µC/OS-II, The Real-Time Kernel

V2.90 Quick Reference Chart

Legend:
Black is for seldom used functions
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Green is for comments

	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       *perr);

void        OSSemPend         (OS_EVENT    *pevent,
                               INT32U       timeout,
                               INT8U       *err);
INT8U       OSSemPendAbort    (OS_EVENT    *pevent,
                               INT8U        opt,
                               INT8U       *perr);

INT8U       OSSemPost         (OS_EVENT    *pevent);
INT8U       OSSemQuery        (OS_EVENT    *pevent,
                               OS_SEM_DATA *p_sem_data);




void        OSSemSet          (OS_EVENT    *pevent,
                               INT16U       cnt,
                               INT8U       *perr);
```

OPTIONS (opt):
```
OS_DEL_NO_PEND
OS_DEL_ALWAYS




OS_PEND_OPT_NONE
OS_PEND_OPT_BROADCAST
```

Miscellaneous:
```
OS_SEM_DATA:
INT16U  OSCnt
#if OS_LOWEST_PRIO <= 63
INT8U   OSEventGrp
INT8U   OSEventTbl[]
#else
INT16U  OSEventGrp
INT16U  OSEventTbl[]
#endif
```

µC/OS-II, The Real-Time Kernel

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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);

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);
```

OPTIONS (opt):
```
OS_DEL_NO_PEND
OS_DEL_ALWAYS
```

Miscellaneous:
```
OS_MUTEX_DATA:
BOOLEAN OSValue
INT8U   OSOwnerPrio
INT8U   OSMutexPIP
#if OS_LOWEST_PRIO <= 63
INT8U   OSEventGrp
INT8U   OSEventTbl[]
#else
INT16U  OSEventGrp
INT16U  OSEventTbl[]
#endif
```

µC/OS-II, The Real-Time Kernel

V2.90 Quick Reference Chart

			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);
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);




OS_FLAGS        OSFlagPendGetFlagsRdy (void);
OS_FLAGS        OSFlagPost          (OS_FLAG_GRP    *pgrp,
                                     OS_FLAGS        flags,
                                     INT8U           opt,
                                     INT8U          *perr);
OS_FLAGS        OSFlagQuery         (OS_FLAG_GRP    *pgrp,
                                     INT8U          *perr);
```

OPTIONS (opt):
OS_DEL_NO_PEND
OS_DEL_ALWAYS

OS_FLAG_CLR
OS_FLAG_SET

Miscellaneous:
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

µC/OS-II, The Real-Time Kernel

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	OPTIONS (opt)	Miscellaneous

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
```

µC/OS-II, The Real-Time Kernel

V2.90 Quick Reference Chart

		OPTIONS (opt)	Miscellaneous

Message Queues (OS_Q.C)

```
void        *OSQAccept      (OS_EVENT      *pevent,
                             INT8U         *perr);
OS_EVENT    *OSQCreate      (void          **start,
                             INT16U          size);
OS_EVENT    *OSQDel         (OS_EVENT      *pevent,        OS_DEL_NO_PEND
                             INT8U           opt,          OS_DEL_ALWAYS
                             INT8U         *perr);
INT8U        OSQFlush       (OS_EVENT      *pevent);
void        *OSQPend        (OS_EVENT      *pevent,
                             INT32U          timeout,
                             INT8U         *perr);
INT8U        OSQPendAbort   (OS_EVENT      *pevent,        OS_PEND_OPT_NONE
                             INT8U           opt,          OS_PEND_OPT_BROADCAST
                             INT8U         *perr);
INT8U        OSQPost        (OS_EVENT      *pevent,
                             void          *pmsg);
INT8U        OSQPostFront   (OS_EVENT      *pevent,
                             void          *pmsg);
INT8U        OSQPostOpt     (OS_EVENT      *pevent,        OS_POST_OPT_NONE
                             void          *pmsg,          OS_POST_OPT_BROADCAST
                             INT8U           opt);         OS_POST_OPT_FRONT
                                                           OS_POST_OPT_NO_SCHED

INT8U        OSQQuery       (OS_EVENT      *pevent,
                             OS_Q_DATA     *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
```

µC/OS-II, The Real-Time Kernel

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	OPTIONS (opt)	Miscellaneous

Memory Management (OS_MEM.C)

```
OS_MEM      *OSMemCreate      (void          *addr,
                               INT32U          nblks,
                               INT32U          blksize,
                               INT8U          *perr);
void        *OSMemGet         (OS_MEM        *pmem,
                               INT8U         *perr);
INT8U        OSMemNameGet     (OS_MEM        *pmem,
                               INT8U        **pname,
                               INT8U         *perr);
void         OSMemNameSet     (OS_MEM        *pmem,
                               INT8U         *pname,
                               INT8U         *perr);
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
```

µC/OS-II, The Real-Time Kernel

V2.90 Quick Reference Chart

		OPTIONS (opt)	**Miscellaneous**

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);



INT8U      OSTaskDel           (INT8U         prio);
INT8U      OSTaskDelReq        (INT8U         prio);
INT8U      OSTaskNameGet       (INT8U         prio,
                                INT8U         **pname,
                                INT8U         *perr);
void       OSTaskNameSet       (INT8U         prio,
                                INT8U         *pname,
                                INT8U         *perr);
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);
```

OPTIONS (opt):
```
OS_TASK_OPT_NONE
OS_TASK_OPT_STK_CHK
OS_TASK_OPT_STK_CLR
OS_TASK_OPT_SAVE_FP
```

Miscellaneous:
```
OS_STK_DATA:
INT32U .OSFree
INT32U .OSUsed
```

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	OPTIONS (opt)	Miscellaneous

Time Management (OS_TIME.C)

```
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);
```

µC/OS-II, The Real-Time Kernel

			OPTIONS (opt)	Miscellaneous

Timer Management (OS_TMR.C)

```
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);
```

OS_TMR_OPT_PERIODIC
OS_TMR_OPT_ONE_SHOT
OS_TMR_OPT_NONE
OS_TMR_OPT_CALLBACK
OS_TMR_OPT_CALLBACK_ARG

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	OPTIONS (opt)	Miscellaneous

Miscellaneous (OS_CORE.C)

```
INT8U       OSEventNameGet      (OS_EVENT       *pevent,
                                 INT8U          **pname,
                                 INT8U          *perr);
void        OSEventNameSet      (OS_EVENT       *pevent,
                                 INT8U          *pname,
                                 INT8U          *perr);
void        OSEventPendMulti    (OS_EVENT       **pevents_pend,
                                 OS_EVENT       **pevents_rdy,
                                 void           **pmsgs_rdy,
                                 INT16U          timeout,
                                 INT8U          *perr);
void        OSInit              (void);
void        OSIntEnter          (void);
void        OSIntExit           (void);
void        OSSafetyCriticalStart (void);
void        OSSchedLock         (void);
void        OSSchedUnlock       (void);
void        OSStart             (void);
void        OSStatInit          (void);
INT16U      OSVersion           (void);
```

µC/OS-II, The Real-Time Kernel

V2.90 Quick Reference Chart

	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);`		