CodeSonar Analysis Report

generated by Administrator on Wed Aug 23 15:55:07 2017

for analysis rpl-border-router analysis 1

Summary

Table 1: rpl-border-router analysis 1 Summary

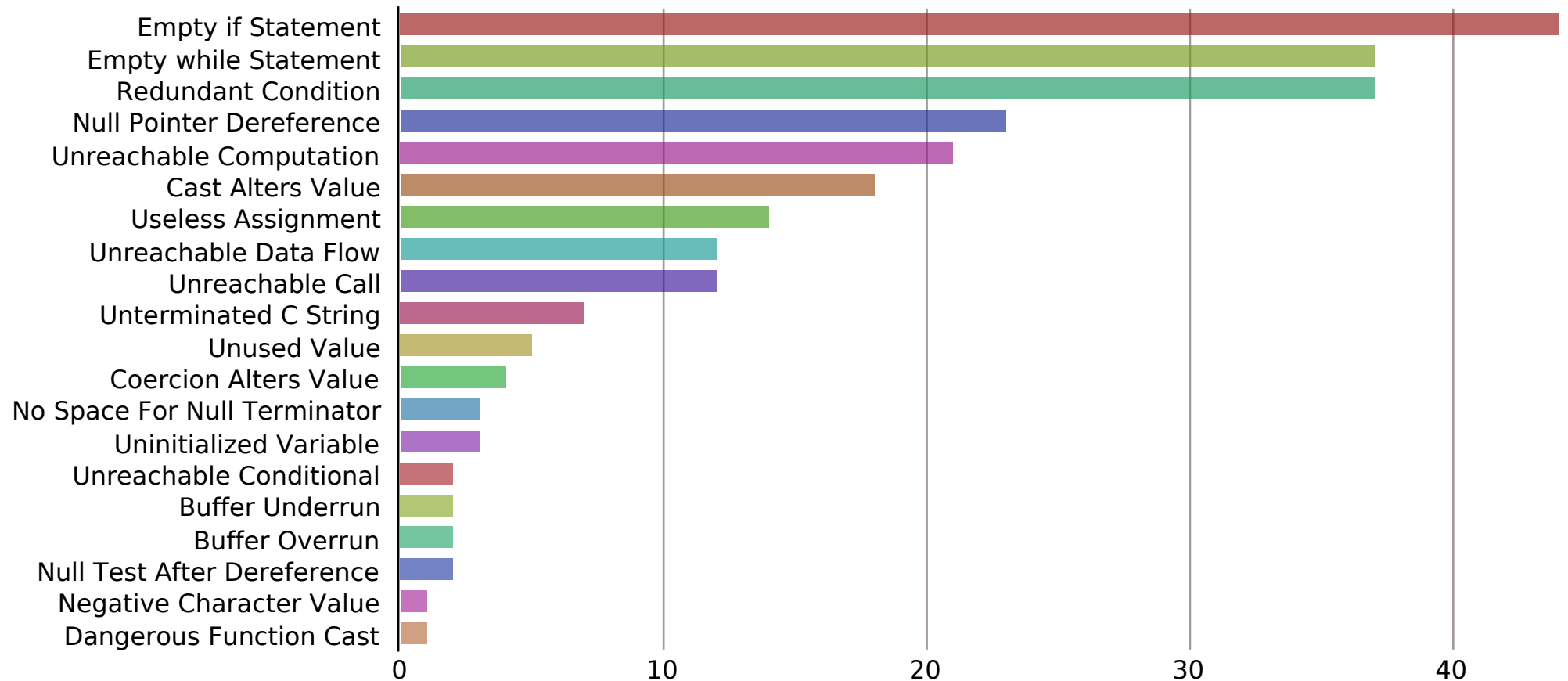| Active Warnings	File Count	Project Name	Time Started	Time Finished	Machine
250	473	rpl-border-router	Sun Mar 12 18:38:08 2017	Sun Mar 12 19:09:19 2017	Jacks-MBP

Warnings

Figure 1: rpl-border-router analysis 1, Warnings by Class

Table 2: rpl-border-router analysis 1, Warnings by Class

Warning Class	Active Warnings
Empty if Statement	44
Empty while Statement	37
Redundant Condition	37
Null Pointer Dereference	23
Unreachable Computation	21
Cast Alters Value	18
Useless Assignment	14
Unreachable Data Flow	12
Unreachable Call	12
Unterminated C String	7
Unused Value	5
Coercion Alters Value	4
Uninitialized Variable	3
No Space For Null Terminator	3
Buffer Underrun	2
Unreachable Conditional	2

Warning Class	Active Warnings
Null Test After Dereference	2
Buffer Overrun	2
Negative Character Value	1
Dangerous Function Cast	1

Table 3: rpl-border-router analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
resolv.c	22	1521	C
ieee-mode.c	17	1606	C
rpl-dag.c	15	1631	C
rpl-icmp6.c	14	1367	C
i2s.c	14	440	C
contikimac.c	8	1102	C
rf-ble.c	7	395	C
httpd-simple.c	7	261	C
uip6.c	6	2362	C
rpl-ext-header.c	6	665	C

File	Active Warnings	Total Lines	Language
framer-802154.c	6	274	C
rf-core.c	6	620	C
border-router.c	5	453	C
psock.c	5	319	C
websocket.c	5	724	C
uip-ds6.c	4	716	C
crypto.c	4	1242	C
nbr-table.c	4	483	C
rpl.c	4	355	C
websocket-http-client.c	4	347	C
csma.c	4	507	C
tcpip.c	4	849	C
uart.c	3	368	C
rpl-dag-root.c	3	268	C
udp-socket.c	3	199	C
setup_rom.c	3	950	C
prcm.c	3	664	C

File	Active Warnings	Total Lines	Language
phase.c	3	252	C
startup_gcc.c	3	301	C
aux_adc.c	3	333	C
soc-trng.c	3	315	C
setup.c	2	394	C
rfc.c	2	254	C
ip64-addr.c	2	123	C
sicslowpan.c	2	1806	C
ddi.h	2	591	C
rpl-of0.c	2	238	C
uip-icmp6.c	2	378	C
tcp-socket.c	2	409	C
rpl-timers.c	2	497	C
dhcpc.c	2	431	C
ssi.c	2	341	C
chipinfo.c	2	250	C
frame802154e-ie.c	2	585	C

File	Active Warnings	Total Lines	Language
adi.c	2	73	C
flash.c	2	780	C
rpl-nbr-policy.c	2	256	C
button-sensor.c	1	491	C
uip-ds6-nbr.c	1	361	C
ieee-addr.c	1	90	C
ctimer.c	1	175	C
clock.c	1	236	C
frame802154.c	1	623	C
vims.c	1	213	C
etimer.c	1	272	C
fault-handlers.c	1	54	C
sensors.c	1	137	C
ifft.c	1	168	C
nullrdc.c	1	368	C
aux_tdc.c	1	125	C
aux_wuc.c	1	310	C

File	Active Warnings	Total Lines	Language
uip-ds6-route.c	1	721	C
contiki-watchdog.c	1	164	C
simple-udp.c	1	183	C
slip.c	1	457	C
smph.c	1	105	C
serial-line.c	1	137	C
uip-split.h	0	95	C
putchar.c	0	85	C
ccm-star.c	0	177	C
batmon-sensor.h	0	57	C
gcr.c	0	162	C
ifft.h	0	58	C
uip-split.c	0	158	C
cc26xx-uart.c	0	396	C
linkaddr.c	0	80	C
procinit.c	0	48	C
contikimac-framer.c	0	167	C

File	Active Warnings	Total Lines	Language
contikimac-framer.h	0	47	C
mt.c	0	109	C
assert.c	0	41	C
nullrdc-noframer.c	0	112	C
nullrdc-noframer.h	0	48	C
mt.h	0	263	C
trickle-timer.c	0	410	C
trickle-timer.h	0	514	C
mtarch.h	0	48	C
energest.c	0	121	C
petsciiconv.c	0	119	C
anti-replay.c	0	115	C
aux-ctrl.c	0	117	C
timer.c	0	148	C
aux-ctrl.h	0	143	C
pwr_ctrl.c	0	84	C
aux_timer.c	0	337	C

File	Active Warnings	Total Lines	Language
sys_ctrl.c	0	547	C
systick.c	0	41	C
netstack.c	0	51	C
setup_rom.h	0	374	C
aux_timer.h	0	485	C

(Showing 100 of 473 Files)

Table 4: rpl-border-router analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
68	Negative Character Value	resolv.c	dns_name_isequal	400	None	None
64	Uninitialized Variable	ieee-mode.c	set_object	1581	None	None
63	Uninitialized Variable	frame802154.c	frame802154_check_dest_panid	214	None	None
62	Uninitialized Variable	uip-ds6-route.c	uip_ds6_route_lookup	272	None	None
61	No Space For Null Terminator	resolv.c	remove_trailing_dots	1252	None	None
60	Unterminated C String	resolv.c	resolv_set_hostname	1095	None	None
60	Unterminated C String	resolv.c	resolv_set_hostname	1096	None	None
60	Unterminated C String	resolv.c	resolv_set_hostname	1097	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
59	No Space For Null Terminator	websocket.c	parse_url	143	None	None
58	Unterminated C String	resolv.c	resolv_lookup	1380	None	None
58	Unterminated C String	resolv.c	resolv_query	1287	None	None
58	Unterminated C String	resolv.c	resolv_query	1312	None	None
58	Unterminated C String	resolv.c	resolv_query	1319	None	None
57	No Space For Null Terminator	resolv.c	resolv_query	1312	None	None
54	Buffer Overrun	uip-icmp6.c	uip_icmp6_error_output	213	None	None
51	Null Test After Dereference	frame802154e-ie.c	frame80215e_create_ie_tsch_channel_hopping_sequence	303	None	None
51	Null Test After Dereference	rpl-dag.c	rpl_print_neighbor_list	110	None	None
49	Null Pointer Dereference	i2s.c	NOROM_I2SBufferConfig	292	None	None
49	Null Pointer Dereference	i2s.c	NOROM_I2SPointerUpdate	346	None	None
49	Null Pointer Dereference	i2s.c	NOROM_I2SSampleStampConfigure	383	None	None
49	Null Pointer Dereference	i2s.c	NOROM_I2SAudioFormatConfigure	126	None	None
49	Null Pointer Dereference	i2s.c	NOROM_I2SPointerUpdate	357	None	None
49	Null Pointer Dereference	i2s.c	NOROM_I2SChannelConfigure	269	None	None
49	Null Pointer Dereference	tcpip.c	tcpip_uipcall	792	None	None
48	Null Pointer Dereference	rpl-icmp6.c	dao_input_storing	667	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
48	Null Pointer Dereference	resolv.c	process_thread_resolv_process	1174	None	None
48	Null Pointer Dereference	rpl-dag-root.c	rpl_dag_root_init_dag_immediately	215	None	None
48	Null Pointer Dereference	rpl-dag.c	rpl_add_dag	1220	None	None
48	Null Pointer Dereference	rpl-dag.c	rpl_print_neighbor_list	106	None	None
48	Null Pointer Dereference	nbr-table.c	nbr_table_add_lladdr	368	None	None
47	Null Pointer Dereference	rpl.c	rpl_remove_routes_by_nexthop	218	None	None
47	Coercion Alters Value	websocket.c	websocket_open	591	None	None
47	Coercion Alters Value	ieee-mode.c	init_rf_params	632	None	None
47	Null Pointer Dereference	border-router.c	ipaddr_add	132	None	None
47	Null Pointer Dereference	rpl-icmp6.c	dao_input_storing	770	None	None
47	Null Pointer Dereference	rpl-dag.c	rpl_get_any_dag	1041	None	None
47	Null Pointer Dereference	rpl-dag.c	rpl_print_neighbor_list	113	None	None
46	Coercion Alters Value	uip6.c	uip_process	1546	None	None
46	Null Pointer Dereference	httpd-simple.c	handle_output	143	None	None
45	Coercion Alters Value	ifft.c	ifft	123	None	None
44	Null Pointer Dereference	uip-icmp6.c	uip_icmp6_send	281	None	None
42	Cast Alters Value	rpl-dag-root.c	set_global_address	153	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
42	Cast Alters Value	rpl.c	rpl_link_neighbor_callback	260	None	None
42	Cast Alters Value	tcpip.c	udp_broadcast_new	328	None	None
42	Cast Alters Value	rpl-icmp6.c	dis_output	268	None	None
42	Cast Alters Value	rpl.c	rpl_init	342	None	None
42	Cast Alters Value	dhcpc.c	create_msg	149	None	None
42	Cast Alters Value	resolv.c	process_thread_resolv_process	1174	None	None
42	Cast Alters Value	uip-ds6.c	uip_ds6_init	118	None	None
42	Cast Alters Value	resolv.c	mdns_write_announce_records	522	None	None
42	Cast Alters Value	resolv.c	process_thread_resolv_process	1208	None	None
42	Cast Alters Value	resolv.c	newdata	907	None	None
42	Cast Alters Value	uip-ds6.c	uip_ds6_init	127	None	None
42	Cast Alters Value	resolv.c	check_entries	756	None	None
42	Cast Alters Value	uip-ds6.c	uip_ds6_init	130	None	None
42	Cast Alters Value	rpl-icmp6.c	dio_output	613	None	None
42	Cast Alters Value	rpl-dag-root.c	rpl_dag_root_init_dag_immediately	224	None	None
42	Cast Alters Value	resolv.c	newdata	1070	None	None
41	Cast Alters Value	uip6.c	uip_udp_new	593	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
41	Null Pointer Dereference	rpl-dag.c	rpl_select_dag	806	None	None
41	Null Pointer Dereference	rpl-dag.c	rpl_select_dag	773	None	None
39	Null Pointer Dereference	rpl-dag.c	rpl_select_dag	764	None	None
39	Buffer Underrun	nbr-table.c	remove_key	195	None	None
38	Dangerous Function Cast	uip-ds6-nbr.c	uip_ds6_neighbors_init	79	None	None
34	Buffer Overrun	sicslowpan.c	uncompress_addr	611	None	None
33	Buffer Underrun	resolv.c	remove_trailing_dots	1251	None	None
23	Unused Value	rpl-ext-header.c	rpl_remove_header	627	None	None
23	Unused Value	rpl-icmp6.c	dio_output	539	None	None
23	Unused Value	rpl-icmp6.c	set16	184	None	None
23	Unused Value	rpl-icmp6.c	set32	171	None	None
23	Unused Value	rpl-timers.c	schedule_dao	322	None	None
21	Useless Assignment	chipinfo.c	NOROM_ChipInfo_GetChipType	165	None	None
21	Useless Assignment	framer-802154.c	create_frame	88	None	None
21	Useless Assignment	framer-802154.c	create_frame	90	None	None
21	Useless Assignment	framer-802154.c	create_frame	93	None	None
21	Useless Assignment	framer-802154.c	create_frame	98	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
21	Useless Assignment	prcm.c	NOROM_PRCMInfClockConfigureGet	240	None	None
21	Useless Assignment	prcm.c	NOROM_PRCMInfClockConfigureSet	166	None	None
21	Useless Assignment	resolv.c	encode_name	464	None	None
21	Useless Assignment	resolv.c	newdata	809	None	None
21	Useless Assignment	rf-ble.c	send_ble_adv_nc	128	None	None
21	Useless Assignment	rf-ble.c	send_ble_adv_nc	129	None	None
21	Useless Assignment	rf-ble.c	send_ble_adv_nc	139	None	None
21	Useless Assignment	rpl-dag.c	rpl_alloc_instance	571	None	None
21	Useless Assignment	uip-ds6.c	uip_ds6_init	115	None	None
20	Redundant Condition	aux_wuc.c	NOROM_AUXWUCClockStatus	194	None	None
20	Redundant Condition	contikimac.c	schedule_powercycle	317	None	None
20	Redundant Condition	contikimac.c	schedule_powercycle_fixed	337	None	None
20	Redundant Condition	contikimac.c	send_packet	584	None	None
20	Redundant Condition	csma.c	backoff_period	160	None	None
20	Redundant Condition	csma.c	channel_check_interval	484	None	None
20	Redundant Condition	frame802154e-ie.c	frame80215e_create_ie_tsch_channel_hopping_sequence	303	None	None
20	Redundant Condition	httpd-simple.c	handle_output	131	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
20	Redundant Condition	i2s.c	NOROM_I2SEnable	89	None	None
20	Redundant Condition	ieee-mode.c	channel_clear	1106	None	None
20	Redundant Condition	ieee-mode.c	off	1263	None	None
20	Redundant Condition	ieee-mode.c	receiving_packet	1159	None	None
20	Redundant Condition	ieee-mode.c	receiving_packet	1172	None	None
20	Redundant Condition	ieee-mode.c	rx_off	682	None	None
20	Redundant Condition	ieee-mode.c	rx_off	692	None	None

(Showing 100 of 250 Warnings)

Analysis Metrics

Table 5: rpl-border-router analysis 1 Metrics

Metric Name	Value
Blank Lines	15115
Code Lines	65637
Comment Lines	84248
Include file instances	172
Lines with Code	71462
Lines with Comments	90073
Mixed Lines	5825
Top-level file instances	167
Total Lines	170825
User-defined functions	1384

File Metrics

Table 6: rpl-border-router analysis 1 File Metrics Summary

Metric Name	Max	Min	Avg
Blank Lines	455	0	31.96
Code Lines	3202	0	138.77
Comment Lines	6249	0	178.11
Cyclomatic Complexity	330	0	11.32
Lines with Code	3203	0	151.08
Lines with Comments	6250	0	190.43
Mixed Lines	570	0	12.32
Modified Cyclomatic Complexity	330	0	10.84
Taint Propagator Total	0	0	0
Taint Sink Total	11	0	0.31
Taint Source Total	0	0	0
Total Lines	9839	2	361.15

Table 7: rpl-border-router analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
hw_ioc.h	9839	3203	6250	3202	6249	387
hw_cpu_scs.h	3885	1348	2145	1347	2144	393
hw_flash.h	3475	1239	1782	1238	1781	455
hw_event.h	3284	1001	2091	1000	2090	193
hw_fcfg1.h	2917	1032	1497	1031	1496	389
uip6.c	2362	1476	723	1403	650	236
hw_gpio.h	2247	1042	932	1041	931	274
uip.h	2219	698	1422	578	1302	219
hw_crypto.h	1914	512	1239	511	1238	164
hw_ccfg.h	1910	737	962	736	961	212
sicslowpan.c	1806	1060	604	1012	556	190
hw_gpt.h	1686	545	1006	544	1005	136
hw_rfc_dbell.h	1671	690	831	689	830	151
rpl-dag.c	1631	1273	215	1256	198	160
ieee-mode.c	1606	1045	366	1021	342	219
hw_prcm.h	1581	407	1036	406	1035	139

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
hw_aon_event.h	1533	656	860	655	859	18
resolv.c	1521	1039	313	986	260	222
hw_smph.h	1455	323	1002	322	1001	131
rpl-icmp6.c	1367	1018	225	983	190	159
udma.h	1326	342	932	322	912	72
timer.h	1249	307	926	255	874	68
crypto.c	1242	536	553	536	553	153
prcm.h	1212	284	903	256	875	53
hw_adi.h	1182	405	982	188	765	12
uart.h	1166	286	846	250	810	70
ioc.h	1160	300	904	203	807	53
uip-nd6.c	1147	825	280	779	234	88
contikimac.c	1102	776	219	752	195	131
ble_cmd.h	1081	685	789	214	318	78
hw_ddi_0_osc.h	1069	373	573	372	572	124
i2c.h	1052	283	702	276	695	74
hw_uart.h	1044	331	625	330	624	89

Table 7: rpl-border-router analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
common_cmd.h	1031	622	674	267	319	90
hw_i2s.h	1028	258	679	257	678	92
hw_nvic.h	1026	663	880	93	310	53
aon_rtc.h	950	288	611	264	587	75
setup_rom.c	950	516	361	490	335	99
adi.h	929	224	642	223	641	64
rf_common_cmd.h	924	522	593	245	316	86
crypto.h	883	242	607	224	589	52
i2s.h	882	208	653	179	624	50
aon_wuc.h	864	216	613	194	591	57
tcpip.c	849	629	184	582	137	83
aux_tdc.h	832	230	558	225	553	49
flash.h	825	225	561	204	540	60
reent.h	794	558	220	462	124	112
flash.c	780	365	314	365	314	101
stdio.h	769	622	126	577	81	66
ioc.c	757	372	311	372	311	74

Table 7: rpl-border-router analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
ssi.h	737	161	553	141	533	43
hw_i2c.h	728	202	465	201	464	62
websocket.c	724	489	173	488	172	63
uip-ds6-route.c	721	526	157	493	124	71
uip-ds6.c	716	528	158	495	125	63
cdefs.h	707	446	211	415	180	81
hw_aux_wuc.h	705	220	422	219	421	64
gpio.h	704	182	509	146	473	49
uipopt.h	684	159	487	122	450	75
rom.h	678	429	120	409	100	149
hw_aon_wuc.h	674	172	448	171	447	55
rpl-ext-header.c	665	440	154	431	145	80
prcm.c	664	349	255	349	255	60
aon_event.h	633	113	527	78	492	28
chipinfo.h	632	223	387	191	355	54
frame802154.c	623	401	194	380	173	49
hw_aux_tdc.h	621	201	391	200	390	30

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
rf-core.c	620	424	118	424	118	78
strformat.c	617	550	13	545	8	59
ieee_cmd.h	611	346	455	116	225	40
hw_trng.h	609	150	398	149	397	62
osc.h	597	145	414	144	413	39
prop_cmd.h	596	349	440	125	216	31
lpm.c	593	296	213	294	211	86
ddi.h	591	151	398	150	397	43
aux_adc.h	590	148	410	147	409	33
frame802154e-ie.c	585	458	119	434	95	32
uip-nd6.h	575	203	346	183	326	46
hw_udma.h	575	94	437	93	436	45
interrupt.c	572	239	292	239	292	41
ti-lib.h	561	427	110	426	109	25
udma.c	550	232	261	232	261	57
sys_ctrl.c	547	302	189	298	185	60
hw_ssi.h	544	160	340	159	339	45

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
watchdog.h	543	119	397	114	392	32
process.h	531	90	386	88	384	57
features.h	515	276	205	270	199	40
trickle-timer.h	514	76	418	65	407	31
interrupt.h	510	117	368	116	367	26
hw_aon_rtc.h	508	118	352	117	351	39
hw_adi_4_aux.h	508	160	310	159	309	39
csma.c	507	369	99	364	94	44
rpl-timers.c	497	345	112	336	103	49
button-sensor.c	491	257	211	257	211	23
aux_timer.h	485	130	383	77	330	25
nbr-table.c	483	331	132	328	129	23
ccfg.c	482	265	203	202	140	77
rf_prop_cmd.h	482	278	352	101	175	29
hw_adi_3_refsys.h	481	147	295	146	294	40
settings.c	475	284	104	281	101	90

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