



# Media information

## Digital key to new business models: on demand safety and comfort functions with Huf Phone as a Key

Velbert, February 16<sup>th</sup>, 2021 | Drivers can now use a digital key to open and lock car doors and even start the engine. What's special about Phone as a Key from Huf is that users no longer need to have their smartphone in their hand. The complete package of hardware and software solutions automatically recognizes the verified digital key on a smartphone, enabling passive authorization. The smartphone comes even more into focus as drivers can use it to add additional comfort features via an app. These "Functions on Demand" are integrated into Phone as a Key and allow car manufacturers to access new business models. What's more, the scalable Phone as a Key system can be adapted to suit individual customer requirements and, thanks to an AUTOSAR-compliant electronic control unit, can be integrated into virtually any vehicle architectures.

"Car manufacturers have very particular requirements regarding car access and authorization. This is hardly surprising given the fact that the automotive experience begins as the driver approaches the vehicle," says Claus Vollmer, Head of the Business Unit Locking & Authorization at Huf. "Huf is the specialist when it comes to this important first impression and is offering a future-proof solution with Phone as a Key. Our system already enables passive authorization, the most sophisticated way to open, start, or lock a vehicle. But it's not just in terms of driver authorization that Phone as a Key is opening up new opportunities; the extremely accurate sensors in the system enable additional comfort features, which car manufacturers can offer their customers as 'Functions on Demand'. Phone as a Key from Huf is therefore paving the way for lucrative business models for the mobility of the future."

### **Phone as a Key offers 'Functions on Demand' based on wireless technologies BLE and UWB**

At the heart of Phone as a Key is the intelligent software that gathers sensor data and processes digital keys. Huf also offers an electronic control unit that has been developed in accordance with the global AUTOSAR standard and can therefore be integrated into virtually any vehicle architecture. The various sensors turn Phone as a Key into a complete package and guarantee reliable communication between car and smartphone. Opting for a sensor package that includes Bluetooth Low Energy (BLE) and Ultra Wide Band (UWB) opens up new business areas to car manufacturers with so-called "Functions on Demand". Huf uses the UWB and BLE sensors integrated in the vehicle not only to locate the smartphone with centimeter accuracy. The sensors can also recognize objects as well as people and gestures. Huf is therefore creating opportunities for various additional functions for enhanced comfort and personalization, which car manufacturers can integrate into their equipment packages or offer their customers as "Functions on Demand" that can be purchased from within the app.

UWB also plays a role in safety: starting in 2022, the detection of children inside the vehicle (Child Presence Detection) will be included in the evaluation framework of the Euro NCAP crash test. NHTSA, the American federal agency for road and traffic safety, also takes this technology into consideration when awarding its coveted safety rating stars. Child Presence Detection can be carried out by the existing sensors in the Phone as a Key system from Huf, although, in contrast to the "Functions on Demand", this will be included as standard.

"UWB enables extremely precise positioning and increases the level of protection against theft considerably. With UWB, so-called relay station attacks, in which thieves extend the wireless signals so that they can open vehicles, are a thing of the past", says Jürgen Stadler, Head of Development in the Business Unit Locking & Authorization at Huf. "We are striving to make UWB the standard by working with car manufacturers and tech giants such as Apple, Samsung, and Google as a member of the Car Connectivity Consortium. We are already seeing excellent performance from the compact UWB sensors in our demo cars, which are available to customers worldwide for benchmark tests. It is only top-of-the-range smartphones that currently feature UWB. NFC, on the other hand, is widely available. This is why car manufacturers are focusing more on this technology for the time being. This also means that NFC cards or wireless keys that are needed to register smartphones and smartwatches in vehicles are still in demand. As a specialist in wireless keys and NFC technologies, we also offer excellent solutions in this area", continues Stadler.

#### **Liberkee: digital key not only opens car doors**

In 1989, Huf was the first automotive supplier to introduce a wireless key into a series-production vehicle. This innovative technology made its debut in the Mercedes SL (R129). In the late 1990s, Huf applied the same pioneering spirit to passive driver authorization as it did to NFC technology, which was installed in the door handle of the Mercedes E-Class in 2016, enabling the driver's door to be opened via a smartphone.

Since 2013, Huf has been offering digital keys as a retrofit solution for rental cars and fleet vehicles. With its latest innovation, Liberkee, the subsidiary of the same name is going one step further. The team is currently working on enabling smartphone users to manage digital keys for their car, home, and even building complexes or office spaces within a single application. The digital authorization and access system is based on asymmetrical encryption methods and can be combined with virtually all common access solutions. Digital keys can also be shared outside of the app via e-mail, SMS, or WhatsApp. The function is then executed via a link, without having to install the Liberkee app. Liberkee works across all manufacturers and is the ideal solution for the networked mobility of tomorrow.

**Images and further information are available via the following link:**

[Huf Group Newsroom](#)

**For a video about Huf Phone as a Key please visit the**

[Huf Group Youtube channel](#)

#### **About the Huf Group**

*The Huf Group develops and produces mechanical and electronic locking systems as well as vehicle access and authorization systems for the global automotive industry. Established in Velbert by Ernst Hülsbeck and August Fürst in 1908, the family-owned company today has locations in Europe, America and Asia. According to a study conducted by Handelsblatt, Huf is among the 20 most innovative companies in Germany. In the 2019 financial year, the Huf Group generated sales of roughly €1.1 billion and employed around 9,300 people worldwide.*



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