## Сборка корневой файловой системы на основе busybox

- 1. Скачаем busybox
- 2. Создаем дефолтный конфиг

ARCH=arm make defconfig

3. Заходим в menuconfig

ARCH=arm make menuconfig

4. Указываем статичную сборку, добавляем префикс

```
Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letter
are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [*] built-in [
excluded <M> module < > module capable
     -1(-)-
         Build Options
     [*] Build static binary (no shared libs)
      [ ] Force NOMMU build
      (arm-linux-gnueabihf-) Cross compiler prefix
      () Path to sysroot
      () Additional CFLAGS
     () Additional LDFLAGS
         Additional LDLIBS
     [ ] Avoid using GCC-specific code constructs
     [*] Use -mpreferred-stack-boundary=2 on i386 arch
                           <Select>
                                        < Exit > < Help >
```

5. Собираем

ARCH=arm make -j 16

6. Устанавливаем

ARCH=arm make install

- 7. Удалим Linuxrc из install
- 8. Создадим архив с новой файловой системой

```
find . | cpio -o -H newc | gzip > initramfs.cpio.gz
```

9. Запускаем в дети

QEMU\_AUDIO\_DRV=none qemu-system-arm -M vexpress-a9 -kernel zImage -dtb vexpress-v2p-ca9.dtb -initrd initramfs.cpio.gz -append "console=ttyAMAO rdinit=/bin/ash" -nographic

```
2.816585] Run /bin/ash as init process
/bin/ash: can't access tty; job control turned off
~ # ls -la
total 4
              7 1000
                         1000
                                        180 Sep 24 09:40
drwxrwxr-x
              7 1000
                                        180 Sep 24 09:40
drwxrwxr-x
                         1000
                                          7 Sep 24 09:40 .ash_history
              1 0
                         0
drwxrwxr-x
              2 1000
                         1000
                                       1900 Sep 24 09:29 bin
              2 0
drwxr-xr-x
                         0
                                         60 Sep 18 09:43 dev
              1 1000
                         1000
                                          0 Sep 24 09:36 initramfs.cpio.gz
- rw-rw-r--
                                         40 Sep 18 09:43 root
drwx----
              2 0
                         0
              2 1000
                         1000
drwxrwxr-x
                                       1460 Sep 24 09:29 sbin
                                         80 Sep 24 09:29 usr
drwxrwxr-x
              4 1000
                         1000
```

```
~ # ps
PID
      USER
               TIME COMMAND
ps: can't open '/proc': No such file or directory
~ # mkdir proc
~ # mkdir sys
~ # mount -t proc proc proc
~ # ls /proc
                                                               pagetypeinfo
                                               execdomains
                                                              partitions
                                               filesystems
                                                               self
                                                               slabinfo
                                               interrupts
                                                              softirgs
                                               iomem
                                                               stat
                                               ioports
                                                               swaps
                                               kallsyms
                                                               sysrq-trigger
                                               key-users
                                                               thread-self
                                               keys
                               buddyinfo
                                               kmsg
                                                               timer_list
                                               kpagecount
                                               kpageflags
                                                              uptime
                               cgroups
                               cmdline
                                               loadavg
                                                              version
                                                              vmallocinfo
                               consoles
                                               locks
                                               meminfo
                                                              vmstat
                               cpuinfo
                                               misc
                                                               zoneinfo
                               crypto
                                               modules
                               device-tree
                                               mounts
                               devices
                                               mtd
                               diskstats
                                               net
```