

```
1:
2: PROGRAM "lab4.abs"
3:
4: *****
5: TARGET SECTION
6: -----
7: Processor   : Freescale HC12
8: Memory Model: SMALL
9: File Format  : ELF\DWARF 2.0
10: Linker      : SmartLinker V-5.0.36 Build 9056, Feb 26 2009
11:
12: *****
13: FILE SECTION
14: -----
15: s12dp256vecs.o12                Model: SMALL,      Lang: Assembler
16: os_cpu_a.o12                    Model: SMALL,      Lang: Assembler
17: main.o12                        Model: SMALL,      Lang: ANSI-C
18: ucos_ii.o12                     Model: SMALL,      Lang: ANSI-C
19: 9S12DP256Start.o12              Model: SMALL,      Lang: ANSI-C
20: LCD.o12                         Model: SMALL,      Lang: ANSI-C
21: UcosKey.o12                     Model: SMALL,      Lang: ANSI-C
22: Clock.o12                       Model: SMALL,      Lang: ANSI-C
23: rtshc12.c.o (ANSIS.LIB)         Model: SMALL,      Lang: ANSI-C
24:
25: *****
26: STARTUP SECTION
27: -----
28: Entry point: 0xC000 (_Startup)
29: _startupData is allocated at 0xC05D and uses 11 Bytes
30: extern struct _tagStartup {
31:   unsigned flags      0
32:   _PFunc   main      0xC06C   (main)
33:   long     stackOffset 0x3FFF
34:   unsigned nofZeroOut 1
35:   _Range   pZeroOut   0x1000   1755
36:   _Copy    *toCopyDownBeg 0xDEFB
37: } _startupData;
38:
39: *****
40: SECTION-ALLOCATION SECTION
41: Section Name          Size  Type      From      To      Segment
42: -----
43: .text                  7161   R      0xC06C    0xDC64   ROM_C000
44: s12dp256vecs__ORG00001  116   R      0xFF8C    0xFFFF   .absSeg0
45: .bss                    72   R/W    0x1000    0x1047   RAM
46: .rodata                 272   R      0xDC65    0xDD74   ROM_C000
47: .rodata1                75   R      0xDD75    0xDDBF   ROM_C000
48: .startData             15   R      0xC05D    0xC06B   ROM_C000
49: .init                   93   R      0xC000    0xC05C   ROM_C000
50: s12dp256vecs._SEC000000  4   R      0xDDC0    0xDDC3   ROM_C000
51: os_cpu_a._SEC000000     53   R      0xDDC4    0xDDF8   ROM_C000
52: .common                1683  R/W    0x1048    0x16DA   RAM
53: RUNTIME                258   R      0xDDF9    0xDEFA   ROM_C000
54: .stack                  1   R/W    0x3FFF    0x3FFF   .stackSeg
55: .copy                   2   R      0xDEFB    0xDEFB   ROM_C000
56:
57: Summary of section sizes per section type:
58: READ_ONLY (R):          1F71 (dec: 8049)
59: READ_WRITE (R/W):       6DC (dec: 1756)
60:
61: *****
62: VECTOR-ALLOCATION SECTION
63: Address      InitValue  InitFunction
```

```
64: -----
65:
66: *****
67: OBJECT-ALLOCATION SECTION
68: Name          Module          Addr      hSize    dSize     Ref     Secti
69: -----
70: MODULE:      -- s12dp256vecs.o12 --
71: - PROCEDURES:
72:   _exit              DDC0          2         2        55     s12dp2
73:   loop              DDC2          2         2         0     s12dp2
74: - VARIABLES:
75:   __vec8C            FF8C          2         2         0     .text
76:   __vec8E            FF8E          2         2         0     .text
77:   __vec90            FF90          2         2         0     .text
78:   __vec92            FF92          2         2         0     .text
79:   __vec94            FF94          2         2         0     .text
80:   __vec96            FF96          2         2         0     .text
81:   __vec98            FF98          2         2         0     .text
82:   __vec9A            FF9A          2         2         0     .text
83:   __vec9C            FF9C          2         2         0     .text
84:   __vec9E            FF9E          2         2         0     .text
85:   __vecA0            FFA0          2         2         0     .text
86:   __vecA2            FFA2          2         2         0     .text
87:   __vecA4            FFA4          2         2         0     .text
88:   __vecA6            FFA6          2         2         0     .text
89:   __vecA8            FFA8          2         2         0     .text
90:   __vecAA            FFAA          2         2         0     .text
91:   __vecAC            FFAC          2         2         0     .text
92:   __vecAE            FFAE          2         2         0     .text
93:   __vecB0            FFB0          2         2         0     .text
94:   __vecB2            FFB2          2         2         0     .text
95:   __vecB4            FFB4          2         2         0     .text
96:   __vecB6            FFB6          2         2         0     .text
97:   __vecB8            FFB8          2         2         0     .text
98:   __vecBA            FFBA          2         2         0     .text
99:   __vecBC            FFBC          2         2         0     .text
100:  __vecBE            FFBF          2         2         0     .text
101:  __vecC0            FFC0          2         2         0     .text
102:  __vecC2            FFC2          2         2         0     .text
103:  __vecC4            FFC4          2         2         0     .text
104:  __vecC6            FFC6          2         2         0     .text
105:  __vecC8            FFC8          2         2         0     .text
106:  __vecCA            FFCA          2         2         0     .text
107:  __vecCC            FFCC          2         2         0     .text
108:  __vecCE            FFCE          2         2         0     .text
109:  __vecD0            FFD0          2         2         0     .text
110:  __vecD2            FFD2          2         2         0     .text
111:  __vecD4            FFD4          2         2         0     .text
112:  __vecD6            FFD6          2         2         0     .text
113:  __vecD8            FFD8          2         2         0     .text
114:  __vecDA            FFDA          2         2         0     .text
115:  __vecDC            FFDC          2         2         0     .text
116:  __vecDE            FFDE          2         2         0     .text
117:  __vecE0            FFE0          2         2         0     .text
118:  __vecE2            FFE2          2         2         0     .text
119:  __vecE4            FFE4          2         2         0     .text
120:  __vecE6            FFE6          2         2         0     .text
121:  __vecE8            FFE8          2         2         0     .text
122:  __vecEA            FFEA          2         2         0     .text
123:  __vecEC            FFEC          2         2         0     .text
124:  __vecEE            FFEE          2         2         0     .text
125:  __vecF0            FFF0          2         2         0     .text
126:  __vecF2            FFF2          2         2         0     .text
```

## lab4.map

127:	__vecF4	FFF4	2	2	0	.text	190:	OS_FlagInit	CE48	42	66	1	.text
128:	__vecF6	FFF6	2	2	0	.text	191:	OS_FlagUnlink	CE8A	30	48	1	.text
129:	__vecF8	FFF8	2	2	0	.text	192:	OS_MemInit	CEBA	44	68	1	.text
130:	__vecFA	FFFA	2	2	0	.text	193:	OSMutexPend	CEFE	18B	395	4	.text
131:	__vecFC	FFFC	2	2	0	.text	194:	OSMutexPost	D089	A4	164	2	.text
132:	__vecFE	FFFE	2	2	0	.text	195:	OSMutex_RdyAtPrio	D12D	64	100	1	.text
133:	MODULE:	-- os_cpu_a.o12 --					196:	OSSemCreate	D191	40	64	4	.text
134:	- PROCEDURES:						197:	OSSemPend	D1D1	89	137	4	.text
135:	OSStartHighRdy	DDC4	C	12	1	os_cpu	198:	OSSemPost	D25A	47	71	4	.text
136:	OSCtxSw	DDD0	17	23	1	os_cpu	199:	OSTaskCreate	D2A1	7E	126	8	.text
137:	OSIntCtxSw	DDE7	12	18	1	os_cpu	200:	OSTaskDel	D31F	11A	282	2	.text
138:	- VARIABLES:						201:	OSTaskNameSet	D439	6C	108	3	.text
139:	MODULE:	-- main.o12 --					202:	OSTaskResume	D4A5	77	119	1	.text
140:	- PROCEDURES:						203:	OSTaskSuspend	D51C	7A	122	1	.text
141:	main	C06C	26	38	0	.text	204:	OSTimeDly	D596	3C	60	4	.text
142:	StartTask	C092	45	69	1	.text	205:	OSTmrCreate	D5D2	83	131	1	.text
143:	UITask	C0D7	27	39	1	.text	206:	OSTmrStart	D655	5D	93	1	.text
144:	TimeDispTask	C0FE	28	40	1	.text	207:	OSTmrSignal	D6B2	7	7	1	.text
145:	SetTheTime	C126	6D7	1751	22	.text	208:	OSTmr_Alloc	D6B9	24	36	1	.text
146:	- VARIABLES:						209:	OSTmr_Init	D6DD	9D	157	1	.text
147:	StartTaskStk	1048	40	64	1	.comm	210:	OSTmr_InitTask	D77A	23	35	1	.text
148:	UITaskStk	1088	40	64	1	.comm	211:	OSTmr_Link	D79D	82	130	2	.text
149:	TimeDispTaskStk	10C8	40	64	1	.comm	212:	OSTmr_Unlink	D81F	47	71	2	.text
150:	MODULE:	-- ucos_ii.o12 --					213:	OSTmr_Lock	D866	12	18	3	.text
151:	- PROCEDURES:						214:	OSTmr_Unlock	D878	6	6	7	.text
152:	OSCPUSaveSR	C7FD	5	5	24	.text	215:	OSTmr_Task	D87E	86	134	2	.text
153:	OSCPUREstoreSR	C802	3	3	46	.text	216:	- VARIABLES:					
154:	OSInitHookBegin	C805	6	6	1	.text	217:	OSUnMapTbl	DC65	100	256	2	.rodat
155:	OSInitHookEnd	C80B	1	1	1	.text	218:	STRING.uc.OS.II.Idle.1	DD75	E	14	1	.rodat
156:	OSTaskCreateHook	C80C	1	1	1	.text	219:	STRING.uc.OS.II.Stat.2	DD83	E	14	1	.rodat
157:	OSTaskDelHook	C80D	1	1	1	.text	220:	STRING.OS.TmrLock.3	DD91	B	11	1	.rodat
158:	OSTaskIdleHook	C80E	1	1	1	.text	221:	STRING.OS.TmrSig.4	DD9C	A	10	1	.rodat
159:	OSTaskStatHook	C80F	1	1	1	.text	222:	STRING.uc.OS.II.Tmr.5	DDA6	D	13	1	.rodat
160:	OSTaskStkInit	C810	22	34	1	.text	223:	OSTmrCtr	1000	2	2	4	.bss
161:	OSTaskSwHook	C832	1	1	3	.text	224:	OSCtxSwCtr	1108	4	4	10	.comm
162:	OSTCBInitHook	C833	1	1	1	.text	225:	OSEventFreeList	110C	2	2	3	.comm
163:	OSTimeTickHook	C834	15	21	1	.text	226:	OSEventTbl	110E	F0	240	4	.comm
164:	OSTickInit	C849	12	18	1	.text	227:	OSFlagTbl	11FE	64	100	4	.comm
165:	OSTickISR	C85B	22	34	1	.text	228:	OSFlagFreeList	1262	2	2	1	.comm
166:	OSEventNameSet	C87D	55	85	2	.text	229:	OSCPUUsage	1264	1	1	3	.comm
167:	OSInit	C8D2	21	33	1	.text	230:	OSIdleCtrMax	1265	4	4	6	.comm
168:	OSIntExit	C8F3	5C	92	1	.text	231:	OSIdleCtrRun	1269	4	4	4	.comm
169:	OSStart	C94F	23	35	1	.text	232:	OSStatRdy	126D	1	1	2	.comm
170:	OSTimeTick	C972	92	146	1	.text	233:	OSTaskStatStk	126E	80	128	1	.comm
171:	OS_Dummy	CA04	1	1	1	.text	234:	OSIntNesting	12EE	1	1	18	.comm
172:	OS_EventTaskRdy	CA05	87	135	2	.text	235:	OSLockNesting	12EF	1	1	9	.comm
173:	OS_EventTaskWait	CA8C	43	67	2	.text	236:	OSPrioCur	12F0	1	1	6	.comm
174:	OS_EventTOAbort	CACF	3D	61	2	.text	237:	OSPrioHighRdy	12F1	1	1	8	.comm
175:	OS_EventWaitListInit	CB0C	F	15	1	.text	238:	OSRdyGrp	12F2	1	1	26	.comm
176:	OS_InitEventList	CB1B	42	66	1	.text	239:	OSRdyTbl	12F3	2	2	16	.comm
177:	OS_InitMisc	CB5D	30	48	1	.text	240:	OSRunning	12F5	1	1	8	.comm
178:	OS_InitRdyList	CB8D	1D	29	1	.text	241:	OSTaskCtr	12F6	1	1	3	.comm
179:	OS_InitTaskIdle	CBAA	23	35	1	.text	242:	OSIdleCtr	12F7	4	4	14	.comm
180:	OS_InitTaskStat	CB CD	23	35	1	.text	243:	OSTaskIdleStk	12FB	40	64	1	.comm
181:	OS_InitTCBList	CBF0	4A	74	1	.text	244:	OSTCBCur	133B	2	2	28	.comm
182:	OS_MemClr	CC3A	D	13	7	.text	245:	OSTCBFreeList	133D	2	2	5	.comm
183:	OS_Sched	CC47	4D	77	10	.text	246:	OSTCBHighRdy	133F	2	2	7	.comm
184:	OS_SchedNew	CC94	16	22	3	.text	247:	OSTCBList	1341	2	2	6	.comm
185:	OS_StrCopy	CCAA	18	24	3	.text	248:	OSTCBPrioTbl	1343	20	32	18	.comm
186:	OS_StrLen	CCC2	C	12	3	.text	249:	OSTCBTbl	1363	1EF	495	4	.comm
187:	OS_TaskIdle	CCCE	1C	28	1	.text	250:	OSTickStepState	1552	1	1	3	.comm
188:	OS_TaskStat	CCEA	92	146	1	.text	251:	OSMemFreeList	1553	2	2	1	.comm
189:	OS_TCBInit	CD7C	CC	204	1	.text	252:	OSMemTbl	1555	40	64	4	.comm

## lab4.map

```
253:      OSTime                1595      4      4      6      .commo
254:      OSTmrFree             1599      2      2      3      .commo
255:      OSTmrUsed             159B      2      2      3      .commo
256:      OSTmrTime             159D      4      4     13      .commo
257:      OSTmrSem              15A1      2      2      4      .commo
258:      OSTmrSemSignal        15A3      2      2      4      .commo
259:      OSTmrTbl              15A5     4E     78      4      .commo
260:      OSTmrFreeList         15F3      2      2      3      .commo
261:      OSTmrTaskStk          15F5     80    128      1      .commo
262:      OSTmrWheelTbl         1675     20     32      4      .commo
263: MODULE:                    -- 9S12DP256Start.o12 --
264: - PROCEDURES:
265:   _Startup                 C000     11     17      1      .init
266:   Init                     C011     4C     76      1      .init
267: - VARIABLES:
268:   _startupData             C05D      B     11      6      .start
269: MODULE:                    -- LCD.o12 --
270: - PROCEDURES:
271:   LcdWrCmd                 D904     14     20     10      .text
272:   LcdInit                  D918     4F     79      1      .text
273:   LcdDispChar              D967      E     14     52      .text
274:   LcdClrDisp               D975      9      9      1      .text
275:   LcdMoveCursor            D97E     15     21     10      .text
276:   LcdDispTime              D993     70    112      2      .text
277:   LcdCursor                DA03     1C     28      2      .text
278:   LcdDly500ns              DA1F      5      5      3      .text
279:   LcdDly40us               DA24      A     10      3      .text
280:   LcdDlyms                  DA2E     12     18      9      .text
281:   LcdBSpace                DA40      5      5      1      .text
282: - VARIABLES:
283: MODULE:                    -- UcosKey.o12 --
284: - PROCEDURES:
285:   KeyPend                  DA45     14     20      8      .text
286:   KeyInit                  DA59     1E     30      1      .text
287:   KeyTask                  DA77     5C     92      1      .text
288:   KeyScan                  DAD3     63     99      1      .text
289: - VARIABLES:
290:   KeyCodeTable             DD65     10     16      1      .rodat
291:   KeyTaskStk               1002     40     64      1      .bss
292:   Key                      1042      3      3      5      .bss
293: MODULE:                    -- Clock.o12 --
294: - PROCEDURES:
295:   ClockTask                DB36     78    120      1      .text
296:   TimeInit                 DBAE     67    103      1      .text
297:   TimeSet                  DC15     25     37      1      .text
298:   TimeGet                  DC3A     25     37      2      .text
299:   ClockTimerFnct           DC5F      6      6      1      .text
300: - VARIABLES:
301:   STRING.Clock.Timer..1    DDB3      D     13      1      .rodat
302:   TimeOfDay                1045      3      3     25      .bss
303:   SecFlag                  1695      2      2      3      .commo
304:   ClockMutexKey            1697      2      2      5      .commo
305:   ClockTimer               1699      2      2      1      .commo
306:   ClockTaskStk             169B     40     64      1      .commo
307: MODULE:                    -- rtshcl2.c.o (ANSIS.LIB) --
308: - PROCEDURES:
309:   _BSHL                    DDF9      8      8      8      RUNTIM
310:   _BDIVMODU                DE01      A     10      9      RUNTIM
311:   _LINC                    DE0B      5      5      7      RUNTIM
312:   _lDivMod                 DE10     BE    190      1      RUNTIM
313:   _LDIVU                   DECE      E     14      3      RUNTIM
314:   _CASE_CHECKED            DEDC      B     11      1      RUNTIM
315:   _CASE_CHECKED_BYTE       DEE7     14     20      2      RUNTIM
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```
316: - VARIABLES:
317:
318: *****
319: MODULE STATISTIC
320:   Name                      Data      Code  Const
321:   -----
322:   sl2dp256vecs.o12          0         4    116
323:   os_cpu_a.o12              0         53     0
324:   main.o12                  192       1937    0
325:   ucos_ii.o12               1423      4359   318
326:   9S12DP256Start.o12        0         93     0
327:   LCD.o12                   0        321    0
328:   UcosKey.o12               67        241   16
329:   Clock.o12                 73        303   13
330:   rtshcl2.c.o (ANSIS.LIB)   0         258    0
331:   other                     1         15     2
332:
333: *****
334: SECTION USE IN OBJECT-ALLOCATION SECTION
335: -----
336: SECTION: ".text"
337:   main StartTask UITask TimeDispTask SetTheTime OSCPUsaveSR OSCPUrestoreSR
338:   OSInitHookBegin OSInitHookEnd OSTaskCreateHook OSTaskDelHook OSTaskIdleHook
339:   OSTaskStatHook OSTaskStkInit OSTaskSwHook OSTCBInitHook OSTimeTickHook
340:   OSTickInit OSTickISR OSEventNameSet OSInit OSIntExit OSStart OSTimeTick
341:   OS_Dummy OS_EventTaskRdy OS_EventTaskWait OS_EventTOAbort
342:   OS_EventWaitListInit OS_InitEventList OS_InitMisc OS_InitRdyList
343:   OS_InitTaskIdle OS_InitTaskStat OS_InitTCBList OS_MemClr OS_Sched OS_SchedNew
344:   OS_StrCopy OS_StrLen OS_TaskIdle OS_TaskStat OS_TCBInit OS_FlagInit
345:   OS_FlagUnlink OS_MemInit OSMutexPend OSMutexPost OSMutexRdyAtPrio
346:   OSSemCreate OSSemPend OSSemPost OSTaskCreate OSTaskDel OSTaskNameSet
347:   OSTaskResume OSTaskSuspend OSTimeDly OSTmrCreate OSTmrStart OSTmrSignal
348:   OSTmr_Alloc OSTmr_Init OSTmr_InitTask OSTmr_Link OSTmr_Unlink OSTmr_Lock
349:   OSTmr_Unlock OSTmr_Task LcdWrCmd LcdInit LcdDispChar LcdClrDisp LcdMoveCursor
350:   LcdDispTime LcdCursor LcdDly500ns LcdDly40us LcdDlyms LcdBSpace KeyPend
351:   KeyInit KeyTask KeyScan ClockTask TimeInit TimeSet TimeGet ClockTimerFnct
352:   __vec8C __vec8E __vec90 __vec92 __vec94 __vec96 __vec98 __vec9A __vec9C
353:   __vec9E __vecA0 __vecA2 __vecA4 __vecA6 __vecA8 __vecAA __vecAC __vecAE
354:   __vecB0 __vecB2 __vecB4 __vecB6 __vecB8 __vecBA __vecBC __vecBE __vecC0
355:   __vecC2 __vecC4 __vecC6 __vecC8 __vecCA __vecCC __vecCE __vecD0 __vecD2
356:   __vecD4 __vecD6 __vecD8 __vecDA __vecDC __vecDE __vecE0 __vecE2 __vecE4
357:   __vecE6 __vecE8 __vecEA __vecEC __vecEE __vecF0 __vecF2 __vecF4 __vecF6
358:   __vecF8 __vecFA __vecFC __vecFE
359: SECTION: ".bss"
360:   OSTmrCtr KeyTaskStk Key TimeOfDay
361: SECTION: ".init"
362:   _Startup Init
363: SECTION: ".rodata"
364:   OSUnMapTbl KeyCodeTable
365: SECTION: ".rodatal"
366:   STRING.uc.OS.II.Idle.1 STRING.uc.OS.II.Stat.2 STRING.OS.TmrLock.3
367:   STRING.OS.TmrSig.4 STRING.uc.OS.II.Tmr.5 STRING.Clock.Timer..1
368: SECTION: "sl2dp256vecs._SEC000000"
369:   _exit loop
370: SECTION: "os_cpu_a._SEC000000"
371:   OSStartHighRdy OSCtxSw OSIntCtxSw
372: SECTION: ".common"
373:   StartTaskStk UITaskStk TimeDispTaskStk OSCtxSwCtr OSEventFreeList OSEventTbl
374:   OSFlagFreeList OSCPUUsage OSIdleCtrMax OSIdleCtrRun OSStatRdy
375:   OSTaskStatStk OSIntNesting OSLockNesting OSPrioCur OSPrioHighRdy OSRdyGrp
376:   OSRdyTbl OSRunning OSTaskCtr OSIdleCtr OSTaskIdleStk OSTCBCur OSTCBFreeList
377:   OSTCBHighRdy OSTCBList OSTCBPrioTbl OSTCBTbl OSTickStepState OSMemFreeList
378:   OSMemTbl OSTime OSTmrFree OSTmrUsed OSTmrTime OSTmrSem OSTmrSemSignal
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379: OSTmrTbl OSTmrFreeList OSTmrTaskStk OSTmrWheelTbl SecFlag ClockMutexKey
380: ClockTimer ClockTaskStk
381: SECTION: "RUNTIME"
382: _BSHL _BDIVMODU _LINC _lDivMod _LDIVU _CASE_CHECKED _CASE_CHECKED_BYTE
383:
384: *****
385: OBJECT LIST SORTED BY ADDRESS
386: Name Addr hSize dSize Ref Secti
387: -----
388: OSTmrCtr 1000 2 2 4 .bss
389: KeyTaskStk 1002 40 64 1 .bss
390: Key 1042 3 3 5 .bss
391: TimeOfDay 1045 3 3 25 .bss
392: StartTaskStk 1048 40 64 1 .commo
393: UITaskStk 1088 40 64 1 .commo
394: TimeDispTaskStk 10C8 40 64 1 .commo
395: OSCtxSwCtr 1108 4 4 10 .commo
396: OSEventFreeList 110C 2 2 3 .commo
397: OSEventTbl 110E F0 240 4 .commo
398: OSFlagTbl 11FE 64 100 4 .commo
399: OSFlagFreeList 1262 2 2 1 .commo
400: OSCPUUsage 1264 1 1 3 .commo
401: OSIdleCtrMax 1265 4 4 6 .commo
402: OSIdleCtrRun 1269 4 4 4 .commo
403: OSStatRdy 126D 1 1 2 .commo
404: OSTaskStatStk 126E 80 128 1 .commo
405: OSIntNesting 12EE 1 1 18 .commo
406: OSLockNesting 12EF 1 1 9 .commo
407: OSPrioCur 12F0 1 1 6 .commo
408: OSPrioHighRdy 12F1 1 1 8 .commo
409: OSRdyGrp 12F2 1 1 26 .commo
410: OSRdyTbl 12F3 2 2 16 .commo
411: OSRunning 12F5 1 1 8 .commo
412: OSTaskCtr 12F6 1 1 3 .commo
413: OSIdleCtr 12F7 4 4 14 .commo
414: OSTaskIdleStk 12FB 40 64 1 .commo
415: OSTCBCur 133B 2 2 28 .commo
416: OSTCBFreeList 133D 2 2 5 .commo
417: OSTCBHighRdy 133F 2 2 7 .commo
418: OSTCBLList 1341 2 2 6 .commo
419: OSTCBPrioTbl 1343 20 32 18 .commo
420: OSTCBTbl 1363 1EF 495 4 .commo
421: OSTickStepState 1552 1 1 3 .commo
422: OSMemFreeList 1553 2 2 1 .commo
423: OSMemTbl 1555 40 64 4 .commo
424: OSTime 1595 4 4 6 .commo
425: OSTmrFree 1599 2 2 3 .commo
426: OSTmrUsed 159B 2 2 3 .commo
427: OSTmrTime 159D 4 4 13 .commo
428: OSTmrSem 15A1 2 2 4 .commo
429: OSTmrSemSignal 15A3 2 2 4 .commo
430: OSTmrTbl 15A5 4E 78 4 .commo
431: OSTmrFreeList 15F3 2 2 3 .commo
432: OSTmrTaskStk 15F5 80 128 1 .commo
433: OSTmrWheelTbl 1675 20 32 4 .commo
434: SecFlag 1695 2 2 3 .commo
435: ClockMutexKey 1697 2 2 5 .commo
436: ClockTimer 1699 2 2 1 .commo
437: ClockTaskStk 169B 40 64 1 .commo
438: _Startup C000 11 17 1 .init
439: Init C011 4C 76 1 .init
440: main C06C 26 38 0 .text
441: StartTask C092 45 69 1 .text
```

```
442: UITask C0D7 27 39 1 .text
443: TimeDispTask C0FE 28 40 1 .text
444: SetTheTime C126 6D7 1751 22 .text
445: OSCPUsaveSR C7FD 5 5 24 .text
446: OSCPURestoreSR C802 3 3 46 .text
447: OSInitHookBegin C805 6 6 1 .text
448: OSInitHookEnd C80B 1 1 1 .text
449: OSTaskCreateHook C80C 1 1 1 .text
450: OSTaskDelHook C80D 1 1 1 .text
451: OSTaskIdleHook C80E 1 1 1 .text
452: OSTaskStatHook C80F 1 1 1 .text
453: OSTaskStkInit C810 22 34 1 .text
454: OSTaskSwHook C832 1 1 3 .text
455: OSTCBInitHook C833 1 1 1 .text
456: OSTimeTickHook C834 15 21 1 .text
457: OSTickInit C849 12 18 1 .text
458: OSTickISR C85B 22 34 1 .text
459: OSEventNameSet C87D 55 85 2 .text
460: OSInit C8D2 21 33 1 .text
461: OSIntExit C8F3 5C 92 1 .text
462: OSStart C94F 23 35 1 .text
463: OSTimeTick C972 92 146 1 .text
464: OS_Dummy CA04 1 1 1 .text
465: OS_EventTaskRdy CA05 87 135 2 .text
466: OS_EventTaskWait CA8C 43 67 2 .text
467: OS_EventTOAbort CACF 3D 61 2 .text
468: OS_EventWaitListInit CB0C F 15 1 .text
469: OS_InitEventList CB1B 42 66 1 .text
470: OS_InitMisc CB5D 30 48 1 .text
471: OS_InitRdyList CB8D 1D 29 1 .text
472: OS_InitTaskIdle CBAA 23 35 1 .text
473: OS_InitTaskStat CBCD 23 35 1 .text
474: OS_InitTCBList CBF0 4A 74 1 .text
475: OS_MemClr CC3A D 13 7 .text
476: OS_Sched CC47 4D 77 10 .text
477: OS_SchedNew CC94 16 22 3 .text
478: OS_StrCopy CCAA 18 24 3 .text
479: OS_StrLen CCC2 C 12 3 .text
480: OS_TaskIdle CCCE 1C 28 1 .text
481: OS_TaskStat CCEA 92 146 1 .text
482: OS_TCBInit CD7C CC 204 1 .text
483: OS_FlagInit CE48 42 66 1 .text
484: OS_FlagUnlink CE8A 30 48 1 .text
485: OS_MemInit CEBA 44 68 1 .text
486: OSMutexPend CEFE 18B 395 4 .text
487: OSMutexPost D089 A4 164 2 .text
488: OSMutex_RdyAtPrio D12D 64 100 1 .text
489: OSSemCreate D191 40 64 4 .text
490: OSSemPend D1D1 89 137 4 .text
491: OSSemPost D25A 47 71 4 .text
492: OSTaskCreate D2A1 7E 126 8 .text
493: OSTaskDel D31F 11A 282 2 .text
494: OSTaskNameSet D439 6C 108 3 .text
495: OSTaskResume D4A5 77 119 1 .text
496: OSTaskSuspend D51C 7A 122 1 .text
497: OSTimeDly D596 3C 60 4 .text
498: OSTmrCreate D5D2 83 131 1 .text
499: OSTmrStart D655 5D 93 1 .text
500: OSTmrSignal D6B2 7 7 1 .text
501: OSTmr_Alloc D6B9 24 36 1 .text
502: OSTmr_Init D6DD 9D 157 1 .text
503: OSTmr_InitTask D77A 23 35 1 .text
504: OSTmr_Link D79D 82 130 2 .text
```

## lab4.map

505:	OSTmr_Unlink	D81F	47	71	2	.text	568:	__vecB2	FFB2	2	2	0	.text
506:	OSTmr_Lock	D866	12	18	3	.text	569:	__vecB4	FFB4	2	2	0	.text
507:	OSTmr_Unlock	D878	6	6	7	.text	570:	__vecB6	FFB6	2	2	0	.text
508:	OSTmr_Task	D87E	86	134	2	.text	571:	__vecB8	FFB8	2	2	0	.text
509:	LcdWrCmd	D904	14	20	10	.text	572:	__vecBA	FFBA	2	2	0	.text
510:	LcdInit	D918	4F	79	1	.text	573:	__vecBC	FFBC	2	2	0	.text
511:	LcdDispChar	D967	E	14	52	.text	574:	__vecBE	FFBE	2	2	0	.text
512:	LcdClrDisp	D975	9	9	1	.text	575:	__vecC0	FFC0	2	2	0	.text
513:	LcdMoveCursor	D97E	15	21	10	.text	576:	__vecC2	FFC2	2	2	0	.text
514:	LcdDispTime	D993	70	112	2	.text	577:	__vecC4	FFC4	2	2	0	.text
515:	LcdCursor	DA03	1C	28	2	.text	578:	__vecC6	FFC6	2	2	0	.text
516:	LcdDly500ns	DA1F	5	5	3	.text	579:	__vecC8	FFC8	2	2	0	.text
517:	LcdDly40us	DA24	A	10	3	.text	580:	__vecCA	FFCA	2	2	0	.text
518:	LcdDlyms	DA2E	12	18	9	.text	581:	__vecCC	FFCC	2	2	0	.text
519:	LcdBSpace	DA40	5	5	1	.text	582:	__vecCE	FFCE	2	2	0	.text
520:	KeyPend	DA45	14	20	8	.text	583:	__vecD0	FFD0	2	2	0	.text
521:	KeyInit	DA59	1E	30	1	.text	584:	__vecD2	FFD2	2	2	0	.text
522:	KeyTask	DA77	5C	92	1	.text	585:	__vecD4	FFD4	2	2	0	.text
523:	KeyScan	DAD3	63	99	1	.text	586:	__vecD6	FFD6	2	2	0	.text
524:	ClockTask	DB36	78	120	1	.text	587:	__vecD8	FFD8	2	2	0	.text
525:	TimeInit	DBAE	67	103	1	.text	588:	__vecDA	FFDA	2	2	0	.text
526:	TimeSet	DC15	25	37	1	.text	589:	__vecDC	FFDC	2	2	0	.text
527:	TimeGet	DC3A	25	37	2	.text	590:	__vecDE	FFDE	2	2	0	.text
528:	ClockTimerFnct	DC5F	6	6	1	.text	591:	__vecE0	FFE0	2	2	0	.text
529:	OSUnMapTbl	DC65	100	256	2	.rodat	592:	__vecE2	FFE2	2	2	0	.text
530:	KeyCodeTable	DD65	10	16	1	.rodat	593:	__vecE4	FFE4	2	2	0	.text
531:	STRING.uC.OS.II.Idle.1	DD75	E	14	1	.rodat	594:	__vecE6	FFE6	2	2	0	.text
532:	STRING.uC.OS.II.Stat.2	DD83	E	14	1	.rodat	595:	__vecE8	FFE8	2	2	0	.text
533:	STRING.OS.TmrLock.3	DD91	B	11	1	.rodat	596:	__vecEA	FFEA	2	2	0	.text
534:	STRING.OS.TmrSig.4	DD9C	A	10	1	.rodat	597:	__vecEC	FFEC	2	2	0	.text
535:	STRING.uC.OS.II.Tmr.5	DDA6	D	13	1	.rodat	598:	__vecEE	FFEE	2	2	0	.text
536:	STRING.Clock.Timer..1	DDB3	D	13	1	.rodat	599:	__vecF0	FFF0	2	2	0	.text
537:	_exit	DDC0	2	2	55	s12dp2	600:	__vecF2	FFF2	2	2	0	.text
538:	loop	DDC2	2	2	0	s12dp2	601:	__vecF4	FFF4	2	2	0	.text
539:	OSStartHighRdy	DDC4	C	12	1	os_cpu	602:	__vecF6	FFF6	2	2	0	.text
540:	OSCtxSw	DDD0	17	23	1	os_cpu	603:	__vecF8	FFF8	2	2	0	.text
541:	OSIntCtxSw	DDE7	12	18	1	os_cpu	604:	__vecFA	FFFA	2	2	0	.text
542:	_BSHL	DDF9	8	8	8	RUNTIM	605:	__vecFC	FFFC	2	2	0	.text
543:	_BDIVMODU	DE01	A	10	9	RUNTIM	606:	__vecFE	FFFE	2	2	0	.text
544:	_LINC	DE0B	5	5	7	RUNTIM	607:						
545:	_lDivMod	DE10	BE	190	1	RUNTIM	608:	*****					
546:	_LDIVU	DECE	E	14	3	RUNTIM	609:	UNUSED-OBJECTS SECTION					
547:	_CASE_CHECKED	DEDC	B	11	1	RUNTIM	610:	-----					
548:	_CASE_CHECKED_BYTE	DEE7	14	20	2	RUNTIM	611:	NOT USED PROCEDURES					
549:	__vec8C	FF8C	2	2	0	.text	612:	ucos_ii.o12:					
550:	__vec8E	FF8E	2	2	0	.text	613:	OSEventNameGet OSIntEnter OSSchedLock OSSchedUnlock OSStatInit OSVersion					
551:	__vec90	FF90	2	2	0	.text	614:	OS_MemCopy OSFlagAccept OSFlagCreate OSFlagDel OSFlagNameGet OSFlagNameSet					
552:	__vec92	FF92	2	2	0	.text	615:	OSFlagPend OSFlagPendGetFlagsRdy OSFlagPost OSFlagQuery OS_FlagBlock					
553:	__vec94	FF94	2	2	0	.text	616:	OS_FlagTaskRdy OSMemCreate OSMemGet OSMemNameGet OSMemNameSet OSMemPut					
554:	__vec96	FF96	2	2	0	.text	617:	OSMemQuery OSMutexAccept OSMutexCreate OSMutexDel OSMutexQuery OSSemAccept					
555:	__vec98	FF98	2	2	0	.text	618:	OSSemDel OSSemPendAbort OSSemQuery OSSemSet OSTaskChangePrio OSTaskDelReq					
556:	__vec9A	FF9A	2	2	0	.text	619:	OSTaskNameGet OSTaskQuery OStimeDlyHMSM OStimeDlyResume OStimeGet OStimeSet					
557:	__vec9C	FF9C	2	2	0	.text	620:	OSTmrDel OSTmrNameGet OSTmrRemainGet OSTmrStateGet OSTmrStop OSTmr_Free					
558:	__vec9E	FF9E	2	2	0	.text	621:	LCD.o12:					
559:	__vecA0	FFA0	2	2	0	.text	622:	LcdClrLine LcdDispByte LcdDispStrg LcdDispDecByte LcdFSpace					
560:	__vecA2	FFA2	2	2	0	.text	623:	rtshc12.c.o (ANSIS.LIB):					
561:	__vecA4	FFA4	2	2	0	.text	624:	_BSHRS _BSHRU _BDIVMODS _ISHL _ISHRU _ISHRS _LSHL _LSHRU _LSHRS _LADD _LSUB					
562:	__vecA6	FFA6	2	2	0	.text	625:	_LAND _LOR _LXOR _LCMP _LCMP_P _LCMP_PP _LNEG _LCOM _LDEC _LMUL _LMULU16x32					
563:	__vecA8	FFA8	2	2	0	.text	626:	_LMULS16x32 _NEG_P _LDIVS _LMODU _LMODS _ILSEXT _COPY _CASE_DIRECT					
564:	__vecAA	FFAA	2	2	0	.text	627:	_CASE_DIRECT_BYTE _CASE_SEARCH _CASE_SEARCH_BYTE _CASE_SEARCH_8					
565:	__vecAC	FFAC	2	2	0	.text	628:	_CASE_SEARCH_8_BYTE _FCALL _FPCMP					
566:	__vecAE	FFAE	2	2	0	.text	629:	NOT USED VARIABLES					
567:	__vecB0	FFB0	2	2	0	.text	630:	rtshc12.c.o (ANSIS.LIB):					

```
631:  _PowOfTwo_8 _PowOfTwo_16 _PowOfTwo_32 errno
632:
633: *****
634: COPYDOWN SECTION
635: -----
636: ----- ROM-ADDRESS: 0xDEFB ---- SIZE      2 ---
637: Filling bytes inserted
638: 0000
639:
640: *****
641: OBJECT-DEPENDENCIES SECTION
642: -----
643:  _Startup          USES  _startupData Init
644:  Init              USES  _startupData
645:  main              USES  OSInit KeyInit LcdInit StartTask StartTaskStk
646:                   USES  OSTaskCreate OSStart
647:  StartTask         USES  OSTickInit LcdClrDisp LcdMoveCursor TimeInit
648:                   USES  UITask UITaskStk OSTaskCreate TimeDispTask
649:                   USES  TimeDispTaskStk OSTaskDel
650:  UITask            USES  KeyPend SetTheTime
651:  TimeDispTask      USES  TimeGet LcdMoveCursor LcdDispTime
652:  SetTheTime        USES  OSTaskSuspend TimeGet LcdMoveCursor KeyPend
653:                   USES  SetTheTime _CASE_CHECKED LcdCursor LcdDispChar LcdBS
654:                   USES  OTimeDly TimeSet OSTaskResume
655:  OSInitHookBegin   USES  OSTmrCtr
656:  OSTimeTickHook    USES  OSTmrCtr OSTmrSignal
657:  OSTickISR         USES  OSIntNesting OSTCBCur OSTimeTick OSIntExit
658:  OSEventNameSet    USES  OSIntNesting OSCPUaveSR OS_StrLen
659:                   USES  OSCPURestoreSR OS_StrCopy
660:  OSInit            USES  OSInitHookBegin OS_InitMisc OS_InitRdyList
661:                   USES  OS_InitTCBList OS_InitEventList OS_FlagInit OS_MemIn
662:                   USES  OS_InitTaskIdle OS_InitTaskStat OSTmr_Init OSInitHoo
663:  OSIntExit         USES  OSRunning OSCPUaveSR OSIntNesting
664:                   USES  OSLockNesting OS_SchedNew OSPrioHighRdy OSPrioCur
665:                   USES  OSTCBPrioTbl OSTCBHighRdy _LINC OSctxSwCtr OSIntCtxS
666:                   USES  OSCPURestoreSR
667:  OSStart           USES  OSRunning OS_SchedNew OSPrioHighRdy OSPrioCur
668:                   USES  OSTCBPrioTbl OSTCBHighRdy OSTCBCur OSStartHighRdy
669:  OSTimeTick        USES  OSTimeTickHook OSCPUaveSR OSTime _LINC
670:                   USES  OSCPURestoreSR OSRunning OSTickStepState _CASE_CHECK
671:                   USES  OSTCBLList OSRdyGrp OSRdyTbl
672:  OS_EventTaskRdy   USES  OSUnMapTbl _BSHL OSTCBPrioTbl OSRdyGrp OSRdyTbl
673:  OS_EventTaskWait  USES  OSTCBCur OSRdyTbl OSRdyGrp
674:  OS_EventTOAbort   USES  OSTCBCur
675:  OS_InitEventList  USES  OSEventTbl OS_MemClr OSEventFreeList
676:  OS_InitMisc       USES  OTime OSIntNesting OSLockNesting OSTaskCtr
677:                   USES  OSRunning OSctxSwCtr OSIdleCtr OSIdleCtrRun OSIdleCt
678:                   USES  OSStatRdy
679:  OS_InitRdyList    USES  OSRdyGrp OSRdyTbl OSPrioCur OSPrioHighRdy
680:                   USES  OSTCBHighRdy OSTCBCur
681:  OS_InitTaskIdle   USES  OS_TaskIdle OSTaskIdleStk OSTaskCreate
682:                   USES  STRING.uC.OS.II.Idle.1 OSTaskNameSet
683:  OS_InitTaskStat   USES  OS_TaskStat OSTaskStatStk OSTaskCreate
684:                   USES  STRING.uC.OS.II.Stat.2 OSTaskNameSet
685:  OS_InitTCBList    USES  OSTCBTbl OS_MemClr OSTCBPrioTbl OSTCBLList
686:                   USES  OSTCBFreeList
687:  OS_Sched          USES  OSCPUaveSR OSIntNesting OSLockNesting
688:                   USES  OS_SchedNew OSPrioHighRdy OSPrioCur OSTCBPrioTbl
689:                   USES  OSTCBHighRdy _LINC OSctxSwCtr OSCPURestoreSR
690:  OS_SchedNew       USES  OSRdyGrp OSUnMapTbl OSRdyTbl OSPrioHighRdy
691:  OS_TaskIdle       USES  OSCPUaveSR OSIdleCtr _LINC OSCPURestoreSR
692:                   USES  OSTaskIdleHook
693:  OS_TaskStat       USES  OTimeDly OSStatRdy OSIdleCtrMax _LDIVU
```

```
694:  OSCPUaveSR OSIdleCtr OSIdleCtrRun OSCPURestoreSR
695:  OSCPUUsage OSTaskStatHook
696:  OS_TCBInit        USES  OSCPUaveSR OSTCBFreeList OSCPURestoreSR _BSHL
697:                   USES  OSTCBInitHook OSTaskCreateHook OSTCBPrioTbl OSTCBLis
698:                   USES  OSRdyGrp OSRdyTbl OSTaskCtr
699:  OS_FlagInit       USES  OSFlagTbl OS_MemClr OSFlagFreeList
700:  OS_MemInit        USES  OSMemTbl OS_MemClr OSMemFreeList
701:  OSMutexPend       USES  OSIntNesting OSLockNesting OSCPUaveSR OSTCBCur
702:                   USES  OSCPURestoreSR OSMutexPend OSRdyTbl OSRdyGrp _BSHL
703:                   USES  OSTCBPrioTbl OS_EventTaskWait OS_Sched OS_EventTOAbo
704:  OSMutexPost       USES  OSIntNesting OSCPUaveSR OSTCBCur
705:                   USES  OSCPURestoreSR OSMutex_RdyAtPrio OSTCBPrioTbl OS_Eve
706:                   USES  OS_Sched
707:  OSMutex_RdyAtPrio USES  OSRdyTbl OSRdyGrp _BSHL OSTCBPrioTbl
708:  OSSemCreate       USES  OSIntNesting OSCPUaveSR OSEventFreeList
709:                   USES  OSCPURestoreSR OS_EventWaitListInit
710:  OSSemPend         USES  OSIntNesting OSLockNesting OSCPUaveSR OSTCBCur
711:                   USES  OS_EventTaskWait OSCPURestoreSR OS_Sched OS_EventTOA
712:  OSSemPost         USES  OSCPUaveSR OS_EventTaskRdy OSCPURestoreSR
713:                   USES  OS_Sched
714:  OSTaskCreate      USES  OSCPUaveSR OSIntNesting OSCPURestoreSR
715:                   USES  OSTCBPrioTbl OSTaskStkInit OS_TCBInit OSRunning OS_S
716:  OSTaskDel         USES  OSIntNesting OSCPUaveSR OSTCBCur OSTCBPrioTbl
717:                   USES  OSCPURestoreSR OSTaskDel OSRdyTbl OSRdyGrp OS_FlagUn
718:                   USES  OSLockNesting OS_Dummy OSTaskDelHook OSTaskCtr OSTCB
719:                   USES  OSTCBFreeList OSRunning OS_Sched
720:  OSTaskNameSet     USES  OSIntNesting OSCPUaveSR OSTCBCur OSTCBPrioTbl
721:                   USES  OSCPURestoreSR OS_StrLen OS_StrCopy
722:  OSTaskResume      USES  OSCPUaveSR OSTCBPrioTbl OSCPURestoreSR
723:                   USES  OSRdyGrp OSRdyTbl OSRunning OS_Sched
724:  OSTaskSuspend     USES  OSCPUaveSR OSTCBCur OSTCBPrioTbl
725:                   USES  OSCPURestoreSR OSRdyTbl OSRdyGrp OS_Sched
726:  OTimeDly          USES  OSIntNesting OSCPUaveSR OSTCBCur OSRdyTbl
727:                   USES  OSRdyGrp OSCPURestoreSR OS_Sched
728:  OSTmrCreate       USES  OSIntNesting OSTmr_Lock OSTmr_Alloc
729:                   USES  OSTmr_Unlock OS_StrLen OS_StrCopy
730:  OSTmrStart        USES  OSIntNesting OSTmr_Lock _CASE_CHECKED_BYTE
731:                   USES  OSTmr_Unlink OSTmr_Link OSTmr_Unlock
732:  OSTmrSignal       USES  OSTmrSemSignal OSSEMPost
733:  OSTmr_Alloc       USES  OSTmrFreeList OSTmrUsed OSTmrFree
734:  OSTmr_Init        USES  OSTmrTbl OS_MemClr OSTmrWheelTbl OSTmrTime
735:                   USES  OSTmrUsed OSTmrFree OSTmrFreeList OSSEMCreate OSTmrS
736:                   USES  OSTmrSemSignal STRING.OS.TmrLock.3 OSEventNameSet
737:                   USES  STRING.OS.TmrSig.4 OSTmr_InitTask
738:  OSTmr_InitTask    USES  OSTmr_Task OSTmrTaskStk OSTaskCreate
739:                   USES  STRING.uC.OS.II.Tmr.5 OSTaskNameSet
740:  OSTmr_Link        USES  OSTmrTime OSTmrWheelTbl
741:  OSTmr_Unlink      USES  OSTmrWheelTbl
742:  OSTmr_Lock        USES  OSTmrSem OSSEMpend
743:  OSTmr_Unlock      USES  OSTmrSem OSSEMPost
744:  OSTmr_Task        USES  OSTmrSemSignal OSSEMpend OSTmr_Lock OSTmrTime
745:                   USES  _LINC OSTmrWheelTbl OSTmr_Unlink OSTmr_Link
746:                   USES  OSTmr_Unlock OSTmr_Task
747:  LcdWrCmd          USES  LcdDly500ns LcdDly40us
748:  LcdInit           USES  LcdDlyms LcdWrCmd
749:  LcdDispChar       USES  LcdDly500ns LcdDly40us
750:  LcdClrDisp        USES  LcdWrCmd LcdDlyms
751:  LcdMoveCursor     USES  LcdWrCmd
752:  LcdDispTime       USES  _BDIVMODU LcdDispChar
753:  LcdCursor         USES  LcdWrCmd
754:  LcdDly40us        USES  LcdDly500ns
755:  LcdDlyms          USES  LcdDly40us
756:  LcdBSPace         USES  LcdWrCmd
```

```

757: KeyPend          USES Key OSSEmpend
758: KeyInit          USES OSSEmCreate Key KeyTask KeyTaskStk OSTaskCreate
759: KeyTask           USES OSTimeDly KeyScan KeyCodeTable Key OSSEmpost
760: ClockTask         USES SecFlag OSSEmpend TimeOfDay
761: TimeInit          USES TimeOfDay LcdDispTime ClockTimerFnct
762:                   STRING.Clock.Timer..1 OSTmrCreate ClockTimer OSTmrSt
763:                   ClockMutexKey ClockTask ClockTaskStk OSTaskCreate
764:                   OSSEmCreate SecFlag
765: TimeSet           USES ClockMutexKey OSMutexPend TimeOfDay OSMutexPost
766: TimeGet           USES ClockMutexKey OSMutexPend TimeOfDay OSMutexPost
767: ClockTimerFnct    USES SecFlag OSSEmpost
768: OSStartHighRdy    USES OSTaskSwHook OSRunning OSTCBHighRdy
769: OSCtxSw           USES OSTCBCur OSTaskSwHook OSTCBHighRdy
770:                   OSPrioHighRdy OSPrioCur
771: OSIntCtxSw        USES OSTaskSwHook OSTCBHighRdy OSTCBCur
772:                   OSPrioHighRdy OSPrioCur
773: _LDIVU            USES _lDivMod
774:
775: *****
776: DEPENDENCY TREE
777: *****
778: main and _Startup Group
779: |
780: +- main
781: |
782: +- OSInit
783: |
784: +- OSInitHookBegin
785: |
786: +- OS_InitMisc
787: |
788: +- OS_InitRdyList
789: |
790: +- OS_InitTCBList
791: |
792: +- OS_MemClr
793: |
794: +- OS_InitEventList
795: |
796: +- OS_MemClr          (see above)
797: |
798: +- OS_FlagInit
799: |
800: +- OS_MemClr          (see above)
801: |
802: +- OS_MemInit
803: |
804: +- OS_MemClr          (see above)
805: |
806: +- OS_InitTaskIdle
807: |
808: +- OS_TaskIdle
809: |
810: +- OSCPU_SaveSR
811: |
812: +- _LINC
813: |
814: +- OSCPU_RestoreSR
815: |
816: +- OSTaskIdleHook
817: |
818: +- OSTaskCreate
819: |

```

```

820: |
821: |
822: +- OSCPU_SaveSR          (see above)
823: |
824: +- OSTaskStkInit
825: |
826: +- OS_TCBInit
827: |
828: +- OSCPU_SaveSR          (see above)
829: |
830: +- OSCPU_RestoreSR      (see above)
831: |
832: +- _BSHL
833: |
834: +- OSTCBInitHook
835: |
836: +- OSTaskCreateHook
837: |
838: +- OS_Sched
839: |
840: +- OSCPU_SaveSR          (see above)
841: |
842: +- OS_SchedNew
843: |
844: +- _LINC                (see above)
845: |
846: +- OSCPU_RestoreSR      (see above)
847: |
848: +- OSTaskNameSet
849: |
850: +- OSCPU_SaveSR          (see above)
851: |
852: +- OSCPU_RestoreSR      (see above)
853: |
854: +- OS_StrLen
855: |
856: +- OS_StrCopy
857: |
858: +- OS_InitTaskStat
859: |
860: +- OS_TaskStat
861: |
862: +- OSTimeDly
863: |
864: +- OSCPU_SaveSR          (see above)
865: |
866: +- OSCPU_RestoreSR      (see above)
867: |
868: +- OS_Sched              (see above)
869: |
870: +- _LDIVU
871: |
872: +- _lDivMod
873: |
874: +- OSCPU_SaveSR          (see above)
875: |
876: +- OSCPU_RestoreSR      (see above)
877: |
878: +- OSTaskStatHook
879: |
880: +- OSTaskCreate          (see above)
881: |
882: +- OSTaskNameSet        (see above)

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883: | | |
884: | +- OSTmr_Init
885: | |
886: | | +- OS_MemClr          (see above)
887: | | |
888: | | +- OSemCreate
889: | | |
890: | | | +- OSCPUsaveSR      (see above)
891: | | | |
892: | | | +- OSCPUrestoreSR   (see above)
893: | | | |
894: | | | +- OS_EventWaitListInit
895: | | | |
896: | | +- OSEventNameSet
897: | | |
898: | | | +- OSCPUsaveSR      (see above)
899: | | | |
900: | | | +- OS_StrLen        (see above)
901: | | | |
902: | | | +- OSCPUrestoreSR   (see above)
903: | | | |
904: | | | +- OS_StrCopy       (see above)
905: | | |
906: | +- OSTmr_InitTask
907: | |
908: | +- OSTmr_Task
909: | |
910: | | +- OSemPend
911: | | |
912: | | | +- OSCPUsaveSR      (see above)
913: | | | |
914: | | | +- OS_EventTaskWait
915: | | | |
916: | | | +- OSCPUrestoreSR   (see above)
917: | | | |
918: | | | +- OS_Sched         (see above)
919: | | | |
920: | | | +- OS_EventTOAbort
921: | | | |
922: | +- OSTmr_Lock
923: | |
924: | | +- OSemPend          (see above)
925: | | |
926: | +- _LINC               (see above)
927: | |
928: | +- OSTmr_Unlink
929: | |
930: | +- OSTmr_Link
931: | |
932: | +- OSTmr_Unlock
933: | |
934: | | +- OSemPost
935: | | |
936: | | | +- OSCPUsaveSR      (see above)
937: | | | |
938: | | | +- OS_EventTaskRdy
939: | | | |
940: | | | | +- _BSHL          (see above)
941: | | | |
942: | | | +- OSCPUrestoreSR   (see above)
943: | | | |
944: | | | +- OS_Sched         (see above)
945: | | |

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946: | | | +- OSTaskCreate      (see above)
947: | | | |
948: | | | +- OSTaskNameSet    (see above)
949: | | | |
950: | | +- OSInitHookEnd
951: | | |
952: | +- KeyInit
953: | |
954: | | +- OSemCreate         (see above)
955: | | |
956: | | +- KeyTask
957: | | |
958: | | | +- OSTimeDly        (see above)
959: | | | |
960: | | | +- KeyScan
961: | | | |
962: | | | +- OSemPost         (see above)
963: | | | |
964: | | | +- OSTaskCreate     (see above)
965: | | |
966: | +- LcdInit
967: | |
968: | | +- LcdDlyms
969: | | |
970: | | | +- LcdDly40us
971: | | | |
972: | | | | +- LcdDly500ns
973: | | | |
974: | | +- LcdWrCmd
975: | | |
976: | | | +- LcdDly500ns      (see above)
977: | | | |
978: | | | +- LcdDly40us       (see above)
979: | | | |
980: | +- StartTask
981: | |
982: | | +- OSTickInit
983: | | |
984: | | +- LcdClrDisp
985: | | |
986: | | | +- LcdWrCmd         (see above)
987: | | | |
988: | | | +- LcdDlyms         (see above)
989: | | | |
990: | | +- LcdMoveCursor
991: | | |
992: | | | +- LcdWrCmd         (see above)
993: | | | |
994: | | +- TimeInit
995: | | |
996: | | | +- LcdDispTime
997: | | | |
998: | | | | +- _BDIVMODU
999: | | | |
1000: | | | | +- LcdDispChar
1001: | | | | |
1002: | | | | | +- LcdDly500ns      (see above)
1003: | | | | | |
1004: | | | | | +- LcdDly40us       (see above)
1005: | | | | |
1006: | | | +- ClockTimerFnct
1007: | | | |
1008: | | | +- OSemPost         (see above)

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1009: | | | |
1010: | +- OSTmrCreate
1011: | |
1012: | +- OSTmr_Lock (see above)
1013: | |
1014: | +- OSTmr_Alloc
1015: | |
1016: | +- OSTmr_Unlock (see above)
1017: | |
1018: | +- OS_StrLen (see above)
1019: | |
1020: | +- OS_StrCopy (see above)
1021: | |
1022: | +- OSTmrStart
1023: | |
1024: | +- OSTmr_Lock (see above)
1025: | |
1026: | +- _CASE_CHECKED_BYTE
1027: | |
1028: | +- OSTmr_Unlink (see above)
1029: | |
1030: | +- OSTmr_Link (see above)
1031: | |
1032: | +- OSTmr_Unlock (see above)
1033: | |
1034: | +- ClockTask
1035: | |
1036: | +- OSSemPend (see above)
1037: | |
1038: | +- OSTaskCreate (see above)
1039: | |
1040: | +- OSSemCreate (see above)
1041: | |
1042: | +- UITask
1043: | |
1044: | +- KeyPend
1045: | |
1046: | +- OSSemPend (see above)
1047: | |
1048: | +- SetTheTime
1049: | |
1050: | +- OSTaskSuspend
1051: | |
1052: | +- OSCPUSaveSR (see above)
1053: | |
1054: | +- OSCPURestoreSR (see above)
1055: | |
1056: | +- OS_Sched (see above)
1057: | |
1058: | +- TimeGet
1059: | |
1060: | +- OSMutexPend
1061: | |
1062: | +- OSCPUSaveSR (see above)
1063: | |
1064: | +- OSCPURestoreSR (see above)
1065: | |
1066: | +- _BSHL (see above)
1067: | |
1068: | +- OS_EventTaskWait (see above)
1069: | |
1070: | +- OS_Sched (see above)
1071: | |

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1072: | | +- OS_EventTOAbort (see above)
1073: | |
1074: | | +- OSMutexPost
1075: | |
1076: | | +- OSCPUSaveSR (see above)
1077: | |
1078: | | +- OSCPURestoreSR (see above)
1079: | |
1080: | | +- OSMutex_RdyAtPrio
1081: | |
1082: | | +- _BSHL (see above)
1083: | |
1084: | | +- OS_EventTaskRdy (see above)
1085: | |
1086: | | +- OS_Sched (see above)
1087: | |
1088: | +- LcdMoveCursor (see above)
1089: | |
1090: | +- KeyPend (see above)
1091: | |
1092: | +- _CASE_CHECKED
1093: | |
1094: | +- LcdCursor
1095: | |
1096: | +- LcdWrCmd (see above)
1097: | |
1098: | +- LcdDispChar (see above)
1099: | |
1100: | +- LcdBSpace
1101: | |
1102: | +- LcdWrCmd (see above)
1103: | |
1104: | +- OSTimeDly (see above)
1105: | |
1106: | +- TimeSet
1107: | |
1108: | +- OSMutexPend (see above)
1109: | |
1110: | +- OSMutexPost (see above)
1111: | |
1112: | +- OSTaskResume
1113: | |
1114: | +- OSCPUSaveSR (see above)
1115: | |
1116: | +- OSCPURestoreSR (see above)
1117: | |
1118: | +- OS_Sched (see above)
1119: | |
1120: | +- OSTaskCreate (see above)
1121: | |
1122: | +- TimeDispTask
1123: | |
1124: | +- TimeGet (see above)
1125: | |
1126: | +- LcdMoveCursor (see above)
1127: | |
1128: | +- LcdDispTime (see above)
1129: | |
1130: | +- OSTaskDel
1131: | |
1132: | +- OSCPUSaveSR (see above)
1133: | |
1134: | +- OSCPURestoreSR (see above)

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1135: | | |
1136: | | +- OS_FlagUnlink
1137: | | |
1138: | | +- OS_Dummy
1139: | | |
1140: | | +- OSTaskDelHook
1141: | | |
1142: | | +- OS_Sched (see above)
1143: | | |
1144: | +- OSTaskCreate (see above)
1145: | |
1146: | +- OSStart
1147: | |
1148: | +- OS_SchedNew (see above)
1149: | |
1150: | +- OSStartHighRdy
1151: | |
1152: | +- OSTaskSwHook
1153: | |
1154: +- _Startup
1155: | |
1156: +- Init
1157: |
1158: _ORG00001
1159: |
1160: +- _exit
1161: |
1162: +- OSTickISR
1163: | |
1164: | +- OSTimeTick
1165: | | |
1166: | | +- OSTimeTickHook
1167: | | | |
1168: | | | +- OSTmrSignal
1169: | | | |
1170: | | | +- OSSemPost (see above)
1171: | | |
1172: | +- OSCPUsaveSR (see above)
1173: | |
1174: | +- _LINC (see above)
1175: | |
1176: | +- OSCPUrestoreSR (see above)
1177: | |
1178: | +- _CASE_CHECKED_BYTE (see above)
1179: | |
1180: +- OSIntExit
1181: | |
1182: | +- OSCPUsaveSR (see above)
1183: | |
1184: | +- OS_SchedNew (see above)
1185: | |
1186: | +- _LINC (see above)
1187: | |
1188: | +- OSIntCtxSw
1189: | | |
1190: | | +- OSTaskSwHook (see above)
1191: | | |
1192: | +- OSCPUrestoreSR (see above)
1193: | |
1194: +- OSCtxSw
1195: | |
1196: | +- OSTaskSwHook (see above)
1197: | |
```

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1198: +- _Startup (see above)
1199: |
1200: *****
1201: STATISTIC SECTION
1202: -----
1203: |
1204: ExeFile:
1205: -----
1206: Number of blocks to be downloaded: 8
1207: Total size of all blocks to be downloaded: 8049
1208: |
```