µC/OS-II, The Real-Time Kernel

V2.80 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 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);`
	OS_DEL_NO_PEND
	OS_DEL_ALWAYS
		OS_SEM_DATA:
		INT16U OSCnt
		#if OS_VERSION < 280
		INT8U OSEventGrp
		INT8U OSEventTbl
		#else
		INT16U OSEventGrp
		INT16U OSEventTbl[]
		#endif

Mutual Exclusion Semaphores (OS_MUTEX.C)
`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);`
	OS_DEL_NO_PEND
	OS_DEL_ALWAYS
		OS_MUTEX_DATA:
		INT8U OSValue
		INT8U OSOwnerPrio
		INT8U OSMutexPIP
		#if OS_VERSION < 280
		INT8U OSEventGrp
		INT8U OSEventTbl
		#else
		INT16U OSEventGrp
		INT16U OSEventTbl[]
		#endif

Event Flags (OS_FLAG.C)
`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_DEL_NO_PEND
	OS_DEL_ALWAYS	

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`OS_FLAGS OSFlagPend(OS_FLAG_GRP *pgrp, OS_FLAGS flags, INT8U wait_type, INT16U timeout, INT8U *err);`		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 *err);`	OS_FLAG_CLR OS_FLAG_SET	
`OS_FLAGS OSFlagQuery(OS_FLAG_GRP *pgrp, INT8U *err);`		
Message Mailboxes (OS_MBOX.C)		
`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);`	OS_DEL_NO_PEND OS_DEL_ALWAYS	
`INT8U OSMboxPost(OS_EVENT *pevent, void *msg);`		
`INT8U OSMboxPostOpt(OS_EVENT *pevent, void *msg, INT8U opt);`	OS_POST_OPT_NONE OS_POST_OPT_BROADCAST	
`INT8U OSMboxQuery(OS_EVENT *pevent, OS_MBOX_DATA *p_mbox_data);`		**OS_MBOX_DATA:** void *msg #if OS_VERSION < 280 INT8U OSEventGrp INT8U OSEventTbl #else INT16U OSEventGrp INT16U OSEventTbl[] #endif
Message Queues (OS_Q.C)		
`void *OSQAccept(OS_EVENT *pevent, INT8U *err);`		
`OS_EVENT *OSQCreate(void **start, INT16U size);`		
`OS_EVENT *OSQDel(OS_EVENT *pevent, INT8U opt, INT8U *err);`	OS_DEL_NO_PEND OS_DEL_ALWAYS	
`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);`	OS_POST_OPT_NONE OS_POST_OPT_BROADCAST OS_POST_OPT_FRONT	

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`INT8U OSQQuery(OS_EVENT *pevent, OS_Q_DATA *p_q_data);`		`OS_Q_DATA:`
		`void *OSMsg`
		`INT16U OSNMsgs`
		`INT16U OSQSize`
		`#if OS_VERSION < 280`
		`INT8U OSEventGrp`
		`INT8U OSEventTbl`
		`#else`
		`INT16U OSEventGrp`
		`INT16U OSEventTbl[]`
		`#endif`

Memory Management (OS_MEM.C)
`OS_MEM *OSMemCreate(void *addr, INT32U nblks, 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 *pblk);`
`INT8U OSMemQuery(OS_MEM *pmem, OS_MEM_DATA *p_mem_data);`
		`OS_MEM_DATA:`
		`void *OSAddr`
		`void *OSFreeList`
		`INT32U OSBlkSize`
		`INT32U OSNBlks`
		`INT32U OSNFree`
		`INT32U OSNUsed`

Task Management (OS_TASK.C)
`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);`
	`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 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);`
		`OS_STK_DATA:`
		`INT32U .OSFree`
		`INT32U .OSUsed`

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INT8U OSTaskQuery(INT8U prio, OS_TCB *p_task_data);		

Time Management (OS_TIME.C)

```
void          OSTimeDly(INT16U 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);
```

Miscellaneous (OS_CORE.C)

```
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);
```

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          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);
```