

QNX Neutrino RTOS

Multi-Core

Embedded industry's only field-proven platform and clean migration strategy for multi-core

Solution highlights

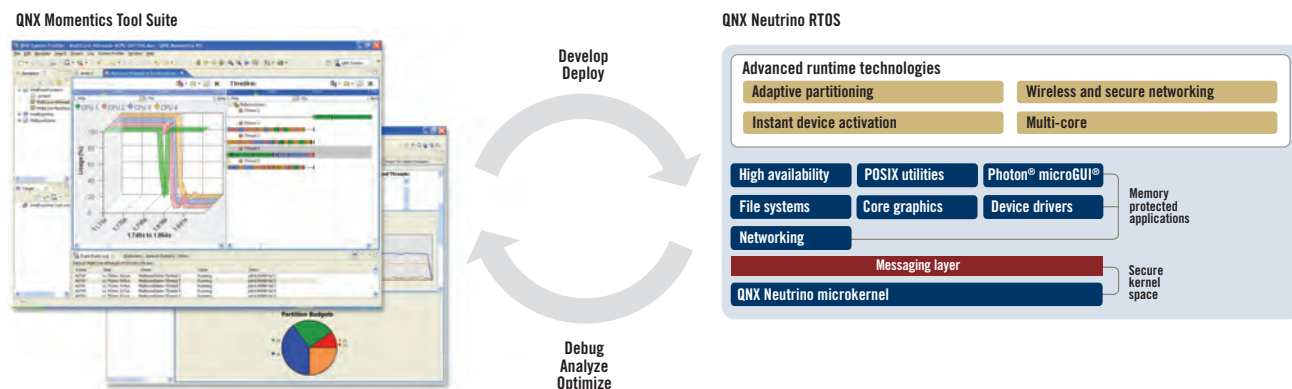
- ▶ Proven, reliable OS — QNX Neutrino RTOS has been multiprocessor capable for over 10 years
- ▶ Comprehensive multi-core support for symmetric and bound multiprocessing
- ▶ Seamlessly scale beyond two processors with symmetric and bound multiprocessing
- ▶ Accelerate legacy code migration to multi-core processors using bound multiprocessing
- ▶ Propel time to market — reuse existing applications with full visibility into application processes and system resources
- ▶ Maximize performance through true concurrency offered by symmetric and bound multiprocessing
- ▶ Debug and optimize multi-core applications efficiently with best in class tools

For years, QNX Software Systems has been the leading provider of multiprocessing RTOS technology. With the introduction of QNX multi-core technology, QNX now offers the industry's most comprehensive software platform for multi-core systems. Powered by the massively scalable QNX Neutrino® RTOS and QNX Momentics® IDE, this fully integrated solution supports symmetric (SMP) and bound multiprocessing (BMP). Introduced by QNX, BMP is a groundbreaking technology that simplifies code migration and future-proofs designs.

Choose the model

Only the QNX Neutrino RTOS provides the choice of any multiprocessing model for your product: symmetric or bound multiprocessing. Only the QNX Momentics Tool Suite provides the tools you need to develop, visualize and optimize multiprocessing applications. For years, QNX has proven the power of symmetric multiprocessing with its industry-leading QNX Neutrino SMP solution. With QNX multi-core technology you can migrate your existing uniprocessor code to a multi-core processor without any modification whatsoever.

Maximum choice for multi-core



QNX multi-core technology provides visualization tools for quickly developing, debugging, and optimizing multi-core applications for maximum performance.

Migrate legacy code

For new application development, symmetric multiprocessing (SMP) offers a way to extract the maximum performance from multi-core processors. However, not all legacy applications are compatible with the SMP model. To address this, QNX Software Systems has created bound multiprocessing (BMP). BMP offers the simplicity of SMP's transparent resource management with the ability to dedicate applications or threads to an individual core. BMP provides the control of asymmetric multiprocessing with the power of symmetric multiprocessing to allow code written for uniprocessing environments to run without modification on multi-core processors.

Legacy applications can co-exist with applications designed to extract the maximum performance from multi-core processors. Legacy applications can be bound to a specific processor while applications designed with concurrency in mind (parallel processing) can be scheduled by the operating system for highest performance.

Build and debug applications quickly

The QNX Momentics Tool Suite provides the tools that developers need to develop, debug and optimize multi-core systems. These include:

- ▶ A complete multi-core aware toolchain for multiprocessing debuggers, compilers and embedding tools
- ▶ Value-added tools developed specifically for multiprocessing, including the QNX system profiler for maximizing performance in multi-core systems. The system profiler provides a detailed view of all system activity (operating system, drivers, application, file systems, stacks, etc). It includes time-stamped interactions between the various elements.

Foundry27

This community portal for QNX software developers provides source repositories, forums, blogs, wikis, and, in the community spirit, a bazaar that lets developers share source code and binaries with one another. Whether the developer wants to download source, discuss ideas with fellow developers, or even create a new code project for the QNX community, Foundry27 offers the resources required.

About QNX Software Systems

QNX Software Systems, a Harman International company (NYSE: HAR), is the innovation leader in embedded technology with middleware, development tools, operating-system software and services. Global leaders such as Cisco, Daimler, General Electric, Lockheed Martin, and Logitech depend on QNX technology for a wide range of OEM applications. QNX Software Systems is headquartered in Ottawa, Canada, and distributes products in over 100 countries worldwide.

