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µC/OS-II V2.92.11
Configuration Manual

Wkl #fkd h #   lgh #d#gh f l l # i#kh# ilj d ch#dch h # i# F2R VOLL#Ehfd h# F2R VOLL#l #   lghg#l #   fh#il   /#f ilj dl #l #g h#k j #d#   eh # i#define#f   d /# klfk#d h#i   g#l #OS_CFG.H#d g# k og#h l #i #hdfk#   nhf 2 g f #kd #   #gh ho #L # kh #   g /#f ilj dl #l #g h# ld#f gl l do# f   lod l l##

#

   L hdg# i#f hd l j#d #OS_CFG.H#ildh#   # f d fk#l #l #hf   h ghg#kd #   #f   #d g# gli # h# i#kh# OS_CFG.H#ildh #   lghg#l # h# i#kh#hl d   ch #kd #fd h# l k# F2R VOLL##OS_CFG.H#l #l gh h gh # i#kh# h# i#FS # hgl#

#

   Wkl # hf l #gh f leh #hdfk# i#kh##define#f   d #l #OS_CFG.H#

#

Miscellaneous

OS_APP_HOOKS_EN

kh # h # #1/# kl ##define# hflilh #kd #d   dfd l #ghil hg#k   n #d h#fdoohg#i   # F2R VOL #k   n 1##Vhh#
do #OS_CPU_HOOKS_EN1#V hflilfdoo #

\#

The µC/OS-II hook …	Calls the Application-define hook …
OSTaskCreateHook()	App_TaskCreateHook()
OSTaskDelHook()	App_TaskDelHook()
OSTaskIdleHook()	App_TaskIdleHook()
OSTaskStatHook()	App_TaskStatHook()
OSTaskSwHook()	App_TaskSwHook()
OSTCBInitHook()	App_TCBInitHook()
OSTimeTickHook()	App_TimeTickHook()

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OS_ARG_CHK_EN

OS_ARG_CHK_EN# glfd h # kh kh #   # d #   # i# F2R VOL#i   f l   # # h i   #d j   h #fkhfnl j1# kh #
h# #1/# F2R VOL# loo#   h#kd # l h # d hg# #i f l   #d h#   0NULL/#kd #j   h   # d hg#d h# lkl #
doo dedh#d jh#d g#   h1#OS_ARG_CHK_EN# d #dgghg# #hg fh#kh#d   # i#f gh# dfh#d g# fh l j#l h#
h l hg#e # F2R VOL1#Vh #OS_ARG_CHK_EN# #0#li# #   #hg fh#f gh# dfh# #d# l l l   1#L #jh h do# #
k og#do d #h dedh#d j   h #fkhfnl j#d g#k #h#OS_ARG_CHK_EN# #41#

\##

OS_CPU_HOOKS_EN

OS_CPU_HOOKS_EN#l glfd h # kh kh #OS_CPU_C.C#ghfod h #kh#k n#i f l # kh # h# #1,# # # kh # h#
 #0,1#Uhfdoo#kd # F2R VOL#h hf #kh# h h fh# i# l h#i f l   #kd #fd #eh#ghil hg#hl kh #l #kh#   #llhl/#1 #
OS_CPU_C.C,# #e #kh#d dfd l #f gh1#Wkh h#i f l   #d h #

\#

```
      OSInitHookBegin()#
      OSInitHookEnd()
      OSTaskCreateHook()
      OSTaskDelHook()
      OSTaskIdleHook()
      OSTaskStatHook()
      OSTaskSwHook()
      OSTCBInitHook()
      OSTimeTickHook
      #
```

OS_DEBUG_EN

 kh # h # #1/# kl ##define#dgg #URP #f   d #o f hg#l #OS_DEBUG.C# #kho #   #nh ho#d d h#
ghe jjh 1##V hflilfdoo #d#   eh # i#d hg#URP #d lde dh#fd #eh# h lhg#e #d#ghe jjh # #il g# #de #
  f   ldhg0l # l 1##I #h d   dh#kh#ghe jjh #fd #il g# # kh#l h# i#d #OS_TCB/# F2R VOL # h l #
  eh /#kh#l h# i#d #h h #odj#j   #OS_FLAG_GRP,#d g# fk#   hl#

\#

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OS_EVENT_MULTI_EN

Wkl #f   d #gh h l h # kh kh #k #f gh# #   # h gl j# r# ol d #h h # loœ h #h de dg# 4,# # #3,1#
Wkl #f   d #k h de ch #f gh# r #kh #r f l #OSEventPendMulti()# Wkl #define# d #dg ghg #l #Y5l; 91#
#

OS_EVENT_NAME_EN

Wkl #f   d #gh h l h # kh kh #r #d h #fd #ch d lj hg# #h l kh #d #h d k h #r# #   h #r #r # doe # #d#
 h djh# h h l# #L i# OS_EVENT_NAME_EN l # h # #O #kl #ihd   r l #gl de dg l # #   # k   og# h #kd # hhg# # h#
OSEventNameSet()# # h #kh #d h # i #h l kh #d #h d k h #r #   h #r # doe # #d# h djh# h h l ## #
 hhg# # h#OSEventNameGet()# # e dl #kh #d h # i #h l kh #d #h d k h #r#   h #r # doe # #d# h djh#
 h h l#
#

OS_LOWEST_PRIO

OS_LOWEST_PRIO# hf lilh # kh #o h # d n# l l # l lh l #kl j kh #   eh ,# kd #   #6 d ,6 k,9 ,04: ,;   d #l kh#

#

OS_MAX_MEM_PART

OS_MAX_MEM_PART# hflllh #kh# d l # eh #i# h # d ll #kd # #d dfd #fd #f hd hl##W #
l# h # d l /#do # hhg# # h #OS_MEM_EN# #1#Li# #l h g# # l# h # d ll #
OS_MAX_MEM_PART# eh#h# #d#d #kh# eh # i# d l # # l k# #f hd hl##I #h d dh/#e #h l j#
OS_MAX_MEM_PART# #3# #d h#doo hg# #f hd h#d g# h# # # k h# h # d ll 1## Vh l j#
OS_MAX_MEM_PART# #0# eh#j hd h #kd #kh# eh #li# h # d ll # #d dfd l # h# loo# #
fd h# edh #e #l # hfh d #d g#d# d h# i#UDP 1#
#

OS_MAX_QS

OS_MAX_QS# hflilh # kh# d l # eh # # h djh# h h#kd # #d dfd l #fd #f hd hl#W # h#
h djh# h h # #do # #h#OS_Q_EN# #1#Li# #l h g# # h# h djh# h h /#OS_MAX_QS# #eh# h #
#d #dhd #kh# eh # i# n h # # l k# #f l d hl##I #h d dh/#i# # h#OS_MAX_QS# #3# #d h#doo hg#
#f hd h#d g# h# # # k h# h djh# h h ## Vh l j#OS_MAX_QS# #j hd h #kd #kh# eh # i# h djh#
l h # #d dfd l # h # lo# #fd h# edh #e #l # hfh d #d g#d# d h# i#UDP 1#
#

OS_MAX_TASKS

OS_MAX_TASKS# lflilh #kh# d l # eh # i#*application*#d n #kd #fd #h l #l # #d dfd l 1# h#kd #
OS_MAX_TASKS#fd # #eh#j hd h #kd #253# d # i#Y51; 3,#ehfd l h# F2R VOLl#f h o#h h h # #d n #i #
l l oi# hh#OS_N_SYS_TASKS#l #uCOS_II.H,1#Li# # h#OS_MAX_TASKS# #kh#h df # eh # i#d n #l # #
h # # hhg# # dnh# h#kd # # h l h#kl # do h# kh # #dgg#dggl l do#d n 1#F h ho /#Li# #
dnh#OS_MAX_TASKS# fk#kljkh #kd # #f h #d n#h l h h # i #i h#h d l ,# #d h# d l j#
do dedh#UDP 1#
#

OS_SCHED_LOCK_EN

Wkl #f d #h dedh # kh # h # #4,# #gl dedh # kh # h# #3,#f gh# h h d l #i# #kh# #i f l #
OSSchedLock()#d g#OSSchedUnlock()1#
#

OS_TICK_STEP_EN

F2R VOYlh #d#P lf # g f #kd#doo # # #gl od # 0l h#gd d#de # # #d n# #d# l g 0ed hg#
SF,#fd # #kdo # F2R VOLL #lfn# fh l j#d g#doo # # #l h# h #l d g #l # # F2R VOYlh 1##L #
kh # g /# F2R VOYlh #fd h h # F2R VOLl#l #fdd j#OSTimeTick()# #kd #l h #d g#l h#ghod #
d h# #o jh# fh hgl# h h /#k jk#d#nh nh#i # F2R VOYlh /# #fd h hf h#d# l j dh#lfn#d #d#
l hl##Li#OS_TIME_TICK_HOOK_EN# l#eho ,#l# h# #l/#OSTimeTickHook()#l # loo#h hf hg#d#kh#hj od #
lfn#d h#l #fd h# #kd h#l h#f l lfdo#h # #dnh#fd h# i#l# #d dfd l 1#
#

OS_TICKS_PER_SEC

OS_TICKS_PER_SEC# hflilh #kh#d h#d# klfk# #fdo#OSTimeTick()#L#l# # # #l l ldd d l #f gh# #
h h#kd#OSTimeTick()#l #l nhg#d#kl #d hl#Wkl #f d # # hg#e #OSStatInit()#OS_TaskStat()#
d g#OSTimeDlyHMSM()1#
#

OS_TLS_TBL_SIZE

OS_TLS_TBL_SIZE# h i # # i f l 1##E #gh l l j#kl ##define# #l glfd h#kd # #gh l h# #kd h#
Wk hdg#O fd#V djh# WOV,# # i #hl kh #kh#FFHV# o#i # #D do j#Gh lfh #L f# DGL,# #H ehgghg#
neh fk#i # #DU1##Wkh# do h# i#kl # ghil h#gh h l h #kh# eh # i#hdh h # hhghg#l #kh#WOV#dedh#
i #kh#gh l hg# dfdl 1#Hdfk#h #l # lfdo #d# l h #l h#d ldedh1## #k g# hfli #5#i #e k# o1#

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Event Flags

OS_FLAG_EN

OS_FLAG_EN#h de ch # kh # h # #4,# #gl de ch # kh # h # #3,#f gh#jh h d l # i#**all**#kh#h h 0iodj# h lf h # d g#gdd# f h # klf k# hg f h #kh#d # i#f gh#d g#gdd# df h# hhghg# kh # #d df d l #g h # # h l h#kh# h# i#h h #iodj l# kh #OS_FLAG_EN#l # h # #3 /# #g # # hhg# #h de ch# #gl de ch#d # i#kh# kh #define#f d #l #kl # hf l 1#

#

OS_FLAG_ACCEPT_EN

OS_FLAG_ACCEPT_EN#h de ch # kh # h # #4,# #gl de ch # kh # h # #3,#kh#f gh#jh h d l # i#kh#i f l # OSFlagAccept()l#

#

OS_FLAG_DEL_EN

OS_FLAG_DEL_EN#h de ch # kh # h # #4,# #gl de ch # kh # h # #3,#kh#f gh#jh h d l # i#kh#i f l # OSFlagDel()l#

#

OS_FLAG_NAME_EN

Wkl #f d #gh#h l h # kh kh#d h #fd #eh#d l j hg# #h h #iodj#j l##li#OS_FLAG_NAME_EN#l # h # # 0 /#kl #ihd h#l #gl de chgl##

#

OS_FLAG_QUERY_EN

OS_FLAG_QUERY_EN#h de ch # kh # h# #4,# #gl de ch # kh # h # #3,#kh#f gh#jh h d l # i#kh#i f l # OSFlagQuery()l#

#

OS_FLAG_WAIT_CLR_EN

OS_FLAG_WAIT_CLR_EN#h de ch # kh # h# #4,# #gl de ch # kl # h # #3,#kh#f gh#jh h d l # hg# # dl # i #h h #iodj # #eh#3#l hdg# i#4l# h h doo /# # d # # dl #i #h h #iodj # #eh# h l# h h /# l # ljk # do # d # # dl #i #h h #iodj # #eh#fchd /#d g#k # # hhg# #h de ch#kl # l 1#

#

OS_FLAGS_NBITS

OS_FLAGS_NBITS#kd #ehh #l g f hg#l #Y5l; 3#d g# hf lilh #kh#l eh # i#el # hg#l #h h #iodj #d g#P VW# eh#hl kh #; /#49# #65l#

#

#

Message Mailboxes

OS_MBOX_EN

Wkl #f   d #h dedh # kh # h# #4,# #gl dedh # kh # h# #3,#kh#f gh#jh h d l # i#all# h djh0 dlœ #
h lfh #d g#gd d#   f   h /# klfk# hg fh #kh#d   # i#f gh# dfh# hhghg# kh #   #d dfd l #g h # #
h l h#kh# h#i# h djh# dlœ   h l# kh #OS_MBOX_EN#l # h # #3 /#   #g #   # hhg# #h dedh# #gl dedh#d #
 i#kh# kh ##define#f   d   #l #kl #hf l l#
#

OS_MBOX_ACCEPT_EN

Wkl #f   d #h dedh # kh # h # #4,# #gl dedh # kh # h # #3,# kh#f gh#jh h d l # i#kh#i f l #
OSMboxAccept()l#
#

OS_MBOX_DEL_EN

Wkl #f   d #h dedh # kh # h # #4,# #gl dedh # kh # h # #3,# kh#f gh#jh h d l # i#kh#i f l #
OSMboxDel()l#
#

OS_MBOX_PEND_ABORT_EN

OS_MBOX_PEND_ABORT_EN#h dedh # kh # h# #1,# #gl dedh # kh # h # #0,#kh#f gh#jh h d l # i#kh#
i f l #OSMboxPendAbort()l#
#

OS_MBOX_POST_EN

OS_MBOX_POST_EN#h dedh # kh # h# #1,# #gl dedh # kh # h # #0,#kh#f gh#jh h d l # i#kh#i f l #
OSMboxPost()l#   #fd #gl dedh#f gh#jh h d l #i #kl #i f l #li#   #ghflgh# # h#kh#   h#   h i œ#
i f l #OSMboxPostOpt()l   hdgl#
#

OS_MBOX_POST_OPT_EN

OS_MBOX_POST_OPT_EN#h dedh # kh #h# #4,# #gl dedh # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l #
OSMboxPostOpt()l#   #fd #gl dedh#f gh#jh h d l #i #kl #i f l #li#   #g # # hhg# kh#dggl l do#
i f l dd #   lghg#œ #OSMboxPostOpt()l#OSMboxPost()#jh h d h #dh #f ghl#
#

OS_MBOX_QUERY_EN

OS_MBOX_QUERY_EN#h dedh # kh #h# #4,# #gl dedh # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l #
OSMboxQuery()l#
#

#

Memory Management

OS_MEM_EN

OS_MEM_EN#h de ch # kh # h # #4,# #gl de ch # kh # h# #3,#a l#f gh#jh h d l # i#kh# F2 R VOI# d l l 0
h   # d djh#d g#l #d fld h g#gd d#   f h l#Wkl #hd h# hg fh #kh#d   # i#f gh#d g#gd d# dfh#
hhghg# kh #   #d dfd l #g h # #h l h#kh# h#i# n   # d l l l#
#

OS_MEM_NAME_EN

Wkl #f   d #gh h l h # kh kh#l d h #fd #ch#d l j hg# l #h   # d l l   l#Li#OS_MEM_NAME_EN#l # h# #
0 /#kl #ihd h#l #gl de ch g#d g# #UDP #l # hg#l #kh#OS_MEM#i #kh#l h   # d l l #i #   djh# i#d h l#d#
#

OS_MEM_QUERY_EN

OS_MEM_QUERY_EN#h de ch # kh # h# #4,# #gl de ch # kh # h # #3,#kh#f gh#jh h d l # i#kh#i   f l #
OSMemQuery()#l#
#

Mutual Exclusion Semaphores

OS_MUTEX_EN

OS_MUTEX_EN#h dech # kh # h # #4,# #gl dech # kh # h # #3,#kh#f gh#jh h d l # i#all#   dc0h fo l 0

h d k h# h lf h #d g#gd d#   f   h /# klf k# hg f h #kh#d   # i#f gh#d g#gd d# df h# hhghg#06 #,0 ;   ,9 hh, gI #f 5#W

; #

#

#

Message Queues

OS_Q_EN

OS_Q_EN#h dech # kh #h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#all# h djh0 h h#h lfh # d g#gd d# f h # klfk#hg fh #kh#d # i#f gh# dfh# hhghg# kh # #d dfd l #g h # #h l h#kh# h# l# h djh# h h l# kh #OS_Q_EN#l # h# #3/# #g # # hhg# #h dech# #gl dech#d # i#kh# kh # #define#f d #l # kl # hf l l# h#kd #li#OS_Q_EN#l # h# #3/# kh##define#f d #OS_MAX_QS#l # l hch d l#
#

OS_Q_ACCEPT_EN

OS_Q_ACCEPT_EN#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # OSQAccept()l#
#

OS_Q_DEL_EN

OS_Q_DEL_EN#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # OSQDel()l#
#

OS_Q_FLUSH_EN

OS_Q_FLUSH_EN#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # OSQFlush()l#
#

OS_Q_PEND_ABORT_EN

OS_Q_PEND_ABORT_EN#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # OSQPendAbort()l#
#

OS_Q_POST_EN

OS_Q_POST_EN#h dech # kh # h# #4,# #gl dech # kh # h# #3,# kh#f gh#jh h d l # i#kh#i f l # OSQPost()l# #fd #gl dech#f gh#jh h d l #i #kl #i f l #li# #ghflgh# # h#kh# h# h i o#i f l # OSQPostOpt()#l hdgl#
#

OS_Q_POST_FRONT_EN

OS_Q_POST_FRONT_EN#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # OSQPostFront()l# #fd #gl dech#f gh#jh h d l #i #kl #i f l #li# #ghflgh# # h#kh# h# h i o# i f l #OSQPostOpt()#l hdgl#
#

OS_Q_POST_OPT_EN

OS_Q_POST_OPT_EN#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # OSQPostOpt()l# #fd #gl dech#f gh#jh h d l #i # kl #i f l #li# #g # # hhg# kh#dggl l do# i f l dd # lghg#e #OSQPostOpt()l#OSQPost()#jh h d h #ch #f ghl#
#

#

#

OS_Q_QUERY_EN

OS_Q_QUERY_EN#h dedh # kh # h# #4,# #gl dedh # kh # h# #3,# kh#f gh#jh h d l # i# kh#i f l #
OSQQuery()#

#

OS_Q_QUERY_EN#h dedh # kh # h# #4,# #gl dedh # kh # h# #3,# kh#f gh#jh h d l # i# kh#i f l #
OSQQuery()#

Semaphores

OS_SEM_EN

`OS_SEM_EN`#h dech # kh # h# #4,# #gl dech # kh # h# #3,#**all**#f gh#jh h d l # i#kh# F2R VOL#h d k h# d djh #d g#l #d f ld hg#gd d# f h # klfk#hg fh #kh#d # i#f gh#d g#gd d# dfh# hhghg# kh # # d dfd l #g h # #h l h#kh# h# i#h d k h l# kh #`OS_SEM_EN`#l # h # #3 # #g # # hhg# #h dech# # gl dech#d # i#kh# kh #`define`#f d #l #kl # hf l l#
#

OS_SEM_ACCEPT_EN

`OS_SEM_ACCEPT_EN`#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # `OSSemAccept()`#
#

OS_SEM_DEL_EN

`OS_SEM_DEL_EN`#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # `OSSemDel()`#
#

OS_SEM_PEND_ABORT_EN

`OS_SEM_PEND_ABORT_EN`#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh# i f l #`OSSemPendAbort()`#
#

OS_SEM_QUERY_EN

`OS_SEM_QUERY_EN`#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # `OSSemQuery()`#
#

OS_SEM_SET_EN

`OS_SEM_SET_EN`#h dech # kh # h# #4,# #gl dech # kh # h# #3,#kh#f gh#jh h d l # i#kh#i f l # `OSSemSet()`#

#

Task Management

OS_TASK_TMR_STK_SIZE

OS_TASK_TMR_STK_SIZE# hflilh #kh# l h# i#kh# F2R VOLL#l h #d n# dfn#Wkh#l h#l # hflilhg# # #l #e h # e #l # eh # i#kdh h l#Wkl #l #ehfd h#d# dfn#l #ghfod hg# #eh# i# h#OS_STK#Wkh# l h# i#kh#l h 0 d n# dfn#gh h g# #kh# fh # #d h# l j#kh#fdoœdfn #i f l #kd # loœeh#h hf hg# kh #ndfk# i#kh# l h#l h# #d g#kh#ghh h #d lfl d hg#l h   0 h l j#dh ho#
#

OS_TASK_STAT_STK_SIZE

OS_TASK_STAT_STK_SIZE# hflilh #kh# l h# i#kh# F2R VOLL# d l lf0 d n# dfn#Wkh# l h#l # hflilhg# #l # e h #e #l # eh # i#kdh h l#Wkl #l #ehfd h#d# dfn#l #ghfod hg#d #ehl j# i# h#OS_STK#Wkh# l h# i#kh# d l lf0 d n# dfn#gh h g# #kh# fh # #d h# l j#d g#kh# d l # i#kh#i o l j#df l #

Wkh# dfn#j k#d fld hg# l k# h i l j#650 e l#d l k hlf# e df l #d g#g l l ,#

Wkh# dfn#j k#d fld hg# l k#fdod j#OSTimeDly()

Wkh# dfn#j k#d fld hg# l k#fdod j#OSTaskStatHook()

Wkh#ghh h #d lfl d hg#l h   0 h l j#dh ho#

Ii# # d # # # dfn#fkhfnl j# #kl #d n#d g#gh h l h#l #df do# dfn#h l h h # # # #h dedh# f gh#jh h d l #i #OSTaskCreateExt()#e h l j#OS_TASK_CREATE_EXT_EN# #4l#Djdl #kh# l l # i# OS_TaskStat()#l #do d #h # #OS_LOWEST_PRIO-1l#
#

OS_TASK_IDLE_STK_SIZE

OS_TASK_IDLE_STK_SIZE# hflilh #kh# l h# i#kh# F2R VOLL#lgdh0 d n# dfn#Wkh# l h#l # hflilhg# #l #e h # e #l # eh # i#kdh h l#Wkl #l #ehfd h#d# dfn#l #ghfod hg# #eh# i# h#OS_STK#Wkh# l h# i#kh#lgdh0 d n# dfn#gh h g# #kh# fh # #d h# l j#d g#kh#ghh h #d lfl d hg#l h   0 h l j#dh ho#Yh #d dh#l # ehl j#g h#l #kh#lgdh# d n#e # # k œg#doo #d #dhd #h jk# dfh # # h#doo# fh # hjl h # #kh# dfn#d g#h jk# djh# #kd gdh#doo# h hg#l h   l#
#

OS_TASK_CHANGE_PRIO_EN

OS_TASK_CHANGE_PRIO_EN#h dedh # kh # h # #4,# #gl dedh # kh # h # #3,#kh#f gh#jh h d l # i#kh# i f l #OSTaskChangePrio()#Li# #d dfdl # h h#fkd jh #d n# l dh#di h #kh #dh#d lj hg/# # fd #hg fh#kh#d # i#f gh# dfh# hg#e # F2R VOLL#e # h l j#OS_TASK_CHANGE_PRIO_EN# #3l#
#

OS_TASK_CREATE_EN

OS_TASK_CREATE_EN#h dedh # kh # h # #4# #gl dedh # kh # h # #3,#kh#f gh#jh h d l # i# kh# OSTaskCreate()#i f l l#H ded j#kl#i f l l # dnh# F2R VOLL#edfn d g dleдh l k#kh# F2R V#d n0 f hdl #i f l l#Li# #d dfdl #do d # h#OSTaskCreateExt()# h h ghg,# #fd #hg fh#kh# d # i#f gh# dfh# hg#e # F2R VOLL#e # h l j#OS_TASK_CREATE_EN# #3l# h#kd # # # h #d dhd # OS_TASK_CREATE_EN #OS_TASK_CREATE_EXT_EN# #4l#Li# # l k/# #fd # h#e kl#
#

#

OS_TASK_CREATE_EXT_EN

OS_TASK_CREATE_EN#h de ch # kh # h # #4,# #gl de ch # kh # h # #3,#kh#f gh#jh h d l # i#kh#i f l #
OSTaskCreateExt()# klfk#l #kh#h h ghg# h# h i o# h   # i#kh# #d n0f hd l #i f l l#Li# #
d dfd l # h h# h#OSTaskCreateExt()# #fd # hg fh#kh#d # i#f gh# dfh# hg#e # F2R VOLL#e #
 h l j#OS_TASK_CREATE_EXT_EN# #3l# h#kd # # hhg#kh#h h ghg#d n0f hd h#i f l # # l#kh# dfn0
fkhfnl j#i f l #OSTaskStkChk()l#
#

OS_TASK_DEL_EN

OS_TASK_DEL_EN#h de ch # kh # h# #1,# #gl de ch # kh # h # #0,#f gh#jh h d l # i# kh#i f l #
OSTaskDel()# klfk#ghch h #d n l#Li# #d dfd l # h h# h#kl #i f l /# #fd # hg fh#kh#d # i#
f gh# dfh# hg#d # F2R VOLL#e # h l j#OS_TASK_DEL_EN# #0l#
#

OS_TASK_NAME_EN

Wkl #f d #gh h l h # kh kh # #fd #d li #d h # #d n l#Li#OS_TASK_NAME_EN#l #h# #3/#kl #ihd h#
l #gl de chg#d g# #UDP #l # hg#l #kh#OS_TCB#i #kh#d n#d h l##
#

OS_TASK_PROFILE_EN

Wkl #f d #doo # d lde ch # #eh#doo fd hg#l #hdfk#d n #OS_TCB# kd #k og# h i d fh#gd d#de #hdfk#
d n l##V hflilfdoo /#li#OS_TASK_PROFILE_EN#l #h # #L/#hdfk#d n# loo#kd h#d# d lde ch# #nhh # dfn# i#kh#
  eh # i#f h # l fkh /#kh#d n#h hf l #l h/#kh#l eh # i#e h # hg#e #kh#d n#d g# hl#
#

OS_TASK_QUERY_EN

OS_TASK_QUERY_EN#h de ch # kh # h# #1,# #gl de ch # kh # h # #0,#f gh#jh h d l # i#kh#i f l #
OSTaskQuery()# klfk#doo # #d dfd l # #jl #d# d k # i#d#f h # d n #OS_TCB#l#Li# #
d dfd l # h h# h#kl #i f l /# #fd # hg fh#kh#d # i#f gh# dfh# hg#e # F2R VOLL#e # h l j#
OS_TASK_QUERY_EN# #0l#
#

OS_TASK_STAT_EN

OS_TASK_STAT_EN# hflilh # kh kh # # # #fd #h de ch# kh# F2R VOLL# d l lf# d n/#d # hoo#d #l #
l l ldd d l #i f l l# kh # h # #4/# kh# d l lf# d n#OS_TaskStat()#d g#kh# d l lf0 d n0l l ldd d l #
i f l #d h#h de chg#OS_TaskStat()#l h #kh#FS # djl #i# #d dfd l l# kh #h de chg/#l#h hf h #
h h # hf g#d g#l h #kh#,0el # d lde ch#OSCPUUsage# klfk# l gh #kh# h fh djh# i#FS # h# i# #
d dfd l l#OS_TaskStat()#foo #OSTaskStatHook()#h h #l h#l#h hf h # kd # #fd #dgg# # #
 d l lf#d # hhghg#Vhh#OS_CORE.C#i #gh dlo # #kh# d l lf#d n l#Wkh#l l l # i#OS_TaskStat()#l #doo d #
h # #OS_LOWEST_PRIO-1l#

    Wkh#jo e do# d lde ch #OSCPUUsage/#OSIdleCtrMax/#OSIdleCtrRun#OSTaskStatStk[]/#d g#OSStatRdy#
d h# #ghfod hg# kh #OS_TASK_STAT_EN#l #h# #3/# klfk#hg fh#kh#d # i#UDP # hhghg#e # F2R VOLL#
li# #g #l h g# # h#kh# d l lf#d n l#OSIdleCtrRun#f dl #d# d k # i#OSIdleCtr#m #ehi h#
OSIdleCtr#l #fchd hg# # h #h h # hf gl#OSIdleCtrRun#l # # hg#e # F2R VOLL#i #d # kh # hl#
    h h /# #fd #hdg#d g#gl od #OSIdleCtrRun#li# hhghgl#
#

OS_TASK_STAT_STK_CHK_EN

Wkl #f   d #doo # kh# d l lf# d n# #gh n l h# kh#df do# dfn# djh# i#hdfk#df l h# d n ## Li#
OS_TASK_STAT_EN#l # h# #0# kh# d l lf# d n#l #   #h dedhg,#e /#   #fd #fdoo#OS_TaskStatStkChk()#
    h oi#i   # h# i#   #d n ##If OS_TASK_STAT_EN#l # h# #1/# dfn# l h# loo#eh#gh n l hg#h h #
  hf g#e #kh# d l lf#d n#

OS_TASK_SUSPEND_EN

OS_TASK_SUSPEND_EN#h dedh # kh # h# #1,# #gl dedh # kh # h# #0,#f gh#jh h d l # i#kh#i   f l   #
OS TaskSuspend()#d g#OSTaskResume()# klfk#doo   # # #h dfl d#   h g#d g# h   h# d n /#
 h hf l ho #Li#   #d dfd l # h h# h #kh h#i f l /#   #fd # hg fh#kh#d   # i#f gh# dfh# hg#e #
  F2R VOII#e # h l j#OS_TASK_SUSPEND_EN   #0 #
#

OS_TASK_SW_HOOK_EN

   doo # F2R VOII#h l h#kd #   #kd h#d#f h # l fk k n#i f l #fdoohg#OSTaskSwHook()l# kh # h#
  #0 /#kl #f   d #doo # # # l#OSTaskSwHook()#   #   #f gh ##Wkl #f ilj d l f   d # d#
dgghg# hg fh#kh d   # i# h khdg#g l i#df h # fk#l#d dfd l #kd#g h   #h l h#kh#f h #
  l fk# k n## Ri# f   h/#   #   loo# do # hhg#   # h   h# kh# fdoo # # OSTaskSwHook()# i   #
OSTaskStartHighRdy()/#OSCtxSw()#d g#OSIntCtxSw()# #OS_CPU_A.ASM #
#

OS_TASK_TMR_PRIO (APP_CFG.H)

OS_TASK_TMR_PRIO# hflilh #kh# l l # i#kh#l h# d djh h #d n ##   #fd # h#kh# l l # i#kh#l h #
 d n# # d kl j#   # d # ##   h# kd# l h#fdoo edfn#i f l   # dh#h hf hg#e # kh# l h# d n ##
OS_TASK_TMR_PRIO# hhg # eh#h h#l #   #d dfd l #ildh#fdoohg#APP_CFG.H #
#

Time Management

OS_TIME_DLY_HMSM_EN

OS_TIME_DLY_HMSM_EN#h dech # kh #h # #4,# #gl dech # kh #h # #3,#kh#f gh#jh h d l # i#kh#i f l # OSTimeDlyHMSM()# klfk#l # hg# #ghod #d# d n#i #d# hflilhg# eh # i#k # l h # hf g #d g# lod hf g l#

#

OS_TIME_DLY_RESUME_EN

OS_TIME_DLY_RESUME_EN#h dech # kh # h # #4,# #gl dech # kh # h # #3,# kh#f gh#jh h d l # i#kh# i f l #OSTimeDlyResume()l#
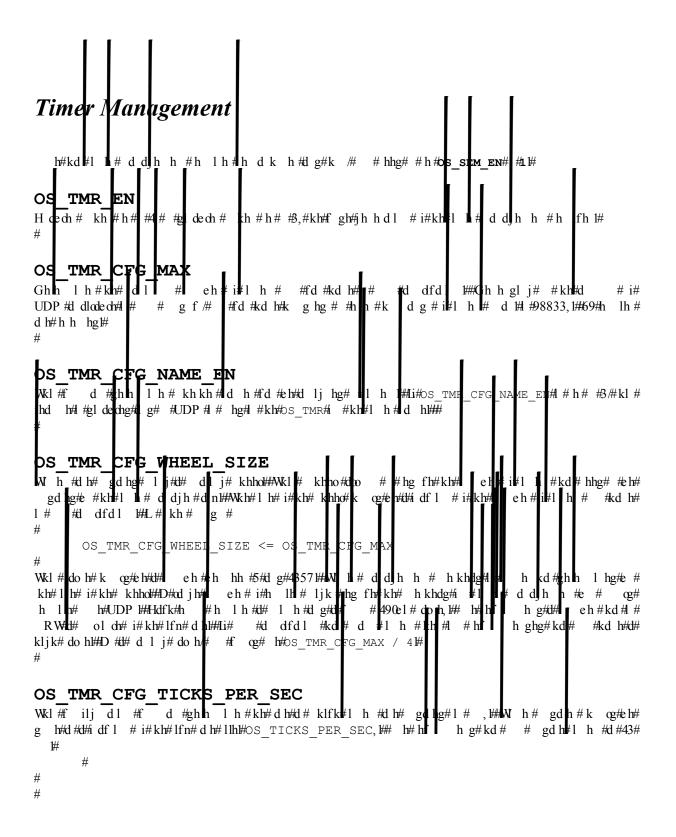
#

OS_TIME_GET_SET_EN

OS_TIME_GET_SET_EN#h dech # kh #h # #4,# #gl dech # kh #h # #3,#kh#f gh#d g#gd d#jh h d l # i#kh# i f l #OSTimeGet()#d g#OSTimeSet()#Hi# #g # #hhg# # h#kh#650el #lfn#f h #OSTime/#kh # # fo #d h# hoi#7#e h # i#gd d# dfh#d g#f gh# dfh#e # #kd l j#kl#f gh#i #kh h#i f l #jh h d hg#e # kh#f lch l#

#

OS_TIME_TICK_HOOK_EN

doo # F2R V0I# h l h #kh# h h fh# i#d#i f l #fdoohg#OSTimeTickHook()# klfk#l #fdoohg#d#kh# h # ehjl l j# i#kh#lfn#LVU1## kh # h # #0/#kl #f d #doo # # # l#OSTimeTickHook()#i # # f gh#Wkl #f ilj d l #f d # d #dgghg# #hg fh#kl#d # i# h khdg#g l j#d#lfn#LVU#l #d dfd l # kd #g h # h l h#kl #k nl##

#

#

h#kd#l l # d djh h #h l h#h d k h#d g#k # # hhg# #h#**OS_SEM_EN**# #1#

OS_TMR_EN

H edh # kh #h# #4# #g dedh # kh #h# #3,#kh#f gh#jh h d l #i#kh#l l # d djh h #h fh l#
#

OS_TMR_CFG_MAX

Ghh l h#kh#d l # eh #i#l h # #fd #kd h#d# #d dfd l##Gh h gl j# #kh#d # i#
UDP #d dlodedh#l # # g f # #fd #kd h#k g hg # #h h #k d g # i#l h # d l#l#98833,l#69#h lh #
d h#h h hg l#
#

OS_TMR_CFG_NAME_EN

Wkl #f d #gh h l h# khkh#d h #fd #eh#d lj hg# #l h l#Li#OS_TMR_CFG_NAME_EN#l # h # #3 #kl #
hd h#l #gl dedhg#d g# #UDP #l # hg#l #kh#OS_TMR#l #kh#l h #d h l##
#

OS_TMR_CFG_WHEEL_SIZE

W h #d h# gdhg# l j#d # d l j# khho l##Wkl # khho#d o # #hg fh#kh#l eh #i#l l #kd # hhg# #eh #
gd hg#e #kh#l l # d djh #d nl##Wkh#l l h #i#kh# khho#k og#eh#d#i df l # i#kh#l eh #i#l h # #kd h #
l # #d dfd l l##L #l kh # g #
#

       OS_TMR_CFG_WHEEL_SIZE <= OS_TMR_CFG_MAX
#

Wkl #do h# k og#eh#d#l eh #eh hh #5#d g#4357l##W l # d djh h # h khhdg#l l# h kd#gh h l hg#e #
kh#l l h #i#kh# khho l##D#od jh#l eh # i#h lh # ljk#hg fh#kh# hkhdg#i #l l i#d djh h #e # og#
h l h# h#UDP l##Hdfk#h # h l h#d# l h#d g#d l # #490e l # do h l#l# h#h l h g#d#l eh #kd l #
RW l# ol dh# i#kh#lfn#d h l##Li# #d dfd l #kd # d #l h #l h#l # #hl l h ghg#kd # #kd h#d#
kljk# do h l##D #d l j# do h # #f og# h#OS_TMR_CFG_MAX / 4l#
#

OS_TMR_CFG_TICKS_PER_SEC

Wkl #f il j d l #f d #gh h l h#kh#dh#d # klfk#l h #d h# gd hg#l # ,l##W h# gd h # k og#eh#
g h#d#d#i df l # i#kh#lfn#d h#l l hl#OS_TICKS_PER_SEC,l## h#h l h g#kd # # gd h#l h #d l#43#
l#
       #
#
#

#

Function Summary

Wdedh #4: 14#d #hdfk# F2RVOII#i f l #e #   h# **Service**, #l glfd h # klfk# d ldedh #h dedh# kh#f gh#
 Set to 1, #d g#d # kh#f ilj d l #f   d #kd #diihf #kh#i f l #**Other Constants**, #
#
   Ri#f   h#OS_CFG.H# #ch#l fo ghg# kh # F2RVOII#l #e lo /#l # gh #l #kh#gh l hg#f ilj d l # #dnh#
hiihf l#
  #
  #

Table 17.1   *µC/OS-II functions and `#define` configuration constants.*

Service	*Set to 1*	*Other Constants*
Miscellaneous		
Thread Local Storage (TLS)	OS_TLS_TBL_SIZE (set to **5**)	2D#
OSEventNameGet()	OS_EVENT_NAME_EN	2D#
OSEventNameSet()	OS_EVENT_NAME_EN	2D#
OSEventPendMulti()	OS_EVENT_MULTI_EN	#
OSInit()	2D#	OS_MAX_EVENTS OS_Q_EN and OS_MAX_QS OS_MEM_EN OS_TASK_IDLE_STK_SIZE OS_TASK_STAT_EN OS_TASK_STAT_STK_SIZE
OSSafetyCriticalStart()	OS_SAFETY_CRITICAL_IEC61508	#
OSSchedLock()	OS_SCHED_LOCK_EN	2D#
OSSchedUnlock()	OS_SCHED_LOCK_EN	2D#
OSStart()	2D#	2D#
OSStatInit()	OS_TASK_STAT_EN && OS_TASK_CREATE_EXT_EN	OS_TICKS_PER_SEC
OSVersion()	2D#	2D#
Interrupt Management		
OSIntEnter()	2D#	2D#
OSIntExit()	2D#	2D#
Event Flags		
OSFlagAccept()	OS_FLAG_EN	OS_FLAG_ACCEPT_EN
OSFlagCreate()	OS_FLAG_EN	OS_MAX_FLAGS
OSFlagDel()	OS_FLAG_EN	OS_FLAG_DEL_EN
OSFlagNameGet()	OS_FLAG_EN	OS_FLAG_NAME_EN
OSFlagNameSet()	OS_FLAG_EN	OS_FLAG_NAME_EN
OSFlagPend()	OS_FLAG_EN	OS_FLAG_WAIT_CLR_EN
OSFlagPost()	OS_FLAG_EN	2D#
OSFlagQuery()	OS_FLAG_EN	OS_FLAG_QUERY_EN

  #

Message Mailboxes		
OSMboxAccept()	OS_MBOX_EN	OS_MBOX_ACCEPT_EN
OSMboxCreate()	OS_MBOX_EN	OS_MAX_EVENTS
OSMboxDel()	OS_MBOX_EN	OS_MBOX_DEL_EN
OSMboxPend()	OS_MBOX_EN	2D#
OSMboxPendAbort()	OS_MBOX_EN	OS_MBOX_PEND_ABORT_EN
OSMboxPost()	OS_MBOX_EN	OS_MBOX_POST_EN
OSMboxPostOpt()	OS_MBOX_EN	OS_MBOX_POST_OPT_EN
OSMboxQuery()	OS_MBOX_EN	OS_MBOX_QUERY_EN
Memory Partition Management		
OSMemCreate()	OS_MEM_EN	OS_MAX_MEM_PART
OSMemGet()	OS_MEM_EN	2D#
OSMemNameGet()	OS_MEM_EN	OS_MEM_NAME_EN
OSMemNameSet()	OS_MEM_EN	OS_MEM_NAME_EN
OSMemPut()	OS_MEM_EN	2D#
OSMemQuery()	OS_MEM_EN	OS_MEM_QUERY_EN
Mutex Management		
OSMutexAccept()	OS_MUTEX_EN	OS_MUTEX_ACCEPT_EN
OSMutexCreate()	OS_MUTEX_EN	OS_MAX_EVENTS
OSMutexDel()	OS_MUTEX_EN	OS_MUTEX_DEL_EN
OSMutexPend()	OS_MUTEX_EN	2D#
OSMutexPost()	OS_MUTEX_EN	2D#
OSMutexQuery()	OS_MUTEX_EN	OS_MUTEX_QUERY_EN
Message Queues		
OSQAccept()	OS_Q_EN	OS_Q_ACCEPT_EN
OSQCreate()	OS_Q_EN	OS_MAX_EVENTS OS_MAX_QS
OSQDel()	OS_Q_EN	OS_Q_DEL_EN
OSQFlush()	OS_Q_EN	OS_Q_FLUSH_EN
OSQPend()	OS_Q_EN	2D#
OSQPendAbort()	OS_Q_EN	OS_Q_PEND_ABORT_EN
OSQPost()	OS_Q_EN	OS_Q_POST_EN
OSQPostFront()	OS_Q_EN	OS_Q_POST_FRONT_EN
OSQPostOpt()	OS_Q_EN	OS_Q_POST_OPT_EN
OSQQuery()	OS_Q_EN	OS_Q_QUERY_EN

#

Semaphore Management		
OSSemAccept()	OS_SEM_EN	OS_SEM_ACCEPT_EN
OSSemCreate()	OS_SEM_EN	OS_MAX_EVENTS
OSSemDel()	OS_SEM_EN	OS_SEM_DEL_EN
OSSemPend()	OS_SEM_EN	2D#
OSSemPendAbort()	OS_SEM_EN	OS_SEM_PEND_ABORT_EN
OSSemPost()	OS_SEM_EN	2D#
OSSemQuery()	OS_SEM_EN	OS_SEM_QUERY_EN
OSSemSet()	OS_SEM_EN	OS_SEM_SET_EN
Task Management		
OSTaskChangePrio()	OS_TASK_CHANGE_PRIO_EN	OS_LOWEST_PRIO
OSTaskCreate()	OS_TASK_CREATE_EN	OS_MAX_TASKS
OSTaskCreateExt()	OS_TASK_CREATE_EXT_EN	OS_MAX_TASKS OS_TASK_STK_CLR
OSTaskDel()	OS_TASK_DEL_EN	OS_MAX_TASKS
OSTaskDelReq()	OS_TASK_DEL_EN	OS_MAX_TASKS
OSTaskRegGet()	OS_TASK_REG_TBL_SIZE	N/A
OSTaskRegGetID()	OS_TASK_REG_TBL_SIZE	N/A
OSTaskRegSet()	OS_TASK_REG_TBL_SIZE	N/A
OSTaskResume()	OS_TASK_SUSPEND_EN	OS_MAX_TASKS
OSTaskNameGet()	OS_TASK_NAME_EN	2D#
OSTaskNameSet()	OS_TASK_NAME_EN	2D#
OSTaskStkChk()	OS_TASK_CREATE_EXT_EN	OS_MAX_TASKS
OSTaskSuspend()	OS_TASK_SUSPEND_EN	OS_MAX_TASKS
OSTaskQuery()	OS_TASK_QUERY_EN	OS_MAX_TASKS
OS_TaskStatStkChk()	OS_TASK_STAT_STK_CHK_EN	2D#
Time Management		
OSTimeDly()	2D#	2D#
OSTimeDlyHMSM()	OS_TIME_DLY_HMSM_EN	OS_TICKS_PER_SEC
OSTimeDlyResume()	OS_TIME_DLY_RESUME_EN	OS_MAX_TASKS
OSTimeGet()	OS_TIME_GET_SET_EN	2D#
OSTimeSet()	OS_TIME_GET_SET_EN	2D#
OSTimeTick()	2D#	2D#
Timer Management		
OSTmrCreate()	OS_TMR_EN	N/A
OSTmrDel()	OS_TMR_EN	N/A
OSTmrNameGet()	OS_TMR_EN && OS_TMR_CFG_NAME_EN	N/A
OSTmrRemainGet()	OS_TMR_EN	N/A
OSTmrStart()	OS_TMR_EN	N/A
OSTmrStop()	OS_TMR_EN	N/A
OSTmrSignal()	OS_TMR_EN	OS_TMR_CFG_TICKS_PER_SEC

4 #

#

#

User-Defined Functions		
OSTaskCreateHook()	OS_CPU_HOOKS_EN	2D#
OSTaskDelHook()	OS_CPU_HOOKS_EN	2D#
OSTaskStatHook()	OS_CPU_HOOKS_EN	2D#
OSTaskSwHook()	OS_CPU_HOOKS_EN	OS_TASK_SW_HOOK_EN
OSTimeTickHook()	OS_CPU_HOOKS_EN	OS_TIME_TICK_HOOK_EN#

   #