CodeSonar Analysis Report

generated by Administrator on Wed Aug 23 15:50:34 2017

for analysis cc1200 analysis 1

Summary

Table 1: cc1200 analysis 1 Summary

Active Warnings	File Count	Project Name	Time Started	Time Finished	Machine
298	451	cc1200	Sun Mar 26 23:35:47 2017	Sun Mar 26 23:41:12 2017	Jacks-MBP

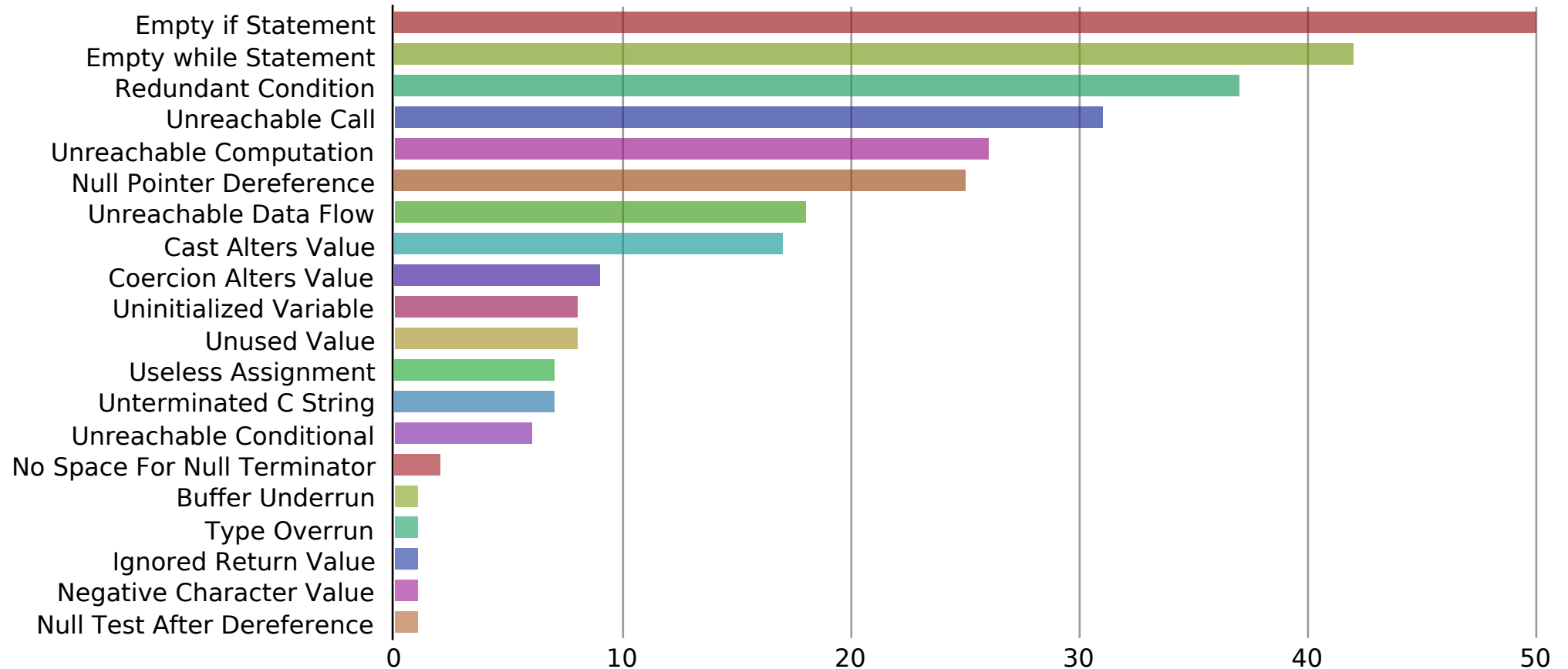# Warnings

Figure 1: cc1200 analysis 1, Warnings by Class

Table 2: cc1200 analysis 1, Warnings by Class

Warning Class	Active Warnings
Empty if Statement	50
Empty while Statement	42
Redundant Condition	37
Unreachable Call	31
Unreachable Computation	26
Null Pointer Dereference	25
Unreachable Data Flow	18
Cast Alters Value	17
Coercion Alters Value	9
Uninitialized Variable	8
Unused Value	8
Unterminated C String	7
Useless Assignment	7
Unreachable Conditional	6
No Space For Null Terminator	2
Negative Character Value	1

Warning Class	Active Warnings
Type Overrun	1
Null Test After Dereference	1
Buffer Underrun	1
Ignored Return Value	1

Table 3: cc1200 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
cfs-coffee.c	14	1346	C
adc-zoul.c	12	187	C
cc2538-rf.c	10	1126	C
collect.c	9	1558	C
ccm.c	9	142	C
gcm.c	8	125	C
lpm.c	8	390	C

File	Active Warnings	Total Lines	Language
contikimac.c	8	1102	C
aes.c	7	330	C
sha256.c	7	356	C
startup-gcc.c	6	330	C
framer-802154.c	6	274	C
cfs-coffee-arch.c	6	144	C
cc1200-zoul-arch.c	5	293	C
cc2538-ccm-star.c	5	130	C
nbr-table.c	5	483	C
cbc-mac.c	5	91	C
usb-arch.c	5	1295	C
psock.c	5	319	C
cc1200.c	4	2420	C
ecc-algorithm.c	4	201	C
csma.c	3	507	C
udp-socket.c	3	199	C
tcpip.c	3	849	C

File	Active Warnings	Total Lines	Language
soc.c	3	108	C
mmc-arch.c	3	139	C
sys-ctrl.c	3	135	C
ctr.c	3	77	C
phase.c	3	252	C
usb-core.c	2	631	C
frame802154e-ie.c	2	585	C
tcp-socket.c	2	409	C
mmc.c	2	608	C
rudolph2.c	2	407	C
ip64-addr.c	2	123	C
dhcpc.c	2	431	C
diskio.c	2	84	C
rudolph1.c	2	338	C
random.c	2	136	C
ieee-addr.c	1	92	C
ctimer.c	1	175	C

File	Active Warnings	Total Lines	Language
cc1200-demo.c	1	106	C
sensors.c	1	137	C
adc.c	1	99	C
simple-udp.c	1	183	C
nullrdc.c	1	368	C
etimer.c	1	272	C
slip.c	1	457	C
ifft.c	1	168	C
frame802154.c	1	623	C
cc2538-aes-128.c	1	121	C
uart.c	1	398	C
rucb.c	1	170	C
netflood.c	1	184	C
linkaddr.c	1	80	C
serial-line.c	1	137	C
trickle.c	1	210	C
route.c	1	292	C

File	Active Warnings	Total Lines	Language
dbg.c	1	117	C
polite.c	1	144	C
rtimer-arch.c	1	158	C
watchdog.c	1	109	C
collect-link-estimate.c	1	139	C
usb-serial.c	1	307	C
neighbor-discovery.c	1	196	C
collect-neighbor.c	1	436	C
runicast.c	1	250	C
contiki-main.c	1	313	C
slip-arch.c	1	86	C
clock.c	1	255	C
core_cm3.h	1	1776	C
ctr.h	0	89	C
me_tabs.c	0	121	C
procinit.c	0	48	C
leds.c	0	119	C

File	Active Warnings	Total Lines	Language
mt.c	0	109	C
stunicast.c	0	176	C
settings.c	0	475	C
settings.h	0	352	C
power-mgmt.c	0	291	C
eeprom.h	0	116	C
syscalls.c	0	92	C
power-mgmt.h	0	194	C
energest.c	0	121	C
chameleon-raw.c	0	215	C
errno.h	0	11	C
errno.h	0	192	C
polite-announcement.c	0	197	C
cc1200-802154g-863-870-fsk-50kbps.c	0	170	C
cc1200-868-fsk-1-2kbps.c	0	137	C
broadcast-announcement.c	0	235	C
list.c	0	330	C

File	Active Warnings	Total Lines	Language
zoul-sensors.c	0	60	C
announcement.c	0	153	C
gpio.c	0	123	C
cdc-acm-descriptors.c	0	167	C
crypto.c	0	120	C

(Showing 100 of 451 Files)

Table 4: cc1200 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
63	Uninitialized Variable	frame802154.c	frame802154_check_dest_panid	214	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

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
63	Uninitialized Variable	rtcc.c	rtcc_set_alarm_time_date	447	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
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

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

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	cc1200.c	configure	1465	None	None
47	Coercion Alters Value	rtcc.c	ab08_read_reg	132	None	None
47	Coercion Alters Value	rucb.c	rucb_open	150	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
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

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	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
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
27	Ignored Return Value	netflood.c	recv_from_ipolite	113	None	None
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

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
23	Unused Value	ff.c	st_dword	655	None	None
23	Unused Value	ff.c	st_qword	669	None	None
23	Unused Value	ff.c	st_word	646	None	None
23	Unused Value	gcm.c	gcm_auth_crypt_start	59	None	None
23	Unused Value	soc.c	soc_print_info	89	None	None
21	Useless Assignment	collect.c	rtmetric_compute	252	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
21	Useless Assignment	resolv.c	encode_name	464	None	None
21	Useless Assignment	resolv.c	newdata	809	None	None
20	Redundant Condition	adc-zoul.c	configure	148	None	None
20	Redundant Condition	adc-zoul.c	configure	154	None	None
20	Redundant Condition	adc-zoul.c	configure	157	None	None
20	Redundant Condition	adc-zoul.c	configure	160	None	None
20	Redundant Condition	cc2538-aes-128.c	set_key	84	None	None

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
20	Redundant Condition	cfs-coffee.c	cfs_coffee_format	1331	None	None
20	Redundant Condition	cfs-coffee.c	file_end	507	None	None
20	Redundant Condition	collect-link-estimate.c	collect_link_estimate_update_tx	83	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

(Showing 100 of 298 Warnings)

Analysis Metrics

Table 5: cc1200 analysis 1 Metrics

Metric Name	Value
Blank Lines	10286
Code Lines	44160
Comment Lines	38131
Include file instances	179
Lines with Code	50854
Lines with Comments	44825
Mixed Lines	6694
Top-level file instances	179
Total Lines	99271
User-defined functions	1400

File Metrics

Table 6: cc1200 analysis 1 File Metrics Summary

Metric Name	Max	Min	Avg
Blank Lines	820	0	22.81
Code Lines	3209	0	97.92
Comment Lines	1302	0	84.55
Cyclomatic Complexity	1145	0	13.62
Lines with Code	4833	0	112.76
Lines with Comments	2013	0	99.39
Mixed Lines	1624	0	14.84
Modified Cyclomatic Complexity	1131	0	13.10
Taint Propagator Total	0	0	0
Taint Sink Total	11	0	0.23
Taint Source Total	0	0	0
Total Lines	6042	2	220.11

Table 7: cc1200 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: cc1200 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
uipopt.h	684	159	487	122	450	75
rfcore-xreg.h	673	284	668	4	388	1
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
features.h	515	276	205	270	199	40

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
trickle-timer.h	514	76	418	65	407	31
csma.c	507	369	99	364	94	44
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
ieeefp.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
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

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
uart.c	398	255	95	255	95	48
rtcc.h	398	198	183	197	182	18
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
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
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

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
rudolph1.c	338	244	69	241	66	28
stdlib.h	335	291	28	277	14	30
gptimer.h	335	137	325	8	196	2
cc1200-const.h	335	268	274	58	64	3
aes.c	330	179	103	179	103	48
startup-gcc.c	330	254	234	83	63	13
list.c	330	123	182	123	182	25
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
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

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
config.h	286	218	35	210	27	41
mtarch.c	285	145	129	145	129	11
contiki-default-conf.h	285	95	185	63	153	37
cfs.h	285	61	200	60	199	25
ioc.h	278	154	147	124	117	7
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
udma.c	259	165	69	165	69	25
clock.c	255	97	137	97	137	21
etimer.h	254	23	208	22	207	24
packetbuf.c	254	167	71	166	70	17
phase.c	252	159	71	156	68	25
_default_types.h	250	214	14	213	13	23

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