



## **NXP and VW share the wide possibilities of Ultra-Wideband's (UWB) fine ranging capabilities**

*Volkswagen showcases future use cases with UWB equipped concept car: higher levels of theft protection, safety, convenience*

**HAMBURG, August 26, 2019** – NXP Semiconductors N.V. (NASDAQ: NXPI) and Volkswagen have shared early glimpses into Ultra-Wideband (UWB) technology and its future applications. In a Volkswagen concept car, the companies showed the capabilities of Ultra-Wideband for advancing security, safety and convenience in vehicles. Lars Reger, CTO of NXP Semiconductors, and Maik Rohde, head of body electronics and car access systems, Volkswagen, discussed the pioneering collaboration as part of a broader, cross-industry push to leverage the **unique capabilities of UWB: accurate localization and fine ranging at maximum security levels.**

In automotive alone, UWB will enable interesting new use cases such as automated trailer hitch activation, in-cabin passenger detection, automated valet parking, hands-free parking, lot access and drive-through payment, to name a few. Another interesting application is walking pattern recognition for car access, which was demonstrated in the VW concept car. The Volkswagen UWB car key used high-precision sensing technology and Artificial Intelligence to learn personalized user gestures.

Developers of groundbreaking applications in a broad range of markets including mobile, automotive, Internet-of-Things (IoT) and the Industrial space, have been actively seeking a secure, fine ranging technology that delivers precise outdoor and indoor localization. UWB meets these requirements and is a clear enhancement compared to existing wireless technologies such as Wi-Fi, Bluetooth and GPS. Its ability to process contextual information such as the position of the UWB anchor, its movements, and distance to other devices with an unprecedented precision of a few centimeters in real-time, will enable a host of new and exciting applications.

### **Quotes:**

Lars Reger, Chief Technology Officer, NXP: We see enormous potential in UWB. As a co-founder of the FIRA Consortium we are working to enhance the technology, drive its standardization and also to develop new use cases. A potential application, that I personally find very compelling, is the potential UWB has to replace the key ring for your home, office or car.

Maik Rohde, head of body electronics and car access, Volkswagen: The first UWB application we see is in theft protection – another security milestone which you will see in volume Volkswagen car models starting this year. But this is only the beginning. UWB, especially when combined with high-precision sensors and Artificial Intelligence, can deliver further benefits. Some of these you can experience in our concept car.

### **LINKS for further information on UWB:**

NXP Ultra-Wideband: <https://www.nxp.com/applications/solutions/ultra-wideband:UWB>

FIRA Consortium: <https://www.firaconsortium.org/>



### **New levels of theft protection**

UWB helps to prevent car theft that attempts to eavesdrop on car key communication.



### **Gesture recognition for personalized car access**

Combining high-precision sensing with Artificial Intelligence, the UWB car key is able to learn personal gestures for easy opening of the vehicle doors



### **Automated trailer hitch activation**

Car and trailer seamlessly engage for easy, convenient attach



### **Infant Carrier / Airbag control**

Verifying the proper installation of the infant carrier / safe airbag activation



### **Easy open**

Combining high-precision sensing with Artificial Intelligence, the UWB car key is able to learn personalized gestures for easy opening of the trunk

### **About NXP Semiconductors**

NXP Semiconductors N.V. enables secure connections for a smarter world, advancing solutions that make lives easier, better, and safer. As the world leader in secure connectivity solutions for embedded applications, NXP is driving innovation in the automotive, industrial & IoT, mobile, and communication infrastructure markets. Built on more than 60 years of combined experience and expertise, the company has approximately 30,000 employees in more than 30 countries and posted revenue of \$9.41 billion in 2018. Find out more at [www.nxp.com](http://www.nxp.com)

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