一般生成的code是不能relocate的，在link阶段生成的地址也必须是code在CPU运行时的地址。原因很简单，一般linker对function invocation和data reference使用的都是absolute address。absolute address就是fixed address，code一移动，原来的fixed address就无意义了。

但在u-boot的 arch/arm/config.mk

```
# needed for relocation
LDFLAGS_u-boot += -pie
```

即u-boot在link时带有-pie option。

man ld中有关于pie option的如下描述：

-pie

--pic-executable

Create a position independent executable. This is currently only supported on ELF platforms. Position independent executables are similar to shared libraries in that they are relocated by the dynamic linker to the virtual address the OS chooses for them (which can vary between invocations). Like normal dynamically linked executables they can be executed and symbols defined in the executable cannot be overridden by shared libraries.
