



Reduce risk. Decrease costs. Secure, connected, safety- critical device design.

QNX® Software Systems offers the industry's most reliable real-time operating system (RTOS) platform. Supported by field-proven development tools, feature-rich middleware and professional services we enable reliable, secure, connected, safety-critical devices.

RTOS – The QNX® Neutrino® RTOS is a full-featured and robust multi-core operating system that exceeds the most demanding reliability, performance, and security needs of today's medical devices. Our architecture incorporates core functionality into a tiny microkernel while leaving drivers, networking stacks, and other OS services outside in memory protected space – providing unparalleled reliability, a higher degree of determinism, and fault-tolerance.

The QNX® Neutrino® RTOS Safe Kernel – Certified to IEC 61508 at Safety Integrity Level 3 (SIL 3), the Safe Kernel provides a certified platform for application development of safety critical systems.

The QNX® Neutrino® RTOS Secure Kernel – Delivers the Common Criteria ISO/IEC 15408 Evaluation Assurance Level (EAL) 4+ certified kernel that meets the stringent safety and security requirements of mission-critical applications

QNX technology is based on three principles:

1. **Microkernel architecture:** Bug resiliency, self-healing systems, rapid development, field upgradeability
2. **Industry standards:** Reusable software assets, tool and application portability
3. **Pre-integrated platforms:** Development-ready technology, low-risk prototypes, fast time to market

Tools – The QNX® Momentics® Tools Suite is a comprehensive, Eclipse-based IDE with innovative profiling tools for maximum insight into system behavior. These unique tools give developers at-a-glance views of real-time interactions, memory profiles, and more, for shorter debug times and faster time to market. Multi-core specific tools allow developers to cleanly migrate legacy code and optimize it for multi-threaded environments.

Connectivity – We provide support for various forms of wireless connectivity from point-to-point connections like Bluetooth and ZigBee to peer-to-peer networking like WiFi (802.11). Our native distributed processing supports complex distributed systems in which multiple devices seamlessly share resources and communicate without custom protocols.

Security – Our networking ecosystem offers support for various authentication and security protocols including WEP, WPA/WPA2, Radius, 802.1x, SSL, IPSec, IPv6, NAT, and more, in accordance with the Health Insurance Portability Accountability Act (HIPAA).



HMIs — QNX® Software Systems provides a comprehensive offering for quickly developing visually compelling and high-performing embedded graphics applications. Based on the concept of a universal application platform, our Graphics solutions span the spectrum from basic UIs to complex, high-end human-machine interface (HMI) technologies, as well as being easily expandable to include emerging new technologies.

IEC 61508 Certification Assistance — Initially used in the automation and process-control industry, IEC 61508 has become the basis from which safety standards are derived for various markets including medical devices. QNX Professional Services can help pave the path to certification through our IEC 61508 certification support service. By leveraging existing confidence-in-use (CIU) data on various QNX-supported hardware platforms and QNX expertise in safety certification, our team can identify the best solutions to shorten your time to certification and considerably reduce your costs at the system level.

FDA Consulting Service — QNX has a proven track record of successfully helping companies with FDA approvals for medical-devices running the QNX Neutrino RTOS; this includes deep experience with achieving FDA 510(k) clearance. Our professional services team also provides product life-cycle management services — everything from process reviews to quality system audits. What's more, service providers in the QNX ecosystem can help with the premarket notification process as well as the more complex premarket approval (PMA) process.

Support — Forced software migration is a foreign concept at QNX Software Systems. QNX 2, first released in 1982, is still supported 28 years later and QNX 4, first released in 1991, is still maintained with new releases.

Ecosystem — Our most fundamental technology relationships are based on the silicon sitting beneath the OS and the market-driven middleware components that ride on top of it. Close to 300 best-in-class hardware and software vendors give our customers choice and flexibility throughout the development cycle.



QNX SOFTWARE SYSTEMS

www.qnx.com

QNX Software Systems

Founded: 1980

Headquarters: Ottawa, Canada

Worldwide offices:

- Throughout the US
- Hanover, Germany
- Tokyo, Japan
- Shanghai, China
- Bangalore, India

Authorized distributors: Serving 40 countries on 6 continents

Key markets

- Medical devices and imaging
- Automotive telematics and infotainment
- Industrial control and building automation
- Networking and telecom
- Military, security, and defense

Benefits

- Ensure in-field reliability with a microkernel-based OS that encourages clean modular software
- Guarantee high availability with self-healing systems thanks to enhanced OS features like adaptive partitioning and high availability monitoring (HAM)
- Shorten debug times with comprehensive, Eclipse-based development tools for code analysis and traceability
- Reduce regulatory burden with IEC 61508 SIL3 and CC EAL4+ certification and proven FDA validation history
- Quickly build compelling UIs with pre-integrated and optimized HMI technology for selected hardware
- Reduce time to market with pre-integrated protocols for connectivity (USB, Bluetooth), wireless (802.11 a/b/g), and security (WEP/WPA/WP2)

Industry Certifications

- IEC 61508 Safety Integrity Level (SIL 3) — Fall 2010
- Common Criteria Security Certification (EAL 4+)
- ISO 9001:2008
- POSIX PSE52 Realtime Controller 1003.13-2003
- OpenGL ES certified conformant implementation