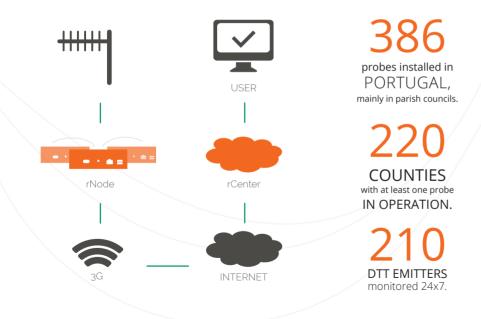




www.rprobe.com

# REMOTELY MONITOR DTT NETWORKS

**rprobe** is a probing platform designed for spectrum sensing applications. It allows operators, broadcasters and regulators to remotely monitor the DVB signal in real time, keeping a record of the network status with intelligence over the collected measurements.



# rNode

The easiest way to measure the DVB-T/T2 signal quality parameters and transmit them to the rprobe center (rCenter) via its 3G interface or Ethernet interface.

# Standards

DVB-T, DVB-T2, DVB-T2 Lite and DVB-C.

#### Configurable Thresholds

The user can set its own thresholds on different measurements, to trigger different alarms.

#### Measurements

Signal Power (RSSI), Modulation Error Rate (MER), Signal-to-Noise Ratio (SNR), Carrier-to-Noise Ratio (CNR), BER before Viterbi (CBER), BER after Viterbi (VBER), BER after Reed- Solomon (RSBER), BER before Low Density Parity Check, BER before Bose-Chaudhuri-Hocquenghem, Bose-Chaudhuri-Hocquenghem FEC block Error Rate, Packet Error Rate (PER), Packet Error Number (PEN), Signal Quality Indicator (SQI), Strength Signal Indicator (SSI).

### Transport Stream Record

**rNode** can record a sample of the transport stream for later viewing by user request.

# What's new!

- Transport Stream Analysis (for TS integrity check);

- Several levels of login (distinct access to configurations and data: admin, installer, monitor);

- IP Streaming of Transport Stream (to feed PCs in the **rNode** LAN).





# rCenter

A cloud based centralized system that gathers measurements from **rNodes** and provides an extensive set of statistics, graphs and reports. It is a powerful database which allows the end-user to select a time frame where one can consult in detail each measure.

DVB-T/T2 Real Time Measurements RSSI, MER, SNR, CNR, CBER, VBER, RSBER, PER, PEN, SQI, SSI.

#### Measurement statistics

Histogram; Probability Distribution Function; Complementary Cumulative Distribution Function; Standard Deviation, Average, Maximum, Minimum and Median;

## Probes Map Location;

Configuration Probe Parameters; Alert Thresholds; Probe Groups;

Event-based sytem For dealing with Alerts and Errors;

User and Profile Management;

High Availability and Redundancy.

#### Auditing;

A complex event processing (CEP) engine is provided by rCenter, allowing the user to fully study the measures retrieved from each rNode. Using its user friendly query interface, this engine provides a powerful tool to detect variation patterns on one or more variables for a given period of time for a set of rNodes.

# What's new!

- Meteorologic information based on rNode location.



# rInstaller

On a distributed measurement platform, someone have to guarantee for each probe, the right installation procedure, the collection of coordinates and antenna elevation, correction factors dependent on the antenna and coaxial cable and the conformance of each probe with the ITU-R SM-1875 recommendation.

**rInstaller** is an Android APP that guides the installer and collects installation data and measurements results in an automatic report for each **rNode** installation process, thus being a priceless tool for large scale deployments.

**rInstaller** guides the installer to define the best server according to ITU-R SM-1875 recommendation. The installer rotates the antenna in 10° intervals up to 360°, after which, the rInstaller will plot the MER and Receiving Power azimuthal diagrams and will notify the installer of the azimuth for the best DVB-T/T2 server.