



ACTIA[®] SOLUTIONS **RAIL TRANSPORT**





RAIL TRANSPORT

Mobility challenges

Mobility is the foremost concern of all players in the transport sector, especially rail transport. For manufacturers and operators in the world of rail, mastering mobility means taking up a lot of new challenges.

LIFE ONBOARD

For passengers and crew alike, vehicles are now considered to be living spaces in their own right, providing a comfortable, smooth travel experience in addition to passenger information and entertainment services. As a major force in multimedia systems, particularly for the bus & coach market, ACTIA's® range of solutions also targets tramways, underground trains, high-speed and intercity trains.

SAFETY SYSTEMS

To guarantee maximum safety for passengers as well as for onboard and ground personnel, risks have to be assessed and predicted from the vehicle design stage onwards through its entire lifecycle.

With its expertise centres, the ACTIA® group helps manufacturers and operators in the rail transport sector manage safety challenges: equipment dependability, videosurveillance, high-voltage presence detection, safety announcement systems, control/command system security, etc...

NEW COMMUNICATION TECHNOLOGIES

To meet today's increasing needs for data security in communications, passenger information systems, fleet management or passenger comfort, vehicles must stay connected and a length ahead on the latest technologies. Armed with its experience in GPS, TV and digital radio technologies, the ACTIA® group is outstandingly well equipped to deliver mobility-oriented communication solutions to the rail transport world.

VEHICLE AVAILABILITY ACROSS THE LIFECYCLE

In an increasingly competitive environment, vehicle must always be ready to go with a maximum service rate. This requires Integrated Logistics Support engineered right into the product design phase, optimum maintenance levels and long-term obsolescence management

As a leader in vehicle diagnostics, and armed with the skills of its design offices and sustainability department, ACTIA® is the operator's guarantee of maximum vehicle availability.



P.4 Informing & Entertaining passengers



P.8 Increasing availability



P.5 Enhancing safety



P.6 Linking & Communicating



P.7 Mastering energy



P.11 ACTIA® means business

Enhancing life onboard :

INFORMING & ENTERTAINING

passengers

MULTIMEDIA SYSTEMS

Informing and entertaining passengers contribute extensively to enhancing passenger comfort, the operator's image and boost the appeal of the transport system.

ACTIA® provides a comprehensive range of equipment, onboard systems and services for real-time passenger information. Modular architecture designed around an Ethernet 100Mbit core, the equipment range and the ergonomics of the operator interface make these solutions ideal for trains, tramways and underground railways.

ACTIA's® system provides real-time information transmission, video bouquet broadcasting and video on demand.

The long-standing experience acquired by ACTIA® in trains and underground transport systems means that its solutions pack high information legibility plus equipment dependability.



VOD



VOD (server)

Enhancing SAFETY

VIDEO PROTECTION

ACTIA® makes it safe for passengers and goods to travel thanks to its new BOP HD videosurveillance system, which seamlessly fits into the rail transport environment: MPEG4 (H264) high definition image capture with compatible bandwidth, full-scale connectivity (CAN, IBIS, ETHERNET, etc.) and ruggedized casing meeting railway standards.



Bop



Vacma



SAFETY ANNOUNCEMENT SYSTEMS

Rail transport is booming across the globe because of population growth, urbanisation, and human and goods mobility. Railway infrastructure managers are therefore focusing their maintenance and renovation strategies on meeting these traffic demands.

The ACTIA® group's telecommunications division is taking up this new challenge by delivering solutions to shorten troubleshooting time while reducing personnel risks.

ACTIA® safety announcement systems meet all the requirements of railway companies:

- fast deployment for mobile or short-duration worksites,
- dependability of stationary and automatic equipment.

This range of safety announcement systems delivers excellent cost performance while providing the highest safety levels for personnel at work.

CONTROL/COMMAND SYSTEMS

The ACTIA® group's offering is based on extensive experience in complex and multiplexed systems, secure control systems for drivers and on its know-how in developing operator stations.

ACTIA® supports manufacturers throughout the vehicle architecture design phase: developing compulsory functions such as driver vigilance systems and automatic train braking systems, dashboards and instrumentation modules, high-voltage presence detection unit, etc...



LINKING & COMMUNICATING

COMMUNICATION AND TRANSMISSION SYSTEMS

The ACTIA® group has developed a wide range of real-time transmission and radio communication systems:

- outdoor wireless and rack solution for railway telecommunications infrastructures (TETRA, GSM-R, etc...)
- innovative WLAN 802.11n vehicle/ground communications systems providing sophisticated roaming features for mobility and safety: ideal for railway signalling
- video surveillance
- real or deferred-time passenger counting management and transmission system
- media (video and audio) loading / unloading systems.

ACTIA® is also an acknowledged leader in positioning systems design featuring the latest communication and geolocation technology.

A global partner, the group provides a turnkey custom development solution based on specifications or for upgrading existing electronic systems.



WRM100



Voices rack

MASTERING

energy for better performance and less impact on the environment

SOLUTIONS FOR CATENARY POWER GRID CONTROL INFRASTRUCTURES – CLASSIC AND HIGH-SPEED LINES

For many years, ACTIA® has been working on operator systems and control/command products for railway sub-stations powering catenaries.

We provide our customers with SCADA systems as well as equipment for controlling electrical grids and full sub-station overhaul services.



FCZ 9010



Power train



We supply the RTUs and communication front-ends in addition to band-sharing modems for remote control across analogue and IP links (MUP9080 and MUP9080 IP).

INNOVATION IN ONBOARD ENERGY AND BATTERY MANAGEMENT

The ACTIA® group participates in many innovation programmes aimed at building groundbreaking technology into tomorrow's vehicles to provide more safety, better performance and more planet-friendly vehicle use.

For instance, ACTIA® is a first-rank equipment manufacturer that designs, develops and produces a complete power train system for electric vehicles.

ACTIA® also works towards developing battery management systems and hardware/software maintenance and diagnostics solution specifically for batteries.





INCREASING

availability across
the lifecycle

Operating Dependability and Logistics Support built into the design phase

DIAGNOSTICS SYSTEMS FOR VEHICLE MAINTENANCE

In 1985, ACTIA® invented the first diagnostics tool. The group has since become the diagnostics partner to major vehicle manufacturers. This know-how is essential for vehicle maintenance and to guarantee maximum availability.

The diagnostics platform developed by ACTIA® includes all the hardware and software solutions for onboard and remote diagnostics to provide vehicle dependability throughout their lifecycle from manufacturing to operational life.

Diagnostics-related constraints are factored right into the design phase to provide optimised testing and maintenance solutions from production to maintenance and repair.

ACTIA® develops innovative modular solutions that pack industry standard protocols. Our diagnostics solutions can be delivered ready to go or developed by our customers using our authoring tool.

- **Solution for on-board diagnostics** : our equipment packs software self-diagnostics and updating features to provide remote maintenance and management capabilities.
- **Solutions for off-vehicle diagnostics** : our range of ruggedized PCs specifically responds to the constraints of severe, uncompromising environments. They feature specially designed communications interfaces, software suites and databases.

These solutions let technicians perform reprogramming and testing tasks on your rolling stock with full freedom of movement and ease of use.



XG Master

MAINTENANCE IN OPERATIONAL CONDITIONS

Vehicles have to be maintained to guarantee an optimum service rate.

The products and systems provided by the ACTIA® group are designed in the group's own engineering offices. Manufacturing, assembly and integration are carried out in our production facilities, which are capable of short, medium and mass production runs under the highest quality standards.

We maintain total control over the industrial and supply chain for all our products. Over the past years, we have been noticing that lifecycles are getting progressively shorter.

Controlling the supply chain therefore involves exerting a closer watch for product and electronic component obsolescence to guarantee component availability for the vehicle's entire lifespan.

In 2001, ACTIA® created a department dedicated to dynamic obsolescence management to deliver true in-service support for the group's systems: electronic, control/command, telecom, PCBs and components, as well as in-service support for our clients' systems in the power production, nuclear, aeronautics and military industrial sectors.

This expertise harnesses five skills centres that contribute to preventing obsolescence and managing the product end-of-life phase:

- Expertise / Consulting
- Obsolescence management database and tools
- Component purchasing / Long-term storage
- Components management
- Replacement solution engineering / manufacturing / maintenance

IRIS
Certification





OUR ADVANTAGES

OUR EXPERIENCE IN THE WORLD OF TRANSPORT

A pioneer in multiplexed architecture, a leader in multimedia systems and a partner to major European innovation projects, the challenges and crucial issues at stake in passenger and goods transport have been at the heart of our group strategy for over 25 years.

OUR REFERENCES IN RAIL TRANSPORT

The ACTIA® group works with major rail manufacturers and operators across the world. In its production sites, ACTIA® also manufactures engine power control electronics and ancillary power train device control (aircon, lighting, etc...) electronics.

This partnership with engine manufacturers early on in the design stage enables the ACTIA® group to operate at the same level of quality and safety as its customers.



OUR SECURE SYSTEMS EXPERTISE

ACTIA® builds its responses to today's market constraints, especially operating safety constraints, right into the design of its products. We provide SIL-certified products meeting the IEC61508 standard, by implementing advanced safety management strategies.

Our organisation, our software development and validation processes seamlessly match the requirements of these new standards.

OUR SYSTEM INTEGRATION KNOW-HOW

More than a product, ACTIA® delivers a systems approach from the very start of the project kick-off phase and provides consulting services for product integration, security strategies, configuration, diagnostics and maintaining these systems.

This know-how allows us to come up with solutions tailored to specifications: trains, underground systems, tramways.

OUR COMMITMENTS



PROXIMITY

ACTIA® supports you throughout your project lifecycle:

- Before-sales support to analyse your needs: our team of experts works with you as soon as the project kicks off to help you formalise your requirements.
- We place a resident engineer at your disposal for true technical support throughout the project.
- Industrial solutions and local after-sales support on all five continents: hot lines, on-site troubleshooting, etc...
- The ACTIA® group's international scope (15 subsidiaries and a dealer network) is your guarantee of a fast, effective response to keep your vehicle stock in operating condition.

QUALITY AND ENVIRONMENT

ACTIA® delivers maximum quality levels at all stages of development and manufacturing:

- ACTIA® products are developed in the group's engineering offices.
- All our products are assembled and integrated in our production facilities (France and Tunisia) capable of handling medium to mass production runs in compliance with quality standards prevailing in the automotive and aeronautics sectors.
- ACTIA® factories provide high-tech certified production environments.
- ACTIA® adheres to a far-reaching environmental policy: lead-free production processes, RoHS, etc...
- The medium size of the ACTIA® group also allows us to secure supply sources while maintaining maximum flexibility.

INNOVATION

Since it was founded in 1986, ACTIA's® talents and innovation policy have kept it a length ahead. As the inventor of electronic diagnostics and a pioneer in the field of vehicle architecture, including multiplexed architectures, ACTIA® has innovated constantly to stand apart from the crowd, maintain its independence and leadership. This ability to innovate is supported by extensive investment in R&D and partnerships with major laboratories.

Staying a length ahead is the ACTIA® group's rule of thumb.





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