Add-on OTA performance testing software and hardware modules for both StarLab and SG measurement systems. SATIMO systems are particularly suited to testing wireless devices in active mode.

It is our company strategy to follow the evolution of the different telecommunication protocols and to be present in the standardization committees to actively contribute to the test plan drafting. SATIMO systems: by far the fastest in testing both TRP and TIS.

### MAIN FEATURES

1. **Measurement capabilities**
   - Total Isotropic Sensitivity
   - Total Radiated Power
   - Effective Isotropic Radiated Power
   - Effective Isotropic Sensitivity
   - Upper Hemisphere Partial Radiated Power
   - Upper Hemisphere Partial Isotropic Sensitivity
   - Near-Horizon Partial Isotropic Sensitivity
   - Near-Horizon Partial Isotropic Radiated Power
   - Intermediate channel

2. **Certifications**
   - CTIA 2.2. certifiable measurements
   - CTIA 3.0 vendor audit**

3. **Protocols***
   GSM, GPRS, EDGE, CDMA2000, CDMA 1xEVDO, CDMA 1xRTT, WCDMA, HSDPA, Wi-Fi 802.11 a/b/g, BLUETOOTH 802.15.1.2, PHS, TD-SCDMA, HSPA, WiMAX, GPS, DVB-H, A-GPS

   *the list of compatible protocols is evolving on an on-going basis. Please contact us for updated information

   **Our SG 64 in Atlanta has undergone the vendor CTIA 3.0 on-site audit that includes measurements for A-GPS protocols and official CTIA approved Test Lab certification is expected to follow upon availability from CTIA. Other systems will follow.

### SYSTEM CONFIGURATIONS

#### Software:
- SatEnv (measurement control & data acquisition)
- SAM (OTA performance testing)
- SMM (SATIMO Multi Measurement)

#### Equipment:
- Amplification unit
- Radio Communication Tester
- Wideband Dynamic Range Adapter
- Active Switching Unit

#### Accessories:
- PC
- Upright head phantom
- Head and hand phantoms
- Instrumentation rack
- Positioning laser pointer

#### Services:
- Installation
- Warranty
- Training
- Extended warranty
- CTIA certification assistance

[Optional] [ Included ] [ Required]
TRP is the total RF channel power radiated by a wireless terminal. It is calculated by integrating the measured Effective Isotropic Radiated Power (EIRP) data over the measurement sphere. The EIRP is measured every 15 degrees in both elevation and azimuth, at a minimum.

This accounts for a total of 1656 measurement points (23 elevations × 12 azimuths × 2 polarizations × 3 frequencies), with a typical measurement time of about 3 minutes (depending on the protocol and equipment).
TIS is a figure of merit for the overall radiated sensitivity of a wireless terminal. It is calculated as the integral of the measured Effective Isotropic Sensitivity (EIS) data over the measurement sphere. The EIS is measured every 30 degrees in both elevation and azimuth, at a minimum. This accounts for a total of 396 measurement points (11 elevations × 6 azimuths × 2 polarizations × 3 frequencies), with a typical measurement time of about 90 minutes (depending on the protocol and equipment).

The EIS is calculated by a search algorithm that finds the minimum power level radiated onto the DUT for which the error rate is lower than a specified limit.
SAM is the software interface for automated OTA performance testing with StarLab and SG measurement systems. It enables measurements of both radiated power and sensitivity, supporting most of the common wireless communications protocols: GSM, GPRS, EDGE, CDMA2000, CDMA 1xEVDO, CDMA 1xRTT, WCDMA, HSDPA, Wi-Fi 802.11 a/b/g, BLUETOOTH 802.15.1,2, PHS, TD-SCDMA, HSPA, WiMAX, GPS, DVB-H (Contact us for an updated list).

CTIA reporting supported

Data can be exported in different formats, such as tab limited ascii formats, binary, XML or NetCDF Format. The user can adjust the file content to his/her requirements: separate data according to parameters or store only a part of the measurement. Reports can be automatically generated in any format supported by Windows. The content and lay out of the format can be adapted to specific requirements, such as CTIA certification reports.

A Multi-profile User Interface

SAM offers different measurement configurations, depending on the user’s level of expertise. Users with limited experience are guided through the different measurement steps, whereas more experienced users can access a full range of parameters.
HARDWARE CONFIGURATION

- **Radio Communication Tester**: Base station simulator with measurement capabilities. It is the signal generator and measurement receiver.

- **Amplification unit**: includes uplink/downlink switch for the SG or StarLab systems.

- **Link antenna**: A low reflectivity antenna mounted inside the positioning mast, close to the turntable. It rotates with the DUT, maintaining a constant link, which reduces the risk for dropped calls during testing.

- **Active Switching Unit (optional)**: Allows automatic switching between different test equipment.

- **Wideband Dynamic Range Adapter (optional)**: A step attenuator allowing SAM to automatically adjust the output range of the Radio Communication Tester.