Uboot 常用的命令

1、环境变量相关的命令
   a) 内核启动位置
   b) 根文件挂载的位置
   c) 虚拟机与开发板同一网络位置的设置
2、代码数据搬运相关的(产品发布)
   a) SD --- >外扩内存(DDR3) --->EMMC

1、查找显示 Uboot 中所有的命令
   命令提示符：？或者 help
   用法 1：？或者 help
       显示 uboot 所有的命令

```
TINY4412 # ?
?          - alias for 'help'
base       - print or set address offset
bdinfo    - print Board Info structure
boot       - boot default, i.e., run 'bootcmd'
bootd      - boot default, i.e., run 'bootcmd'
bootelf - Boot from an ELF image in memory
bootm      - boot application image from memory
bootp      - boot image via network using BOOTP/TFTP protocol
bootvx    - Boot vxWorks from an ELF image
chpart    - change active partition
cmp        - memory compare
coninfo - print console devices and information
cp         - memory copy
crc32      - checksum calculation
dcache    - enable or disable data cache
dnw        - dnw        - initialize USB device and ready to receive for Windows server
(specific)

echo       - echo args to console
editenv - edit environment variable
emmc       - Open/Close eMMC boot Partition
env        - environment handling commands
exit       - exit script
ext2format- ext2format - disk format by ext2

ext2load- load binary file from a Ext2 filesystem
ext2ls    - list files in a directory (default /)
ext3format- ext3format - disk format by ext3
```

```
false     - do nothing, unsuccessfully
fastboot- fastboot- use USB Fastboot protocol

fatformat- fatformat - disk format by FAT32

fatinfo - fatinfo - print information about filesystem
fatload - fatload - load binary file from a dos filesystem

fatls     - list files in a directory (default /)
fdisk     - fdisk for sd/mmc.

go          - start application at address 'addr'
help       - print command description/usage
icache    - enable or disable instruction cache
iminfo    - print header information for application image
imxtract- extract a part of a multi-image
itest     - return true/false on integer compare
loadb     - load binary file over serial line (kermit mode)
loads     - load S-Record file over serial line
loady     - load binary file over serial line (ymodem mode)
loop       - infinite loop on address range
md          - memory display
mm          - memory modify (auto-incrementing address)
mmc         - MMC sub system
mmcinfo - mmcinfo <dev num>-- display MMC info
movi       - movi    - sd/mmc r/w sub system for SMDK board
mtdparts- define flash/nand partitions
mtest      - simple RAM read/write test
mw          - memory write (fill)
nfs        - boot image via network using NFS protocol
nm          - memory modify (constant address)
ping       - send ICMP ECHO_REQUEST to network host
printenv- print environment variables
reginfo - print register information
reset      - Perform RESET of the CPU
run         - run commands in an environment variable
saveenv - save environment variables to persistent storage
setenv    - set environment variables
showvar - print local hushshell variables
sleep      - delay execution for some time
source    - run script from memory
test       - minimal test like /bin/sh
tftpboot- boot image via network using TFTP protocol
```

```
true      - do nothing, successfully
usb        - USB sub-system
version - print monitor version
TINY4412 #
```

用法 2：help 命令
　　　　查看某一命令的具体的用法

```
TINY4412 # help printenv
printenv - print environment variables

Usage:
printenv
    - print values of all environment variables
printenv name ...
    - print value of environment variable 'name'
TINY4412 #
```

2、查看环境变量
　　命令提示符：printenv
```
TINY4412 # printenv
baudrate=115200
bootargs=noinitrd      root=/dev/nfs      nfsroot=192.168.10.106:/root/work/root_nfs
ip=192.168.10.123:192.168.10.106:192.168.10.1:255.255.255.0::eth0:off
init=/linuxrc console=ttySAC0 lcd=S702
bootcmd=movi read kernel 0 40008000;movi read rootfs 0 41000000 400000;bootm
40008000 41000000
bootdelay=3
ethaddr=00:40:5c:26:0a:5b
gatewayip=192.168.0.1
ipaddr=192.168.0.20
netmask=255.255.255.0
serverip=192.168.0.10

Environment size: 438/16380 bytes
TINY4412 #
```

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批注[A1]: 常用的

2、设置/删除环境变量
　　命令提示符：setenv
```
TINY4412 # help setenv
setenv - set environment variables

Usage:
setenv name value ...
```

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批注[A2]: 设置环境变量，临时设置，重启后变量不存在，必须修改后保存

```
    - set environment variable 'name' to 'value ...'
setenv name
    - delete environment variable 'name'
TINY4412 #
```

A) 设置环境变量
```
TINY4412 # setenv aaa 5
TINY4412 # printenv
aaa=5
baudrate=115200
bootargs=noinitrd    root=/dev/nfs    nfsroot=192.168.10.106:/root/work/root_nfs
ip=192.168.10.123:192.168.10.106:192.168.10.1:255.255.255.0::eth0:off
init=/linuxrc console=ttySAC0 lcd=S702
bootcmd=movi read kernel 0 40008000;movi read rootfs 0 41000000 400000;bootm
40008000 41000000
bootdelay=3
ethaddr=00:40:5c:26:0a:5b
gatewayip=192.168.0.1
ipaddr=192.168.0.20
netmask=255.255.255.0
serverip=192.168.0.10

Environment size: 446/16380 bytes
TINY4412 #
```

B)删除环境变量
```
TINY4412 # setenv aaa
TINY4412 # printenv
baudrate=115200
bootargs=noinitrd    root=/dev/nfs    nfsroot=192.168.10.106:/root/work/root_nfs
ip=192.168.10.123:192.168.10.106:192.168.10.1:255.255.255.0::eth0:off
init=/linuxrc console=ttySAC0 lcd=S702
bootcmd=movi read kernel 0 40008000;movi read rootfs 0 41000000 400000;bootm
40008000 41000000
bootdelay=3
ethaddr=00:40:5c:26:0a:5b
gatewayip=192.168.0.1
ipaddr=192.168.0.20
netmask=255.255.255.0
serverip=192.168.0.10

Environment size: 438/16380 bytes
TINY4412 #
```

3、保存环境变量
命令提示符：help saveenv

```
TINY4412 # saveenv
Saving Environment to SMDK bootable device...
done
TINY4412 #
```

4、查看设备带点 fat 分区
```
TINY4412 # help fatinfo
fatinfo - fatinfo - print information about filesystem

Usage:
fatinfo <interface> <dev[:part]>
        - print information about filesystem from 'dev' on 'interface'

TINY4412 #
```

查看 sd 卡的信息
```
TINY4412 # fatinfo mmc 0
-----Partition 1-----
Partition1: Start Address(0x4b800), Size(0xe78800)
-----------------------
-----Partition 2-----
Partition1: Start Address(0x4b800), Size(0xe78800)
-----------------------
-----Partition 3-----
Partition1: Start Address(0x4b800), Size(0xe78800)
-----------------------
-----Partition 4-----
Partition1: Start Address(0x4b800), Size(0xe78800)
-----------------------
Interface:   SD/MMC
   Device 0: Vendor: Man 123456 Snr 4b924233 Rev: 0.0 Prod: SD
             Type: Removable Hard Disk
             Capacity: 14.7 MB = 0.0 GB (30240 x 512)
Partition 1: Filesystem: FAT32 "NO NAME       "
TINY4412 #
```

5、代码数据搬运命令
命令提示符：help mmc
```
TINY4412 # help mmc
mmc - MMC sub system

Usage:
```

```
mmc read <device num> addr blk# cnt
mmc write <device num> addr blk# cnt
mmc rescan <device num>
mmc erase <boot | user> <device num> <start block> <block count>
mmc list - lists available devices
TINY4412 #
```

把 sd 卡中的 uboot 整体搬运到 EMMC 中，取出 SD 卡，重启，设置为 EMMC 启动，看开机的效果是否与 SD 卡启动一样。
Exynos4412 的外扩 DDR3 的起始地址为：0x40000000

1、把 sd 卡中的 uboot 整体搬运到 EMMC
```
mmc    read    0    0x40000000 1 800
```
2、打开 EMMC 设备
```
emmc open 1
```
3、把内存中的 uboot 写入到 EMMC 中
```
mmc    write    1    0x40000000 0 800
```
4、关闭 EMMC 设备
```
emmc close 1
```