

Media Information  
22 July 2019

## **5G mobile network goes live at all BMW Brilliance Automotive production sites in China**

- 100% coverage at BMW Brilliance Automotive's three plants
- Data rate of one gigabit per second
- First pilot project transfers data from test vehicles to the data centre

**Shenyang.** BMW Brilliance Automotive (BBA) has become the first automobile manufacturer to enable full 5G wireless coverage at all its plants. The new wireless standard allows large quantities of data to be transferred within a very short space of time, since data will now be processed in small, high-performance computer centres directly on site and no longer has to travel long distances. This means that networked machines and systems can exchange data in real time, for instance, and align themselves even better with the production process. 5G provides the ideal conditions for numerous digital innovations and has the potential to further increase efficiency, quality and flexibility in production.

BBA is also implementing the technology in a pilot project that uses 5G to transfer large quantities of test data from vehicles to the data centre in real time, making data collection and analysis more efficient. In this way, vehicle updates involving large volumes of data and real-time diagnostics could also be conducted remotely in the future.

With this development, BBA becomes the first automobile manufacturer to use 5G technology in automotive development and production.

Johann Wieland, president of the joint venture between the BMW Group and its partner Brilliance China Automotive Holdings Ltd.: "5G is a ground-breaking technology with the potential to revolutionise industrial production. BBA is taking a leading role in testing the use of 5G and developing new innovations and procedures to improve industrial productivity."

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**Full 5G coverage, transfer rate of 1 Gbps**

BBA was the first 5G pilot company in Shenyang to begin developing a 5G network for its three plants back in October 2018. Once construction of the 21 mobile phone masts and 35 5G base stations was completed in April 2019, BBA already had full 5G network coverage at its car plants in Tiexi and Dadong, as well as at its powertrain plant. After only three months of technical optimisations, the 5G data rate increased from an initial 600 megabytes per second to one gigabit per second – fast enough to download an entire HD film in just a few seconds.

BBA sees the potential of 5G technology in many areas of production. Possible 5G application scenarios include augmented reality, cloud-based control of autonomous transport systems, human-machine interaction using mobile smart devices, robot-to-robot communications and communication between robotics systems and the control centre. Effective application of 5G technology in these areas has the potential to transform automobile production and boost productivity.

BBA partnered with China Unicom and China Mobile to build the necessary infrastructure and connect the 5G network across a total area of more than three million square metres.

**5G in the BMW Group production network**

The BMW Group is currently preparing to set up local, private 5G networks at its plants in Germany. The benefits of the new technology are not just in its high data rate and rapid response time, but also in the reliability and security of the network. It therefore offers optimal conditions for innovations that work with large quantities of data in real time. These include applications from the field of virtual and augmented reality, widescale networking of machines and the use of autonomous logistics fleets.

The long-term aim is to establish 5G networks at all BMW Group plant locations worldwide.

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**The BMW Brilliance Automotive joint venture**

The BBA Brilliance Automotive joint venture was founded in 2003. Over the past 16 years, it has become one of the most successful premium automobile manufacturers in China, encompassing production and sales of BMW automobiles in China, as well as local development tasks. In 2018, the BBA automotive plants in Tiexi and Dadong produced over 490,000 vehicles for the Chinese market – an increase of almost 24% year-on-year. BBA employs a total of more than 18,000 people.

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**The BMW Group production network**

Strong customer demand and the launch of new models resulted in high capacity utilisation for the BMW Group's production network in 2018. With 2,541,534 vehicles produced for the BMW, MINI and Rolls-Royce brands, production volumes reached a new all-time high. This figure included 2,168,496 BMW, 368,685 MINI and 4,353 Rolls-Royce units. The company's German plants produced more than one million vehicles.

With its unparalleled flexibility, the leading-edge production system is in excellent shape for the future. Based on Strategy NUMBER ONE > NEXT, it is characterised by a high level of efficiency and robust processes. The BMW Group's production expertise represents a decisive competitive advantage and contributes to the profitability of the company and its sustainable success.

Quality and speed of reaction are key factors in the BMW production system, as well as flexibility. Digitalisation, standardised modular concepts and intelligent composite construction testify to the high

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level of expertise within the production network. At the same time, the production system offers a very high level of customisation and allows customer specifications to be modified up until six days before delivery.

**The BMW Group**

With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises 31 production and assembly facilities in 15 countries; the company has a global sales network in more than 140 countries.

In 2018, the BMW Group sold over 2,490,000 passenger vehicles and more than 165,000 motorcycles worldwide. The profit before tax in the financial year 2018 was € 9.815 billion on revenues amounting to € 97.480 billion. As of 31 December 2018, the BMW Group had a workforce of 134,682 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving resources as an integral part of its strategy.

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