

A solar-powered tracker with worldwide LTE multiband connectivity.



Track anything, anywhere.
A solar-powered smart logistics tracker enabled by Virtual Antenna™ technology.

SODAQ, a Netherlands-based design house for low power trackers and sensors, has joined the latest off-the-shelf antenna technology revolution to provide worldwide LTE connectivity to their latest solar-powered trackers. Ignion's ALL mXTEND Virtual Antenna™ enables the SODAQ "TRACK Solar" with a worldwide multiband LTE connectivity.



THE CHALLENGE

A total of 100 billion connected smart devices expected by 2050 would fill approximately 300 Olympic-sized swimming pools with AA batteries per year without the use of energy harvesting. SODAQ faced the challenge of creating an autonomous, more sustainable tracker of which the battery does not need to be replaced and can have cellular multiband connection worldwide, in a compact form-factor whereby the small solar panel is fitted in a 6.9 x 6.9 cm enclosure.

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- Kees Hogenhout, RF Engineer, SODAQ

THE SOLUTION

Working side-by-side, Ignion supported SODAQ in the development of a solar-powered tracker product, which covers LTE-M frequency bands by using the versatile ALL mXTEND™ Virtual Antenna™ component. "Next to the appreciated Ignion Antenna Intelligence Cloud, the off-the-shelf LTE antenna of Ignion is unique. It is able to cover all the LTE required bands, in Europe and in the United States," Kees Hogenhout, RF Engineer, SODAQ.

During the engineering process Ignion and SODAQ managed to achieve the highest possible efficiency in the smallest space for all possible network frequencies globally, including the challenging connection at 700MHz. On top of this, due to the versatile nature of the Virtual Antenna™ technology, the result is an antenna configuration that SODAQ can re-use for other projects, such as the SODAQ AIR. Having multiple projects benefit from one optimization exercise, gives SODAQ a more efficient development cycle and a shorter time to market.

ACHIEVEMENTS

700 Mhz

Low bands within a small antenna

6.9x6.9 cm

High-performance LTE connectivity in a small enclosure

one for all

One antenna, all projects. Saving design time and cost