

# µC/OS-II, The Real-Time Kernel

## V2.92 Quick Reference Chart

**Legend:**  
**Black** is for seldom used functions  
**Orange** is for CREATE functions  
**Red** is for DELETE functions  
**Blue** is for commonly used functions  
**Green** is for comments

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				OPTIONS (opt)	Miscellaneous
Semaphores (OS_SEM.C)					
INT16U	OS_SemAccept	(OS_EVENT	*pevent);		
OS_EVENT	*OS_SemCreate	(INT16U	cnt);		
OS_EVENT	*OS_SemDel	(OS_EVENT	*pevent,	OS_DEL_NO_PEND	
		INT8U	opt,	OS_DEL_ALWAYS	
		INT8U	*perr);		
void	OS_SemPend	(OS_EVENT	*pevent,		
		INT32U	timeout,		
		INT8U	*err);		
INT8U	OS_SemPendAbort	(OS_EVENT	*pevent,	OS_PEND_OPT_NONE	
		INT8U	opt,	OS_PEND_OPT_BROADCAST	
		INT8U	*perr);		
INT8U	OS_SemPost	(OS_EVENT	*pevent);		
INT8U	OS_SemQuery	(OS_EVENT	*pevent,		OS_SEM_DATA:
		OS_SEM_DATA	*p_sem_data);		INT16U OSCnt
					#if OS_LOWEST_PRIO <= 63
					INT8U OSEventGrp
					INT8U OSEventTbl[]
					#else
					INT16U OSEventGrp
					INT16U OSEventTbl[]
					#endif
void	OS_SemSet	(OS_EVENT	*pevent,		
		INT16U	cnt,		
		INT8U	*perr);		

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<b>Mutual Exclusion Semaphores (OS_MUTEX.C)</b>					
BOOLEAN	OSMutexAccept	(OS_EVENT INT8U	*pevent, *perr);		
OS_EVENT	*OSMutexCreate	(INT8U INT8U	prio, *perr);		
OS_EVENT	*OSMutexDel	(OS_EVENT INT8U INT8U	*pevent, opt, *perr);	OS_DEL_NO_PEND OS_DEL_ALWAYS	
void	OSMutexPend	(OS_EVENT INT32U INT8U	*pevent, timeout, *perr);		
INT8U	OSMutexPost	(OS_EVENT	*pevent);		
INT8U	OSMutexQuery	(OS_EVENT OS_MUTEX_DATA	*pevent, *p_mutex_data);		OS_MUTEX_DATA: BOOLEAN OSValue INT8U OSOwnerPrio INT8U OSMutexPIP #if OS_LOWEST_PRIO <= 63 INT8U OSEventGrp INT8U OSEventTbl[] #else INT16U OSEventGrp INT16U OSEventTbl[] #endif

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<b>Event Flags (OS_FLAG_C)</b>					
OS_FLAGS	OSFlagAccept	(OS_FLAG_GRP OS_FLAGS INT8U INT8U	*pgrp, flags, wait_type, *perr);		
OS_FLAG_GRP	*OSFlagCreate	(OS_FLAGS INT8U	flags, *perr);		
OS_FLAG_GRP	*OSFlagDel	(OS_FLAG_GRP INT8U INT8U	*pgrp, opt, *perr);	OS_DEL_NO_PEND OS_DEL_ALWAYS	
INT8U	OSFlagNameGet	(OS_FLAG_GRP INT8U INT8U	*pgrp, **pname, *perr);		
void	OSFlagNameSet	(OS_FLAG_GRP INT8U INT8U	*pgrp, *pname, *perr);		
OS_FLAGS	OSFlagPend	(OS_FLAG_GRP OS_FLAGS INT8U INT16U INT8U	*pgrp, flags, wait_type, timeout, *perr);		wait_type: OS_FLAG_WAIT_CLR_ALL OS_FLAG_WAIT_CLR_AND OS_FLAG_WAIT_CLR_ANY OS_FLAG_WAIT_CLR_OR OS_FLAG_WAIT_SET_ALL OS_FLAG_WAIT_SET_AND OS_FLAG_WAIT_SET_ANY OS_FLAG_WAIT_SET_OR + OS_FLAG_CONSUME
OS_FLAGS	OSFlagPendGetFlagsRdy	(void);			
OS_FLAGS	OSFlagPost	(OS_FLAG_GRP OS_FLAGS INT8U INT8U	*pgrp, flags, opt, *perr);	OS_FLAG_CLR OS_FLAG_SET	
OS_FLAGS	OSFlagQuery	(OS_FLAG_GRP INT8U	*pgrp, *perr);		

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<b>Message Mailboxes (OS_MBOX.C)</b>					
void	*OSMboxAccept	(OS_EVENT	*pevent);		
OS_EVENT	*OSMboxCreate	(void	*msg);		
OS_EVENT	*OSMboxDel	(OS_EVENT	*pevent,		
		INT8U	opt,		
		INT8U	*perr);		
void	*OSMboxPend	(OS_EVENT	*pevent,	OS_DEL_NO_PEND	
		INT32U	timeout,	OS_DEL_ALWAYS	
		INT8U	*perr);		
INT8U	OSMboxPendAbort	(OS_EVENT	*pevent,	OS_PEND_OPT_NONE	
		INT8U	opt,	OS_PEND_OPT_BROADCAST	
		INT8U	*perr);		
INT8U	OSMboxPost	(OS_EVENT	*pevent,		
		void	*pmsg);		
INT8U	OSMboxPostOpt	(OS_EVENT	*pevent,	OS_POST_OPT_NONE	
		void	*pmsg,	OS_POST_OPT_BROADCAST	
		INT8U	opt);	OS_POST_OPT_NO_SCHED	
INT8U	OSMboxQuery	(OS_EVENT	*pevent,		OS_MBOX_DATA:
		OS_MBOX_DATA	*p_mbox_data);		void *msg

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<b>Message Queues (OS_Q.C)</b>					
void	*OSQAccept	(OS_EVENT INT8U	*pevent, *perr);		
OS_EVENT	*OSQCreate	(void INT16U	**start, size);		
OS_EVENT	*OSQDel	(OS_EVENT INT8U INT8U	*pevent, opt, *perr);	OS_DEL_NO_PEND OS_DEL_ALWAYS	
INT8U	OSQFlush	(OS_EVENT	*pevent);		
void	*OSQPend	(OS_EVENT INT32U INT8U	*pevent, timeout, *perr);		
INT8U	OSQPendAbort	(OS_EVENT INT8U INT8U	*pevent, opt, *perr);	OS_PEND_OPT_NONE OS_PEND_OPT_BROADCAST	
INT8U	OSQPost	(OS_EVENT void	*pevent, *pmsg);		
INT8U	OSQPostFront	(OS_EVENT void	*pevent, *pmsg);		
INT8U	OSQPostOpt	(OS_EVENT void INT8U	*pevent, *pmsg, opt);	OS_POST_OPT_NONE OS_POST_OPT_BROADCAST OS_POST_OPT_FRONT OS_POST_OPT_NO_SCHED	
INT8U	OSQQuery	(OS_EVENT OS_Q_DATA	*pevent, *p_q_data);		<b>OS_Q_DATA:</b> void *OSMsg INT16U OSNMsgs INT16U OSQSize #if OS_LOWEST_PRIO <= 63 INT8U OSEventGrp INT8U OSEventTbl[] #else INT16U OSEventGrp INT16U OSEventTbl[] #endif

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<b>Memory Management (OS_MEM.C)</b>					
OS_MEM	*OSMemCreate	(void INT32U INT32U INT8U	*addr, nblks, blksize, *perr);		
void	*OSMemGet	(OS_MEM INT8U	*pmem, *perr);		
INT8U	OSMemNameGet	(OS_MEM INT8U INT8U	*pmem, *pname, *perr);		
void	OSMemNameSet	(OS_MEM INT8U INT8U	*pmem, *pname, *perr);		
INT8U	OSMemPut	(OS_MEM void	*pmem, *pblk);		
INT8U	OSMemQuery	(OS_MEM OS_MEM_DATA	*pmem, *p_mem_data);		OS_MEM_DATA: void *OSAddr void *OSFreeList INT32U OSBlkSize INT32U OSNblks INT32U OSNFree INT32U OSNUsed

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<b>Task Management (OS_TASK.C)</b>					
INT8U	OSTaskChangePrio	(INT8U INT8U	oldprio, newprio);		
INT8U	OSTaskCreate	(void void OS_STK INT8U	(*task)(void *p_arg), *p_arg, *ptos, prio);		
INT8U	OSTaskCreateExt	(void void OS_STK INT8U INT16U OS_STK INT32U void INT16U	(*task)(void *p_arg), *p_arg, *ptos, prio, id, *pbos, stk_size, *pext, opt);	OS_TASK_OPT_NONE OS_TASK_OPT_STK_CHK OS_TASK_OPT_STK_CLR OS_TASK_OPT_SAVE_FP	
INT8U	OSTaskDel	(INT8U	prio);		
INT8U	OSTaskDelReq	(INT8U	prio);		
INT8U	OSTaskNameGet	(INT8U INT8U INT8U	prio, **pname, *perr);		
void	OSTaskNameSet	(INT8U INT8U INT8U	prio, *pname, *perr);		
INT8U	OSTaskResume	(INT8U	prio);		
INT8U	OSTaskSuspend	(INT8U	prio);		
INT8U	OSTaskStkChk	(INT8U OS_STK_DATA	prio, *p_stk_data);		OS_STK_DATA: INT32U .OSFree INT32U .OSUsed
INT8U	OSTaskQuery	(INT8U OS_TCB	prio, *p_task_data);		

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			OPTIONS (opt)	Miscellaneous	
<b>Time Management (OS_TIME.C)</b>					
void	OSTimeDly	(INT32U	ticks);		
INT8U	OSTimeDlyHMSM	(INT8U	hours,		
		INT8U	minutes,		
		INT8U	seconds,		
		INT16U	milli);		
INT8U	OSTimeDlyResume	(INT8U	prio);		
INT32U	OSTimeGet	(void);			
void	OSTimeSet	(INT32U	ticks);		
void	OSTimeTick	(void);			



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<b>Timer Management (OS_TMR.C)</b>					
OS_TMR	*OSTmrCreate	(INT32U INT32U INT8U OS_TMR_CALLBACK callback, void INT8U INT8U	dly, period, opt, *callback_arg, *pname, *perr);		
BOOLEAN	OSTmrDel	(OS_TMR INT8U	*ptmr, *perr);		
INT8U	OSTmrNameGet	(OS_TMR INT8U INT8U	*ptmr, **pdest, *perr);		
INT32U	OSTmrRemainGet	(OS_TMR INT8U	*ptmr, *perr);		
INT8U	OSTmrStateGet	(OS_TMR INT8U	*ptmr, *perr);		
BOOLEAN	OSTmrStart	(OS_TMR INT8U	*ptmr, *perr);	OS_TMR_OPT_PERIODIC OS_TMR_OPT_ONE_SHOT	
void	OSTmrStop	(OS_TMR INT8U void INT8U	*ptmr, opt, *callback_arg, *perr);	OS_TMR_OPT_NONE OS_TMR_OPT_CALLBACK OS_TMR_OPT_CALLBACK_ARG	
void	OSTmrSignal	(void);			

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<b>Miscellaneous (OS_CORE.C)</b>					
INT8U	OSEventNameGet	(OS_EVENT INT8U INT8U	*pevent, **pname, *perr);		
void	OSEventNameSet	(OS_EVENT INT8U INT8U	*pevent, *pname, *perr);		
void	OSEventPendMulti	(OS_EVENT OS_EVENT void INT16U INT8U	**pevents_pend, **pevents_rdy, **pmsgs_rdy, timeout, *perr);		
void	OSInit	(void);			
void	OSIntEnter	(void);			
void	OSIntExit	(void);			
void	OSSafetyCriticalStart	(void);			
void	OS SchedLock	(void);			
void	OS SchedUnlock	(void);			
void	OSStart	(void);			
void	OSStatInit	(void);			
INT16U	OSVersion	(void);			

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<b>Port Functions (OS_CPU_A.ASM)</b>			
void	OSCtxSw (void);		
void	OSIntCtxSw (void);		
void	OSStartHighRdy (void);		
<b>Port Functions (OS_CPU_C.C)</b>			
void	OSInitHookBegin (void);		
void	OSInitHookEnd (void);		
void	OSTaskCreateHook (OS_TCB *ptcb);		
void	OSTaskDelHook (OS_TCB *ptcb);		
void	OSTaskIdleHook (void);		
void	OSTaskReturnHook (OS_TCB *ptcb);		
void	OSTaskStatHook (void);		
OS_STK	*OSTaskStkInit (void (*task) (void *p_arg), void *p_arg, OS_STK *ptos, INT16U opt);		
void	OSTaskSwHook (void);		
void	OSTCBInitHook (OS_TCB *ptcb);		
void	OSTimeTickHook (void);		