

Polyspace Bug Finder

Detailed Report for Project: HYCD-469_Disp_ES8P5066

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Published 09-Jun-2023 14:56:32

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Polyspace Version(s): Polyspace Bug Finder 3.7 (R2022b Update 3)

Project Version(s): 1.0

Result Folder(s):

G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Polyspace\BF_Result

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Chapter 1. Polyspace Bug Finder Summary

Table 1.1. Project Summary

	Count	Reviewed	Unreviewed	Pass/Fail
Defects	8	8	0	NA
Total	8	8	0	NA

Table 1.2. Summary By File

File	Defects (Reviewed)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Disp.H	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Disp.c	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Init_config.c	1 (1)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Init_config.h	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Program_Cfg.h	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Typedefine.h	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Wifi\Coupler.c	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Wifi\Coupler.h	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Wifi\esp8266.c	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Wifi\esp8266.h	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\includes.h	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\logicsub.H	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\logicsub.c	6 (6)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\main.c	1 (1)

File	Defects (Reviewed)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\systick.c	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\systick.h	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\PlatForm\irqhandler.c	0 (0)
G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\PlatForm\irqhandler.h	0 (0)

Chapter 2. Defects

Defects

Table 2.1. G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\Init_config.c

ID	Defect	Impact	Function	Detail	Severity	Status	Comment
1	Useless if	Medium	PWM_Start()	Unnecessary code, if-condition is always true.	Unset	Not a defect	通过宏定义选择是否开启代码

Table 2.2. G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\logicsub.c

ID	Defect	Impact	Function	Detail	Severity	Status	Comment
2	Dead code	Low	LcDisp()	If-condition always evaluates to false. Dead branch at line 1520.	Unset	Justified	防护性代码
6	Useless if	Medium	KeyPutDown()	Unnecessary code, if-condition is always true.	Unset	Not a defect	增强代码可读性
8	Unsigned integer conversion overflow	Low	WriteByte()	Conversion from type int 32 bits to type unsigned int 8 bits might overflow. Additional Info: Expected values: [0 .. 255]. Actual values: even values in [0 .. 510]. Risk: Truncation or wrap-around of value to fit destination type might lead to unexpected results. Fix: Ensure that the destination type is larger than or same as the source type.	Unset	Justified	IIC 通信移位发送
3	Dead code	Low	ReturnPrintFrame()	Default clause of switch at line 4166 is dead.	Unset	Not a defect	正常用法
4	Integer conversion overflow	High	ReturnStateFrame()	Conversion from type int 32 bits to type int 16 bits might overflow. Additional Info: Expected values: [-32768 .. 32767]. Actual values: [32768 .. 65535]. Risk: Truncation or wrap-around of value to fit destination type might lead to unexpected results. Fix: Ensure that the destination type is larger than or same as the source type.	Unset	Justified	此时 temp 范围为-32768~0, abs(temp)范围为 0~32768 (0x0000~0x8000),只有 0x8000 这个值按位或 0x8000 才会造成数据出错,而实际测量温度不会使 abs(temp)达到 0x8000,所以没问题。

ID	Defect	Impact	Function	Detail	Severity	Status	Comment
5	Integer conversion overflow	High	ReturnStateFrame()	Conversion from type int 32 bits to type int 16 bits might overflow. Additional Info: Expected values: [-32768 .. 32767]. Actual values: [32768 .. 34768]. Risk: Truncation or wrap-around of value to fit destination type might lead to unexpected results. Fix: Ensure that the destination type is larger than or same as the source type.	Unset	Justified	此时 temp 范围为-32768~0, abs(temp)范围为 0~32768 (0x0000~0x8000), 只有 0x8000 这个值按位或 0x8000 才会造成数据出错, 而实际测量温度不会使 abs(temp)达到 0x8000, 所以没问题。

Table 2.3. G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Project\Project\Project\APP\main.c

ID	Defect	Impact	Function	Detail	Severity	Status	Comment
7	Dead code	Low	main()	If-condition always evaluates to false. Dead branch from line 156 to line 159.	Unset	Justified	中断中置位

Chapter 3. Appendix 1 - Configuration Settings

Polyspace Settings

Option	Value
-author	19033292
-bug-finder	true
-c-version	c90
-checkers	ALIGNMENT_CHANGE, ASSERT, ATOMIC_VAR_ACCESS_TWICE, ATOMIC_VAR_SEQUENCE_NOT_ATOMIC, BAD_EQUAL_EQUAL_USE, BAD_EQUAL_USE, BAD_FREE, BAD_LOCK, BAD_PTR_SCALING, BAD_UNLOCK, CHARACTER_MISUSE, CHAR_EOF_CONFUSED, CLOSED_RESOURCE_USE, CONSTANT_OBJECT_WRITE, DATA_RACE, DATA_RACE_BIT_FIELDS, DATA_RACE_STD_LIB, DEADLOCK, DEAD_CODE, DECL_MISMATCH, DOUBLE_DEALLOCATION, DOUBLE_LOCK, DOUBLE_RESOURCE_CLOSE, DOUBLE_RESOURCE_OPEN, DOUBLE_UNLOCK, ERRNO_MISUSE, FILE_OBJECT_MISUSE, FLEXIBLE_ARRAY_MEMBER_STRUCT_MISUSE, FLOAT_ABSORPTION, FLOAT_CONV_OVFL, FLOAT_STD_LIB, FLOAT_ZERO_DIV, FREED_PTR, FUNC_CAST, IMPROPER_ARRAY_INIT, INLINE_CONSTRAINT_NOT_RESPECTED, INT_CONV_OVFL, INT_STD_LIB, INT_ZERO_DIV, INVALID_ENV_POINTER, INVALID_MEMORY_ASSUMPTION, INVALID_VA_LIST_ARG, IO_INTERLEAVING, LOCAL_ADDR_ESCAPE, MACRO_USED_AS_OBJECT, MEMCMP_PADDING_DATA, MEMCMP_STRINGS, MEM_STD_LIB, MISSING_ERRNO_RESET, MISSING_NULL_CHAR, MISSING_RETURN, NON_INIT_PTR, NON_INIT_VAR, NON_POSITIVE_VLA_SIZE, NULL_PTR, OPERATOR_PRECEDENCE, OTHER_STD_LIB, OUT_BOUND_ARRAY, OUT_BOUND_PTR, PARTIALLY_ACCESSED_ARRAY, PRE_DIRECTIVE_MACRO_ARG, PRE_UCNAME_JOIN_TOKENS, PTR_CAST, PTR_SIZEOF_MISMATCH, PTR_TO_DIFF_ARRAY, PUTENV_AUTO_VAR, READ_ONLY_RESOURCE_WRITE, RESOURCE_LEAK, SIDE_EFFECT_IGNORED, SIGN_CHANGE, SIG_HANDLER_CALLING_SIGNAL, SIG_HANDLER_COMP_EXCP_RETURN, SIG_HANDLER_ERRNO_MISUSE, SIG_HANDLER_SHARED_OBJECT, SIZEOF_MISUSE, STD_FUNC_ARG_MISMATCH, STREAM_WITH_SIDE_EFFECT, STRING_FORMAT, STRLIB_BUFFER_OVERFLOW, STRLIB_BUFFER_UNDERFLOW, STR_FORMAT_BUFFER_OVERFLOW, STR_STD_LIB, TEMP_OBJECT_ACCESS, TOO_MANY_VA_ARG_CALLS, TYPEDEF_MISMATCH, UINT_CONV_OVFL, UNPROTOTYPED_FUNC_CALL, UNREACHABLE, USELESS_IF, USELESS_WRITE, VAR_SHADOWING, VA_ARG_INCORRECT_TYPE, VA_START_INCORRECT_TYPE, VA_START_MISUSE
-compiler	armcc
-date	09/06/2023
-enum-type-definition	auto-unsigned-first
-import-comments	G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Polyspace\BF_Result\comments_bak
-lang	C
-library	none
-no-default-system-includes	true
-prog	HYCD-469_Disp_ES8P5066
-results-dir	G:\Haier\Project\HYCD-469\Code\Disp Board\0271800139A_Program_ES8P5088\Polyspace\BF_Result
-target	arm

Option	Value
-verif-version	1.0

Chapter 4. Appendix 2 - Definitions

Table 4.1. Abbreviations

Abbreviation	Definition
NA	Not Available