

# AUTOMOTIVE SOLUTIONS BY ERNI

We put the future onto the road.



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# ERNI – partners for the automotive future

■ **MANY PATHS LEAD TO YOUR DESTINATION.  
AND SOME GO EVEN FURTHER.**



Thinking ahead is an essential part of the work we do. In close cooperation with our clients, that's how we manage to create not just new products and solutions, but also perspectives for the future. For several decades. This long-standing experience in research and development makes us the ideal partner for the evermore demanding automotive sector. With locations in Europe, North America and Asia, ERNI is one of the world's most sought-after producers of plug connectors today. You've got an idea? We can find the ideal solution together. Regardless of what stage of development your concept is in, ERNI will develop your components from the first thought to full-scale production.

## ERNI Components for Hybrid Drive

### ■ GET TO THE FUTURE FASTER.

Hybrid technology: no more than a question of faith several years ago – today it's the answer to ever-stricter legal emissions regulations and rising fuel costs. Now every well-known car manufacturer has economical hybrid-engined models in their range. And that's where the optimal connection of electric and internal combustion engines plays a leading part. ERNI connector solutions such as SMC, MiniBridge and MaxiBridge, for example, are built into many hybrid vehicles. Certification according to ISO TS 16949 gives you the added security that you've got the right partner on board with ERNI.



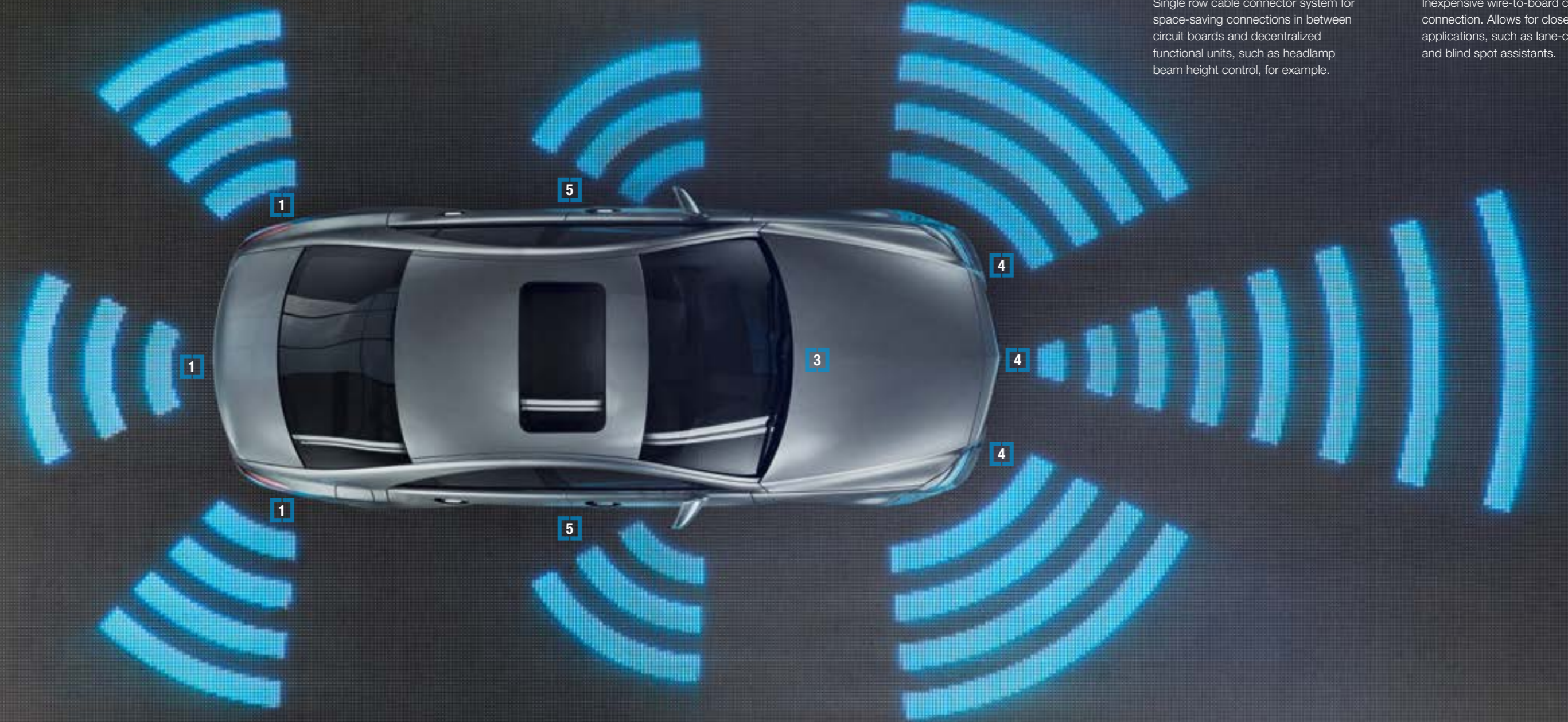
- 1 SMC**  
 Extremely compact and universally applicable plug-in connectors for reliable data transmission up to 3 Gbit/s.
  
- 2 MiniBridge**  
 Space-saving cable plug system with a current rating of up to 8 A per contact. For temperatures up to 150 °C.
  
- 3 MaxiBridge**  
 Robust cable plug system for a current rating of up to 12 A per contact. Ideal for demanding connections.

# ERNI Components for Assistance Systems

## ■ EVEN DRIVER ASSISTANTS NEED AN ASSISTANT.

Cars are becoming evermore intelligent with their many driver aides. Anything is theoretically possible these days. Anything is practically possible as well. We see how the vision of autonomous driving is quickly becoming a reality. And those who want to keep pace with today's rapid developments need to always be one step ahead. At best two steps ahead. Because data needs to be captured and processed in thousandths of a second. And only with reliable connections is it possible to provide for the perfect interplay between the most varied systems. ERNI MaxiBridge cable connectors can fulfill even the most demanding technical challenges – such as in highly sensitive front and rear camera solutions.

- 1 MaxiBridge**  
Very robust cable connector with double interlock for high levels of stress from vibration, such as in rear view cameras or parking sensors, for example.
- 2 SMC**  
Extremely reliable plug-in connector system with two-sided contacts. Ideally suited to adaptive cruise control systems and emergency braking aides.
- 3 MicroSpeed**  
Shielded plug-in connector system for high transfer rates and large amounts of data for the real time connection of intelligent ESP systems and lane-hold assistants.
- 4 MiniBridge**  
Single row cable connector system for space-saving connections in between circuit boards and decentralized functional units, such as headlamp beam height control, for example.
- 5 IDC PCB-Terminal**  
Inexpensive wire-to-board cable connection. Allows for close-packed applications, such as lane-change and blind spot assistants.



## ERNI Components for Safety Systems

### SOME THINGS ARE TOO IMPORTANT TO TAKE CARE OF ALONE.

Divided knowledge is double knowledge. The pace of automotive development has substantially picked up in recent years through the connection of the most varied competencies. But above all, it can't go fast enough when it comes safety-relevant assistance systems. Intelligent headlight systems with dynamic cornering are already standard in many car models. Just like airbags that know exactly how heavy the passengers are, allowing them to adapt to them precisely. And ERNI is a key constituent of these important developments – with components that guarantee the highest levels of reliability in many active and passive safety systems. Like the MiniBridge in electric steering systems, for example.



- 1 MiniBridge**  
 Miniature plug-in connector with a current rating of up to 8 A per contact. Available specially for the automotive sector as a Koshiri variant.
- 2 MaxiBridge**  
 Versatile application through straight and angled dual-beam connectors in SMT technology, such as in space-saving connections in headlights, for example.
- 3 Pressfit terminations and contacts**  
 Pressfit terminations and contacts certified for the automotive industry with elastic and gas-sealed pressfit zone are ideal for use in airbags.

# Automotive Solutions from ERNI

## VARIETY IN DETAIL:

Little things often make a big difference. We contribute to the increases in reliability from generation to generation of cars with ERNI connection technology for the automotive industry.



### MaxiBridge

- 2.54 mm pitch
- Up to 12 A current rating per contact
- Fulfills the applicable guidelines of LV 214

### Pressfit terminations and contacts

- Project management, design, toolmaking and full-scale production
- Elastic, gas-tight pressfit zone
- Automobile-certified pressfit zone



### PowerElements

- Same torque as with pressfit elements up to 17 Nm
- Current rating per contact of up to 200 A per PowerElement
- Suitable for fully automatic mounting



### MiniBridge

- 1.27 mm pitch
- Up to 8 A current rating per contact
- Fulfills the applicable guidelines of LV 214



### MicroCon

- 0.8 mm pitch
- Up to 2.3 A current rating per contact
- Data rate up to 3 Gbit/s



### SMC

- 1.27 mm pitch
- Up to 1.64 A current rating per contact
- Data rate up to 3 Gbit/s



### MicroStac

- 0.8 mm pitch
- Up to 2.2 A current rating per contact
- Extremely small board-to-board heights possible



### MicroSpeed

- 1.00 mm pitch
- Shielded design with outstanding EMC properties
- Data rate up to 25 Gbit/s



### iBridge

- 2.0 mm pitch
- Up to 5 A current rating per contact
- Halogen-free housing material



### MiniMez

- 1.27 mm pitch
- SMT- and THT-terminal possibilities
- Reinforced sidewalls for robust applications



### IDC PCB-Terminal

- AWG 24 and AWG 22
- Nominal current: 6 A (AWG24), 17 A (AWG22)
- Cost-efficient cable to circuit board connection



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