## Operating Systems (RTOS / OS)

Operating systems use specialized scheduling algorithms to let the software developer produce deterministic behavior in the final system. NXP's 3rd party tool vendors offer a range of operating systems, from small real-time kernels for deeply embedded systems to large, complex operating systems like Linux and Windows CE.

| Supplier | Operating Systems (RTOS / OS) | Supported Devices | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LPC175x | LPC176x | LPC210x | LPC211x | LPC212x | LPC219x | LPC213x | LPC214x | LPC215x | LPC221x | LPC222x | LPC229x | LPC236x | LPC237x | LPC238x | LPC242x | LPC245x | LPC246x | LPC247x | LPC288x | LPC291x | LPC292x | LPC293x | LH754xx | LH795xx | LH7A4xx | LPC313x | LPC314x | LPC315x | LPC318x | LPC32xx | |
| Adeneo Embedded | Windows CE | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | ● | ● | Free binary eval versions available |
| | Linux | | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | ● | ● | for LPC24xx: uCLinux |
| | .NET MicroFramework | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | ● | | - |
| BSQUARE | Windows CE | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | Free binary eval versions available |
| CMX | CMX-RTX | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | ● | | | | | | ● | | - |
| | CMX-TINY+ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | - |
| eCosCentric | eCos | | | ● | | | | ● | ● | | ● | | ● | | | ● | | | ● | | | | | | | | | | | | | | Combined with eCosPro IDE |
| ENEA | OSE | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | - |
| eSysTech | X Real-Time Kernel | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | - |
| Express Logic | ThreadX | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | - |
| FreeRTOS.org | FreeRTOS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | Runs on any ARM7, ARM9, Cortex-M3 |
| GHI | .NET MicroFramework | | | | | | | | | | | | | | | ● | | | ● | ● | | | | | | | | | | | | | USBizi and EmbeddedMaster products |
| Green Hills | Integrity | | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | | | | Call GHS regarding BSP availability |
| | µ-velOSity | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | runs on any ARM7 or ARM9 core |
| IAR | PowerPac RTOS | | | ● | | | | ● | ● | | | | | ● | ● | | | | ● | ● | ● | | | | | | | | | | ● | ● | - |
| InterNiche | NicheTask | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | - |
| Keil / ARM | RTX | | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | ● | ● | | | ● | ● | - |
| Mentor Graphics | Nucleus OS | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Easily ported to other NXP controllers |
| Micrium | µC/OS-II | | | ● | | ● | | ● | ● | | | | ● | | ● | | | | ● | ● | ● | | | | | ● | ● | ● | | | ● | ● | - |
| Micro Digital | smxARM | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | | | | ● | ● | ● | | | | ● | ● | - |
| NXP | Windows CE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | FREE WinCE 6.0 BSP from NXP |
| | Linux for LPC32x0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | FREE Linux 2.6.27.8 BSP from NXP |
| | Linux for LPC31xx | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | ● | ● | | | FREE Linux 2.6.28.2 BSP from NXP |
| | Linux for LH7/LH7A | | | | | | | | | | | | | | | | | | | | | | | | | ● | ● | | | | | | FREE Linux 2.6.16 BSP from NXP |
| Pumpkin | Salvo RTOS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | Instruction-set architecture |
| Quadros | RTXC Quadros | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● | Highly customizable and reliable RTOS |
| SEGGER | embOS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | - |
| Wind River | VxWorks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | ● | - |
| WITTENSTEIN | OpenRTOS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | Commercial licensing for FreeRTOS |
| Family | | LPC1000 | | LPC2000 | | | | | | | | | | | | | | | | | | | | | LH7 / LH7A | | | LPC3000 | | | | | - |
| Core | | Cortex-M3 | | ARM7TDMI | | | | | | | | | | | | | | | | | | ARM968E | | | [1] | [2] | [3] | ARM926EJ | | | | | [1] ARM7TDMI [2] ARM720T [3] ARM922T |