# FutureHorizons

The Global Semiconductor Industry Analysts

## **FH MONDAY**

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### Distributors in China Are Bracing For Life Without TI

SHENZHEN, China — Those who packed a ballroom at the Global Distribution and Supply Chain Leaders' Summit last week couldn't stop talking about Texas Instruments' recent decision to cancel distribution agreements.

TI's move will reportedly lead to the loss of at least 1,000 jobs of sales and field application engineers (FAEs) in China.

The Dallas, Texas-based chip giant launched a bold initiative to do the company's business in China without relying on distributors. TI quietly made that announcement early October during China's national holiday week.

#### Graphcore's AI Chips Used in Microsoft's Azure Cloud

LONDON — Graphcore's AI accelerator chip, the Colossus intelligence processing unit (IPU) is now available for customers to use as part of Microsoft's Azure cloud platform.

This is the first time any major cloud service provider has publicly offered customers the opportunity to run their data on an accelerator from any of the dozens of AI chip startups and as such, it represents a big win for Graphcore. Microsoft has said access will initially be prioritised for customers who are "pushing the boundaries of machine learning".

#### Momentum Picking up for Digital Keys for Cars

The momentum on digital keys for cars is picking up as NXP announced its latest ultra-wide band (UWB) chip to enable smartphones to unlock cars, while BMW is driving the next-generation Digital Key 3.0 specification featuring UWB through the Car Connectivity Consortium (CCC).

Following on from its September launch of its UWB chipset for mobile devices, NXP has now introduced the counterpart UWB chip for the car, the NXP NCJ29D5. This means it now has a UWB solution for the key fob, smartphone and car, which the company said opens up the possibility for true handsfree smartphone access and remote parking, enabled by the precise distance management and localization capability of UWB technology.

#### **EV Battery Life Depends on Precise Management**

The Texas Instruments has created a new device that performs high-precision measurements for three to six battery cells. Electric vehicles (EVs) commonly rely on multiple batteries that must be balanced to achieve maximum battery efficiency. The new TI part will be critical for battery management systems in EVs.

EVs simply perform better than traditional vehicles equipped with internal combustion engines. Electric motors are characterized by greater efficiency, and deliver excellent performance. These motors make it possible to considerably simplify the mechanical design of vehicles as well, by drastically eliminating the noise level and polluting emissions.

Electric vehicles have disadvantages too, however, and many of them are directly related to batteries and battery management. They include range limitations and long recharging times which result from the technology currently used in electrical energy storage systems. EVs and hybrid (HEV) vehicles, in which currents and voltages are generated with very high values, also must comply with the most rigorous safety standards, ensuring that any failure or damage to the electronic components onboard the vehicle does not create a risk for the occupants of the vehicle.

#### NXP Adds Latest Automotive UWB Chip As BMW Drives Digital Key 3.0

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Ultra-wideband technology is considered to provide precise, secure, real-time localization capabilities unrivaled by other wireless technologies such as Wi-Fi, Bluetooth, and GPS. Devices equipped with a UWB radio that come into range of another UWB-based device start ranging using time of flight (ToF) measurements between the devices, calculating the roundtrip time of challenge/response packets