WITTENSTEIN

WITTENSTEIN high **integrity** systems

Proven RTOS solutions for safety-critical applications

- 25+ Years of Expertise
- TÜV SÜD Certified
- 100% Certification Success

Committed to Safety

Safety Critical RTOS Experts

WITTENSTEIN high integrity systems (WHIS) is a specialist safety systems company with over a quarter of a century of experience delivering trusted embedded Real Time Operating System (RTOS). Their flagship product, SAFE**RTOS**®, is designed for mission and safety-critical applications. WHIS helps customers reduce risk, achieve certification efficiently, and build systems they can rely on with confidence.

As part of the WITTENSTEIN group, a global technology leader founded in 1948 and operating in more than 45 countries, WHIS is the group's centre of excellence for high-integrity and safety-critical embedded systems. WHIS' expertise and impact have been recognised through a King's Award for Enterprise in International Trade.

- Proven safety expertise with a 100% certification success rate;
- Reduced certification risk and time-to-market;
- Trusted FreeRTOS heritage and long-term support.

Meet the Experts Behind SAFERTOS®

Andrew Longhurst
Co-Founder

With expertise spanning electrical, electronic, software engineering, and business development, Andrew brings a unique, system-level understanding of safety-critical design. This ensures that WHIS solutions are grounded in real-world engineering challenges, giving customers confidence that performance, safety, and precision are built in from the start.

"WHIS' mission is to deliver absolute confidence in the most demanding applications, where performance, safety, and precision matter most."

Emiliano Costagli
Product Manager

With over 20 years' experience in real-time embedded software, Emiliano drives product strategy that balances technical excellence with customer needs. He ensures SAFE**RTOS**® evolves in line with industry demands.

James Stanley
Engineering Manager

James leads the engineering strategy to ensure robust, certifiable solutions that customers can trust in the most demanding applications, drawing on over 20 years of safety and verification RTOS expertise.

Stephanie Bean
Marketing Leader

Stephanie builds strong industry partnerships and communicates WHIS' value with clarity and impact. With a focus on brand strength and digital presence, she champions progressive marketing strategies.

Salomea Paprotny
Sales Leader

Salomea brings an experienced, customer-focused approach, delivering responsive engagement and solutions that genuinely reflect the needs and priorities of each customer.

Neil Johnson
Finance and Operations Manager

Neil provides the financial discipline and operational oversight that underpin WHIS' stability and sustainability. His detail-driven, strategic approach ensures customers benefit from a dependable partner.

Simon Hodges
Process and Quality Manager

Simon's commitment to continuous improvement and rigorous quality standards ensures customers receive solutions that consistently meet the highest safety and quality expectations.

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The Complete RTOS Ecosystem

Trusted by Engineers Worldwide

Empowering Embedded Excellence

WHIS delivers a proven RTOS and middleware ecosystem that enables engineers to build robust, responsive, and certifiable embedded systems. WHIS solutions support a wide range of platforms and toolchains, covering both commercial and safety-critical applications, with flexible licensing to suit projects of any scale. To see the full list of solutions, please visit the WHIS website.

Expert Support, From Design to Certification

WHIS' experienced engineers provide hands-on technical support, guidance on safety-critical development, and insight into certification pathways. From individual engineers to global organisations, WHIS offers a unified RTOS ecosystem and FreeRTOS upgrade path that simplifies development and reduces risk across entire product portfolios.

Certified Safety

WHIS' RTOS ecosystem supports compliance with key international safety standards, enabling customers to accelerate certification. The portfolio includes:

- SAFE**RTOS**®: Pre-certified to ISO 26262 and IEC 61508. Compliant to IEC 62304, DO 178C, FDA 510(k) and EN 50716;
- SAFE**RTOS**® Enhanced Security Module: Designed in accordance with ISO 21434;
- SAFE**RTOS**® CORE: For those who need to consider safety, but not full certification;
- OPEN**RTOS**®: Commercial licensing and professional support for FreeRTOS, one of the world's most widely adopted kernels.

Trusted by Industry Leaders

Working with the world's leading silicon, tools, and technology partners

Silicon and Semiconductor Partners

Toolchain and Development Tool Partners

Architecture and Technology Partners

Explore our full partner ecosystem on our website.

email: sales@highintegritysystems.com
web: www.highintegritysystems.com

SAFERTOS®

Reduce Risk and Accelerate Certification

SAFE**RTOS®** is a pre-emptive, pre-certified Real Time Operating System (RTOS) that delivers unprecedented levels of determinism and robustness to embedded systems. Based on the FreeRTOS functional model, but specifically re-designed for the safety market by WHIS' own team of safety experts, SAFE**RTOS®** has been independently certified by TÜV SÜD to IEC 61508-3 SIL3 and ISO 26262-6 ASIL D.

Built Specifically for the Safety Market

SAFE**RTOS®** is engineered from the ground up with risk management embedded throughout the development lifecycle. Every requirement influences the core implementation, resulting in a trusted RTOS with intrinsic self-verification routines and safety features essential for high-integrity applications.

Intrinsic Safety by Design

- Deterministic, pre-emptive kernel;
- Built-in runtime verification mechanisms;
- Robust design tailored specifically for safety-critical use;
- Developed by a team of experienced safety engineers.

A Smooth Certification Path

The tailored Design Assurance Pack (DAP) delivers full lifecycle transparency and all evidence required for industry certification. The included Safety Manual gives clear integration instructions that generate audit-ready documentation, removing the need to re-test SAFE**RTOS®** on your hardware and ensuring a smooth, predictable certification path.

Engineered For Reliability

SAFE**RTOS®** includes MPU/MMU support as standard, enabling task-level memory separation to reduce unintended access and improve system safety. WHIS' expert team provides ongoing technical, safety, and certification support, including optional revalidation with the latest compilers.

SAFE**RTOS®** Key Features Include:

- Royalty free;
- Full source code and Design Assurance Pack;
- Pre-certified to IEC 61508-3 SIL 3 by TÜV SÜD;
- Pre-certified to ISO 26262-6 ASIL D by TÜV SÜD;
- Supports wide range of microprocessors;
- Supports all popular development tools;
- Intrinsic self-verification routines;
- MMU/MPU support as standard;
- Migration path from FreeRTOS;
- No limit on the number of developer seats;
- MISRA C compliant;
- Contains no open source code;
- No production limits;
- Comprehensive MC/DC verification coverage;
- Ultra-low power mode.

Why Choose SAFE**RTOS®**

- Designed exclusively for safety-critical markets;
- Full source code and test harness;
- Royalty free;
- Proven TÜV SÜD certification pathway;
- Transparent and rigorous development lifecycle;
- Unlimited developers;
- Industry-leading documentation and support;
- Tailorable to your hardware, toolchain, and project needs.

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Enhanced Security

Protect Your Safety-Critical Systems from Cyber Threats

The SAFE**RTOS**® **Enhanced Security Module**

The SAFE**RTOS**® Enhanced Security Module (ESM) is purpose-built to safeguard embedded applications by creating a robust, secure execution environment. The ESM creates a protective shield around each user-mode Task, isolating and containing threats before they can spread. If a system is compromised by a bad actor, the ESM ensures the bad actor is contained within the user mode Task, safeguarding the rest of the system.

Designed for automotive-grade security, the ESM is **developed in accordance with ISO 21434**, the global standard for road vehicle cybersecurity.

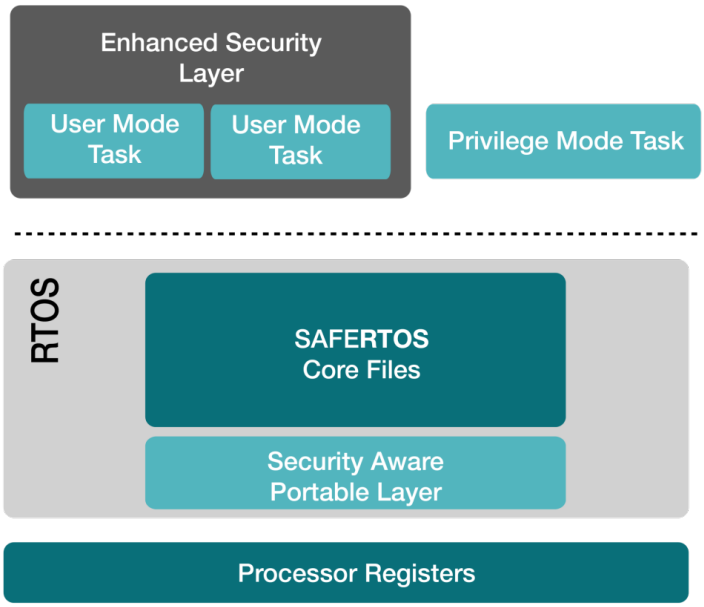
- Detect threats;
- Confine threats;
- Protect data.

What the SAFE**RTOS**® **Enhanced Security Module Offers**

What sets the ESM apart is its effective containment strategy. Its primary objective is to prevent a compromised user mode Task from accessing information from other Tasks or gaining control of the system. The ESM achieves this by limiting the amount of access each user mode Task has with the rest of the system, using the features listed.

- **Access Control Policy:** Minimizes the SAFE**RTOS**® APIs each Task can access;
- **Object Control Policy:** Minimizes the SAFE**RTOS**® data objects each Task can access;
- **Data Obfuscation:** Hides data from a potential bad actor;
- **Memory Isolation:** Builds upon the SAFE**RTOS**® spatial separation mechanism;
- **Secure Portable layer:** Security aware portable layer;
- **Penetration detection monitor:** Warns the application that an attack may be underway.

Download the ESM datasheet for more information.



Automotive and Robotics

Pre-certified to ISO 26262-6 ASIL D by TÜV SÜD

Why Engineers Choose WHIS

Automotive and robotics technologies are rapidly converging, with modern vehicles now relying on the same real-time control principles that drive advanced robotic systems. From electrification to Software-Defined Vehicles (SDV) and SOAFEE-aligned architectures, both domains demand software that is safe, secure, deterministic, and future-proof.

WHIS delivers a proven RTOS ecosystem used by OEMs, Tier 1s, and leading semiconductor partners. WHIS' automotive package provides all the building blocks needed for ASIL-rated embedded control systems and intelligent robotic platforms, with WHIS' development practices being aligned with ASPICE level 2.

The Automotive RTOS Package

A modular, high-integrity solution designed for demanding automotive and robotic applications:

- SAFE**RTOS**® – Pre-certified to ISO 26262 ASIL D A high-performance, small-footprint RTOS designed specifically for safety-critical automotive use.
- SAFE**Checkpoints** – Runtime monitoring meets ISO 26262 ASIL C and D expectations for runtime verification, ensuring Tasks, interrupts and complex processing sequences execute within timing constraints.

Pre-certified to ISO 26262-6 ASIL D by TÜV SÜD

SAFE**RTOS**® is pre-certified to ISO 26262 ASIL D by TÜV SÜD.

ASIL D is the highest possible safety rating under this standard, and is achieved by performing a risk analysis of a potential hazard that examines the severity, exposure and controllability of the vehicle operating scenario.

Processor Platforms and Safety Islands

SAFE**RTOS**® is available across a wide range of leading automotive processors and other emerging architectures. WHIS' packages support safety islands, lockstep cores, and dedicated safety subsystems, ensuring isolation and deterministic performance even in complex automotive SoCs.

Performance and Technology Focused

- Pre-certification reduces development and audit effort;
- Trusted by OEMs, Tier 1s, and leading silicon partners;
- Deterministic, small-footprint RTOS;
- Optional ASIL C/D runtime monitoring;
- DAP and Safety Manual for fast integration.

An Alternative to AUTOSAR Architectures

Automotive teams often turn to WHIS when AUTOSAR does not fully align with their architectural or functional goals. While AUTOSAR is effective for broad, centralised vehicle platforms, it may not always be the ideal choice for targeted, safety-critical functions that demand precise timing, small software footprints, and efficient integration.

WHIS provides an alternative path through a modular, high-integrity RTOS ecosystem built for deterministic, dependable performance, without the architectural overhead typically associated with AUTOSAR-based solutions.

SAFE**RTOS**® is frequently chosen for projects that require rapid boot times, consistent real-time responsiveness, minimal resource usage, and a streamlined route to functional safety certification. These characteristics make it particularly well-suited to ECUs, robotics systems, and emerging next-generation architectures.

"SAFE**RTOS**® **is an important foundational element to Rivian's advanced software stack and commitment to designing for safety. The RTOS documentation and expert support has been fantastic."**

– Andrew Jones, Rivian

SAFE**RTOS**® **is Used in Many Automotive Applications:**

- Zone controller safety islands;
- Battery management systems;
- Digital cockpits;
- Engine control units;
- Radar/vision systems;
- Cameras and sensors;
- Network hubs;
- Advance Driver Assist Systems (ADAS);
- Autonomous drive systems.

email: sales@highintegritysystems.com
web: www.high**integrity**systems.com

SAFERTOS® For Aerospace

In Compliance with DO 178C Design Assurance Level A

Why SAFE**RTOS**® for Aerospace

SAFE**RTOS**® provides aerospace teams with the assurance foundation required to achieve certification efficiently while developing truly deterministic, safety-critical systems. Engineered for DO-178C up to DAL A, SAFE**RTOS**® is delivered with a comprehensive Design Assurance Pack (DAP), verified binary library, and complete source code, ensuring full transparency at every stage of review. With no product limitations and support for unlimited developers, SAFE**RTOS**® eliminates unnecessary commercial constraints that can slow complex programs.

By reducing certification friction and providing clear, auditable evidence, SAFE**RTOS**® demonstrates quality through openness rather than claims.

- DO-178C up to DAL A;
- Comprehensive Design Assurance Pack;
- Verified binary library and full source code;
- Full, transparent quality records;
- Supports for-on site audits and direct collaboration with DERs;
- Unlimited number of developers.

SAFE**UDP: Deterministic Network Stack for Aerospace**

SAFE**UDP** with Static ARP provides a highly deterministic, low-latency networking solution ideal for time-critical aerospace systems. Designed and verified to the same very high standard as SAFE**RTOS**®. SAFE**UDP** eliminates discovery noise and ensures predictable packet handling with features including:

- Static ARP tables for noise-free communication;
- Unicast-only IPv4 for predictable timing;
- Non-cacheable DMA buffers for deterministic behaviour;
- Broadcast/multicast disabled to reduce unpredictability;
- Direct packet-to-socket routing;
- Software VLAN support to reduce hardware needs;
- Multiple Ethernet connector support;
- Flexible internal or external EMAC PHY setup;
- Hybrid ARP option to simplify development;
- Network-stack adaptors to monitor SAFE**UDP** readiness.

Clear and Concise Certification Planning Documentation

Each customer receives a standard set of certification plans with a bespoke Plan for Software Aspects of Certification (PSAC) structured from the outset to satisfy the most demanding aerospace assurance requirements.

WHIS then works closely with the Designated Engineering Representatives (DERs) to align the certification plans PSAC with their requirements.

WHIS supports external audit activities during the development to ensure a smooth and compliant path to certification.

Delivered as Source Code and Binary Library

The final delivery includes both the fully verified binary library and the complete source code, supporting in-depth understanding, easier debugging, and long-term maintainability.

Full Quality Records

The SAFE**RTOS**® development life cycle is fully transparent, supported by complete quality records required for certification. This includes peer review data, problem reports, database contents, SQA records, CM evidence, and support for audits.

Support and Maintenance

WHIS' aerospace support and maintenance gives you direct access to expert engineers who provide fast technical, safety, and certification guidance throughout your entire development and audit lifecycle.

Arrange a call with our experts to discuss your project requirements today

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RTOS for Industrial

Pre-Certified to IEC 61508-3 SIL 3 by TÜV SÜD

SAFE**RTOS**® was certified to IEC 61508 in 2007 and provides Industrial developers with a responsive, deterministic embedded RTOS with a Design Assurance Pack that provides that streamlines integration and certification against Industrial safety standards.

Common Applications Using SAFE**RTOS**®:

- Sensors;
- Industrial Automation;
- Drilling Equipment;
- Industrial Valves and Actuation;
- Power Generation Applications;
- Actuation Systems;
- Industrial Control Systems;
- Radiation Monitoring Equipment;
- Battery Management Systems;
- Industrial door controllers;
- Safety PLCs.

RTOS for Rail

Supporting EN 50716 Certification

SAFE**RTOS**® provides rail developers with a deterministic, safety-critical RTOS supported by a proven Industrial DAP for IEC 61508 SIL3 certification. For applications requiring compliance with EN 50716, WHIS supplies the additional rail-specific software-development evidence directly within the DAP, giving teams a straightforward, low-risk route to achieving rail safety certification for both trackside and onboard systems.

Typical SAFE**RTOS**® **Rail Applications Include:**

- Signalling systems;
- Communication systems;
- Control platform for electrified powertrains;
- Control units;
- Battery units;
- Door control units.

RTOS for Medical

Supports IEC 62304 and FDA 510(k)

WHIS software is used in a wide variety of medical devices, from infusion pumps to defibrillators to prosthetics. WHIS' experience allows us to offer solutions that accelerate the development of medical devices based on SAFE**RTOS**® and its Design History File, supporting FDA 510(k) class III medical device submissions and IEC 62304 class C certifications since 2008.

Common Medical Devices Using SAFE**RTOS**®:

- Infusion pumps;
- Dialysis machines;
- Insulin pumps;
- Prostheses;
- Hemostasis analyser system;
- Liver perfusion machines;
- Ventricular assist devices;
- Endoscopes;
- Cardio-vascular/hypertension monitors;
- Defibrillators;
- Self-monitoring blood glucose and dosing devices;
- Surgical robots;
- Heart pumps.

Reduced Certification Time & Costs for Medical Submissions

SAFE**RTOS**® supports FDA 510(k) class III device submissions and IEC 62304 class C certifications. Its Safety Manual provides clear installation and integration guidance, helping preserve existing verification evidence and removing the need for costly retesting on target hardware.

- FDA 510(k) class III medical device submissions;
- IEC 62304 class C certification;
- Assessed by TÜV SÜD to IEC 62304 Class C;
- Extensively used in Medical Device developments.

21 CFR 820 Medical Design History File

SAFE**RTOS**® Design History File complies with 21 CFR 820 requirements and includes all documentation and testing evidence needed for a Major Level of Concern submission following Guidance for the Content of Premarket Submissions for Software Contained in Medical Devices.

ISO 14971 Risk Management

SAFE**RTOS**® development follows a high-integrity lifecycle incorporating a risk-management process aligned with ISO 14971, ensuring SAFE**RTOS**® meets medical safety expectations and integrates cleanly into medical development workflows.

A Clear Path to Medical Compliance

- Fast, low-risk medical certification (FDA 510(k) Class III, IEC 62304 Class C);
- Complete Design History File aligned with 21 CFR 820;
- Clear Safety Manual simplifying integration and audits;
- Independent TÜV SÜD assessment for added assurance;
- Proven in leading medical devices worldwide.

SAFERTOS® CORE

For Projects in Long-Term Prototype or Development

SAFE**RTOS**® CORE provides the complete functionality and API of SAFE**RTOS**®. It's designed to support embedded systems that need to consider safety, but don't require safety certification.

Full SAFERTOS® Functionality and API

SAFE**RTOS**® CORE is the RTOS for embedded systems where safety needs to be considered, or designed-in for future consideration. It is ideal for projects where full safety certification/ documentation is not required, or at least not required at the start of a long safety development life cycle. SAFE**RTOS**® CORE provides the complete functionality and API of SAFE**RTOS**®.

SAFE**RTOS**® CORE is ideal for companies who are developing products that:

- Need to consider safety but don't require full certification;
- May require certification in the future, and need to future proof their designs;
- Require a robust, highly deterministic RTOS, incorporating key safety features;
- Are at the start of a lengthy development cycle where certification evidence/documentation will not be required until the final stages.

SAFERTOS® or SAFERTOS® CORE?

SAFE**RTOS**® is designed for systems that require safety certification.

SAFE**RTOS**® CORE uses the actual core SAFE**RTOS**® source code, common across safety certified variants of SAFE**RTOS**®, however it is ported for use upon your specific processor/ compiler combination using commercial grade processes.

Whereas SAFE**RTOS**® is supplied with a Design Assurance Pack (Industrial), or a Design History File (Medical) supporting safety certification, SAFE**RTOS**® CORE is supplied as source code accompanied by a comprehensive User's Manual.

SAFE**RTOS**® CORE is available fully integrated with WHIS advanced feature rich Middleware and Safety Components, delivered as one seamless build of code.

Features	SAFE**RTOS**®	SAFE**RTOS**® CORE
SAFE**RTOS**® functionality and API	√	√
Core SAFE**RTOS**® source code	√	√
Standard port layer	-	√
Safety qualified port layer	√	-
DAP and Safety Manual (core and port layer)	√	-
Available pre-certified (IEC 61508 SIL 3)	√	-
RTOS technical support	√	√
RTOS Safety/ Certification support	√	-
Safety Plugins available	√	√
Middleware available	√	√
Training available	√	√

email: sales@highintegritysystems.com
web: www.highintegritysystems.com

OPENRTOS®

Fast, Lightweight, Intuitive

OPEN**RTOS**® provides a fully supported, commercially licensed version of the popular FreeRTOS kernel. Built on the same proven code base, OPEN**RTOS**® gives developers the freedom of FreeRTOS with the added assurance of professional licensing, long-term support, legal protection, and integration services, everything needed to move from prototype to production with confidence.

Why Upgrade to OPEN**RTOS**®?

OPEN**RTOS**® supports a large number of microprocessors and FPGA soft cores, can be used in System on Chip devices and even ROM'ed into the memory of microprocessors.

- Removes the Amazon FreeRTOS Open Source M.I.T. License;
- Commercial indemnification & explicit exclusion of open source code;
- Professional support and warranty;
- Board Package Support Preparation;
- Porting to new processors.
- Seamless transition from FreeRTOS

Start Your Development for Free

WHIS' novel approach to licensing means developers can start their development for free using the FreeRTOS kernel and upgrade to OPEN**RTOS**® later when a commercial license or support is required. FreeRTOS kernel updates and ports are simultaneously released by WITTENSTEIN high integrity systems as OPEN**RTOS**®.

Professional Service

WHIS takes responsibility for ensuring OPEN**RTOS**® works with your chosen processor / compiler combination, verify its correct operation, and deliver a working demonstration project with full source code integrated with any purchased middleware components. This approach has been designed to ensure your developers are working effectively with WHIS products without delay. OPEN**RTOS**® is also supplied with one year's free support, giving you direct access to the WHIS team of highly experienced engineers.

Supporting Your Processor

OPEN**RTOS**® supports a wide number of processors, including those that FreeRTOS does not support. WHIS' team of engineers are experienced in porting OPEN**RTOS**® to a variety of processors, optimizing speed and integration. If your processor is not supported by FreeRTOS, please ask us about creating a new version of OPEN**RTOS**® for your specific processor.

Support and Maintenance

- 12 months included with every OPEN**RTOS**® purchase;
- Experienced support from engineers who know FreeRTOS;
- Flexible licence upgrades;
- Ongoing updates and maintenance.

Royalty Free, Perpetual Licensing

WHIS provides customers with a license model that best suits their needs, supported by a transparent pricing policy.

WHIS standard licensing model uses a royalty free, perpetual license with an unlimited number of production units.

WHIS have three standard levels of licensing- Product, Multi Product and Corporate, but remain flexible and receptive to the needs of customers.

OPEN**RTOS**® Key Features Include

- Pre-emptive, cooperative, & round robin scheduling options;
- Unlimited number of Tasks and priority levels;
- Queues, semaphores and mutexes;
- Event flags;
- Task notification;
- Run time statistics;
- Very efficient software timers;
- Uses minimum system resources;
- Supports wide range of microprocessors;
- Supports all popular tool chains;
- Very large user base;
- Easy to use.

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Organisational Quality Assurance

Ensuring Excellence in Safety-Critical Development

A Safety Systems Company

When you're building safety-critical products, you need absolute confidence that every component is engineered with discipline, transparency, and repeatability. As a specialised safety systems company, WHIS delivers exactly that, through certified processes, proven quality, and an RTOS ecosystem trusted across the most demanding industries. Find out more on the WHIS website.

Why ISO 9001 Matters for Your Project

ISO 9001 demonstrates strong, consistent quality management and ensures reliable, well-controlled outputs. It reduces project risk, improves consistency, and provides confidence in a disciplined supplier.

However, ISO 9001 alone is not enough for safety-critical design. Safety-related projects require additional, domain-specific standards that go beyond general quality management to provide the assurance, evidence, and rigour needed for certification.

- Consistent, repeatable outputs every time;
- Lower project risk;
- Disciplined development practices;
- Reliable deliverables that behave exactly as expected;
- A supplier you can trust to meet safety expectations.

ASPICE Level 2: Automotive-Grade Engineering Discipline

To support modern automotive applications, WHIS development processes incorporate ASPICE Level 2-aligned practices, demonstrating structured work planning, traceability, verification rigour, and controlled process execution. This ensures WHIS can integrate seamlessly into Tier 1 and OEM supply chains that demand ASPICE-aligned development.

A Proven Track Record You Can Trust

Across global deployments in automotive, medical, industrial, aerospace and rail systems:

- There has never been an in-field incident involving SAFE**RTOS**®;
- 100% certification success rate for customers using DAPs and safety manuals.

LRQA CERTIFIED ISO 9001 · ISO 14001

UKAS MANAGEMENT SYSTEMS 0001

Your Project, Expertly Managed

Clear communication, structured delivery, and seamless collaboration at every stage

WHIS take a structured and collaborative approach to every project, ensuring clear communication, aligned expectations, and smooth delivery from start to finish. By combining disciplined project management with a customer-focused mindset, WHIS keep stakeholders informed, address challenges early, and ensure each project progresses efficiently and confidently.

Adegoke Gbadamosi
Project Manager

Adegoke is a certified Project Management Professional with extensive experience delivering projects across multiple industries. By overseeing every phase, from planning through to implementation, he ensures customers benefit from a smooth, well-coordinated process with clear communication at each step. His focus on efficiency and practical, transformative solutions helps streamline workflows, reduce project risks, and ultimately improve the overall experience and satisfaction of all stakeholders.

email: sales@highintegritysystems.com
web: www.highintegritysystems.com

Safety Plugins

Increasing Integrity

WHIS safety plugins strengthen the integrity of your safety-critical system by adding targeted protection where it matters most. Each module is delivered with full source code and a high-integrity Design Assurance Pack built to the same exacting standards as SAFE**RTOS**®, ensuring seamless integration, audit-ready evidence, and reduced certification effort.

SAFEXchange

Securely share safety critical data between multiple processors and cores across black-channel communication buses. Conforms to the principles of IEC 61784-3.

SAFECRC Checker

Guard against corruption and malicious attack by confirming the correctness of your program memory.

SAFECheckpoints

Provides a sophisticated Task monitoring capability that allows the user to specify timing tolerances for critical sections of code.

Middleware

Fully Integrated Solutions

WHIS Middleware components are available with all WHIS RTOS products as one highly integrated, fully optimised and verified package, accompanied by a demonstration application, allowing engineers to work effectively from the day they are delivered.

When integrating middleware with SAFE**RTOS**®, WHIS safety engineers will provide an example showing how the SAFE**RTOS**® MPU functionality could be used to isolate middleware code from other safety critical code segments. Used effectively, MPU functionality may allow mixed safety integrity levels of software to coexist within the same build of code, resulting in lower development & production costs.

TCP/IP

WHIS' networking solution is a scalable, thread safe TCP/IP stack. It provides a familiar, standards based, Berkeley sockets interface, making it as simple to use and as quick to learn as possible. An alternative callback interface is also available for advanced users.

It's features and RAM footprint are fully scalable, making it equally applicable to smaller, lower throughput microcontrollers as to larger more powerful processors. It is available with a light weight HTTPS web server.

Support, Training & Consultancy

Benefit from WHIS Expertise

Support
WHIS' support team is composed of highly experienced engineers dedicated to assisting you. As part of WHIS' support offering, you will have access to the WHIS online support ticket system for a team of up to five developers. This allows client engineers to reach out to the WHIS engineering team with any queries related to licensed components.

Training Courses
Utilise the experienced WHIS team of engineers to fully understand the full capability of the purchased RTOS and make greater use of its features. Enjoy enhanced designs and shortened development schedules.

Consultancy
The WHIS consultancy services are designed to support customers, providing the knowledge and experience to help optimize the final design, improve the design processes, and smooth the route to certification. Just a few hours of consultancy, to review a preliminary design and check the approach being taken is correct, has been proven to deliver significant benefits to the outcome of a project.

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See SAFERTOS® in Action

Free Resources

Have you seen the latest binary evaluation packages? WHIS regularly share new partner evaluation packages, technical resources and blog posts, designed to help you get hands-on faster.

What is a Binary Evaluation Package?

A binary demo is a fully functional, time-limited SAFE**RTOS**® application designed to run seamlessly on supported hardware platforms. It enables engineers to quickly evaluate SAFE**RTOS**® capabilities and performance in a real-world environment.

How To Get Started

- Visit the Download Centre and create a free account;
- Select your area of interest, for example SAFE**RTOS**® downloads, and then select your secondary area of interest;
- Download a binary evaluation package and/or documentation.

What is Included in the Download Centre?

The WHIS Download Centre is your free, go-to resource for exploring SAFE**RTOS**® . You'll find:

- Binary evaluation packages for leading platforms and a Workshop Demo: Upgrading from FreeRTOS to SAFE**RTOS**® ;
- Manuals including setup guides, upgrade instructions, and technical documentation;
- Datasheets covering SAFE**RTOS**®, SAFE**RTOS**® CORE, Tracealyzer, SAFEXchange, and CONNECT MIDDLEWARE.

Some of our most popular demos include:

- Upgrading From FreeRTOS™ to SAFE**RTOS**®: Workshop example using Kinetis K64F with GCC MCUXpresso;
- TC39X Tricore Aurix with Tasking VX-Toolset for Tricore IDE;
- SAFE**RTOS**® for the ARM Cortex-R52 using ARM Compiler 6 for the Fixed Virtual Platform;
- SAFE**RTOS**® for the S32K344 with S32 Design Studio.

Everything is engineered to give you a clear, hands-on experience with SAFE**RTOS**®, so you can assess performance, portability, and safety-critical features before you commit.

Have You Already Tried Binary Evaluation Packages?

Take your evaluation further with Source Code Evaluation Packages, including full SAFE**RTOS**® source code, a ready-to-run demonstration.

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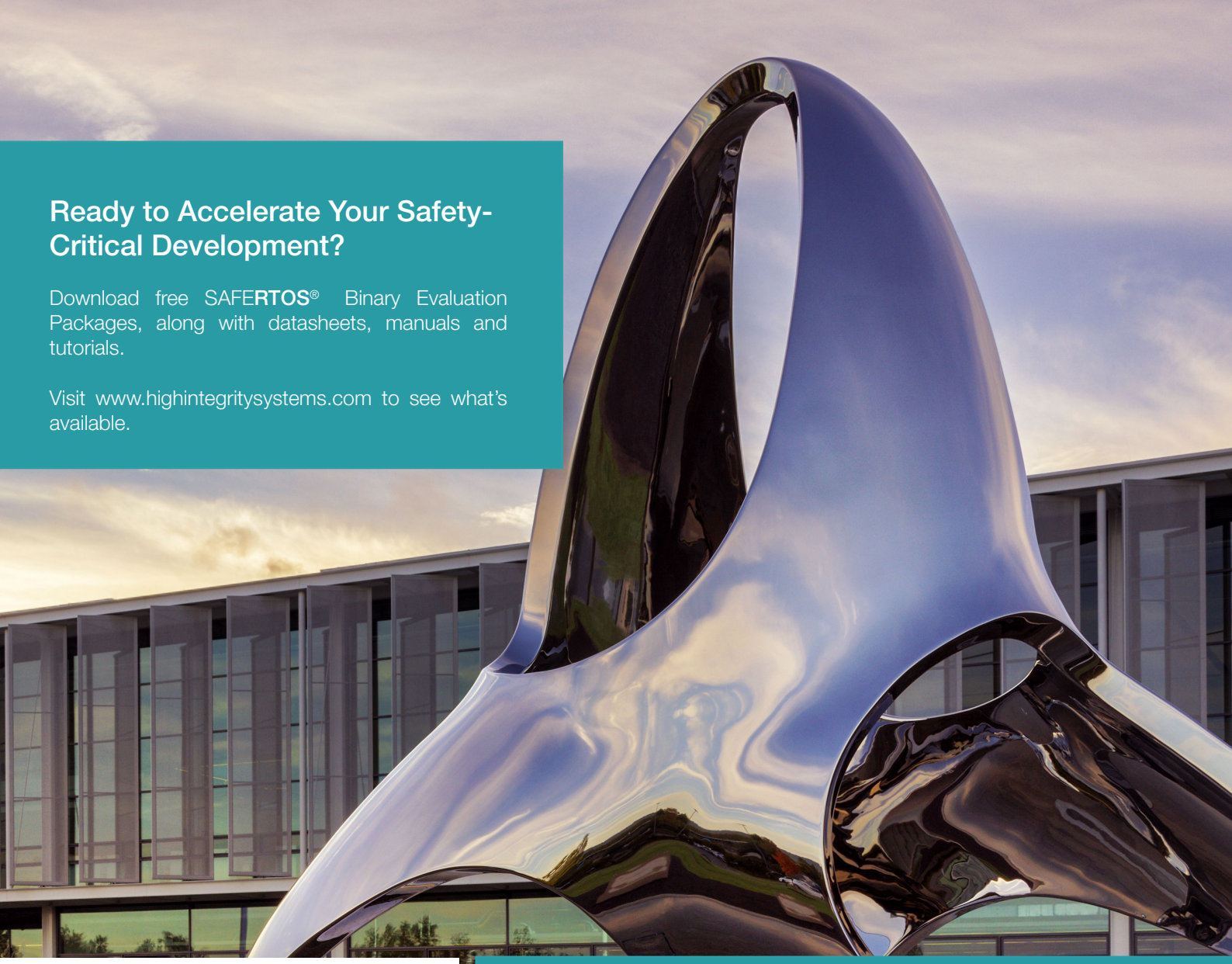

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highintegritysystems

Americas +1 408 625 4712
ROTW +44 1275 395600

Headquarters
WITTENSTEIN high integrity systems
3 Rivergate, 1st Floor
Temple Quay
Bristol
BS1 6EW, UK

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