

μC/OS-II, The Real-Time Kernel

V2.89 Quick Reference Chart

Micrium
949 Crestview Circle
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Legend:
Black is for seldom used functions
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Green is for comments

Semaphores (OS_SEM.C)				OPTIONS (opt)	Miscellaneous
INT16U	OSSemAccept	(OS_EVENT	*pevent);		
OS_EVENT	*OSSemCreate	(INT16U	cnt);	OS_DEL_NO_PEND	
OS_EVENT	*OSSemDel	(OS_EVENT	*pevent,	OS_DEL_ALWAYS	
		INT8U	opt,		
		INT8U	*perr);		
void	OSSemPend	(OS_EVENT	*pevent,		
		INT32U	timeout,		
		INT8U	*err);		
INT8U	OSSemPendAbort	(OS_EVENT	*pevent,	OS_PEND_OPT_NONE	
		INT8U	opt,	OS_PEND_OPT_BROADCAST	
		INT8U	*perr);		
INT8U	OSSemPost	(OS_EVENT	*pevent);		
INT8U	OSSemQuery	(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	OSSemSet	(OS_EVENT	*pevent,		
		INT16U	cnt,		
		INT8U	*perr);		

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		OPTIONS (opt)	Miscellaneous
Mutual Exclusion Semaphores (OS_MUTEX.C)			
BOOLEAN	OSMutexAccept	(OS_EVENT *pevent, INT8U *perr);	
OS_EVENT	*OSMutexCreate	(INT8U prio, INT8U *perr);	
OS_EVENT	*OSMutexDel	(OS_EVENT *pevent, INT8U opt, INT8U *perr);	OS_DEL_NO_PEND OS_DEL_ALWAYS
void	OSMutexPend	(OS_EVENT *pevent, INT32U timeout, INT8U *perr);	
INT8U	OSMutexPost	(OS_EVENT *pevent);	
INT8U	OSMutexQuery	(OS_EVENT *pevent, OS_MUTEX_DATA *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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		OPTIONS (opt)	Miscellaneous
Event Flags (OS_FLAG.C)			
OS_FLAGS	OSFlagAccept	(OS_FLAG_GRP *pgrp, OS_FLAGS flags, INT8U wait_type, INT8U *perr);	
OS_FLAG_GRP	*OSFlagCreate	(OS_FLAGS flags, INT8U *perr);	
OS_FLAG_GRP	*OSFlagDel	(OS_FLAG_GRP *pgrp, INT8U opt, INT8U *perr);	OS_DEL_NO_PEND OS_DEL_ALWAYS
INT8U	OSFlagNameGet	(OS_FLAG_GRP *pgrp, INT8U *pname, INT8U *perr);	
void	OSFlagNameSet	(OS_FLAG_GRP *pgrp, INT8U *pname, INT8U *perr);	
OS_FLAGS	OSFlagPend	(OS_FLAG_GRP *pgrp, OS_FLAGS flags, INT8U wait_type, INT16U timeout, INT8U *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 *pgrp, OS_FLAGS flags, INT8U opt, INT8U *perr);	OS_FLAG_CLR OS_FLAG_SET
OS_FLAGS	OSFlagQuery	(OS_FLAG_GRP *pgrp, INT8U *perr);	

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Message Mailboxes (OS_MBOX.C)

```

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,
                             INT32U     timeout,
                             INT8U     *perr);
INT8U     OSMboxPendAbort   (OS_EVENT  *pevent,
                             INT8U     opt,
                             INT8U     *perr);
INT8U     OSMboxPost        (OS_EVENT  *pevent,
                             void      *pmsg);
INT8U     OSMboxPostOpt     (OS_EVENT  *pevent,
                             void      *pmsg,
                             INT8U     opt);
INT8U     OSMboxQuery       (OS_EVENT  *pevent,
                             OS_MBOX_DATA *p_mbox_data);
    
```

OPTIONS (opt)

```

OS_DEL_NO_PEND
OS_DEL_ALWAYS
OS_PEND_OPT_NONE
OS_PEND_OPT_BROADCAST
OS_POST_OPT_NONE
OS_POST_OPT_BROADCAST
OS_POST_OPT_NO_SCHED
    
```

Miscellaneous

```

OS_MBOX_DATA:
void *msg
#if OS_LOWEST_PRIO <= 63
INT8U OSEventGrp
INT8U OSEventTbl[]
#else
INT16U OSEventGrp
INT16U OSEventTbl[]
#endif
    
```

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Message Queues (OS_Q.C)					
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);		OS_Q_DATA: 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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Memory Management (OS_MEM.C)		OPTIONS (opt)	Miscellaneous
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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Task Management (OS_TASK.C)					
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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Time Management (OS_TIME.C)		
<code>void OSTimeDly (INT32U ticks);</code>		
<code>INT8U OSTimeDlyHMSM (INT8U hours, INT8U minutes, INT8U seconds, INT16U milli);</code>		
<code>INT8U OSTimeDlyResume (INT8U prio);</code>		
<code>INT32U OSTimeGet (void);</code>		
<code>void OSTimeSet (INT32U ticks);</code>		
<code>void OSTimeTick (void);</code>		

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Timer Management (OS_TMR.C)					
OS_TMR	*OSTmrCreate	(INT32U INT32U INT8U OS_TMR_CALLBACK void INT8U INT8U INT8U)	dly, period, opt, callback, *callback_arg, *pname, *perr);		
BOOLEAN	OSTmrDel	(OS_TMR INT8U INT8U)	*ptmr, *perr);		
INT8U	OSTmrNameGet	(OS_TMR INT8U INT8U INT8U)	*ptmr, *pdest, *perr);		
INT32U	OSTmrRemainGet	(OS_TMR INT8U INT8U)	*ptmr, *perr);		
INT8U	OSTmrStateGet	(OS_TMR INT8U INT8U)	*ptmr, *perr);		
BOOLEAN	OSTmrStart	(OS_TMR INT8U 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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Miscellaneous (OS_CORE.C)					
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	OSSchedLock	(void);			
void	OSSchedUnlock	(void);			
void	OSStart	(void);			
void	OSStatInit	(void);			
INT16U	OSVersion	(void);			

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	OPTIONS (opt)	Miscellaneous
Port Functions (OS_CPU_A.ASM) void OSctxSw (void); void OSIntCtxSw (void); void OSStartHighRdy (void);		
Port Functions (OS_CPU_C.C) 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);		