

在Makefile中 SRC_C 应该在Makefile-cfg前指定，否则是无效的!

比如

in Hal/6220/cpu/cortex_r4-r1p3/src/Makefile

```
1.  # set the relative path to the project root dir
2.  PROJECTDIR := ../../../../..
3.
4.  # include global project config
5.  include $(PROJECTDIR)/Makefile-cfg
6.
7.  # include local module project config
8.  include $(PROJECTDIR)/Hal/$(ARCH)/Makefile-cfg
9.
10. # include the global rule set
11. include $(PROJECTDIR)/Makefile-rules
12.
13. SRC_C = \
14.     cortex_r4.o
```

There are 2 files in Hal/6220/cpu/cortex_r4-r1p3/src directory

- cortex_r4.c
- build_mpu.c

上面的Makefile并不会只编译cortex_r4.c，而是build_mpu.o也生成了！

root cause如下

in Makefile-rules

```
1.  ifndef SRC_C
2.  SRC_C = $(wildcard *.c)
3.  endif # SRC_C
4.
5.  ifndef SRC_ASM
6.  SRC_ASM = $(wildcard *$(TOOLTYPE).asm)
7.  endif # SRC_ASM
8.
9.  ifndef SRC_S
10. SRC_S = $(wildcard *$(TOOLTYPE).s)
11. endif # SRC_S
```

即如果没有定义SRC_C，则SRC_C会include当前目录下所有.c files.

而在上面的Makefile中

```
1.  include $(PROJECTDIR)/Makefile-rules
2.
3.  SRC_C = \
4.     cortex_r4.o
```

Makefile-rules在SRC_C之前。

所以正确的方式应该如下

```
1.  # set the relative path to the project root dir
2.  PROJECTDIR := ../../../../..
3.
4.  # include global project config
5.  include $(PROJECTDIR)/Makefile-cfg
6.
7.  # include local module project config
8.  include $(PROJECTDIR)/Hal/$(ARCH)/Makefile-cfg
9.
10. SRC_C = \
11.     cortex_r4.o
12.
13. # include the global rule set
14. include $(PROJECTDIR)/Makefile-rules
```