

## CASE STUDY

# BMW BRILLIANCE, SHENYANG: TOWARDS THE INTELLIGENT FACTORY

With high speed IT infrastructure solutions Datwyler is assisting BMW Brilliance in China in setting up their first “smart factory”.



On 1st April 2020 the go-ahead was given for the “Lydia” factory in Shenyang, which will significantly expand the production capacity of BMW Brilliance in China. In the new plant the company’s emphasis is on digitalisation and sustainable development – throughout the whole process from planning to mass production. In terms of new technologies and infrastructure solutions “Lydia” will be one of the most efficient digital automotive plants in the world.

Datwyler, as IT infrastructure provider, was involved in “Lydia” at an early stage: with technical presentations, practical solutions, high-performance cabling products and professional support. This IT infrastructure project is generally considered to be one of the most advanced in the world, for in China Datwyler is the first provider to use structured building cabling for Industry 4.0 technology.

### Simultaneous challenge and incentive

After the outbreak of the Covid 19 pandemic it became difficult to deliver goods produced in Europe to North-

east China. Last year Datwyler management put the project on the priority list to enable it to be implemented smoothly. Thanks to close coordination with those in charge on site and to careful preparation – from production planning to transportation – all the difficulties were overcome and the goods were delivered on schedule.

At the same time Datwyler spared no effort to protect its own staff from infection during the whole process. For example, the products which had already been disinfected at Chinese customs were sterilised again in Datwyler’s Taicang plant.

During planning and network design the focus was mainly on two aspects: firstly the requirements of the applications in the Lydia plant, and secondly the development trends of the BMW Brilliance intelligent systems and data centre, both essential for a “smart” factory. The aim was to ensure that the IT infrastructure solutions not only met the current system requirements, but were also ready for future expansions and upgrades.





### Client-specific high-performance solutions

The plant's intelligent communications network comprises shielded Cat.7 data cables and shielded Category 6<sub>A</sub> RJ45 modules which meet the requirements of 10 gigabit Industrial Ethernet. A future upgrade to higher-performance modules is envisaged.

A preassembled OM4 fibre optic system and a Category 6<sub>A</sub> patch cable system are being used in the data centre. The preassembled fibre optic cables and components from Datwyler give BMW Brilliance several advantages: low insertion losses, fast installation and stable dependable performance. Thanks to its modular design the plug-and-play solution can be manufactured, completed and tested in the Datwyler plant – in parallel and synchronously with the other work involved in establishing the data centre

infrastructure. This allows fast usage when implementation is completed on site.

The Category 6<sub>A</sub> patch cables are supplied customised by Datwyler. The specific lengths correspond to the distances between the racks. What is more, Datwyler supplies them in bundles corresponding to the relevant number of ports. Last but not least, the patch cables are colour-coded, with each colour standing for a specific application. This simplifies both cable management and maintenance, and improves the sophisticated system management overall.

### Long-term partnership

The first phase of the project will be completed in 2022, the second in 2025. It is anticipated that "Lydia" will include more than 600 kilometres of fibre optic cable and 1000 kilometres of Category 7 copper data cable.

Datwyler has been working with BMW Brilliance for over ten years. During this time the IT infrastructure provider has grown together with the client, has addressed the changing requirements, and established a reputation with various Chinese plants and projects as a reliable service provider. The new BMW Brilliance plant represents a change in company strategy – a change which Datwyler is happy to face.

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