Wireless Simulator Product Line

The new standard for network performance analysis

EXFO

High-performance, future-proof fixed mobile convergence test platform

Platforms
QA Series QualityAssurer Platform

HIGH-PERFORMANCE, HIGH-CAPACITY, FLEXIBLE, RELIABLE AND EASY-TO-USE WIRELESS (2G/3G/CDMA, FEMTOCELL AND LTE), IMS AND VoIP NETWORK TESTING.

The QA-800 platform is the industry's first integrated wireless and wireline testing solution designed for end-to-end network and service testing. This unique platform is purpose-built to meet high-performance and high-capacity testing requirements needed to address the ever-increasing quality expectations of users, and the exponential growth of network traffic. From its features to its interoperability and load-testing capability, the QualityAssurer is ideal for the entire lab-testing lifecycle.

The platform is capable of emulating millions of subscribers, devices and services for wireless (2G/3G/CDMA, Femtocell and LTE), IMS and VoIP networks. EXFO's latest QualityAssurer Series platforms are targeted at NEMs and NSPs that are developing and deploying IMS and wireless networks and services. With the QualityAssurer, EXFO has leveraged its leadership in IMS and wireless (2G/3G/LTE) testing to deliver unmatched control-plane and user-plane testing capability in an integrated platform.

The QualityAssurer platforms are available in the following form factors and options:

QA-813

› Thirteen-unit rack-mounted option

› Emulation of over 13 million LTE or IMS subscribers

› 13 million data sessions

› 3.25 million RTP streams

› 130 Gbit/s of user-plane data generation and analysis

QA-805

› Six-unit rack-mounted option

› Emulation of over 5 million LTE or IMS subscribers

› 5 million data sessions

› 1.25 million RTP streams

› 50 Gbit/s of user-plane data generation and analysis

QA-604

› Two-unit rack-mounted or desktop option

› Emulation of over 2 million IMS subscribers

› Line-rate generation and analysis of 128,000 RTP/SRTP streams

HIGH-CAPACITY SIMULATION FOR WIRELESS TESTING

Modules

THE HARDWARE MODULES USED ON THE QA-800 PLATFORM SUPPORT BOTH THE USER AND CONTROL PLANES

PEv2

Protocol Engine Version 2 is a signaling module dedicated to control-plane testing that is capable of simulating millions of subscribers while processing hundreds of thousands of messages per second.

W²CM

W²CM is the next-generation module designed to generate and analyze high-performance line-rate user-plane data in both 1G and 10G interfaces. The user-plane data includes layer-4-to-7 real-world applications, such as HTTP, FTP and RTSP. The industry-unique Smart Replay feature can be used to generate user-defined application traffic directly from imported PCAP capture files. W²CM also supports IMS and VoIP control-plane capabilities from a single module. The W²CM module's line-rate generation and analysis with real application data across millions of sessions and bearers is unrivaled in the industry. Additionally, certain key features—including the guaranteed-bit-rate (GBR) and maximum-bit-rate (MBR) verification functions—have been specifically designed for wireless testing scenarios exclusive to our products.

Introducing the QualityAssurer applications

Applications

EXFO's test applications running on the QualityAssurer are best-in-class, flexible and very easy-to-use. Designed to meet the rigorous testing demands of today's wireless and wireline networks, these applications showcase both basic and advanced features and services, such as PCAP capture and Smart Replay. These test applications can be used to test anything from individual network devices to end-to-end networks and services, such as iRat mobility, VoLTE and CSFB, and support the latest 3GPP release specifications.

This compliance with 3GPP specifications, combined with the flexibility to modify the message structure and call flows in order to adapt the test requirement, makes these applications the preferred test solution for both equipment manufacturers and service providers.

High-performance VoIP and IMS testing

IMS and VoIP Testing

EXFO's VoIP and IMS applications suite provides the industry's highest signaling and user-plane capacity, as well as the performance needed for IP-to-IP gateway testing (e.g., SBC and media gateways). The application offers testing solutions for VoIP and IMS devices such as CSCFs, Proxy/Registrar, HSS, AS, and DRA/DSC. For VoLTE/RCS/Internet-based WebRTC service deployments, its ability to emulate the entire IMS core network makes it ideal for testing LTE and EPC.

With a single QA-805, it supports:

› 10M subscribers with 1.28M concurrent voice and video sessions

› 50 Gbit/s RTP/SRTP media throughput generation and analysis in real time

› 2.5M IPSEC/TLS secured concurrent user calls

LARGE-SCALE EMULATION OF SUBSCRIBERS, NETWORK ELEMENTS AND THE NETWORK CLOUD

Wireless Core Testing

This application allows for testing of elements (e.g., MME, SGW, PDN-GW and SGSN) in isolation or in combination across multiple domains. Designed for the QualityAssurer platform, this high-performance application is capable of testing not only basic functionality, but also more advanced features such as iRAT mobility, VoLTE, SRVCC and CSFB.

This application is the only integrated solution of its kind offering comprehensive user-plane and control-plane testing.

Small Cell (3G/LTE) Testing

Thanks to this application, the 3G and LTE core network can be simulated with a single platform. The solution allows you to test stand-alone or integrated small cell elements, such as home eNBs, micro eNBs and HNBs.

This scalable solution meets the challenges of today's dynamic small cell testing needs.

LTE RAN Testing

This application enables eNB testing over S1 and X2 interfaces by simulating the EPC. Interfaces to the legacy core networks are also supported for feature testing (e.g., CSFB and inter-RAT mobility). Available on the QualityAssurer platform, this application is suitable for intensive lab testing.

Offering support for all LTE network elements

Simulator Solutions:
Professional Services Overview

TEST SERVICES | TEST CONSULTING | TRAINING

Using EXFO simulator solutions, our Professional Services team will help you maintain your test environment and identify issues in your device/system under test. We provide planning and help execute testing by creating quality scripts for advanced automation using EXFO's simulator solutions.

Helping you achieve the best results for your network requirements is our mission

Our experts work with you to optimize and maintain the best test environment for your needs, leveraging leading EXFO test solutions for the telecom domain to support multiple networks and technologies, such as IMS, VoIP, LTE, VoLTE and legacy.

With years of experience in deploying our simulators and significant technical knowledge in RAN, wireless, IMS and legacy networks, our experts have the know-how needed to increase the efficiency and value of strategic initiatives while minimizing capital investment, complexity and resource consumption.

Our offering includes:

› Simulator product scripting

› Script debugging

› On-demand on-site or off-site consulting

› Customized consulting engagements

› Cost-efficient outsourcing

› Dedicated on-site engineers

For a complete overview
of EXFO's network simulator product line,
visit EXFO.com/simulators

EXFO