



## SENTRY-G-LTE4 (EU) / SENTRY-G-LTE4 (US)

4G/LTE, 3G/UMTS & 2G/GSM Remote Signal Analyser & Datalogger with GNSS

### General Description



SENTRY is a stand-alone remote cellular network analyser that passively monitors the cellular environment that it is placed within and sends the data back to a cloud based management portal ([CloudSURVEY](#)) where this can be viewed and analysed. As well as passively observing the cellular environment, the SENTRY may optionally carry out performance tests on the cellular network to which it is registered to and measure parameters such as connection time, latency, and data transfer rates.

The SENTRY performs the measurements and tests from user requests on the cellular environment, using an embedded STM32F405 Arm® Cortex® M4 core CPU in conjunction with the cellular engine. The integrated GNSS receiver also determines the location where each cellular survey is carried out. The SENTRY runs the network tests and then immediately uploads the test results and location data via an encrypted connection to the CloudSURVEY Portal. The CloudSURVEY portal can display the detailed results of the cellular network testing.

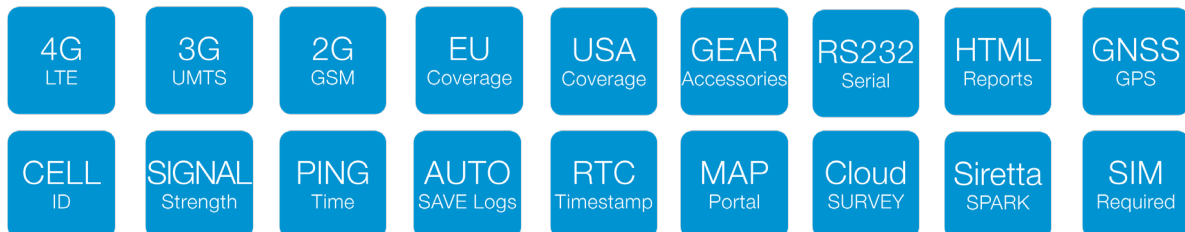
Performance monitoring surveys additionally show cellular, TCP/IP and Socket registration times, uplink/downlink speeds, ping times, and comparative data with other cells of the same network.

In areas where there is poor and/or intermittent cellular coverage, it is possible to configure the SENTRY to output its measurements on an RS232 serial port rather than post data to the CloudSURVEY portal.

**\* SENTRY requires a SIM Card**

**Note:** 2G / GSM is only available for use on the EU model

### Features



### Featured Applications

- » Cellular surveying & logging of new and existing installations on 4G / 3G / 2G networks
- » Remote operation with live data (SIM Required\*)
- » User selectable logging options to determine most reliable mobile operator
- » Evaluate MNO's performance over time
- » Cellular performance monitoring (Registration time, socket connection times and TCP/IP registration, Ping time, upload-download speed testing)
- » Determine "hotspot zones" & "dropout zones"
- » Integrated Mapping Portal enabled (registration required)



Cellular network



CLOUD SURVEY





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### General Features

#### SENTRY-G-LTE4 (EU)

- » 2 Supported Bands GSM
  - » B3 – 1800 MHz
  - » B8 – 900 MHz
- » 3 Supported Bands UMTS
  - » B1 – 2100 MHz
  - » B3 – 1800 MHz
  - » B8 – 900 MHz
- » 6 Supported Bands LTE
  - » B1 – 2100 MHz
  - » B3 – 1800 MHz
  - » B7 – 2600 MHz
  - » B8 – 900 MHz
  - » B20 – 800 MHz
  - » B28A\* – 700 MHz

#### SENTRY-G-LTE4 (US)

- » 3 Supported Bands UMTS
  - » B2 – 1900 MHz
  - » B4 – 1700 MHz
  - » B5 – 850 MHz
- » 8 Supported Bands LTE
  - » B2 – 1900 MHz
  - » B4 – 1700 MHz
  - » B5 – 850 MHz
  - » B12 – 700 MHz
  - » B13 – 700 MHz
  - » B14 – 700 MHz
  - » B66 – 1700 MHz
  - » B71 – 600 MHz

### Interfaces

- » 3 x external LED status indicators (Red, Green, Blue)
- » 1 x RS232 Serial Port
- » 1 x Mini-B USB Port
- » SIM card reader for mini-SIM (2FF)
- » RJ12 Power Connector (5 - 42V)
- » GNSS SMA Connector
- » Cellular Antenna SMA Connector
- » Nominal supply 12V

### Environmental

- » Dimensions: 93mm x 67mm x 28mm
- » Weight: 99 grams (unit only)
- » Extended Temperature Range: -40 to +85 °C

### Power Supply

- » Mains Input: 100 - 240V 50 / 60Hz
- » Multi-Region Heads: UK / EU / US / AU
- » Output - 12V DC 1A

### Accessories

- » 1 x Multi-region Power Supply
- » 1 x Cellular Antenna
- » 1 x GPS Antenna
- » 1 x RS232 Serial to USB Cable
- » 1 x Mini-B USB Cable
- » 1 x Pin Reset Tool

### Approvals and Compliance

- » UKCA
- » CE
- » FCC (TBC)
- » E11 (TBC)
- » RoHS
- » REACH

\* B28A is a subset of B28 using the lower duplexer frequencies (Tx: 703-733 MHz / Rx: 758-788 MHz)



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### Reporting

#### Remote Survey Logging

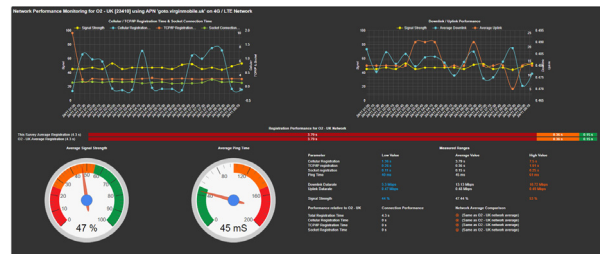
- » User selected time surveys (Duration specific survey)
- » Dynamic survey mapping
- » User controlled start-stop survey function
- » Select continuous or fixed time lapse surveys
- » Calculate seen percentages and signal averages for the entire surveyed session

#### Network Performance Analysis

- » Registration time
- » Socket connection times
- » TCP/IP registration
- » Ping time (Latency)
- » Upload-Download speed testing

#### CloudSURVEY Portal

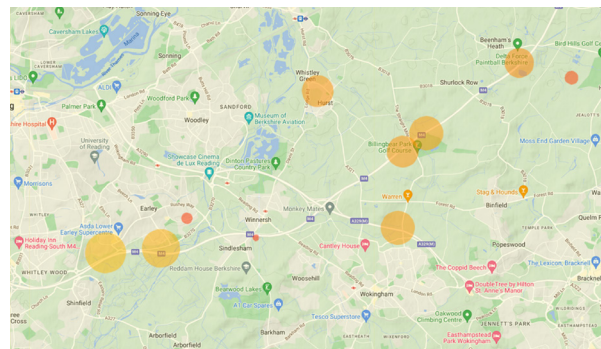
- » Graphical display ordered by signal strength
- » Complete summary breakdown for all recorded cells
- » Recorded survey date and time
- » Integrated mapping portal enabled (registration required)



1. Average Ping time 2. Cellular Signal Strength 3. Network speed

### Identify 'Blackspots'

- » To provide better connectivity to remote areas and ensure equal access to communication services
- » Help service providers improve their network infrastructure and expand their coverage to areas where it is currently unavailable or patchy
- » Identify cellular blackspots for emergency services, as these areas may not have adequate connectivity for people to call for help



### Ordering Information

- |  |       |                             |
|--|-------|-----------------------------|
| » SENTRY-G-LTE4 (EU)                   | 61958 | For European networks       |
| » SENTRY-G-LTE4 (EU) with accessories  | 61959 | For European networks       |
| » SENTRY-G-LTE4 (USA)                  | 61993 | For North American networks |
| » SENTRY-G-LTE4 (USA) with accessories | 61968 | For North American networks |