

# Smart parking sensor with optimized performance



Parking sensor with robust connectivity in difficult environmental conditions.

Established in 1978, Nietzsche Enterprise Co., Ltd. (NHR), an ISO9001 certified manufacturer, has been engaged in wireless communication and power solutions for over 35 years and continues to focus on meeting current and future market needs in Wireless Sensing Network.



## THE CHALLENGE

The environmental conditions of a parking area made us face a challenge for a robust connection. NHR had in mind a parking sensor device that could get the maximum performance despite external materials such as concrete walls.

**“The high-performance antenna and a very professional and easy design path were key considerations when we chose Ignion.”**

- Shih-Yin Chang, Nietzsche Enterprise Co., Ltd.

## THE SOLUTION

Ignion supported Nietzsche Enterprise Co., Ltd. in the development of a smart parking sensor product, which covers NB-IoT and LoRa WAN frequency bands by using the versatile RUN mXTEND™ Virtual Antenna® component, ready to use for all the cellular bands and get the maximum performance in the field.

The RUN mXTEND™ Virtual Antenna® component is the perfect solution for devices where volume and cost are constrained but maximum performance is desired.

## ACHIEVEMENTS

**6 weeks**  
antenna  
design path

**high-performance  
multiband**

All desired cellular bands covered:  
LTE B3+B5+B8+B20+B28

**Local support**  
Ignion's worldwide  
integration experience