

## Our Client is A Revolutionary Leader in the Automaker Industry

Headquartered in the United States with a global presence, our Client is a revolutionary leader in the automaker industry. Their core business produces state-of-the-art plug-in and battery electric passenger automobiles to reduce the over-reliance on petroleum usage tagged to fluctuating price hikes arising from the supply and demand market forces. The benefit of an electric vehicle outweighs conventional gas-powered cars by helping to reduce the emissions that contribute to climate change, improving public health and reducing ecological damage.

Founded more than 15 years ago, our Client has steadily gained trust and recognition from consumers globally with their quality of products and cutting-edge battery technology. In 2020, they sold almost half a million vehicles, a 20% surge in units sold compared to 2019.

Fast forward to today, our Client is a public-listed company with surging stock prices and over US \$700M in profit in 2020. They have several partnerships and joint ventures with other well-known automakers in Europe, China, and India.

**Driving in comfort is an important factor in improving safety, as the features that add to both the safety and comfort level makes driving easier - which are major considerations in the purchase of a new vehicle.**



# COMFORTABLE STEERING FOR A SAFER DRIVING EXPERIENCE

## Our Client's Application: Heated Steering Wheel

A steering wheel is the main controlling unit in a car with several built-in functions to manage the audio system selection and volume, cruise control and cell phone connectivity etc.

Heated steering wheels are common in this day and age. Driving in cold weathers or freezing conditions with a chilling steering wheel could result in an unthinkable consequences on the road. This feature may look insignificant or non-essential during fair weather conditions, but it plays an extremely important role in contributing to road and passenger safety.

When the sensors detect a decrease in the surrounding temperature of the car, the heating element in the steering wheel automatically warms the rim of the wheel uniformly, powered by the battery management system.



The **three key requirements** our Client needed for the connectors to drive the heating module are:

1. To transmit a high current of 10A.
2. A miniature sized connector that will fit onto their printed circuit board assembly (PCBA) in the steering wheel.
3. An automotive connector with an operating temperature of up to 125°C.

## Our Solution

The ERNI MaxiBridge board-to-cable connectors are designed with a high current capacity of up to 12A per contact on a 2.54mm pitch, not only did it fulfil the requirements, but also exceeded the demands of our Client. It is available in different pin counts from 2pin to 8pin in a single row, and 10pin and 20pin in a dual row configuration in four different coloured codings (black, blue, green, red).



Other key features include:

- The ability to withstand extreme temperatures ranging from -55°C to +150°C (particularly suitable for applications with higher temperature requirements).
- A dual crimp interlocking system to secure the crimp contacts in the female housing connector and a double-sided housing interlocking for a reliable connection during mating.
- A high degree of vibration performance (5 Hz – 1000 Hz) according to the automotive requirements.
- Designed based on VW75174 and USCAR-2 specifications.

The MaxiBridge connectors are suitable for use in a diversified range of applications in the automotive, industrial automation, medical, lighting and telecommunication industries.

Browse our MaxiBridge connectors at [www.erni.com/MaxiBridge](http://www.erni.com/MaxiBridge)

At ERNI, we support our clients through their entire developmental journey - from the prototype design to their finished product. Our class-leading experience and vast knowledge in the automotive industry gives us a competitive edge over other manufacturers. It is no coincidence that our clients hold ERNI in high regard as an innovative leader and supplier of high-quality electronic connectors worldwide.

Contact us today at [info.eah@erni.com](mailto:info.eah@erni.com) if you wish to learn how ERNI can help you!