?? sh linuk ? kernel (vmlinux.ub)

??????????? Ubuntu 8.04

????

- [?? Kernel - linux-sh4-2.6.32.59 stm24 0211](#)

?? kernel ??????

http://code.google.com/p/nexttv-mod/downloads/list

Kernel ???linux-sh4-2.6.23.17_stm23_A18B

?? vmlinux
?????????????????

????????????? .config??????????

??????

cd /home/alang/STLinux/build_source/linux-sh4-2.6.23.17_stm23_A18B/linux-sh4-2.6.23.17_stm23_A18B
~~make ARCH=sh CROSS_COMPILE=sh4-linux- pdk7105_defconfig~~
make ARCH=sh CROSS_COMPILE=sh4-linux- vmlinux

TIPs:

- ???????? .config ?????????????

- ??????????????? -j4????????

- ????????? (??????? make distclean??? .config* ???????)
make clean
rm vmlinux.*

- ?????????????? make menuconfig ??? .config????????? .config ?

- ???????????????????:
1. ?? .config
2. ?? make menuconfig????????????
3. ?? .config ?????????????????
4. ?? .config ???????????

????

make ARCH=sh CROSS_COMPILE=sh4-linux- modules
make ARCH=sh CROSS_COMPILE=sh4-linux- modules_install INSTALL_MOD_PATH=./modules_install

TIPs?

INSTALL_MOD_PATH ??????????

?? vmlinux.ub

?????http://www.stlinux.com/u-boot/mkimage/kernel-images

sh4-linux-objcopy -O binary vmlinux vmlinux.bin
gzip --best --force vmlinux.bin
mkimage -A sh -O linux -T kernel -C gzip -a 0x80800000 -e 0x80801000 -n "Linux 2.6" -d vmlinux.bin.gz
vmlinux.ub

TIPs:

???????? gzip, mkimage ??????? apt-get ??
???Ubuntu 8.04 ??? uboot-mkimage ???

Q&A

Q: ??????? APP ??? kernel source????

???? kernel source ???????????????????????????????

- kernel-source
    - ? /usr/src/2.6.23.17_stm23_A18B-PDK7105-32BITS-A18B
- kernel-modules
    - ? /lib/modules/2.6.23.17_stm23_A18B-PDK7105-32BITS-A18B
    - ? /lib/modules/2.6.23.17_stm23_A18B-PDK7105-32BITS-A18B/build -> /usr/src/2.6.23.17_stm23_A18B-PDK7105-32BITS-A18B
    - ? /lib/modules/2.6.23.17_stm23_A18B-PDK7105-32BITS-A18B/source -> /usr/src/2.6.23.17_stm23_A18B-PDK7105-32BITS-A18B

Q: ???? /dev/sda3 ? rootfs

1. ?? kernel ??? .config ??
   CONFIG_CMDLINE_OVERWRITE=y
   CONFIG_CMDLINE="console=ttyAS0,115200 root=/dev/sda3 rootfstype=ext3 rw nwhwconf=device:eth0"
2. ?? U-Boot ??? /dev/sda2 ? rootfs???? U-Boot ??????? vmlinux.ub ?? /dev/sda2 ? /dev/sda3?
3. nwhwconf ????????????
4. ??? MAC address ??????????????????? DHCP ??????????????? IP ?????

Q: ?? 256 MB Memory

System type -> Memory management options ->

- Physical memory size = 0x20000000

Q: CPU ???

System type -> CPU Frequency scaling ->

- 'conservative' cpufreq governor

??????

cat /sys/devices/system/cpu/cpu0/cpufreq/scaling_cur_freq

??

echo "conservative" > /sys/devices/system/cpu/cpu0/cpufreq/scaling_governor

????

- [??????? Kernel](#)