

CodeSonar Analysis Report

generated by Administrator on Wed Aug 23 15:59:00 2017
for analysis zolertia-zoul analysis 1

Summary

Table 1: zolertia-zoul analysis 1 Summary

Active Warnings	File Count	Project Name	Time Started	Time Finished	Machine
382	503	zolertia-zoul	Mon Mar 13 14:10:22 2017	Mon Mar 13 14:23:31 2017	eduEE6B.kent.ac.uk

Warnings

Figure 1: zolertia-zoul analysis 1, Warnings by Class

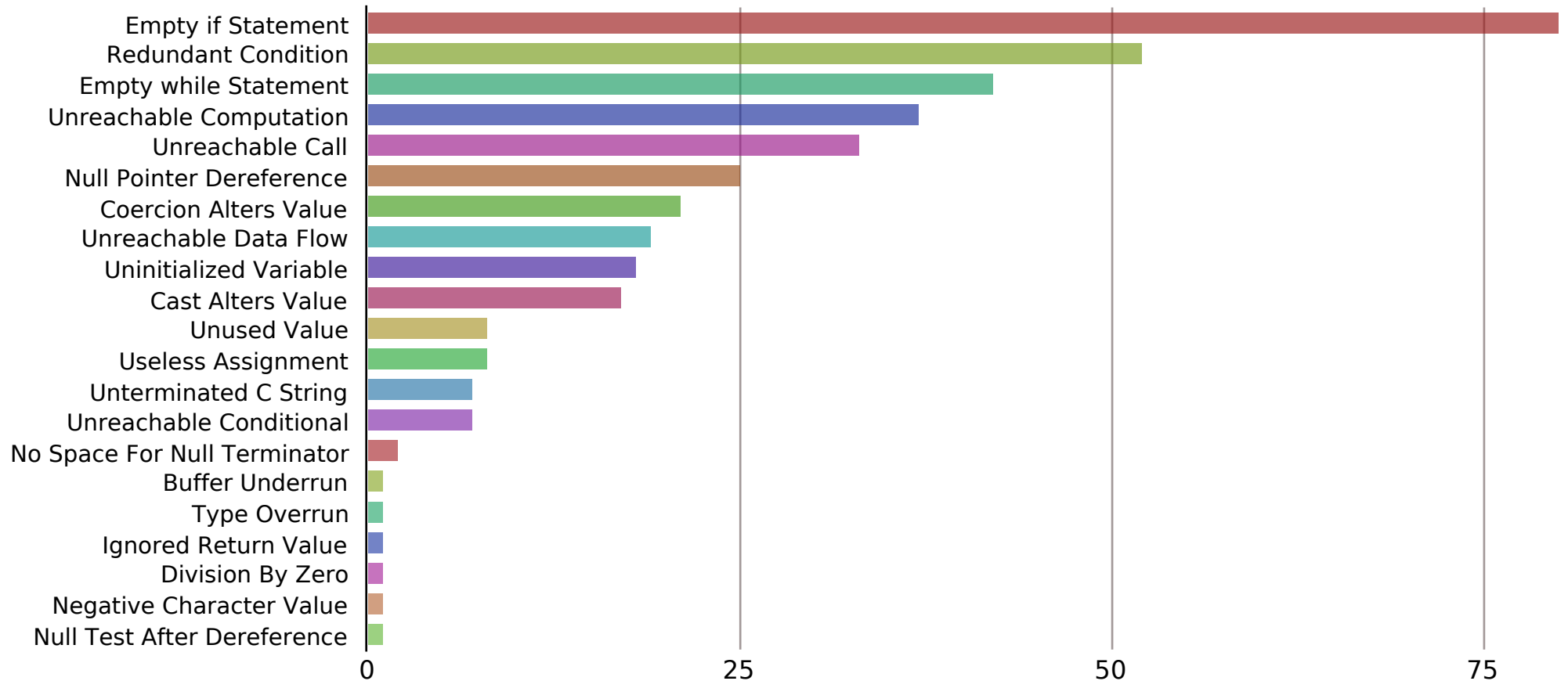


Table 2: zolertia-zoul analysis 1, Warnings by Class

Table 2: zolertia-zoul analysis 1, Warnings by Class

Warning Class	Active Warnings
Empty if Statement	80
Redundant Condition	52
Empty while Statement	42
Unreachable Computation	37
Unreachable Call	33
Null Pointer Dereference	25
Coercion Alters Value	21
Unreachable Data Flow	19
Uninitialized Variable	18
Cast Alters Value	17
Unused Value	8
Useless Assignment	8
Unreachable Conditional	7
Unterminated C String	7
No Space For Null Terminator	2
Null Test After Dereference	1

Table 3: zolertia-zoul analysis 1, Warnings by File

Warning Class	Active Warnings
Negative Character Value	1
Buffer Underrun	1
Ignored Return Value	1
Division By Zero	1
Type Overrun	1

Table 3: zolertia-zoul analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
rtcc.c	30	952	C
resolv.c	24	1521	C
ff.c	20	6042	C
grove-gyro.c	16	647	C
cfs-coffee.c	14	1346	C
adc-zoul.c	12	187	C
cc2538-rf.c	10	1126	C
tsl256x.c	9	494	C
collect.c	9	1558	C

Table 3: zolertia-zoul analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
ccm.c	9	142	C
gcm.c	8	125	C
lpm.c	8	390	C
contikimac.c	8	1102	C
sha256.c	7	356	C
aes.c	7	330	C
framer-802154.c	6	274	C
startup-gcc.c	6	330	C
cfs-coffee-arch.c	6	144	C
usb-arch.c	5	1295	C
nbr-table.c	5	483	C
cbc-mac.c	5	91	C
cc1200-zoul-arch.c	5	293	C
psock.c	5	319	C
weather-meter.c	5	489	C
adc-sensors.c	5	231	C
cc2538-ccm-star.c	5	130	C

Table 3: zolertia-zoul analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
servo.c	4	132	C
test-tsl256x.c	4	125	C
ecc-algorithm.c	4	201	C
test-weather-meter.c	4	159	C
cc1200.c	4	2420	C
tcpip.c	3	849	C
soc.c	3	108	C
zonik.c	3	184	C
udp-socket.c	3	199	C
mmc-arch.c	3	139	C
sys-ctrl.c	3	135	C
sht25.c	3	242	C
ctr.c	3	77	C
csma.c	3	507	C
bmpx8x.c	3	360	C
phase.c	3	252	C
test-bmp085-bmp180.c	2	94	C

Table 3: zolertia-zoul analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
ac-dimmer.c	2	161	C
rudolph1.c	2	338	C
bme280.c	2	276	C
dhcpc.c	2	431	C
mmc.c	2	608	C
diskio.c	2	84	C
rudolph2.c	2	407	C
usb-core.c	2	631	C
test-pm10-sensor.c	2	97	C
tcp-socket.c	2	409	C
motion-sensor.c	2	128	C
test-zonik.c	2	124	C
random.c	2	136	C
frame802154e-ie.c	2	585	C
test-grove-gyro.c	2	167	C
rtimer.c	2	108	C
iaq.c	2	202	C

Table 3: zolertia-zoul analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
ip64-addr.c	2	123	C
nullrdc.c	1	368	C
sensors.c	1	137	C
adc.c	1	99	C
test-bme280.c	1	93	C
core_cm3.h	1	1776	C
collect-neighbor.c	1	436	C
uart.c	1	398	C
frame802154.c	1	623	C
test-lcd.c	1	129	C
test-sht25.c	1	94	C
netflood.c	1	184	C
trickle.c	1	210	C
ctimer.c	1	175	C
serial-line.c	1	137	C
etimer.c	1	272	C
runicast.c	1	250	C

Table 3: zolertia-zoul analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
route.c	1	292	C
watchdog.c	1	109	C
polite.c	1	144	C
clock.c	1	255	C
test-aac-sensor.c	1	105	C
test-vac-sensor.c	1	108	C
rtimer-arch.c	1	158	C
test-rotation-sensor.c	1	110	C
ifft.c	1	168	C
usb-serial.c	1	307	C
slip-arch.c	1	86	C
collect-link-estimate.c	1	139	C
test-grove-loudness-sensor.c	1	110	C
test-grove-light-sensor.c	1	91	C
dbg.c	1	117	C
zoul-demo.c	1	199	C
test-motion.c	1	103	C

Table 4: zolertia-zoul analysis 1, Warning Instances

File	Active Warnings	Total Lines	Language
contiki-main.c	1	313	C
slip.c	1	457	C
simple-udp.c	1	183	C
test-iaq.c	1	112	C
ieee-addr.c	1	92	C
neighbor-discovery.c	1	196	C

(Showing 100 of 503 Files)

Table 4: zolertia-zoul 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
65	Division By Zero	adc-sensors.c	convert_to_value	96	None	None
65	Redundant Condition	grove-gyro.c	grove_gyro_calibrate	397	None	None
65	Redundant Condition	grove-gyro.c	grove_gyro_calibrate	398	None	None
65	Redundant Condition	grove-gyro.c	grove_gyro_calibrate	399	None	None
65	Redundant Condition	tsl256x.c	calculate_lux	108	None	None
65	Redundant Condition	tsl256x.c	calculate_lux	126	None	None

Table 4: zolertia-zoul analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
63	Uninitialized Variable	frame802154.c	frame802154_check_dest_panid	214	None	None
63	Uninitialized Variable	bme280.c	bme280_init	169	None	None
63	Uninitialized Variable	rtcc.c	rtcc_get_time_date	378	None	None
63	Uninitialized Variable	rtcc.c	rtcc_set_autocalibration	760	None	None
63	Uninitialized Variable	rtcc.c	rtcc_set_alarm_time_date	409	None	None
63	Uninitialized Variable	rtcc.c	rtcc_print	713	None	None
63	Uninitialized Variable	rtcc.c	rtcc_print	726	None	None
63	Uninitialized Variable	rtcc.c	rtcc_print	731	None	None
63	Uninitialized Variable	bme280.c	bme280_read	239	None	None
63	Uninitialized Variable	rtcc.c	rtcc_set_alarm_time_date	447	None	None
63	Uninitialized Variable	grove-gyro.c	grove_gyro_calibrate	415	None	None
63	Uninitialized Variable	sht25.c	sht25_read	120	None	None
63	Uninitialized Variable	bmpx8x.c	bmpx8x_read_calib	124	None	None
63	Uninitialized Variable	grove-gyro.c	grove_gyro_calibrate	391	None	None
61	Uninitialized Variable	grove-gyro.c	grove_gyro_convert	274	None	None
61	Uninitialized Variable	grove-gyro.c	grove_gyro_convert	280	None	None
61	Uninitialized Variable	grove-gyro.c	grove_gyro_convert	286	None	None

Table 4: zolertia-zoul analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
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
60	Uninitialized Variable	tsl256x.c	calculate_lux	79	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
51	Null Test After Dereference	frame802154e-ie.c	frame80215e_create_ie_tsch_channel_hopping_sequence	303	None	None
49	Null Pointer Dereference	cbc-mac.c	cbc_mac_auth_start	59	None	None
49	Null Pointer Dereference	cfs-coffee-arch.c	cfs_coffee_arch_erase	81	None	None
49	Null Pointer Dereference	startup-gcc.c	reset_handler	317	None	None
49	Null Pointer Dereference	gcm.c	gcm_auth_crypt_start	63	None	None
49	Null Pointer Dereference	aes.c	aes_load_keys	69	None	None
49	Null Pointer Dereference	aes.c	aes_load_keys	81	None	None

Table 4: zolertia-zoul analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
49	Null Pointer Dereference	ctr.c	ctr_crypt_start	62	None	None
49	Null Pointer Dereference	ccm.c	ccm_auth_crypt_start	74	None	None
49	Null Pointer Dereference	sha256.c	sha256_process	262	None	None
49	Null Pointer Dereference	cfs-coffee-arch.c	cfs_coffee_arch_write	125	None	None
49	Null Pointer Dereference	cfs-coffee-arch.c	cfs_coffee_arch_write	101	None	None
49	Null Pointer Dereference	sha256.c	sha256_process	273	None	None
49	Null Pointer Dereference	cfs-coffee-arch.c	cfs_coffee_arch_write	115	None	None
49	Null Pointer Dereference	soc.c	soc_print_info	99	None	None
49	Null Pointer Dereference	cbc-mac.c	cbc_mac_auth_get_result	78	None	None
49	Null Pointer Dereference	ccm.c	ccm_auth_crypt_get_result	104	None	None
49	Null Pointer Dereference	gcm.c	gcm_auth_crypt_get_result	84	None	None
49	Null Pointer Dereference	cbc-mac.c	cbc_mac_auth_get_result	85	None	None
49	Null Pointer Dereference	ccm.c	ccm_auth_crypt_get_result	98	None	None
49	Null Pointer Dereference	gcm.c	gcm_auth_crypt_get_result	91	None	None
49	Null Pointer Dereference	tcpip.c	tcpip_uipcall	792	None	None
48	Null Pointer Dereference	resolv.c	process_thread_resolv_process	1174	None	None
48	Null Pointer Dereference	polite.c	recv	60	None	None

Table 4: zolertia-zoul analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
48	Null Pointer Dereference	nbr-table.c	nbr_table_add_lladdr	368	None	None
47	Coercion Alters Value	route.c	route_lookup	174	None	None
47	Coercion Alters Value	grove-gyro.c	grove_gyro_read_reg	72	None	None
47	Coercion Alters Value	sht25.c	sht25_read_reg	74	None	None
47	Coercion Alters Value	cc1200.c	configure	1465	None	None
47	Coercion Alters Value	rtcc.c	ab08_read_reg	132	None	None
47	Coercion Alters Value	adc-sensors.c	convert_to_value	122	None	None
47	Coercion Alters Value	rucb.c	rucb_open	150	None	None
47	Coercion Alters Value	zonik.c	process_thread_zonik_stm_process	101	None	None
46	Null Pointer Dereference	linkaddr.c	linkaddr_copy	65	None	None
46	Coercion Alters Value	usb-arch.c	ep0_get_data_pkt	943	None	None
46	Coercion Alters Value	rtcc.c	ab08_read_status	191	None	None
46	Coercion Alters Value	test-grove-gyro.c	process_thread_remote_grove_gyro_process	93	None	None
46	Coercion Alters Value	test-bmp085-bmp180.c	process_thread_remote_bmpx8x_process	75	None	None
46	Coercion Alters Value	test-tsl256x.c	process_thread_remote_tsl256x_process	109	None	None
46	Coercion Alters Value	test-zonik.c	process_thread_test_remote_zonik_process	108	None	None
46	Coercion Alters Value	test-pm10-sensor.c	process_thread_test_pm10_sensor_process	81	None	None

Table 4: zolertia-zoul analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
46	Coercion Alters Value	test-weather-meter.c	process_thread_test_weather_meter_sensors	123	None	None
46	Coercion Alters Value	test-weather-meter.c	process_thread_test_weather_meter_sensors	124	None	None
46	Coercion Alters Value	test-weather-meter.c	process_thread_test_weather_meter_sensors	125	None	None
45	Coercion Alters Value	rtcc.c	rtcc_set_time_date	334	None	None
45	Coercion Alters Value	ifft.c	ifft	123	None	None
45	Coercion Alters Value	mmc.c	mmc_send_cmd	241	None	None
42	Type Overrun	usb-arch.c	fill_buffers	885	None	None
42	Cast Alters Value	resolv.c	mdns_write_announce_records	543	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	resolv.c	process_thread_resolv_process	1208	None	None
42	Cast Alters Value	resolv.c	newdata	907	None	None
42	Cast Alters Value	resolv.c	check_entries	756	None	None
42	Cast Alters Value	resolv.c	newdata	1070	None	None
42	Cast Alters Value	resolv.c	newdata	868	None	None
41	Cast Alters Value	ff.c	f_mkfs	5353	None	None
41	Cast Alters Value	core_cm3.h	NVIC_SetPriority	1541	None	None

Table 4: zolertia-zoul analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
41	Cast Alters Value	ff.c	st_dword	652	None	None
41	Cast Alters Value	cc1200.c	single_read	1373	None	None
40	Cast Alters Value	cc1200.c	update_cca_threshold	2007	None	None
40	Cast Alters Value	ff.c	st_word	645	None	None
40	Cast Alters Value	ff.c	get_xdir_info	1916	None	None
40	Cast Alters Value	ff.c	get_fileinfo	2432	None	None
39	Cast Alters Value	ff.c	f_getlabel	4869	None	None
39	Buffer Underrun	nbr-table.c	remove_key	195	None	None

(Showing 100 of 382 Warnings)

Analysis Metrics

Table 5: zolertia-zoul analysis 1 Metrics

Metric Name	Value
Blank Lines	10936
Code Lines	48549
Comment Lines	41634
Include file instances	213
Lines with Code	55297
Lines with Comments	48382
Mixed Lines	6748
Top-level file instances	213
Total Lines	107867
User-defined functions	1548

File Metrics

Table 6: zolertia-zoul analysis 1 File Metrics Summary

Metric Name	Max	Min	Avg
Blank Lines	820	0	21.74
Code Lines	3209	0	96.52
Comment Lines	1302	0	82.77
Cyclomatic Complexity	1145	0	13.95
Lines with Code	4833	0	109.93
Lines with Comments	2013	0	96.19
Mixed Lines	1624	0	13.42
Modified Cyclomatic Complexity	1131	0	13.32
Taint Propagator Total	0	0	0
Taint Sink Total	11	0	0.26
Taint Source Total	0	0	0
Total Lines	6042	2	214.45

Table 7: zolertia-zoul analysis 1 File Metrics Details

Table 7: zolertia-zoul analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
ff.c	6042	4833	2013	3209	389	820
cc1200.c	2420	1371	643	1343	615	434
uip.h	2219	698	1422	578	1302	219
core_cm3.h	1776	952	1085	303	436	388
collect.c	1558	983	436	956	409	166
resolv.c	1521	1039	313	986	260	222
cmsis_gcc.h	1373	734	382	713	361	278
cfs-coffee.c	1346	962	239	946	223	161
usb-arch.c	1295	962	163	959	160	173
cc2538-rf.c	1126	742	255	734	247	137
contikimac.c	1102	776	219	752	195	131
bignum-driver.c	1064	577	273	577	273	214
rtcc.c	952	712	129	712	129	111
pka.h	871	191	723	112	644	36
tcpip.c	849	629	184	582	137	83
reent.h	794	558	220	462	124	112

Table 7: zolertia-zoul analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
stdio.h	769	622	126	577	81	66
cdefs.h	707	446	211	415	180	81
udma.h	704	294	462	184	352	58
uiopot.h	684	159	487	122	450	75
rfcore-xreg.h	673	284	668	4	388	1
grove-gyro.c	647	476	101	476	101	70
gpio.h	635	240	536	66	362	33
usb-core.c	631	553	25	543	15	63
frame802154.c	623	401	194	380	173	49
contiki-conf.h	620	307	288	260	241	72
strformat.c	617	550	13	545	8	59
mmc.c	608	481	132	430	81	46
frame802154e-ie.c	585	458	119	434	95	32
ecc-driver.c	559	290	156	290	156	113
aes.h	544	303	432	103	232	9
process.h	531	90	386	88	384	57
board.h	524	162	368	139	345	17

Table 7: zolertia-zoul analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
features.h	515	276	205	270	199	40
trickle-timer.h	514	76	418	65	407	31
csma.c	507	369	99	364	94	44
tsl256x.c	494	337	103	337	103	54
weather-meter.c	489	332	105	332	105	52
nbr-table.c	483	331	132	328	129	23
settings.c	475	284	104	281	101	90
queuebuf.c	473	365	103	345	83	25
stdint.h	466	388	34	387	33	45
bignum-driver.h	462	76	366	75	365	21
slip.c	457	343	90	327	74	40
stddef.h	443	313	166	246	99	31
collect-neighbor.c	436	312	86	310	84	40
ieee802154.h	434	303	68	293	58	73
dhcpc.c	431	337	55	336	54	40
ffconf.h	418	107	278	105	276	35
trickle-timer.c	410	243	128	238	123	44

Table 7: zolertia-zoul analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
tcp-socket.c	409	307	66	307	66	36
rudolph2.c	407	272	97	269	94	41
psock.h	404	59	321	49	311	34
rtcc.h	398	198	183	197	182	18
uart.c	398	255	95	255	95	48
chameleon-bitopt.c	395	265	104	258	97	33
lpm.c	390	184	163	183	162	44
process.c	388	233	113	229	109	46
ccsbcs.c	388	307	80	268	41	40
tcpip.h	378	55	283	53	281	42
rgb-bl-lcd.c	377	265	85	258	78	34
packetbuf.h	371	153	185	141	173	45
pwm.c	369	241	84	241	84	44
nullrdc.c	368	271	87	247	63	34
ff.h	366	256	186	111	41	69
spi.c	362	241	91	240	90	31
uart.h	360	149	338	14	203	8

Table 7: zolertia-zoul analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
bmpx8x.c	360	264	63	264	63	33
sha256.c	356	211	108	211	108	37
usb-regs.h	355	127	316	27	216	12
settings.h	352	173	134	156	117	62
sys-ctrl.h	342	150	249	81	180	12
rudolph1.c	338	244	69	241	66	28
gptimer.h	335	137	325	8	196	2
cc1200-const.h	335	268	274	58	64	3
stdlib.h	335	291	28	277	14	30
list.c	330	123	182	123	182	25
startup-gcc.c	330	254	234	83	63	13
aes.c	330	179	103	179	103	48
route-discovery.c	329	220	80	216	76	33
pt.h	322	57	231	56	230	35
psock.c	319	200	87	200	87	32
contiki-main.c	313	184	92	183	91	38
usb-serial.c	307	217	66	217	66	24

Table 7: zolertia-zoul analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
tcp-socket.h	299	63	212	62	211	25
radio.h	294	62	186	61	185	47
cc1200-zoul-arch.c	293	200	79	200	79	14
route.c	292	191	76	185	70	31
power-mgmt.c	291	200	67	200	67	24
config.h	286	218	35	210	27	41
cfs.h	285	61	200	60	199	25
mtarch.c	285	145	129	145	129	11
contiki-default-conf.h	285	95	185	63	153	37
ioc.h	278	154	147	124	117	7
bme280.c	276	190	54	187	51	35
noncoresec.c	275	181	76	170	65	29
framer-802154.c	274	172	80	165	73	29
announcement.h	274	35	213	34	212	27
etimer.c	272	171	74	171	74	27
mt.h	263	29	208	28	207	27

(Showing 100 of 503 Files)