

# μC/OS-II, The Real-Time Kernel

## V2.83 Quick Reference Chart

<p><b>Legend:</b></p> <p>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</p>		
<p style="text-align: right;">Micrium          949 Crestview Circle          Weston, FL 33327          USA  <a href="http://www.Micrium.com">www.Micrium.com</a></p>		
	OPTIONS (opt)	Miscellaneous
<b>Semaphores (OS_SEM.C)</b>		
<pre>INT16U    OSSemAccept(OS_EVENT *pevent); OS_EVENT  *OSSemCreate(INT16U cnt); OS_EVENT  *OSSemDel(OS_EVENT *pevent, INT8U opt, INT8U *err);  void      OSSemPend(OS_EVENT *pevent, INT16U timeout, INT8U *err); INT8U    OSSemPost(OS_EVENT *pevent); INT8U    OSSemQuery(OS_EVENT *pevent, OS_SEM_DATA *p_sem_data);  void      OSsemSet(OS_EVENT *pevent, INT16U cnt, INT8U *err);</pre>	<p>OS_DEL_NO_PEND          OS_DEL_ALWAYS</p> <p><b>OS_SEM_DATA:</b></p> <pre>INT16U  OSCnt #if OS_VERSION &lt; 280 INT8U   OSEventGrp INT8U   OSEventTbl #else INT16U  OSEventGrp INT16U  OSEventTbl[] #endif</pre>	
<b>Mutual Exclusion Semaphores (OS_MUTEX.C)</b>		
<pre>INT8U    OSMutexAccept(OS_EVENT *pevent, INT8U *err); OS_EVENT  *OSMutexCreate(INT8U prio, INT8U *err); OS_EVENT  *OSMutexDel(OS_EVENT *pevent, INT8U opt, INT8U *err);  void      OSMutexPend(OS_EVENT *pevent, INT16U timeout, INT8U *err); INT8U    OSMutexPost(OS_EVENT *pevent); INT8U    OSMutexQuery(OS_EVENT *pevent, OS_MUTEX_DATA *p_mutex_data);</pre>	<p>OS_DEL_NO_PEND          OS_DEL_ALWAYS</p> <p><b>OS_MUTEX_DATA:</b></p> <pre>INT8U  OValue INT8U  OSOwnerPrio INT8U  OSMutexPIP #if OS_VERSION &lt; 280 INT8U  OSEventGrp INT8U  OSEventTbl #else INT16U  OSEventGrp INT16U  OSEventTbl[] #endif</pre>	

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	OPTIONS (opt)	Miscellaneous
<b>Event Flags (OS_FLAG.C)</b> <pre> OS_FLAGS      OSFlagAccept(OS_FLAG_GRP *pgrp, OS_FLAGS flags, INT8U wait_type, INT8U *err); OS_FLAG_GRP   *OSFlagCreate(OS_FLAGS flags, INT8U *err); OS_FLAG_GRP   *OSFlagDel(OS_FLAG_GRP *pgrp, INT8U opt, INT8U *err);  INT8U         OSFlagNameGet(OS_FLAG_GRP *pgrp, INT8U *pname, INT8U *err); void          OSFlagNameSet(OS_FLAG_GRP *pgrp, INT8U *pname, INT8U *err); OS_FLAGS      OSFlagPend(OS_FLAG_GRP *pgrp, OS_FLAGS flags, INT8U wait_type, INT16U timeout, INT8U *err); </pre> <pre> OS_FLAGS      OSFlagPendGetFlagsRdy(void); OS_FLAGS      OSFlagPost(OS_FLAG_GRP *pgrp, OS_FLAGS flags, INT8U opt, INT8U *err); OS_FLAGS      OSFlagQuery(OS_FLAG_GRP *pgrp, INT8U *err); </pre>	OS_DEL_NO_PEND OS_DEL_ALWAYS	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
<b>Message Mailboxes (OS_MBOX.C)</b> <pre> void          *OSMboxAccept(OS_EVENT *pevent); OS_EVENT     *OSMboxCreate(void *msg); OS_EVENT     *OSMboxDel(OS_EVENT *pevent, INT8U opt, INT8U *err); void          *OSMboxPend(OS_EVENT *pevent, INT16U timeout, INT8U *err);  INT8U         OSMboxPost(OS_EVENT *pevent, void *msg); INT8U         OSMboxPostOpt(OS_EVENT *pevent, void *msg, INT8U opt);  INT8U         OSMboxQuery(OS_EVENT *pevent, OS_MBOX_DATA *p_mbox_data); </pre>	OS_POST_OPT_NONE OS_POST_OPT_BROADCAST OS_POST_OPT_NO_SCHED	OS_MBOX_DATA: void    *msg #if OS_VERSION < 280 INT8U   OSEventGrp INT8U   OSEventTbl #else INT16U  OSEventGrp INT16U  OSEventTbl[] #endif

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	OPTIONS (opt)	Miscellaneous
<b>Message Queues (OS_Q.C)</b>		
<pre> void      *OSQAccept(OS_EVENT *pevent, INT8U *err); OS_EVENT  *OSQCreate(void **start, INT16U size); OS_EVENT  *OSQDel(OS_EVENT *pevent, INT8U opt, INT8U *err);  INT8U     OSQFlush(OS_EVENT *pevent); void      *OSQPend(OS_EVENT *pevent, INT16U timeout, INT8U *err); INT8U     OSQPost(OS_EVENT *pevent, void *msg); INT8U     OSQPostFront(OS_EVENT *pevent, void *msg); INT8U     OSQPostOpt(OS_EVENT *pevent, void *msg, INT8U opt);  INT8U     OSQuery(OS_EVENT *pevent, OS_Q_DATA *p_q_data); </pre>	<p>OS_DEL_NO_PEND          OS_DEL_ALWAYS</p> <p>OS_POST_OPT_NONE          OS_POST_OPT_BROADCAST          OS_POST_OPT_FRONT          OS_POST_OPT_NO_SCHED</p> <p><b>OS_Q_DATA:</b>          void    *OSMsg          INT16U  OSNMsgs          INT16U  OSQSize          #if OS_VERSION &lt; 280          INT8U   OSEventGrp          INT8U   OSEventTbl          #else          INT16U  OSEventGrp          INT16U  OSEventTbl[]          #endif</p>	
<b>Memory Management (OS_MEM.C)</b>		
<pre> OS_MEM   *OSMemCreate(void *addr, INT32U nblk, INT32U blksize, INT8U *err); void      *OSMemGet(OS_MEM *pmem, INT8U *err); INT8U    OSMemNameGet(OS_MEM *pmem, INT8U *pname, INT8U *err); void      OSMemNameSet(OS_MEM *pmem, INT8U *pname, INT8U *err); INT8U    OSMemPut(OS_MEM *pmem, void *blk); INT8U    OSMemQuery(OS_MEM *pmem, OS_MEM_DATA *p_mem_data); </pre>		<p><b>OS_MEM_DATA:</b>          void    *OSAddr          void    *OSFreeList          INT32U  OSBlkSize          INT32U  OSBlks          INT32U  OSNFree          INT32U  OSNUsed</p>

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<b>Task Management (OS_TASK.C)</b> <pre> INT8U      OSTaskChangePrio(INT8U oldprio, INT8U newprio); INT8U      OSTaskCreate(void (*task)(void *p_arg), void *p_arg, OS_STK *ptos, INT8U prio); INT8U      OSTaskCreateExt(void (*task)(void *p_arg),                            void      *p_arg,                            OS_STK   *ptos,                            INT8U     prio,                            INT16U    id,                            OS_STK   *pbos,                            INT32U    stk_size,                            void      *pext,                            INT16U    opt); </pre> <pre> INT8U      OSTaskDel(INT8U prio); INT8U      OSTaskDelReq(INT8U prio); INT8U      OSTaskNameGet(INT8U prio, INT8U *pname, INT8U *err); void       OSTaskNameSet(INT8U prio, INT8U *pname, INT8U *err); INT8U      OSTaskResume(INT8U prio); INT8U      OSTaskSuspend(INT8U prio); INT8U      OSTaskStkChk(INT8U prio, OS_STK_DATA *p_stk_data);  INT8U      OSTaskQuery(INT8U prio, OS_TCB *p_task_data); </pre>	OPTIONS (opt)	Miscellaneous
<b>Time Management (OS_TIME.C)</b> <pre> void      OSTimedly(INT16U ticks); INT8U      OSTimedlyHMSM(INT16U hours, INT8U minutes, INT8U seconds, INT16U milli); INT8U      OSTimedlyResume(INT8U prio); INT32U    OSTimeGet(void); void       OSTimeSet(INT32U ticks); void       OSTimeTick(void); </pre>	OS_TASK_OPT_NONE OS_TASK_OPT_STK_CHK OS_TASK_OPT_STK_CLR OS_TASK_OPT_SAVE_FP	OS_STK_DATA: INT32U .OSFree INT32U .OSUsed

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		OPTIONS (opt)	Miscellaneous
<b>Timer Management (OS_TMR.C)</b>			
<pre> OS_TMR      *OSTmrCreate    (INT32U      dly,                            INT32U      period,                            INT8U       opt,                            OS_TMR_CALLBACK callback,                            void        *callback_arg,                            INT8U       *pname,                            INT8U       *perr); BOOLEAN     OSTmrDel       (OS_TMR      *ptmr,                            INT8U       *perr); INT8U       OSTmrNameGet   (OS_TMR      *ptmr,                            INT8U       *pdest,                            INT8U       *perr); INT32U      OSTmrRemainGet (OS_TMR      *ptmr,                            INT8U       *perr); INT8U       OSTmrStateGet  (OS_TMR      *ptmr,                            INT8U       *perr); BOOLEAN     OSTmrStart     (OS_TMR      *ptmr,                            INT8U       *perr); void        OSTmrStop      (OS_TMR      *ptmr,                            INT8U       opt,                            void        *callback_arg,                            INT8U       *perr); void        OSTmrSignal    (void); </pre>		OS_TMR_OPT_PERIODIC OS_TMR_OPT_ONE_SHOT OS_TMR_OPT_NONE OS_TMR_OPT_CALLBACK OS_TMR_OPT_CALLBACK_ARG	
<b>Miscellaneous (OS_CORE.C)</b>			
<pre> INT8U      OSEventNameGet(OS_EVENT *pevent, INT8U *pname, INT8U *err); void       OSEventNameSet(OS_EVENT *pevent, INT8U *pname, INT8U *err); void       OSInit(void); void       OSIntEnter(void); void       OSIntExit(void); void      OSSchedLock(void); void      OSSchedUnlock(void); void      OSStart(void); void      OSStatInit(void); INT16U    OSVersion(void); </pre>			
<b>Port Functions (OS_CPU_A.ASM)</b>			
<pre> void      OSCtxSw(void); void      OSIntCtxSw(void); void      OSStartHighRdy(void); </pre>			
<b>Port Functions (OS_CPU_C.C)</b>			
<pre> void      OSInitHookBegin(void); void      OSInitHookEnd(void); void      OSTaskCreateHook(OS_TCB *ptcb); void      OSTaskDelHook(OS_TCB *ptcb); void      OSTaskIdleHook(void); void      OSTaskStatHook(void); OS_STK   *OSTaskStackInit(void (*task)(void *p_arg), void *p_arg, OS_STK *ptos, INT16U opt); void      OSTaskSwHook(void); void      OSTCBInitHook(OS_TCB *ptcb); void      OSTimeTickHook(void); </pre>			