Highly Reliable Safety-Critical Embedded Solutions

A Full Spectrum Combination of Hardware, Firmware, and Software

Powersoft19 engineers integrate their deep knowledge of embedded systems and industrial safety-critical technologies to offer comprehensive design and development services for safety-critical embedded solutions. Depending on the requirements of a system, we include hardware, firmware, and software, or any combination of these to deliver a complete safety-critical solution.

Services Offered

- New Product Development
- Systems Re-engineering
- Maintenance and Customization
- Standards Conformance
- Product Documentation
- Process Improvement
- Safety Consultancy and Assessment
- System Dynamics Modeling
- Quality Assurance / Product Integrity

Why *Powersoft19*?

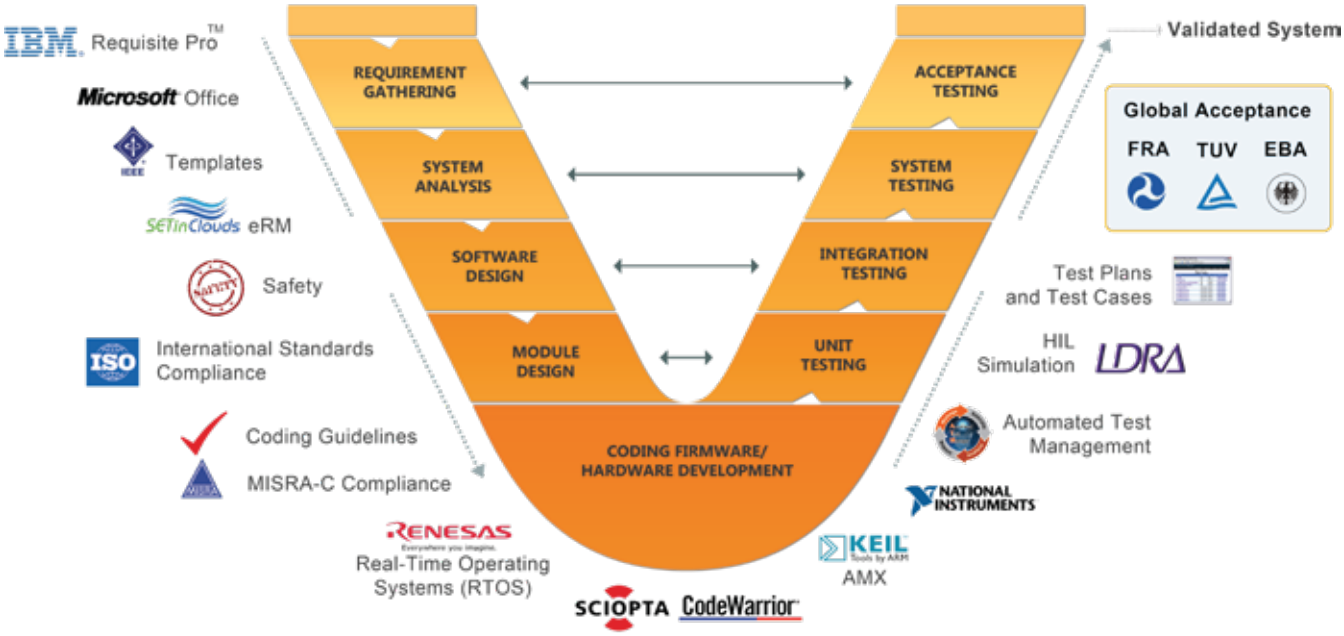
- Augment your resources with our expert team that has more than 20 years of experience in numerous safety-critical industries
- Get comprehensive services including design and development of firmware and hardware, system integration, and quality assurance
- Tailor your own solution using our flexible and transparent business model, allowing seamless integration with your organization's work processes
- Enjoy a quick turn-around time due to standardized and mature work processes followed by *Powersoft19* team

Key Phases and Processes

Powersoft19 takes responsibility of the whole development lifecycle: From analysis and conceptualization to development and testing. Our work meets the most stringent global quality standards as we utilize advanced software engineering methodologies, environments, and tools. *Powersoft19* has over 20 years of experience as an Independent Verification & Validation (IVV) service provider. Our wide set of IVV services include:

- Independent test engineering
- Testing automation
- Test management and consultancy

V-Model Approach for Streamline Process



Agency Approvals and Certifications

Powersoft19 has an excellent track record in achieving agency approvals for industrial products from European and American safety agencies ranging from safety integrity levels SIL 1 to SIL 3. Our experts take care of all the necessary steps involved in getting certifications, such as:

- Analyzing the product, process documents, manuals, etc.
- Listing down the requirements of the applicable safety standards
- Preparing certification documents
- Performing static, dynamic, functional, and performance testing; and generating test reports
- Organizing a complete certification package to be submitted to the certification agency
- Coordinating with the certification agency assessors until successful completion of the process

Technology Stack

We use state-of-the-art tools and technologies to provide you with the best results. Our experts can also learn and adapt quickly to any tools our clients may specify or recommend.

Project Management

HP ALM Project Planning and Tracking, Microsoft Team Foundation, Oracle Agile

Simulation and Modeling

SCADE, Simulink, Matlab

Source Code Management

Source management using SVN, GIT, Clearcase and CMSynergy, Code review using Reviewboard/GERRIT, Building system using Hudson, ANT, GNU Make

Compilers and Toolchains

GNU, CodeWarrior, IAR, Renesas HEW, Visual Studio, Eclipse, NetBeans, Code Composer Studio, ISE, Quartus

Programming Languages

Assembly, C, C++, Python, VHDL, Verilog

OS and RTOS

SCIOPTA, Integrity, Salvo, AMX, Windows CE, freeRTOS, Embedded Linux

Microcontrollers/Processors/FPGA

Renesas, MSP, Atmel (AVR series), PIC, Energy-Micro, Coldfire, ST Microelectronics, x86, Altera, ARM (Cortex M0-M4, Cortex A8, Cortex A15)

Bus

CAN, CANOpen, J1939, DeviceNet, Profibus, Profinet

Source Code Analysis

LDRA, PCLint, SQMLint, CppCheck, Source Monitor

Configuration & Bug Tracking

PVCS, Quality Center, JIRA, Testlog

Test Automation

NI Test Stand, LabVIEW, Unified Functional Testing, Load Runner, AutoIT