Media Oriented Systems Transport (MOST)

The Media Oriented Systems Transport (MOST) bus specification is fast becoming an auto industry standard for building in-vehicle multimedia systems. With the QNX® MOST Technology Development Kit, you can go beyond the standard implementation and quickly build customized in-car multimedia systems that offer enhanced reliability and optimized performance.

Solution Highlights

> Complete integration with QNX Neutrino® realtime operating system (RTOS) enables fault tolerance and dynamic upgrades
> Oasis NetServices plug-in support optimizes performance and eliminates porting issues
> Transparent access to in-vehicle resources maximizes CPU usage and reduces hardware costs
> Source code accelerates customization of MOST drivers, audio, and IP networking

Mission-critical Reliability

Create highly reliable multimedia systems for your in-car platforms. Since the MOST driver is completely integrated with QNX Neutrino, it behaves like a native QNX process, and automatically inherits the benefits of full memory protection and modularity.

Running on QNX Neutrino, your MOST-enabled device will have the same extreme fault tolerance that mission-critical systems have relied on for decades. You can even safely upgrade your system after it leaves the factory floor.

Figure 1: MOST Architecture

The QNX MOST Technology Development Kit lets you build reliable, high-performance systems according to your specifications. For example, two systems may interact over MOST using NetServices, using TCP/IP protocols, or transparently, such as having the head unit control the rear seat display.
Oasis NetServices Optimization
Improve the efficiency of your system with enhanced functionality of the Oasis NetServices Library. NetServices provides a standard software interface to low-level MOST system services, simplifying development. Designed for single-process applications, NetServices can create a bottleneck in complex systems that manage multiple media applications. Under QNX Neutrino, multiple applications can make use of the MOST driver simultaneously.

NetServices acts as a simple plug-in to QNX Neutrino, which lets you avoid difficult porting issues and work with different configurations and implementations of Oasis tranceivers.

Transparent Distributed Processing
Reduce expensive hardware costs and maximize your CPU resources by taking advantage of QNX Neutrino's transparent distributed processing. The framework provides unified access to hardware and software resources on remote nodes using standard messages. Using this technology on the MOST bus, media can be shared by all devices in the car network — even very thin clients. You can also extend the network outside the vehicle through message passing over TCP/IP.

The result is that you can build highly scalable, flexible systems without the added time and per-unit cost associated with custom code development and incremental hardware.

Simplified Customization
Make it easier to port audio and IP networking to custom hardware by using the source code modules available with the QNX MOST Technology Development Kit. Optional modules are also available for development purposes, including the MOST NetServices libraries and sample applications.

You can also rapidly implement custom MOST drivers, with full source for all MOST components plus extensive documentation of driver internals.

What’s in the Kit
> Source and binaries for supported hardware;
  • MOST controllers and transceiver Oasis OS8104
  • Supported platforms include x86, ARM, MIPS, PowerPC, SH-4

> Oasis MOST NetServices libraries:
  • Layers I, II, and MOST High Protocol

> NetServices source code;
  • Optional Oasis MOST NetServices libraries;
  • Sample NetServices applications

> TCP/IP networking driver

> NetServices Adaptation Layers:
  • Synchronous, asynchronous, and control channel APIs

> Full documentation

System Requirements
> QNX Momentics® development suite Professional Edition (PE) v6.3 (development)
> QNX Neutrino RTOS v6.3 (runtime)
> ARM, x86, MIPS, PowerPC, and SH-4 targets

About QNX Software Systems
Founded in 1980, QNX Software Systems is the industry leader in realtime, microkernel OS technology. The inherent reliability, scalable architecture, and proven performance of the QNX Neutrino RTOS make it the most trusted foundation for future-ready applications in the networking, automotive, medical, and industrial automation markets. Companies worldwide like Cisco, Ford, Johnson Controls, Siemens, and Texaco depend on QNX technology for their mission- and life-critical applications. Headquartered in Ottawa, Canada, QNX Software Systems maintains offices in North America, Europe, and Asia, and distributes its products in more than 100 countries worldwide.