

# Mobile Testing

## for Mobile Network Operators

### Key benefits

VoLTE Testing



2G/3G/4G Mobile Robots

High Level API for Voice, SMS and Data test scenarios

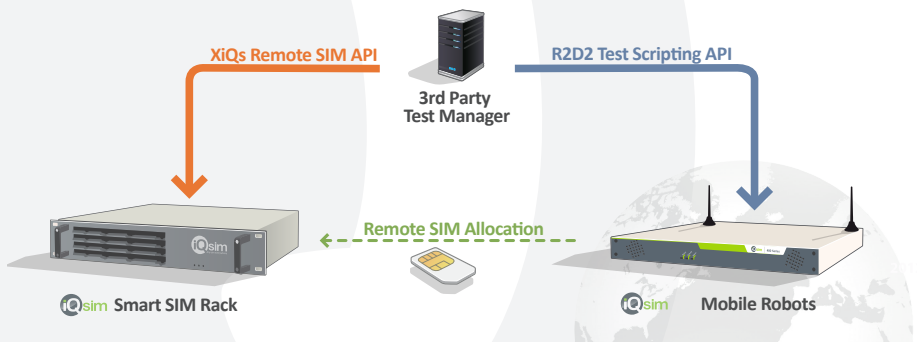
SIM Virtualization with centralized SIM storage and dynamic SIM allocation

Management System with web interface and XML-based API

Periodic, On-Demand or Troubleshooting testing

Local or Remote SIM Management

iQsim's provides to Mobile Operators and service integrators a **unique, open and proven solution** based on state-of-the-art hardware and software helping them building a comprehensive and highly scalable **end-to-end 2G/3G/4G mobile testing environment** which will fully meet their needs.



### Mobile Testing Use-Cases

#### › QoS / QoE TESTING

To keep up with competition and attract new subscribers, mobile operators need to deliver the **best quality of service and experience** to their end-users. Operators need to continuously check quality of service experienced by their end-users in order to **prevent and anticipate any degradation of service**.

#### › ROAMING TESTING

People visiting a mobile operator network can be a great source of revenue and operators need to make sure **roaming agreements are working properly**.

#### › REVENUE ASSURANCE

Revenue Assurance is a process undertaken by most of the mobile operators to **improve profits, revenues and cash flows**. Mobile network testing is commonly used as part of the revenue assurance process.

#### › MACHINE-TO-MACHINE QUALITY ASSURANCE

M2M applications are usually deployed on a large scale. M2M providers must perform quality tests not only **prior to the deployment** of their services but also during **the entire life cycle to anticipate any service degradation** or on demand in case of customer complaint.



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### Mobile Robots (2G/3G/4G)

**R250** - Up to 8 ports



**R400** - Up to 16 ports



- › **R2D2 high level API** accessible for testing application (local or with socket access)
- › Large number of commands to **build test scenarios for Voice, SMS, MMS, USSD, FTP, Email, HTTP, WAP** including access to Operator, Cells and SIM information.
- › **Call Data Records (CDR)** generated for all sessions
- › Local or **Remote SIM Management**

### Remote SIM Management

iQsim **Virtual SIM Management platform** is designed for mobile operators enabling **SIMs cards to be physically and geographically separated from iQsim Mobile Robots**. SIM cards can then be allocated on the fly to GSM devices in order to perform real-time mobile testing.

Remote SIM Management is available as an **integrated product**, Smart SIM Rack (IRON Suite + SIM rack), or as a **distributed solution**, IRON Suite software on the Cloud and SIM racks for SIM cards storage.



- › Includes XiQS, **an XML-based API** to remotely control Mobile Robots, their GSM ports as well as **virtual SIM allocation**
- › IRON Suite Management System : **web-based graphical interface** to monitor and configure Mobile Robots, SIM Rack and Virtual SIM cards manual or dynamic allocation
- › **SIM cards storage** : Up to 256 SIM cards (extensible with additional SIM Rack)

### SIM Flex providing SIM virtualization to any GSM device



IRON Suite can take control of **any GSM device** (sensors, probes, etc.) with the addition of iQsim's SIM Flex. The **SIM Flex is a hardware device**, which is connected on one side to the GSM device in place of the real SIM card and on the other side, **communicates with the IRON Suite over IP**.

Two versions are available, standalone and embedded.



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