TELESTE
ON-BOARD
SOLUTION

Flexible and proven on-board systems
for public transport

TELESTE

DESIGNED FOR
SMART MODERN MOBILITY

Teleste provides public transport with the tools to flexibly address the challenges of modern mobility by improving operations and efficiency, and creating a safe and enjoyable journey for passengers.

Teleste Care - lifetime support for your Teleste solution

Your on-board solution is designed for long-term use and our industry experts are at your service during its entire life cycle. Our services ensure that your solution maintains its high quality and adoptability, even when the industry requirements are changing.

BUILD **A FLEXIBLE AND EFFECTIVE** ON-BOARD SYSTEM

Our on-board solutions combine versatile features, ultimate competitiveness and life-cycle management in order to serve the needs of rolling stock manufacturers and public transport operators. The modular system structure ensures that you can easily choose the right functionality to provide a safe and enjoyable travelling experience for your passengers. With more than 2000 railway vehicles in commercial service, the system technology is proven and mature, and it is constantly improved by innovations and collaborative development with our customers.

A flexible and adjustable service agreement
You can choose the service modules that best meet your needs from our wide offering. The modules include services for life cycle management, software and hardware maintenance, system extensions and upgrades, spare parts and repair, specialist services and training.

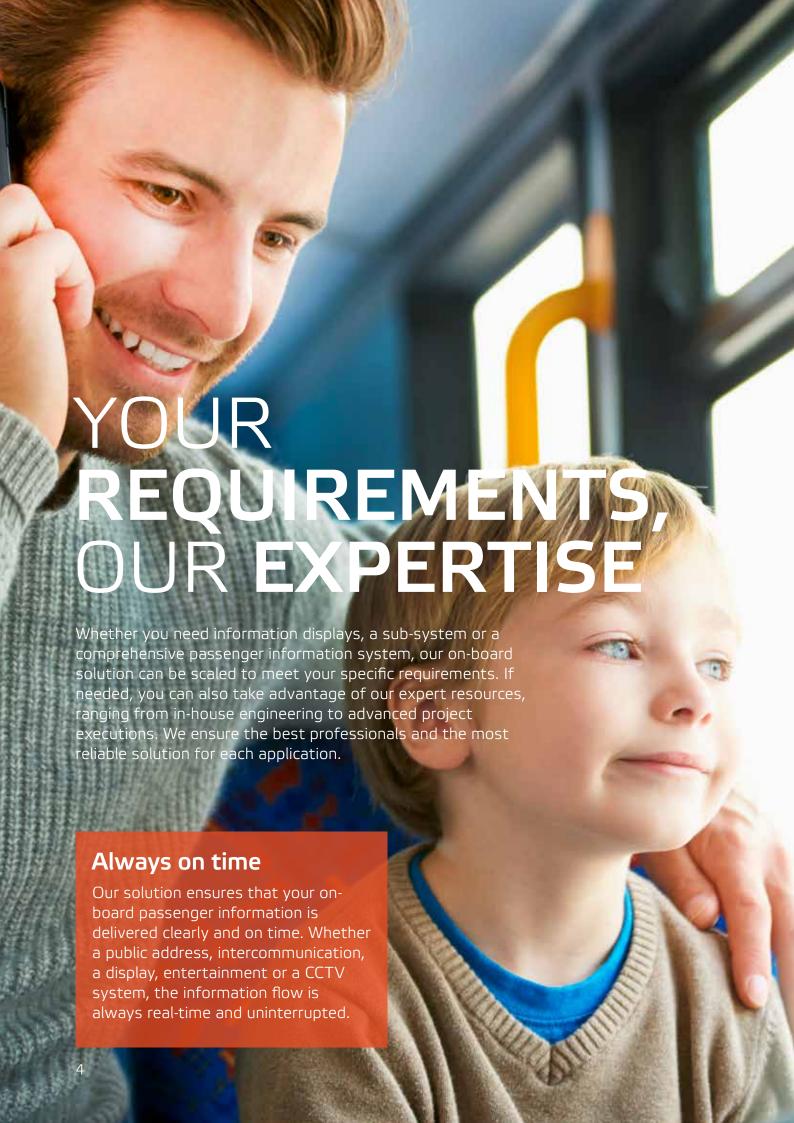## Long-term commitment and secured solution availability
We are continuously developing our own systems and their performance in order to guarantee that the best technology is available to you when standards and requirements change.

The best industry experts to help you
Our professionals have over 20 years of experience in rail-specific solutions. Our professional engineering, training and support services are at your service should any problems occur, or when you need project-specific support.

The benefits offered:
- Secured availability of the solution, information, vehicle, services
- Continuous development of the passenger experience
- Smooth daily operations
- Guaranteed response times
- An optimized inventory and net working capital
- A skilled maintenance team
- Reliability improvements

YOUR
REQUIREMENTS,
OUR EXPERTISE

Whether you need information displays, a sub-system or a comprehensive passenger information system, our on-board solution can be scaled to meet your specific requirements. If needed, you can also take advantage of our expert resources, ranging from in-house engineering to advanced project executions. We ensure the best professionals and the most reliable solution for each application.

Always on time

Our solution ensures that your on-board passenger information is delivered clearly and on time. Whether a public address, intercommunication, a display, entertainment or a CCTV system, the information flow is always real-time and uninterrupted.

Helsinki Sm5 trains for Stadler

Stadler was looking for a modern, integrated and flexible on-board system capable of supporting the existing back office systems and developing new functionalities. An effective maintenance process and streamlined multiple traction operations were needed, for example, for the automated coupling and uncoupling of train units. Also, automated functionalities, such as driver-only operations using camera views for door surveillance, were utilized to improve work efficiency. Teleste's on-board solution fulfilled all the requirements, and in addition, it offered the customer the opportunity to easily create functional extensions and offered them the capability to remotely operate the system.

System modules:
- Passenger information system (PIS)
- CCTV
- Public address
- LED and TFT displays
- Phones and intercommunication
- Ethernet network
- Rear view, system interfaces and remote management functions

TRUSTED BY MAJOR MANUFACTURERS

Our on-board solution is developed in close collaboration with our partners and customers. Based on the wide installed base, we collect and analyze information in order to continuously improve its operation and functionality. The high-quality risk management and transparency guarantee that you can feel safe with us.

Consistent high quality

As part of our on-board solution, we offer a wide range of high-quality products and systems, enabling flexible customization and easy integration with your existing infrastructure. All products and systems are subjected to thorough testing and a validation process to ensure that they match your industry expectations and offer the best value for your investment.

An engineered solution

Our offering covers a comprehensive selection of standard hardware and software products. In addition, the products can be customized to meet your project- and vehicle-specific needs. Our professional testing and validation procedures guarantee that your solution will be fully compliant with the industry requirements.

Railway-proof and standardized

We were one of the first in the world to provide a genuine railway-proof IP based on-board solution.

Today, we can offer you a reliable, proven solution developed over the course of years in collaboration with our customers and partners. Utilizing in-depth knowhow of industry standards and specifications, we can offer you a smart and effective on-board solution fulfilling, for example, the requirements for fire and smoke, RAMS and obsolescence management. Our high quality is also conformed to the railway industry standard ISO/TS 22163 (IRIS) , as well as the ISO 9001 and 14001 standards.

International experience

Our systems are running in over 2000 railway vehicles in more than 20 countries and we are a trusted partner of several international rolling stock manufacturers. Based on our broad experience, we can combine advanced technologies, high-quality in-house engineering and local service capabilities with professional project management and accurate deliveries to anywhere in the world.

CHOOSE **THE RIGHT** **MODULES** FOR **YOUR NEEDS**

Our on-board solution is based on a modular software and hardware architecture that meets the industry standards and customer requirements. The technology can easily be applied to the needs of individual products, subsystems or comprehensive on-board solutions.

Passenger Information System: For a comfortable travelling experience

Our passenger information system can be easily applied in different kinds of applications. Its automated functionalities, based on vehicle location, are complemented with public address and display subsystems. The HMI can be used to control the passenger information system manually. Due to its open architecture, the system offers flexible interoperability with any city or nationwide systems and, through the railway API, it can also take commands from external sources.

Public address: Clear and sharp messaging

The public address subsystem conveys automatic announcements and live messages, including audio and text, to passengers. High system availability and TSI compliance are achieved by combining analogue and digital technologies with IP-based networks and UIC buses.

Intercommunication beyond the limits

The intercommunication subsystem facilitates phones, microphones and passenger intercoms. Their flexible and undisturbed operation is secured by a ruggedized design and redundant Ethernet and UIC bus technologies. In addition to traditional train radio interfaces, our system can allow VoIP technologies to be integrated with operational control centres and other communication systems.

Infotainment: Reshaping the advertising space

Integrated infotainment functionality provides the versatile integration of news, advertising, entertainment and other information in the passenger information solution. The content can be streamed from external sources or triggered from a local media database. The solution supports a wide range of video and audio formats.

Teleste's ultrawide TFT LCD displays provide a new level of information and visuality for passengers during their journey.

CCTV for a safe and secure journey

The fully digital CCTV subsystem enables effective and easy security control. The system utilizes video recorders to store video streams from IP surveillance cameras in the vehicle. The live streams can be viewed on user interfaces from interior and rear-view cameras, and even from cameras installed on the wayside. The video streams are complemented with metadata from various sources and events, like emergency calls or breaks to enable effective situational analysis.

Utilizing connectivity solutions, the live streams and recordings can also be viewed on wayside applications – such as OCC – and off-loaded to storage on the ground servers. High data security is achieved by digital water stamping, encryption and tight access control. The easy-to-use back office tools provide versatile functionality for analysis of the recordings.

Easy wireless connectivity

Our IP-based connectivity system allows easy connectivity between devices and systems. A wide range of network components with dynamic IP addressing provides reliable communication within the vehicle. Various wireless solutions are used for on-board Wi-Fi, and train-to-train and train-to-ground communications.

Displays for high-quality performance

Our information displays are designed for accurate information sharing and excellent visibility in 24/7 use. State-of-the-art display technologies, such as TFT LCD and LED, make it possible to optimize the balance between feature-rich functionality and ultimate competitiveness, and ensure that information is clearly available for the passengers throughout their journey. In addition to standard displays, we provide customer-specific, tailored display solutions, e.g. solutions with integration to security cameras, speakers and wireless communication solutions.

TELESTE

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