



Benefit from Ensuring that Your  
Rail Applications Comply with SIL 4

---

# Safety as Standard

---

# Simplify Infrastructure and Become Future Proof

---

In only a few industries are the safety requirements as high as in the rail industry. And it is to be expected that regulations will only become stricter. There is a diverse range of safety solutions on the market for protecting technology, employees, and passengers. However, the implementation of these solutions is time consuming and costly as they must be adapted to the respective application. When this type of system has been put into operation, it can also be retrospectively modified to new conditions but only at significant expense. Furthermore, the safety controllers used are often technically complex and oversized, something that makes maintenance more difficult.

## Is Vendor Lock-In Resulting in Limitations?

Above all, most available solutions are based upon proprietary controllers from just a few manufacturers that are not compatible with one another. The disadvantage of this is that if a customer decides on using a single manufacturer, then they are often limited to this provider only. This creates a relationship where one party is dependent. This is known as vendor lock-in, which often gives little leeway for customers in areas such as price negotiations. Up until now, de facto independent integrators were also unable to offer a satisfactory alternative, as they were reliant on proprietary hardware, too.

In the future, this business model will no longer be viable. The rail market is changing, and it will eventually change considerably. The amount of passengers is rising, cost-pressure is increasing, and digital transformation is having a significant impact on the industry. Rail operators are frantically searching for more flexible and cost-efficient safety solutions, while integrators are looking for ways in which they can offer this exact type of solution. This is where HIMA comes into play.

Up to  
**30%**   
lower lifecycle costs achieved by HIMA customers through using interlocking solutions.

Find out how to continuously secure rail applications with commercial off-the-shelf components.



Rail operators have a difficult balancing act. The safety requirements and profit margins for their businesses are particularly demanding and are becoming increasingly stringent. Likewise, the need to modernize is huge. However, budgets are tight. This means that the safety solutions of today must not only offer high performance and reliability, but also remain flexible and affordable.

Safety controllers from HIMA therefore form the foundation for this. With commercial off-the-shelf (COTS) components, operators are independent from proprietary systems, reduce costs, and remain flexible for future requirements. At the same time, they fulfill the safety standard SIL 4 in accordance with CENELEC.

---



The HIMax and HIMatrix COTS controllers fulfill every safety requirement for the rail industry.

Would you like more detailed information? Ask us about the technical facts for HIMatrix and HIMax.



# Universal Safety

HIMA safety systems are based on commercial off-the-shelf technology. This means that they are mass produced, standardized, and can be implemented into all rail applications without requiring modifications. They also comply with all safety standards in the rail industry and meet the requirements of SIL 4 in accordance with CENELEC.

## HIMA controllers fulfill all relevant rail standards in accordance with CENELEC:



- EN 50126 for the entire system
- EN 50128 for software
- EN 50129 for hardware
- EN 50155 and IEC 61373 for rolling stock applications

More certificates can be found at [www.hima.com](http://www.hima.com)

The open controllers are manufacturer independent. Every integrator can use their own safety solution and operators are presented with products that perfectly suit their needs.

## Two Product Ranges, One Single Goal

Depending on your individual requirements, either HIMatrix or HIMax will be best suited to your needs. In most cases, HIMatrix is the most appropriate option, as it is a compact system that can be deployed centrally or otherwise. It withstands high temperature fluctuations (-25°C to +70°C) that are common in rolling stock applications.

HIMax is ideal for large applications, such as entire train stations. Using this controller, you can structure redundant architecture. If a controller fails, your safety system continues to run. Furthermore, modifications are possible during operation. You can also add or replace modules at any time.

## Certified Safety for Every Application

Both HIMatrix and HIMax are already TÜV certified and can be directly implemented without requiring additional testing. When you need to make retrospective changes to your application, the HIMA hardware does not have to be newly certified.

Regardless of whether you have to secure train components, signaling systems, interlockings, or level crossings, HIMA controllers are issued ex works and retrofitted for your intended purpose. For example, they are vibration and shock resistant (DIN EN 61373).

## Do-It-Yourself Engineering

With the integrated engineering software SILworX you can centrally configure and program your COTS solution from HIMA. Error diagnosis uses the same intuitive user interface. Therefore, fewer application errors arise and the application can go into service more quickly. Rights management as well as anti-virus and firewall compatibility provide additional protection.



A focus on core business: The controller and application are clearly separated.



Benefits

---

## The Most Important Reasons for Choosing COTS from HIMA

---

COTS controllers from HIMA guarantee you vital benefits, including:

**You become independent.**

HIMA systems are vendor neutral. Integrators can develop solutions that are not based on expensive proprietary controllers and, consequently, can introduce affordable products to the market. These products could help make the difference against the competition. Operating companies have a wider selection to choose from and avoid vendor lock-in.

**You become more flexible.**

You can use standardized HIMA controllers practically anywhere – from a deadman’s control system in a train to complex interlocking systems. Spare parts will be available and in production for the long term – up to a period of 30 years. They are always in stock and can be acquired at short notice.

**You reduce lifecycle costs.**

Compared to proprietary solutions, COTS systems reduce costs over the entire lifecycle – from initial investment, to operation and maintenance.

**You stay safe for the future.**

If the requirements of your business change, you can add new modules to the hardware in the blink of an eye. Therefore, you can modify your safety solution or adapt it to completely new circumstances, such as transitioning through digital transformation.

---

“We were impressed by HIMA due to the company’s long-term experience with safety systems, the quality of these systems, and the commitment to certify products as SIL 4 compliant in accordance with CENELEC.”

---

**Peter Musters**  
Movares Nederland B.V.

Suitable for Every Application



- Signaling systems
- Interlocking
- Level crossings
- Rolling stock
- Power supplies
- Train protection systems

... and much more

## PRODUCTS IN DETAIL

### HIMA COTS FOR THE RAIL INDUSTRY

---

Would you like to learn more? Please contact us:

#### HIMA Rail Segment Team

Phone: +49 6202 709-411

E-mail: [rail@hima.com](mailto:rail@hima.com)

Or visit us online:

 [www.hima.com/en/industries-solutions/rail](http://www.hima.com/en/industries-solutions/rail)

## References

These companies trust HIMA COTS systems for the rail industry:

AT TRANS	(Russia)
DB	(Germany)
Efacec	(Portugal)
ISKRA Sistemi	(Slovenia)
Metro Istanbul	(Turkey)
Matisa	(Switzerland)
Kummler+Matter	(Switzerland)
Mipro Oy	(Finland)
Movares	(Netherlands)
AES	(Greece)
Aktor	(Greece)
Rail Control Systems	(Australia)
RDCS	(Austria)
Reuschling	(Germany)
Yapı Merkezi	(Turkey)
ProRail	(Netherlands)
Signalling & Control	(Serbia)
TCDD	(Turkey)
Zelisko	(Austria)



[www.hima.com](http://www.hima.com)