



netMIRROR

On the Hunt for Errors in Real-Time Ethernet Networks

netMIRROR facilitates quick and reliable troubleshooting in Real-Time Ethernet networks at factory service specialist Leadec

As the leading service specialist for the entire life cycle of factories and plants, Leadec plans, installs and maintains factories worldwide, providing properly functioning production lines all around the globe. One of the Stuttgart-based company's major competencies is finding and fixing errors within the communication networks of factories. Thus, Leadec is the first partner to contact for factory operators and system integrators when devices and machines do not communicate correctly with each other in industrial Real-Time Ethernet networks.

Since no two factories are alike, Leadec is often confronted with troubleshooting in highly diverse and complex systems. Each application represents a distinct use case and errors all too often are very hard to find. For this reason, it is particularly important for Leadec to be able to rely entirely on its tools and their measurement results.

In addition, plants must remain operable during troubleshooting as stopped manufacturing lines mean a loss of production, unfulfilled supply contracts and, in any case, an economic damage – which must be prevented at any cost. In order to face these challenges, Leadec is utilizing Hilscher's netMIRROR, a simple, reliable and efficient solution to implement a fully passive and permanent test access point (TAP) into industrial Real-Time Ethernet networks. With Real-Time Ethernet networks becoming increasingly common in modern plants, TAPs like netMIRROR have to meet rising requirements. netMIRROR proved its reliability when Leadec was searching for lost telegrams at the plants of one of its customers. The loss of data transmissions occurred irregularly and unpredictable, leaving the plant's operator at a loss about its cause.



netMIRROR in operation at a Leadec-supervised plant

Ultimately, Leadec was able to identify the error with the help of netMIRROR. The malfunction originated from faulty data cables causing interferences during the transmission of telegrams, eventually leading to a complete loss of data.

To ensure the reliability of its tools, Leadec has developed seven different test procedures and examined 25 TAPs to date, of which less than ten percent have passed. Following the successful trial by fire and helping to find the lost telegrams at Leadec's customer, the industrial service specialist put netMIRROR through its paces and realized, that Hilscher's solution met its high standards. As a completely passive device, netMIRROR does not interfere in any way with the network it is integrated into. Even in the event of a malfunction or power loss, the network and the plant remains operable, which makes netMIRROR a perfect solution for a permanent TAP.

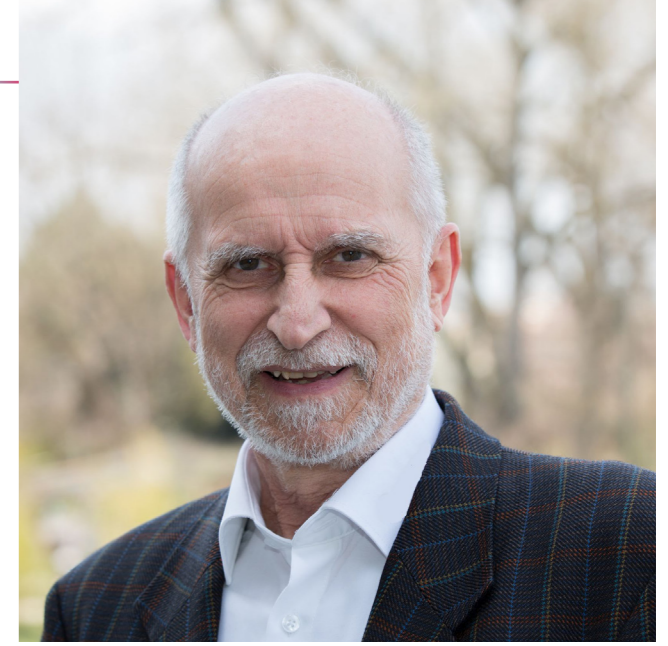
Utilizing Hilscher's proven and reliable technology, the German industrial service specialist has established the foundation to further develop ideas of its customers. These include, among other things, integrating its knowledge and know how regarding troubleshooting into digital twins of machines. In order to realize and implement such ideas, Leadec must be able to rely on safe measuring equipment and its test readings.



Reliability is a key requirement for the industrial service specialist

"A measurement tool that you can rely on is crucial when it comes to increasing efficiency. Without reliability, we are only able to make assumptions and cannot reliably find errors. This is exactly where netMIRROR comes into play."

*Hans-Ludwig Goehring
Project Manager Fieldbus Systems and
Industrial Networks at Leadec*



Key benefits of netMIRROR for Leadec:

- **Reliability:** Proven by seven different measurement methods conducted by Leadec, meeting the high standards of the industrial service specialist
- **Permanent solution:** netMIRROR is a passive test access point without any interference to the network it is integrated in, meaning it can be permanently installed
- **Fail-safe:** Even in the event of a malfunction of netMIRROR, the underlying network remains stable and operable

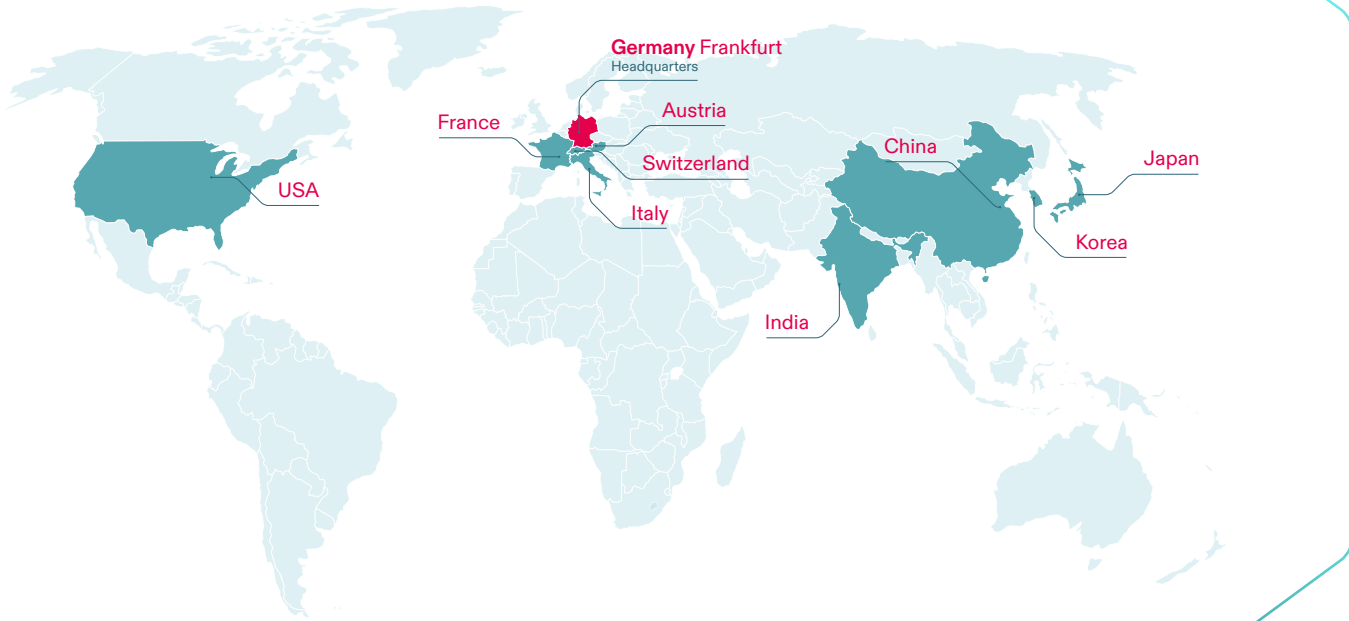


Short circuits, which occur frequently in many other TAPs, do not occur in the netMIRROR and are a seal of quality for Leadec in regard to the reliability of the device.

For more information about Leadec, please refer to the [Leadec Website](#)
For more information about netMIRROR, visit www.hilscher.com

→ QR Code Link: netMIRROR
www.hilscher.com

We look forward to meeting you!



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