- enable CONFIG_XXXs

```
CONFIG_KGDB=y
CONFIG_KGDB_SERIAL_CONSOLE=y
CONFIG_DEBUG_INFO=y
CONFIG_DEBUG_KERNEL=y
CONFIG_FRAME_POINTER=y
CONFIG_CONSOLE_POLL=y
CONFIG_MAGIC_SYSRQ=y
CONFIG_KALLSYMS=y
```

- dowload agent-proxy tool
  由于kernel的输入/输出与kgdb共用一个tty serial,所以需要该tool来route 两者不同的输出与输入

```
$ git clone git://git.kernel.org/pub/scm/utils/kernel/kgdb/agent-proxy.git
$ make
$ agent-proxy 2223^2222 0 /dev/ttyUSB0,115200
```

console port: 2223
debug port: 2222
`/dev/ttyUSB0` 是host看到的连接target的serial port

- telnet console port
  > telnet localhost 2223

user could input command in the console.

- enable kgdb on boot parameter

> console=ttyS0,115200 kgdboc=ttyS0,115200 kgdbcon kgdbwait

`ttyS0` 是target上看到的连接host的serial port

- start gdb
  > cgdb -d arm-linux-gnu-poky-gdb vmlinux
  > in gdb
  > target remote localhost:2222

Note:

1. `/sys/module/kgdboc/parameters/kgdboc` 可以配置serial
   > echo ttyS0,115200 > /sys/module/kgdboc/parameters/kgdboc
2. enter kgdb
   > echo g > /proc/sysrq-trigger

在gdb中press `CTRL+C` 不是太可靠

1. debug in-tree kernel code还可以
2. 在我的环境下，调试out-of-tree kernel module,gdb不认symbol. ???