

RTLinux Hard Realtime OS

- RTLinux™ is a hard realtime operating system that runs a general purpose OS (Linux or NetBSD) in its spare time.
- Non-realtime OS cannot interrupt realtime activities
- Available as open or closed source:
 - Open/RTLinux: GPL and royalty-free patent license
 - RTLinux/Pro: Flexible time- or project-based licensing to permit binary distribution
Non-redistributable source code available
Enhanced features and tools
- All of the applications and features of the general purpose OS are available
- Reliable threads-based hard realtime environment
- Based on the POSIX 1003.13 PS51 “minimal realtime” standard
- Standard POSIX API
- Runs on multiple architectures:
 - x86 (IA32) 486 and up
 - PowerPC 603,604,G4, MPC8260, IBM 405 and others
 - MIPS RM7000 and others
 - Alpha
- Symmetric multiprocessor support (SMP) on x86 and PowerPC
- Training, support and development packages available
- Reseller discounts
- University pricing
- Covered under US Patent No. 5,995,745

Interrupt latency and periodic task scheduling precision an order of magnitude better than any general purpose OS can provide, even those specially modified to be more “real time.”

	<u>Interrupt Latency</u>	<u>Periodic Task Scheduling Jitter</u>
AMD SC520	< 10 μ sec.	< 15 μ sec.
MP8260*	< 3 μ sec.	< 3 μ sec.
x86 (typical)	< 20 μ sec.	< 40 μ sec.
Apple PowerMac (typical)	< 15 μ sec.	< 25 μ sec.

These are “worst case” timings, not “typical.” Interrupt latency is measured from the time the external device asserts an interrupt, unlike some other vendors, who measure the time from the activation of the OS handler scheduling to the time the handler begins operation.

* Not verified.