs

Following the typical quality assurance activities, the perceived quality is better estimated by grouping several counters through Key Performance Indicators (KPIs). A wide range of KPIs is supported by AirMosaic and can be expanded and customized.

Replicate User Experience with Real Traffic Application Profiles

The main Service Providers’ simulation need is to reproduce real subscriber usage, taking into account the current fragmentation for smartphone operating systems, radio capabilities ad terminal types (e.g. data-cards vs. hand-holds). AirMosaic includes a mobile terminal database, fully customizable with all the device properties. AirMosaic can rely on traffic models that reflect both a real customer base and real traffic, which can be simulated over the radio interface. A typical scenario might include a customer base composed of different smartphones running different applications with various data types combined with voice calls and so on.

Simulate Real Radio Conditions and Fading Effects

In the real world, different subscribers experience different radio conditions, mainly due to their mobility profiles in relation to the position of the Base Station; PRISMA has specifically designed AirMosaic to take terminal spatial distribution, mobility and fading into account. A realistic distribution of subscribers within a cluster of cells can be simulated, as well as scenarios where the subscribers move programatically such as on a high-speed train or in a car. Acting directly on the physical layer for each simulated terminal, AirMosaic can accurately simulate terminal mobility.
Multiple Technologies on a Single Platform

UeSIM

This complete solution for all LTE/LTE-Advanced/LTE-Advanced Pro testing needs allows multi-terminal testing over the whole spectrum. The available features support Carrier Aggregation (up to 5 carriers) over any FDD/TDD 3GPP band, Logical Cells configuration, eMBMS, VoLTE, 2x2/4x4 MIMO (with CA), IoT and more. Both RF and optical CPRI interfaces are supported. All configurations are fully scalable to test any eNodeB configuration, regardless of size.

3GSIM

3GSIM is able to load & stress the WCDMA Radio Access, allowing Operators to make the most out of new features defined by 3GPP such as HSPA+, Dual Cell configurations and higher order modulations. More units can be configured and managed by a single control point in order to load & stress a large set of NodeBs concurrently.

MsSIM

MsSIM, the multiterminal simulator of all GSM protocol layers (including the application level), can load up to 16 TRXs per unit while generating both Circuit Switched and Packet Switched Services. The complete set of features defined by 3GPP is supported for GSM/GPRS/EDGE, Evolved EDGE and VAMOS, over the entire 3GPP spectrum.