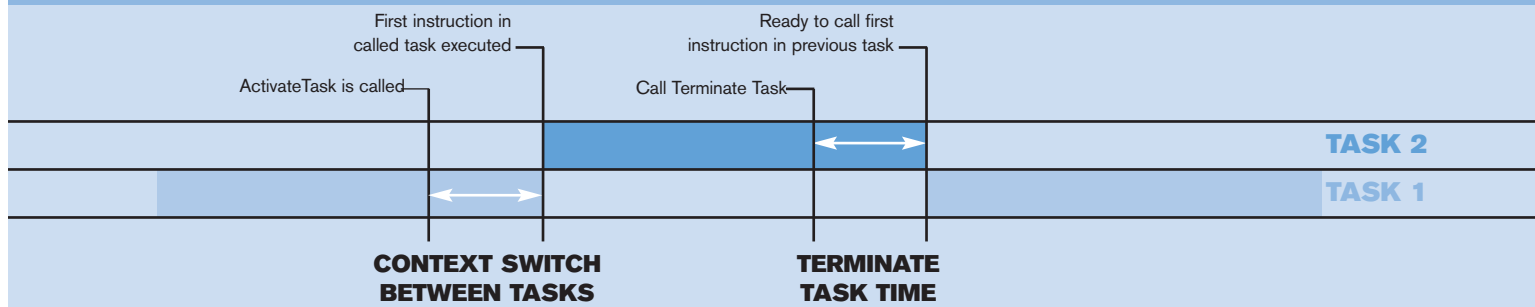


OSEK Real Time Operating System

OSEKturbo Performance Information

Context switch timings:

- Measurements done with Timer capture (MPC555: TB, time base register; HCS12DP256: TCNT, timer count register)
- Tasks activated consecutively, ISR that activates tasks as well
- 19 tasks, 3 ISRs, STANDARD status



OSEKturbo Performance Information	MPC555 40MHz; BCC1	HCS12DP256 8MHz; BCC1
Context switch between tasks (ActiveTask)	1.7µs	12.5µs
Terminate task with return to background task	0.9µs	6.6µs
Context switch from ISR (ActiveTask)	2.1µs	14.9µs

Typical Memory Requirements:	MPC555	HCS12DP256
Total OS ROM	2304 bytes	776 bytes
OS data	108 bytes	60 bytes
OS code	2196 bytes	716 bytes
Total OS RAM	466 bytes	90 bytes

Freescal OSEKturbo OS Products

OSEKturbo releases exist for all OS (BCC1, ECC1, BCC2, ECC2) and COM (CCCA and CCCB) conformance classes.

Supported Processors (check with your local Freescale sales office for latest list)

- > Freescale 68HC08
- > Freescale 68HC(S)12
- > Freescale MPC5xx
- > Freescale MPC5200
- > Freescale DSP56800E
- > Freescale S12X
- > Freescale MPC55xx
- > Freescale MAC7100

Technical Enhancements

- > Timescale feature that enables cyclic task activations based on efficient alarms

- > OSEKturbo highly optimized for speed and memory on each target
- > ORTI (OSEK Runtime Interface) for kernel aware debugging
- > Enhanced OSEK Builder for OIL configuration
- > Multiple scheduling policies
- > Event control for task synchronization
- > Resource management based on OSEK priority ceiling protocol
- > Counter management
- > Efficient alarm management
- > Optimal stack methods
- > Stack monitoring
- > Fast links for accessing system data structures
- > Automatic exclusion of unused system services
- > Specific hardware features such as memory bank switching and use of low

power modes, interrupt handler and Floating Point registers

- > Full internal OSEK communication for inter process communication
- > Task management for activation and termination of tasks
- > Interrupt management
- > Error handling

Benchmark configuration:

- > BCC1 with one task per priority
- > Pre-emptive Scheduling
- > No multiple activations
- > 10 basic tasks + 1 initialization task
- > 10 alarms with task activations
- > 1 16-bit (1 ms)
- > 1 ISR (in addition to system timer)
- > No messages, no resources
- > Standard status, debug level zero
- > No hooks

Learn More: For more information about Freescale products, please visit www.freescale.com/codewarrior