


Smart Autonomous Measurement

Reliable - Robust - Real Devices



ACT for unattended measurement

Whenever you have to carry out measurements in large areas or want to monitor your network over a longer period of time, a measurement solution that works reliably and unattended is the ideal solution.



Focus Infocom's ACT product family is available in different form factors and with different equipment to cover a wide range of use cases. Custom designs for individual requirements are also possible.

Our ACT probes are designed for operation under extreme conditions: they are shock and humidity-resistant, and operate at a wide temperature range.

Reliability and security are in the DNA of each ACT probe: Self-testing and self-configuration functionality, a highly versatile power management, secure data transactions and many more features make sure that ACT systems live up to their name: a truly reliable autonomous solution.

The ACT product family supports all major network technologies from 2G to 5G as well as GSM-R/LTE-R, WiFi, VoWiFi, VoLTE, NB-IoT, and numerous services from telephony over web browsing to Youtube™ video streaming, and of course SAM, our platform for measuring the performance of smartphone apps. Additional service test options are available on request.

At a glance

SAM is for all

SAM, our innovative Smart App Manager, allows you to create service tests for almost any smartphone app (social networks, news, video players, messaging, VoIP etc.).

Benchmarking? Yes!

With ACT-NGBB, we offer an autonomous benchmarking solution that combines the power of our benchmarking tools with the advantages of unattended measurement.

IoT

IoT testing is supported with dedicated modules based on original NB-IoT building blocks for maximum end-user perspective.

All major networks

ACT probes support data and voice service tests of all major network technologies: 2G, 3G, 4G, 5G, GSM-R/LTE-R.

One is for you

ACT probes are available in different designs and sizes for multiple use cases (in-car, in-train, rooftop, stationary etc.). Both PC-controlled and smartphone-only solutions are available.

Data security

Advanced file compression, segmentation techniques and a secured transport layer guarantee high upload efficiency and safe data transmission even in weak radio coverage conditions.

Investment protection

With our measurement solutions, your investment is future-proof. Our products can always be upgraded to new technologies.

Antennas: your choice

No matter if you prefer using the internal smartphone antennas or external ones in cars or trains, we got you covered.

Integrated System Architecture

**Autonomous
Systems**

**Infrastructure/
Data Handling**

**Analysis/
Reporting**

Hardware Systems

- » Any of Focus Infocom's ACT systems (see last page)

System Management

- » Self-hosted
- » Managed service (FI)
- » Remote destinations (speech/data)

Evaluation & Reporting

- » Data import
- » Data visualization
- » Data analysis
- » Reporting

Service Tests

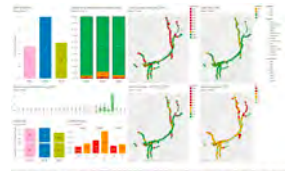
- » Telephony
- » Various data services
- » POLQA speech
- » App testing with SAM (WhatsApp, Skype, Facebook etc.)

System Control

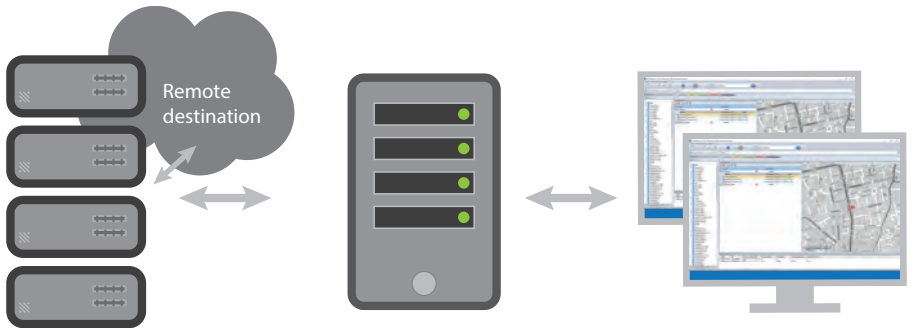
- » Data transport
- » System update
- » Remote management
- » B-Party management
- » Alarming

Features

- » Automatic reports
- » Ad hoc reports (Tableau, MS Reporting)
- » Data mining



System Overview



1

Fleets

Depending on model type, probes can be equipped with smartphones, scanners, modems, IoT devices, or combinations of them. The probes actively perform service tests, collecting data autonomously all year round.

2

Server

The data is sent to a server over the air. On the server, the data is imported into an SQL-database that is accessible from the FleetManager. The data can be combined with data from other sources.

3

Fleet Manager

With the sophisticated "SAAS"-style Fleet Manager users control multiple ACT fleets over the air, define and distribute measurement jobs, update boxes, schedule jobs, set alarms, and more.

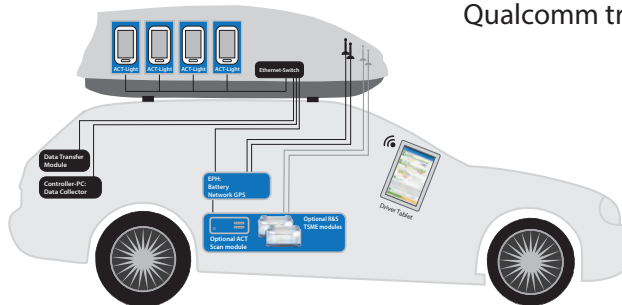
ACT Benchmarking

Focus Infocom's new generation of autonomous benchmarking systems combine proven technology with completely new concepts. The new probes use high-end, latest-generation smartphones, which support all features

of current mobile network technology to provide the best possible QoS view. The probes support all standard service tests and SAM, our unique technology for direct use of smartphone apps in test scenarios.

Features

- Unlimited scalability
- Use of internal smartphone antennas
- Support for all major radio technologies
- SIM switcher
- SAM and numerous test services
- POLQA speech evaluation
- Optional Samsung or Qualcomm trace data



ACT Train

ACT Train is certified for autonomous measurement system for permanent installation in trains. The probes can be installed in the passenger compartment for measuring the end user experience using internal

antennas for a true QoS view. To measure the coverage along the railway network, the systems can be equipped with external antennas.

Features

- Remote distribution of measurement jobs
- Samsung or Qualcomm®-trace data
- Use of internal or external antennas, depending on use case
- Certified for railway use
- SIM switcher
- Mobile network and WiFi measurement
- SAM and numerous test services
- Individual designs for installation in different train types
- POLQA speech evaluation



With its elongated shape, ACT Train is certified for permanent installation in German trains. For other countries, other form factors with their own certification are possible.

Script based, scalable service tests

- CS-Telephony (MOC, MTC)
- VoWiFi
- OTT telephony via apps (WhatsApp, Skype, Google Hangouts, Facebook Messenger) with SAM
- Speech quality (POLQA algorithm)
- HTTP upload and download
- FTP upload and download
- Webbrowsing
- Video streaming
- IP Trace
- App data tests via SAM
- Other tests on request



Creating service tests using the graphical script editor in the FleetManager.

Security & Reliability

To ensure highly reliable measurement conditions, ACT probes continually check all critical operating conditions and send the results to the FleetManager for assessment. Users can define alarming thresholds for these indicators to be instantly informed when problems occur.

The probes record all relevant measurement data, for example, Layer 1 data, Layer 3 messages, IP Trace, application layer information, including a set of marker events.

The integrated GPS system stores position, velocity, altitude and time data. The system time is automatically synchronized with the GPS time.

On the data transport layer, block repetition, block CRC verification and the call retry function protect against data loss.

High-compression technology ensures reduced storage requirements, fast data transfer from the probes to the server, and for downloading new software versions to the probes.

The ACT probes feature a secured callback mode for communication setup with the FleetManager to prevent unauthorized access.

The large internal storage capacity of ACT probes ensures maximum data safety and prevents data loss. More than three days of measurement data can be stored internally.

All collected data is stored internally first and deleted only after data transfer to the FleetManager was successful. Even if weak network coverage prevents immediate data upload, the data is thus safely stored.

Post Processing

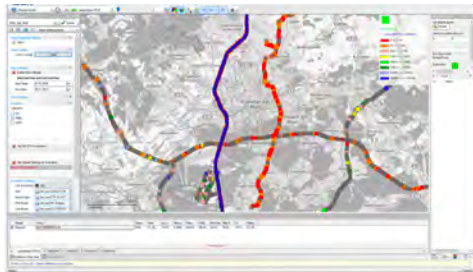


Measurement data visualized in an interactive Tableau™ dashboard.

Data collected with our ACT probes can be processed with a variety of post processing tools. Focus Infocom offers the FIMAS and XGMA analysis tools with specific functionality. But you can also use any SQL-capable tool like Tableau™ or Microsoft Report Builder™ giving you the freedom to choose your favorite tool without locking you in.

While measurement data provides a wealth of information, post processing is what makes this data accessible and powerful.

Post processing converts your raw measurement data into usable metrics: validating, extracting the required information, processing it statistically and making it available in interactive evaluation tools or as static reports.



Measurement data visualized in FIMAS Evaluation Center.

Choose the device for your use case

ACT Standard

Equipped with one device and external antennas



ACT Dual

Equipped with two devices and external antennas



ACT Compact

Equipped with one device and internal antennas



ACT SPO

Stand-alone smartphone-only, internal antennas



ACT Train

Equipped with one device, internal or external antennas



ACT GSM-R

Autonomous systems for GSM-R networks



Get in touch!

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