Securing Embedded Systems Across Industries

Trusted expertise for protection, compliance, and innovation in Automotive, Operational Technology (OT), Agriculture, IoT, and more.

Cybersecurity as a Service

ZF Engineering Solutions (ZES) delivers **holistic Cybersecurity services** that span the entire product lifecycle including the surrounding ecosystem - from concept and architecture to **testing, deployment**, and **long-term operational support**. Our approach ensures not only protection against threats but also alignment with global standards such as **ISO/SAE 21434, IEC 62443**, and the Cyber Resilience Act (**CRA**).

We embed security into every layer of your development - from **advanced vehicles, smart agricultural systems, industrial automation platforms**, or **IoT ecosystems**. With deep expertise in **embedded, IT**, and **OT systems**, we protect your IP, maintain **customer trust**, and **accelerate innovation**. Our scalable solutions are tailored to your needs, making Cybersecurity a **strategic enabler** for your business.

Our Services

- We provide **Coaching & Consultancy** services that enhance your team's Cybersecurity capabilities and ensure compliance.

- Our **System Design & Analysis** services include threat and risk analysis (**TARA**) and security concept creation tailored to your product.

- We offer **Software Engineering** with secure coding and integration by engineers trained in Cybersecurity best practices.

- Our **Testing & Evaluation** services include penetration testing, fuzz testing, code reviews, and vulnerability scanning to identify risks early.

- We deliver **Incident Response and SOC services** with 24/7 monitoring and long-term support to ensure business continuity.

- Our **Tooling & Automation** include fuzzers, **SBOM** generators, and CAN diagnostic tools that integrate into your development pipeline.

Cybersecurity Consulting

Focus Areas:
- IT, OT, and embedded systems

Challenge:
- Protection of complex embedded systems, compliance, and capacity gaps

What ZES provides:
- End-to-end consulting from development to post-SOP
- Strategy, risk management, best practices
- Trainings and hands-on support for compliance incl. documentation and processes

Key Benefits:
- Accelerates learning and implementation
- Elevates your team's cybersecurity capabilities
- Ensures regulatory compliance (ISO/SAE 21434, UNECE R155, CRA)
- Reduces risk by proactive threat modeling and mitigation strategies

Cybersecurity Testing & Evaluation

Focus Areas:
- Penetration Testing and Fuzz Testing

Challenge:
- Robust security validation and early detection of vulnerabilities

What ZES provides:
- Penetration testing simulates real-world attacks to uncover system weaknesses
- Fuzz testing identifies hidden flaws
- Code reviews and vulnerability scanning protects against known threats

Key Benefits:
- Early detection of security issues
- Reduced cost and time for post-development fixes
- Strengthened defenses before threats emerge
- Compliance with ISO/SAE 21434 and other standards