

CodeSonar Analysis Report

generated by Administrator on Wed Aug 23 15:58:50 2017
for analysis zolertia-orion-ip64-router analysis 2

Summary

Table 1: zolertia-orion-ip64-router analysis 2 Summary

Active Warnings	File Count	Project Name	Time Started	Time Finished	Machine
307	456	zolertia-orion-ip64-router	Sat Apr 8 17:51:16 2017	Sat Apr 8 17:54:57 2017	Jacks-MBP

Warnings

Figure 1: zolertia-orion-ip64-router analysis 2, Warnings by Class

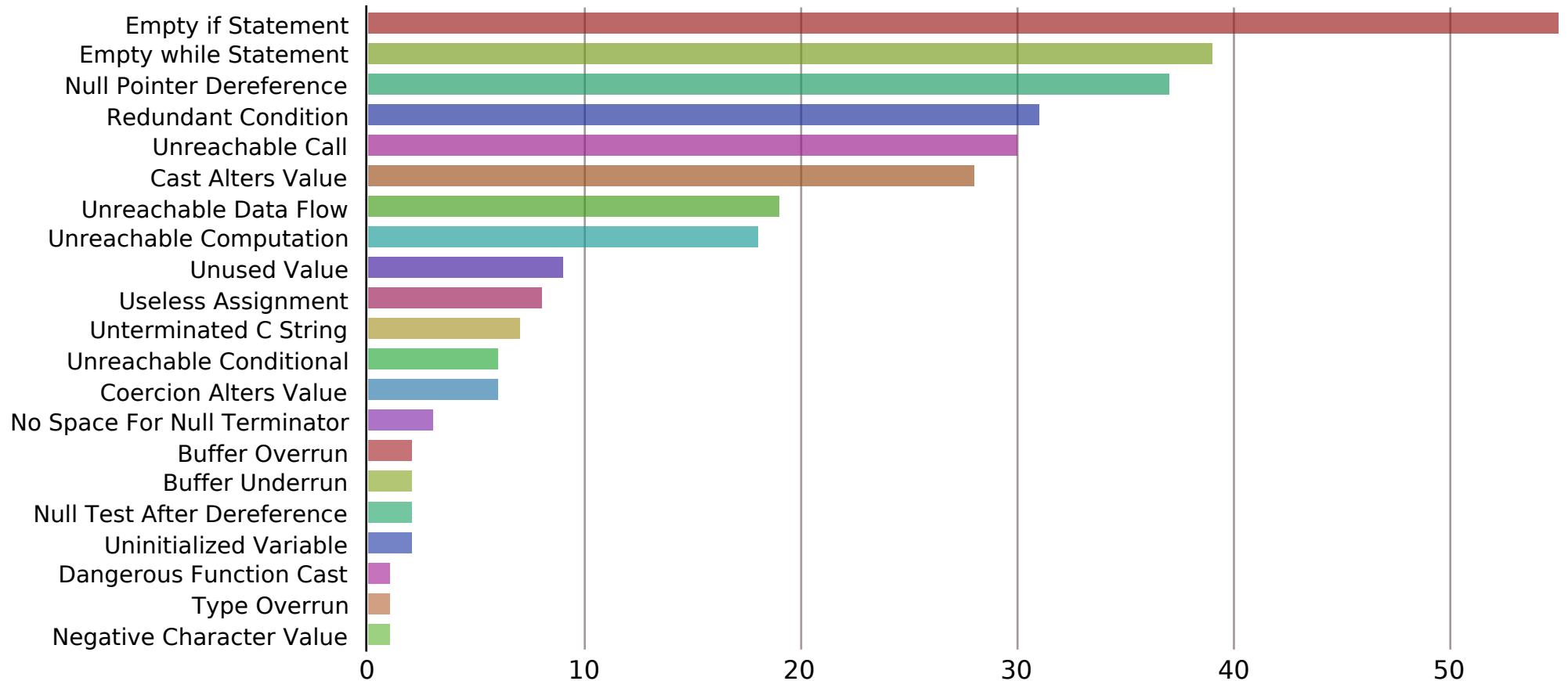


Table 2: zolertia-orion-ip64-router analysis 2, Warnings by Class

Warning Class	Active Warnings
Empty if Statement	55
Empty while Statement	39
Null Pointer Dereference	37
Redundant Condition	31
Unreachable Call	30
Cast Alters Value	28
Unreachable Data Flow	19
Unreachable Computation	18
Unused Value	9
Useless Assignment	8
Unterminated C String	7
Unreachable Conditional	6
Coercion Alters Value	6
No Space For Null Terminator	3
Uninitialized Variable	2
Buffer Underrun	2

Table 3: zolertia-orion-ip64-router analysis 2, Warnings by File

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

Table 3: zolertia-orion-ip64-router analysis 2, Warnings by File

File	Active Warnings	Total Lines	Language
resolv.c	22	1521	C
rpl-dag.c	15	1631	C
cfs-coffee.c	14	1346	C
cc2538-rf.c	10	1126	C
ccm.c	9	142	C
rpl-icmp6.c	9	1367	C
contikimac.c	8	1102	C
lpm.c	8	390	C
gcm.c	8	125	C

Table 3: zolertia-orion-ip64-router analysis 2, Warnings by File

File	Active Warnings	Total Lines	Language
aes.c	7	330	C
httpd-simple.c	7	229	C
sha256.c	7	356	C
startup-gcc.c	6	330	C
adc-zoul.c	6	187	C
rpl-ext-header.c	6	665	C
uip6.c	6	2362	C
cfs-coffee-arch.c	6	144	C
framer-802154.c	6	274	C
websocket.c	5	724	C
ip64.c	5	912	C
ip64-router.c	5	324	C
cc2538-ccm-star.c	5	130	C
cc1200-zoul-arch.c	5	293	C
usb-arch.c	5	1295	C
psock.c	5	319	C
cbc-mac.c	5	91	C

Table 3: zolertia-orion-ip64-router analysis 2, Warnings by File

File	Active Warnings	Total Lines	Language
ip64-arp.c	5	417	C
uip-ds6.c	4	716	C
ecc-algorithm.c	4	201	C
ip64-dns64.c	4	259	C
cc1200.c	4	2420	C
nbr-table.c	4	483	C
rpl.c	4	355	C
websocket-http-client.c	4	347	C
soc.c	3	108	C
rpl-dag-root.c	3	268	C
csma.c	3	507	C
udp-socket.c	3	199	C
ctr.c	3	77	C
tcpip.c	3	849	C
phase.c	3	252	C
sys-ctrl.c	3	135	C
sicslowpan.c	2	1806	C

Table 3: zolertia-orion-ip64-router analysis 2, Warnings by File

File	Active Warnings	Total Lines	Language
rpl-of0.c	2	238	C
tcp-socket.c	2	409	C
uip-icmp6.c	2	378	C
random.c	2	136	C
rpl-nbr-policy.c	2	256	C
rpl-timers.c	2	497	C
ip64-eth-interface.c	2	127	C
frame802154e-ie.c	2	585	C
ip64-addr.c	2	123	C
usb-core.c	2	631	C
ieee-addr.c	1	92	C
ifft.c	1	168	C
ctimer.c	1	175	C
etimer.c	1	272	C
enc28j60.c	1	692	C
core_cm3.h	1	1776	C
frame802154.c	1	623	C

Table 3: zolertia-orion-ip64-router analysis 2, Warnings by File

File	Active Warnings	Total Lines	Language
enc28j60-ip64-driver.c	1	104	C
sensors.c	1	137	C
cc2538-aes-128.c	1	121	C
adc.c	1	99	C
nullrdc.c	1	368	C
contiki-main.c	1	313	C
dhcpc.c	1	431	C
ip64-dhcpc.c	1	448	C
enc28j60-arch-gpio.c	1	154	C
uip-ds6-route.c	1	721	C
ip64-ipv4-dhcp.c	1	96	C
simple-udp.c	1	183	C
slip.c	1	457	C
watchdog.c	1	109	C
serial-line.c	1	137	C
clock.c	1	255	C
rtimer-arch.c	1	158	C

Table 3: zolertia-orion-ip64-router analysis 2, Warnings by File

File	Active Warnings	Total Lines	Language
slip-arch.c	1	86	C
uip-ds6-nbr.c	1	361	C
usb-serial.c	1	307	C
uart.c	1	398	C
linkaddr.c	0	80	C
eeprom.h	0	116	C
contikimac-framer.c	0	167	C
syscalls.c	0	92	C
strformat.c	0	617	C
contikimac-framer.h	0	47	C
nullrdc-noframer.c	0	112	C
errno.h	0	11	C
nullrdc-noframer.h	0	48	C
trickle-timer.c	0	410	C
errno.h	0	192	C
uip-udp-packet.c	0	102	C
trickle-timer.h	0	514	C

Table 4: zolertia-orion-ip64-router analysis 2, Warning Instances

File	Active Warnings	Total Lines	Language
timer.c	0	148	C
rpl-ns.c	0	230	C
cc1200-802154g-863-870-fsk-50kbps.c	0	170	C
rtimer.c	0	108	C
vdd3-sensor.h	0	71	C
stimer.c	0	163	C

(Showing 100 of 456 Files)

Table 4: zolertia-orion-ip64-router analysis 2, 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
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

Table 4: zolertia-orion-ip64-router analysis 2, Warning Instances

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	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
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

Table 4: zolertia-orion-ip64-router analysis 2, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
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	rpl-icmp6.c	dao_input_storing	667	None	None
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

Table 4: zolertia-orion-ip64-router analysis 2, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
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	cc1200.c	configure	1465	None	None
47	Coercion Alters Value	websocket.c	websocket_open	591	None	None
47	Null Pointer Dereference	rpl-dag.c	rpl_print_neighbor_list	113	None	None
47	Null Pointer Dereference	ip64-router.c	ipaddr_add	110	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
46	Coercion Alters Value	usb-arch.c	ep0_get_data_pkt	943	None	None
46	Coercion Alters Value	uip6.c	uip_process	1546	None	None
46	Null Pointer Dereference	httpd-simple.c	handle_output	120	None	None
46	Coercion Alters Value	enc28j60-arch-gpio.c	enc28j60_arch_spi_write	125	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	Type Overrun	usb-arch.c	fill_buffers	885	None	None
42	Cast Alters Value	ip64-eth-interface.c	ip64_eth_interface_input	54	None	None

Table 4: zolertia-orion-ip64-router analysis 2, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
42	Cast Alters Value	rpl-dag-root.c	set_global_address	153	None	None
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	ip64-eth-interface.c	ip64_eth_interface_input	60	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	ip64-arp.c	ip64_arp_create_ethhdr	376	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	ip64-arp.c	ip64_arp_arp_input	254	None	None
42	Cast Alters Value	ip64-arp.c	ip64_arp_create_arp_request	408	None	None
42	Cast Alters Value	ip64-arp.c	ip64_arp_create_arp_request	411	None	None
42	Cast Alters Value	uip-ds6.c	uip_ds6_init	127	None	None

Table 4: zolertia-orion-ip64-router analysis 2, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
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	ip64.c	ip64_4to6	784	None	None
42	Cast Alters Value	resolv.c	newdata	1070	None	None
41	Cast Alters Value	uip6.c	uip_udp_new	593	None	None
41	Cast Alters Value	core_cm3.h	NVIC_SetPriority	1541	None	None
41	Cast Alters Value	cc1200.c	single_read	1373	None	None
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
40	Cast Alters Value	cc1200.c	update_cca_threshold	2007	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

Table 4: zolertia-orion-ip64-router analysis 2, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
23	Unused Value	cc2538-ccm-star.c	aead	88	None	None
23	Unused Value	ccm.c	ccm_auth_crypt_start	67	None	None
23	Unused Value	ctr.c	ctr_crypt_start	57	None	None
23	Unused Value	gcm.c	gcm_auth_crypt_start	59	None	None
23	Unused Value	rpl-ext-header.c	rpl_remove_header	627	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

(Showing 100 of 307 Warnings)

Analysis Metrics

Table 5: zolertia-orion-ip64-router analysis 2 Metrics

Metric Name	Value
Blank Lines	10502
Code Lines	47285
Comment Lines	40009
Include file instances	171
Lines with Code	52544
Lines with Comments	45268
Mixed Lines	5259
Top-level file instances	171
Total Lines	103055
User-defined functions	1378

File Metrics

Table 6: zolertia-orion-ip64-router analysis 2 File Metrics Summary

Metric Name	Max	Min	Avg
Blank Lines	434	0	23.03
Code Lines	1403	0	103.70
Comment Lines	1302	0	87.74
Cyclomatic Complexity	330	0	13.62
Lines with Code	1476	0	115.23
Lines with Comments	1422	0	99.27
Mixed Lines	649	0	11.53
Modified Cyclomatic Complexity	330	0	12.98
Taint Propagator Total	0	0	0
Taint Sink Total	11	0	0.39
Taint Source Total	0	0	0
Total Lines	2420	2	226.00

Table 7: zolertia-orion-ip64-router analysis 2 File Metrics Details

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File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
cc1200.c	2420	1371	643	1343	615	434
uip6.c	2362	1476	723	1403	650	236
uip.h	2219	698	1422	578	1302	219
sicslowpan.c	1806	1060	604	1012	556	190
core_cm3.h	1776	952	1085	303	436	388
rpl-dag.c	1631	1273	215	1256	198	160
resolv.c	1521	1039	313	986	260	222
cmsis_gcc.h	1373	734	382	713	361	278
rpl-icmp6.c	1367	1018	225	983	190	159
cfs-coffee.c	1346	962	239	946	223	161
usb-arch.c	1295	962	163	959	160	173
uip-nd6.c	1147	825	280	779	234	88
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
ip64.c	912	590	222	580	212	110

Table 7: zolertia-orion-ip64-router analysis 2 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
pka.h	871	191	723	112	644	36
tcpip.c	849	629	184	582	137	83
reent.h	794	558	220	462	124	112
stdio.h	769	622	126	577	81	66
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
udma.h	704	294	462	184	352	58
enc28j60.c	692	378	238	371	231	83
uipopt.h	684	159	487	122	450	75
rfcore-xreg.h	673	284	668	4	388	1
rpl-ext-header.c	665	440	154	431	145	80
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

Table 7: zolertia-orion-ip64-router analysis 2 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
strformat.c	617	550	13	545	8	59
frame802154e-ie.c	585	458	119	434	95	32
uip-nd6.h	575	203	346	183	326	46
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
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
rpl-timers.c	497	345	112	336	103	49
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
ip64-dhcpc.c	448	347	58	346	57	44

Table 7: zolertia-orion-ip64-router analysis 2 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
stddef.h	443	313	166	246	99	31
ieeefp.h	434	303	68	293	58	73
dhcpc.c	431	337	55	336	54	40
ip64-arp.c	417	267	102	267	102	48
trickle-timer.c	410	243	128	238	123	44
tcp-socket.c	409	307	66	307	66	36
rpl-private.h	408	258	127	224	93	57
psock.h	404	59	321	49	311	34
uart.c	398	255	95	255	95	48
rtcc.h	398	198	183	197	182	18
lpm.c	390	184	163	183	162	44
process.c	388	233	113	229	109	46
uip-ds6.h	385	208	152	179	123	54
uip-icmp6.c	378	247	89	245	87	44
tcpip.h	378	55	283	53	281	42
packetbuf.h	371	153	185	141	173	45
pwm.c	369	241	84	241	84	44

Table 7: zolertia-orion-ip64-router analysis 2 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
nullrdc.c	368	271	87	247	63	34
spi.c	362	241	91	240	90	31
uip-ds6-nbr.c	361	261	93	251	83	17
uart.h	360	149	338	14	203	8
sha256.c	356	211	108	211	108	37
rpl.c	355	243	77	240	74	38
usb-regs.h	355	127	316	27	216	12
settings.h	352	173	134	156	117	62
websocket-http-client.c	347	247	73	246	72	28
sys-ctrl.h	342	150	249	81	180	12
rpl-conf.h	341	146	183	127	164	31
rpl.h	340	182	155	164	137	21
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

Table 7: zolertia-orion-ip64-router analysis 2 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
aes.c	330	179	103	179	103	48
sicslowpan.h	327	111	188	97	174	42
ip64-router.c	324	233	60	233	60	31
pt.h	322	57	231	56	230	35
psock.c	319	200	87	200	87	32
board.h	317	101	220	85	204	12
rpl-mrhof.c	316	204	105	186	87	25
contiki-main.c	313	184	92	183	91	38
usb-serial.c	307	217	66	217	66	24
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
config.h	286	218	35	210	27	41
contiki-default-conf.h	285	95	185	63	153	37
cfs.h	285	61	200	60	199	25
mtarch.c	285	145	129	145	129	11

(Showing 100 of 456 Files)