Brochure

VIAVI

A Long-term Commitment to GSM-R and the Migration to FRMCS

Providing customers with GSM-R railway expertise, technical support and maintenance services up to 2040

With GSM-R, due to operate alongside FRMCS until around 2040, it is vital that GSM-R networks can be maintained and supported during this time.

GSM-R uses 20-year-old 2G technology, which presents many challenges to today's rail operators and suppliers as it moves towards end-of-life. For example, GSM-R cannot provide the advantages supported by FRMCS, it has known vulnerabilities for cybersecurity and there are issues with hardware and software obsolescence.

VIAVI is Here to Help

We are committed to supporting customers with drive test and passive monitoring solutions for both GSM-R and FRMCS until 2040, and for FRMCS beyond this date, via EVOIA.

EVOIA is a cyber-proof state-of-the-art product portfolio, including the EVOIA Assure platform, which provides all the tools and capabilities needed to test, measure and monitor the railway telecoms network today, and for many years to come.



Our GSM-R Expertise Commitment*

VIAVI is committed to continuing:

- Resources focused on GSM-R/ ETCS technologies to 2040, including:
- Dedicated professional services
- Support teams
- R&D teams
- GSM-R/ETCS skills inside the company to 2040
- Railway activities into the EU
- * Please refer to the Long-term Mission Critical and Railways System Maintenance Services terms and conditions for full details



The Evolution to EVOIA

The present QATS and NetProbe solutions, were designed more than 12 years ago, which means that a more future-proofed alternative is required.

Moving to the new EVOIA solutions, addresses this issue – bringing together the best of the existing QATS and NetProbe capabilities and features, as well as state-of-the-art cyber-proof solutions.

We appreciate our customers will have hard constraints and such a migration will be a long and complex topic. That's is why we will be working closely with you to support you from today to a fully-operational FRMCS network, and beyond.

The transition from the existing VIAVI solutions to EVOIA will be progressive. EVOIA solutions will therefore be available to new customers from 2025, and existing customers will transition to EVOIA between 2025-2028.

Making Operations Easier

EVOIA: A State-of-the-Art Platform

Using Kubernetes, a solution that is promoted by ETSI and CNCF, we offer new features to better manage operations:

- Private and public cloud management
- Using the Kubernetes/Gitops environment to:
 - Automated rollouts and rollbacks
 - Automatic restart
 - Storage orchestration
 - Service discovery and load balancing
- Automatic deployment
- Provide high availability
- Backup and restore features

Converged Solution Designed for Railway

Unique Portal Web Interface for GSM-R, FRMCS and Railway services From desktop UI Standalone web interface to Unique web interface User Web Interface From standalone database/file to Umbrella (Monitoring/Drive test - KPI/ Troubleshooting -BigData data lake Cyber- Inter-domain correlations) From monolithic to service-based ETCS, ATO Processing GSM-R architecture Processing Processing From 2G HW probing to NEM API, Agent, ***** Log and SCP TAP Probes NEM Agent Cell Trace Drive test E1/Eth Drive Test Agent Probe Virtual TAP Probe Agent From 2G Triorail, Funkwerk to 5G Modems + MCX client From HW network element to 111-111 Virtualization and CloudFrom GSM-R to MCX Agent 4G/5G and MCX domains Behavior 4G/5G RAN MCX 4G/5G Core 2G RAN Railway services 2G Core Servers (RBC, KMC, ATO, ...)

Cybersecurity with EVOIA

The Cyber Resilience Act (CRA), NIS2 and NIS2-like regulations outside Europe, are progressively entering into force.

This means cybersecurity is now an essential part of any technology development, including railways. And this applies throughout the value chain; from suppliers to operators alike.

Meeting the new cybersecurity regulations therefore, also applies to EVOIA and its ability to monitor the network and services.

And that is why EVOIA has cybersecurity-oriented supervision built-in, providing greater levels of protection than are possible with the QATS and NetProbe solutions, developed over a decade ago.

EVOIA Assure Cybersecurity Features

- The EVOIA Assure platform has been designed to provide state-of-the-art cybersecurity, including:
 - No exploitable known vulnerabilities
 - Fast vulnerabilities security update: CVSS level 7
 - Data transit ciphered by state-of-the art mechanisms
 - Centralized and secured system configuration
 - Protection from unauthorized access
 - Immutable OS
 - Surface attack limitation



Long-term Maintenance Support*

A long-term support maintenance contract offers the easiest way to ensure the availability of GSM-R skills and services, as well as a smooth transition to EVOIA.

GSM-R Long-term Maintenance Support Contract Summary*

VIAVI is committed to maintaining:

- Installed base GSM-R/ETCS licenses
- Migration from existing QATS and NetProbe solutions to EVOIA with full training provided
- Software and hardware troubleshooting and repair based on SLAs
- Hardware availability, including repair or replacement for GSM-R drive test equipment and passive monitoring equipment to 2040 with
 - ISO hardware replacement
 - New hardware provider providing the same level of service
- Renew hardware when failing or in the case of the hardware manufacturer's end of maintenance
- Software installation, updates and documentation to support GSM-R drive test and monitoring to 2040
- Regular Operational reviews with customers
- Minimum term 8 years for Long-term Maintenance Support contracts
- * Please refer to the Long-term Mission Critical and Railways System Maintenance Services terms and conditions for full details



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