

Low-latency kernel patch instructions

In most cases, uClinux provides excellent real time performance simply due to the bounded nature of the embedded environment it is hosting. However, the kernel low latency patch is included to further enhance system determinism. This patch adds scheduling points to several kernel loops that have been found to increase latency under various loads. The main advantage of this approach is that it improves latency without requiring changes to hosted applications.

To use the low latency patch, perform the following steps.

1. Change to the kernel source directory:
 `cd uClinux-dist/linux-2.4.x`
2. Apply the low latency patch:
 `patch -p1 < low-latency-frio-4.patch`
3. Turn on the low latency scheduling feature using "make xconfig"
 Target Platform Selection
 Customize Kernel Settings
 Main Menu
 Save and Exit
 Processor type and features
 Enable Low latency scheduling
 (leave 'Control low latency with sysctl' turned off)
4. Build and deploy the system image.
