

# uboot的 用

help ·  
help

help env

print  
save  
set

tftp  
↑

· 地址 地址长度  
(IP, 名字)

mmc env

创客

(read, write)  
· 地 地 长

bootcmd(1;1  
server ip  
tftpaddr

# uboot的应用

创客

# uboot的

创客

# uboot的使用

创客学院 武

# uboot模式

## ■ 自启动模式 ✓

uboot启动后若没有用户介入，倒计时结束后会自动执行环境变量(bootcmd)中设置的命令（一般作加载）

## ■ 交互模式 ✓

倒计时结束之前按下任意按键uboot会进入交互模式  
用户可输入uboot命令





# uboot模式

## ■ 自启动模式 ✓

uboot启动后若没有用户介入，倒计时结束后会自动执行自启动  
环境变量(bootcmd)中设置的命令（一般作加载和启动内核）

## ■ 交互模式 ✓

倒计时结束之前按下任意按键uboot会进入交互模式，交互模式下  
用户可输入uboot命令

Day3-3 uboot的使用.pptx

开始 插入 设计 切换 动画 放映 审阅 视图 开发工具 会员专享 查找命令、搜索模板

文件 剪切 复制 格式刷 当页开始 新建幻灯片 版式 节

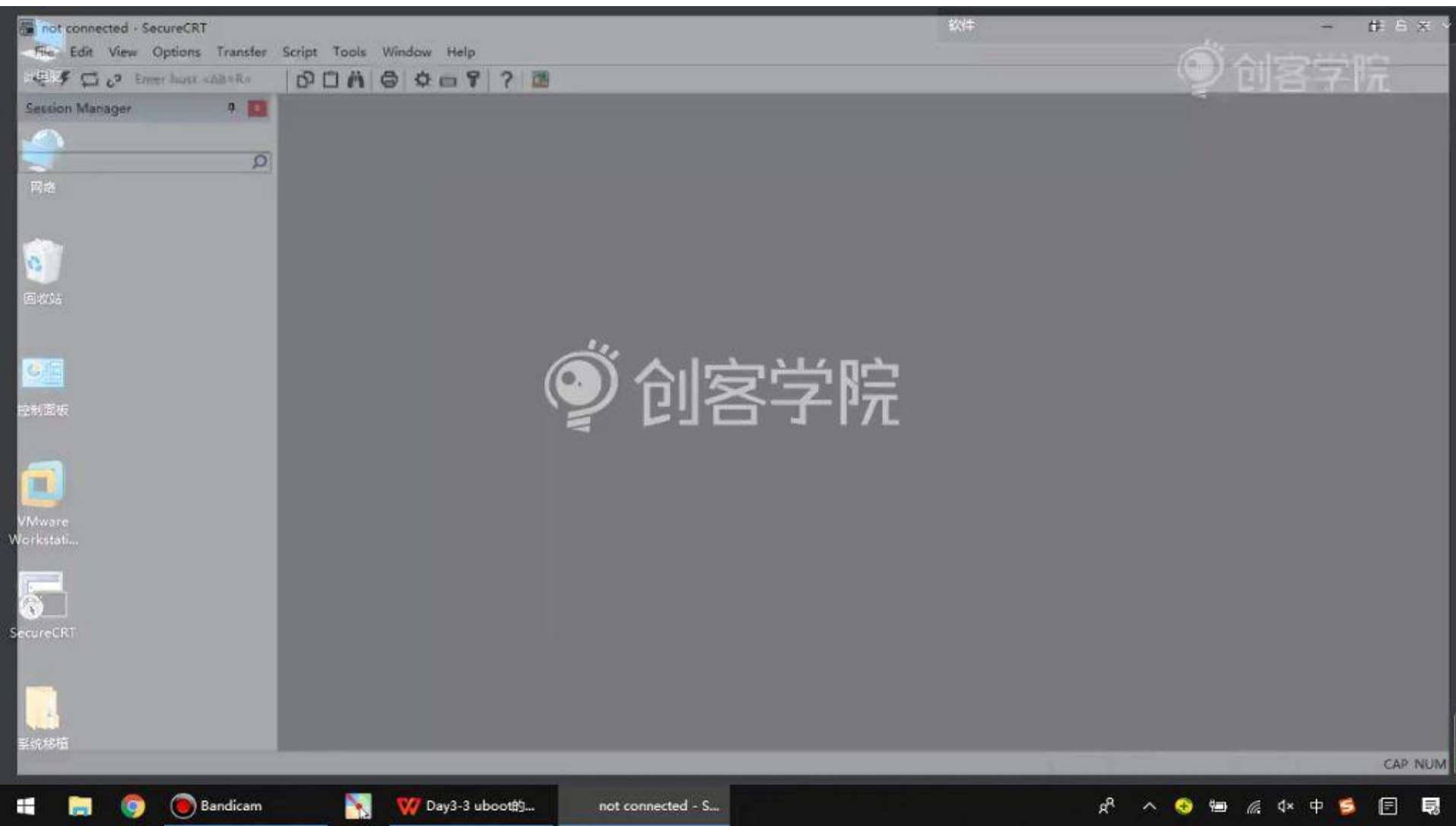
uboot模式

- 自启动模式
- uboot启动后若没有用户介入，倒计时结束后会自动执行自启动环境变量 (bootcmd) 中设置的命令（一般作加载和启动内核）
- 交互模式
- 倒计时结束之前按下任意按键uboot会进入交互模式，交互模式下用户可输入uboot命令

幻灯片 2 / 9 1\_Office 主题 T? 缺失字体

智能美化 备注 批注 71%

Bandicam Day3-3 uboot的...





not connected - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

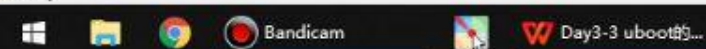
Sessions

- 192.168.1.178
- serial-com3
- serial-com4

Ready

0, 0

0 Rows, 0 Cols



serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

?

Session Manager

serial-com4

Filter by session name <Alt+I>

- Sessions
- 192.168.1.178
- serial-com3
- serial-com4

```
could not establish link
Using dm9000 device
TFTP from server 192.168.1.200; our IP address is 192.168.1.150
Filename 'uImage'.
Load address: 0x41000000
Loading: T T T T T T T T T
Retry count exceeded; starting again
dm9000 i/o: 0x5000000, id: 0x90000a46
DM9000: running in 16 bit mode
MAC: 11:22:33:44:55:66
could not establish link
Using dm9000 device
TFTP from server 192.168.1.200; our IP address is 192.168.1.150
Filename 'uImage'.
Load address: 0x41000000
Loading: T T T T
```

U-Boot 2013.01 (Apr 11 2020 - 04:15:49) for fs4412

CPU: Exynos4412@1000MHz

Board: ORIGEN

DRAM: 1 GiB

WARNING: Caches not enabled

PMIC: S5M8767(VER5.0)

MMC: MMC0: 14910 MB

In: serial

Out: serial

Err: serial

MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK  
eMMC CLOSE Success.!!

Checking Boot Mode ... EMMC4.41

Net: dm9000

Hit any key to stop autoboot: 0

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

Ready

Serial: COM4, 115200 45, 10 45 Rows, 136 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...

### 查看当前命令的使用方法

serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

- Sessions
  - 192.168.1.178
  - serial-com3
  - serial-com4

serial-com4

```
could not establish link
Using dm9000 device
TFTP from server 192.168.1.200; our IP address is 192.168.1.150
Filename 'uImage'.
Load address: 0x41000000
Loading: T T T T T T T T T T
Retry count exceeded; starting again
dm9000 i/o: 0x5000000, id: 0x90000a46
DM9000: running in 16 bit mode
MAC: 11:22:33:44:55:66
could not establish link
Using dm9000 device
TFTP from server 192.168.1.200; our IP address is 192.168.1.150
Filename 'uImage'.
Load address: 0x41000000
Loading: T T T T

U-Boot 2013.01 (Apr 11 2020 - 04:15:49) for fs4412

CPU:      Exynos4412@1000MHz

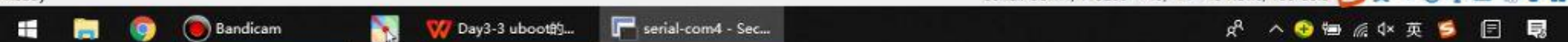
Board: ORIGIN
DRAM: 1 GiB
WARNING: Caches not enabled
PMIC: S5M8767 (VER5.0)
MMC:  MMC0:  14910 MB
In:  serial
Out: serial
Err: serial

MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK
eMMC CLOSE Success.!!

Checking Boot Mode ... EMMC4.41
Net:  dm9000
Hit any key to stop autoboot:  0
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 # help
```

Ready

Serial: COM4, 115200 45, 14 45 Rows, 136 Cols



- Sessions
- 192.168.1.178
- serial-com3
- serial-com4

```
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 # help
? - 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
cmp - memory compare
coninfo - print console devices and information
cp - memory copy
crc32 - checksum calculation
dhcp - boot image via network using DHCP/TFTP protocol
echo - echo args to console
editenv - edit environment variable
emmc - Open/Close eMMC boot Partition
env - environment handling commands
erase - erase FLASH memory
exit - exit script
false - do nothing, unsuccessfully
fatinfo - print information about filesystem
fatload - load binary file from a dos filesystem
fatls - list files in a directory (default /)
fdisk - fdisk - fdisk for sd/mmc.

fdt - flattened device tree utility commands
flinfo - print FLASH memory information
go - start application at address 'addr'
help - print command description/usage
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
```



- Sessions
- 192.168.1.178
  - serial-com3
  - serial-com4

```
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 # help
? - alias for 'help'
base - print or set address offset
bdfinfo - 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
cmp - memory compare
coninfo - print console devices and information
cp - memory copy
crc32 - checksum calculation
dhcp - boot image via network using DHCP/TFTP protocol
echo - echo args to console
editenv - edit environment variable
emmc - Open/Close eMMC boot Partition
env - environment handling commands
erase - erase FLASH memory
exit - exit script
false - do nothing, unsuccessfully
fatinfo - print information about filesystem
fatload - load binary file from a dos filesystem
fatls - list files in a directory (default /)
fdisk - fdisk - fdisk for sd/mmc.

fdt - flattened device tree utility commands
flinfo - print FLASH memory information
go - start application at address 'addr'
help - print command description/usage
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
```



- 192.168.1.178
- serial-com3
- serial-com4

```
fs4412 #
fs4412 # help
- alias for 'help'
base - print or set address offset
bdfinfo - 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
cmp - memory compare
coninfo - print console devices and information
cp - memory copy
crc32 - checksum calculation
dhcp - boot image via network using DHCP/TFTP protocol
echo - echo args to console
editenv - edit environment variable
emmc - Open/Close eMMC boot Partition
env - environment handling commands
erase - erase FLASH memory
exit - exit script
false - do nothing, unsuccessfully
fatinfo - print information about filesystem
fatload - load binary file from a dos filesystem
fatls - list files in a directory (default /)
fdisk - fdisk for sd/mmc.

fdt - flattened device tree utility commands
flinfo - print FLASH memory information
go - start application at address 'addr'
help - print command description/usage
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 - display MMC info
movi - movi - sd/mmc r/w sub system for SMDK board
```

- 192.168.1.178
- serial-com3
- serial-com4

```
serial-com4
emmc - open/close eMMC boot Partition
env - environment handling commands
erase - erase FLASH memory
exit - exit script
false - do nothing, unsuccessfully
fatinfo - print information about filesystem
fatload - load binary file from a dos filesystem
fatls - list files in a directory (default /)
fdisk - fdisk - fdisk for sd/mmc.

fdt - flattened device tree utility commands
flinfo - print FLASH memory information
go - start application at address 'addr'
help - print command description/usage
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 - display MMC info
movi - movi - sd/mmc r/w sub system for SMDK board

mtest - simple RAM read/write test
mw - memory write (fill)
nm - memory modify (constant address)
ping - send ICMP ECHO_REQUEST to network host
printenv - print environment variables
protect - enable or disable FLASH write protection
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
version - print monitor, compiler and linker version
fs4412 #
```



首页 稻壳 Day3-3 uboot的使用.pptx

文件 开始 插入 设计 切换 动画 放映 审阅 视图 开发工具 会员专享 查找命令, 搜索模板 未同步 协作 分享

粘贴 剪切 格式刷 当页开始 新建幻灯片 版式 节 0 A+ A- 对齐文本 文本框 形状 排列 转智能图形 演示工具

大纲 幻灯片

1 uboot的使用

2 uboot模式

3 uboot帮助命令

4 uboot环境设置命令

# uboot帮助命令

- help  
查看uboot支持的所有命令
- help 命令  
查看当前命令的使用方法

幻灯片 3 / 9 1\_Office 主题 T? 缺失字体 智能美化 备注 批注 71% S 中 中

Bandicam Day3-3 uboot的... serial-com4 - Sec...



- Sessions
- 192.168.1.178
- serial-com3
- serial-com4

```
fatload - load binary file from a dos filesystem
fatls - list files in a directory (default /)
fdisk - fdisk - fdisk for sd/mmc.

fdt - flattened device tree utility commands
flinfo - print FLASH memory information
go - start application at address 'addr'
help - print command description/usage
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 - display MMC info
movi - movi - sd/mmc r/w sub system for SMDK board

mtest - simple RAM read/write test
mw - memory write (fill)
nm - memory modify (constant address)
ping - send ICMP ECHO_REQUEST to network host
printenv - print environment variables
protect - enable or disable FLASH write protection
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
version - print monitor, compiler and linker version
fs4412 # help loadb
loadb - load binary file over serial line (kermit mode)

Usage:
loadb [ off ] [ baud ]
- load binary file over serial line with offset 'off' and baudrate 'baud'
fs4412 #
```



# uboot环境变量命令

- **printenv**  
打印uboot中所有的环境变量
- **setenv**  
设置指定的环境变量（保存在RAM中）  
setenv 环境变量 环境变量的值
- **saveenv**  
保存所有环境变量到EMMC中



保存所有环境变量到EMMC中

- Sessions
- 192.168.1.178
- serial-com3
- serial-com4

```
fatload - load binary file from a dos filesystem
fatls   - list files in a directory (default /)
fdisk   - fdisk - fdisk for sd/mmc.

fdt      - flattened device tree utility commands
flinfo  - print FLASH memory information
go       - start application at address 'addr'
help     - print command description/usage
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 - display MMC info
movi    - movi - sd/mmc r/w sub system for SMDK board

mtest   - simple RAM read/write test
mw       - memory write (fill)
nm       - memory modify (constant address)
ping    - send ICMP ECHO_REQUEST to network host
printenv- print environment variables
protect - enable or disable FLASH write protection
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
version - print monitor, compiler and linker version
fs4412 # help loadb
loadb   - load binary file over serial line (kermit mode)

Usage:
loadb [ off ] [ baud ]
- load binary file over serial line with offset 'off' and baudrate 'baud'
fs4412 #
```



File Edit View Options Transfer Script Tools Window Help

•    Enter host <Alt+R>

## Session Manager

Filter by session name <Alt+I>

▼ Sessions

192.168.1.178

serial-com3

serial-com4

```

true - do nothing, successfully
version - print monitor, compiler and linker version
fs4412 # help loadb
loadb - load binary file over serial line (kermit mode)

Usage:
loadb [ off ] [ baud ]
- load binary file over serial line with offset 'off' and baudrate 'baud'
fs4412 #
loadb - load binary file over serial line (kermit mode)

Usage:
loadb [ off ] [ baud ]
- load binary file over serial line with offset 'off' and baudrate 'baud'
fs4412 #
loadb - load binary file over serial line (kermit mode)

Usage:
loadb [ off ] [ baud ]
- load binary file over serial line with offset 'off' and baudrate 'baud'
fs4412 #
loadb - load binary file over serial line (kermit mode)

Usage:
loadb [ off ] [ baud ]
- load binary file over serial line with offset 'off' and baudrate 'baud'
fs4412 #
loadb - load binary file over serial line (kermit mode)

Usage:
loadb [ off ] [ baud ]
- load binary file over serial line with offset 'off' and baudrate 'baud'
fs4412 #

```

Ready

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols



Day3-3 uboot的...



serial-com4 - Sec...



serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

Sessions  
192.168.1.178  
serial-com3  
serial-com4

loadb - load binary file over serial line (kermit mode)

Usage:

loadb [ off ] [ baud ]

- load binary file over serial line with offset 'off' and baudrate 'baud'

fs4412 #

loadb - load binary file over serial line (kermit mode)

Usage:

loadb [ off ] [ baud ]

- load binary file over serial line with offset 'off' and baudrate 'baud'

fs4412 #

loadb - load binary file over serial line (kermit mode)

Usage:

loadb [ off ] [ baud ]

- load binary file over serial line with offset 'off' and baudrate 'baud'

fs4412 #

loadb - load binary file over serial line (kermit mode)

Usage:

loadb [ off ] [ baud ]

- load binary file over serial line with offset 'off' and baudrate 'baud'

fs4412 # <INTERRUPT>

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 # pri

Ready

Serial: COM4, 115200 33, 13 33 Rows, 99 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...



serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

Sessions

- 192.168.1.178
- serial-com3
- serial-com4

serial-com4

```
fs4412 #  
loadb - load binary file over serial line (kermit mode)
```

```
Usage:  
loadb [ off ] [ baud ]  
- load binary file over serial line with offset 'off' and baudrate 'baud'
```

```
fs4412 # <INTERUPT>
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 # printenv
```

```
baudrate=115200
```

```
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
```

```
ignore_unused init=/linuxrc ip=192.168.1.100
```

```
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
```

```
bootdelay=3
```

```
ethact=dm9000
```

```
ethaddr=11:22:33:44:55:66
```

```
gatewayip=192.168.1.1
```

```
ipaddr=192.168.1.150
```

```
netmask=255.255.255.0
```

```
serverip=192.168.1.200
```

```
stderr=serial
```

```
stdin=serial
```

```
stdout=serial
```

```
Environment size: 459/16380 bytes
```

```
fs4412 #
```

Ready

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...

serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

Sessions

192.168.1.178  
serial-com3  
serial-com4

serial-com4

fs4412 #  
loadb - load binary file over serial line (kermit mode)

Usage:  
loadb [ off ] [ baud ]  
- load binary file over serial line with offset 'off' and baudrate 'baud'

fs4412 # <INTERUPT>

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 #

fs4412 # printenv

baudrate=115200

bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk

ignore\_unused init=/linuxrc ip=192.168.1.100

bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000

bootdelay=3

ethact=dm9000

ethaddr=11:22:33:44:55:66

gatewayip=192.168.1.1

ipaddr=192.168.1.150

netmask=255.255.255.0

serverip=192.168.1.200

stderr=serial

stdin=serial

stdout=serial

Environment size: 459/16380 bytes

fs4412 #

Ready

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...



- 192.168.1.178
- serial-com3
- serial-com4

```
fs4412 #
loadb - load binary file over serial line (kermit mode)

Usage:
loadb [ off ] [ baud ]
- load binary file over serial line with offset 'off' and baudrate 'baud'

fs4412 # <INTERUPT>
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 #
fs4412 # printenv
baudrate=115200
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.150
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial

Environment size: 459/16380 bytes
fs4412 #
```

- 192.168.1.178
- serial-com3
- serial-com4

```
fs4412 #  
loadb - load binary file over serial line (kermit mode)
```

Usage:

```
loadb [ off ] [ baud ]  
- load binary file over serial line with offset 'off' and baudrate 'baud'
```

```
fs4412 # <INTERUPT>
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 #
```

```
fs4412 # printenv
```

```
baudrate=115200
```

```
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk
```

```
ignore_unused init=/linuxrc ip=192.168.1.100
```

```
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
```

```
bootdelay=3
```

```
ethact=dm9000
```

```
ethaddr=11:22:33:44:55:66
```

```
gatewayip=192.168.1.1
```

```
ipaddr=192.168.1.150
```

```
netmask=255.255.255.0
```

```
serverip=192.168.1.200
```

```
stderr=serial
```

```
stdin=serial
```

```
stdout=serial
```

```
Environment size: 459/16380 bytes
```

```
fs4412 #
```

serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

Sessions  
192.168.1.178  
serial-com3  
serial-com4

```
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.150
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial

Environment size: 459/16380 bytes
fs4412 #
baudrate=115200
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.150
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial

Environment size: 459/16380 bytes
fs4412 #
```

Ready

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...

Day3-3 uboot的使用.pptx

文件 开始 插入 设计 切换 动画 放映 审阅 视图 开发工具 会员专享 绘图工具 文本工具

格式刷 格式 20 文本填充 文本轮廓 文本效果 形状填充 形状轮廓

大纲 幻灯片

1 uboot的使用

2 uboot模式

3 uboot启动命令

4 uboot环境设置命令

# uboot环境变量命令

- printenv**  
打印uboot中的所有环境变量
- setenv**  
设置指定的环境变量（保存在RAM中）  
setenv 环境变量 环境变量的值
- saveenv**  
保存所有环境变量到EMMC中

幻灯片 4 / 9 1\_Office 主题 T? 缺失字体

智能美化 备注 批注 71%

Bandicam Day3-3 uboot的... serial-com4 - Sec...



大纲 幻灯片

1 uboot的使用

2 uboot的启动

3 uboot的启动命令

4 uboot的启动命令

# uboot环境变量命令

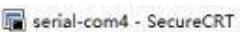
- printenv  
打印uboot中所有的环境变量
- setenv  
设置指定的环境变量（保存在RAM中）  
setenv 环境变量 环境变量的值
- saveenv  
保存所有环境变量到EMMC中



## uboot环境变量命令

- printenv**  
打印uboot中的所有环境变量
- setenv**  
设置指定的环境变量（保存在RAM中）  
`setenv 环境变量 环境变量的值`
- saveenv**  
保存所有环境变量到EMMC中





File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

## Session Manager

Filter by session name <Alt+I>

▼ Sessions

192.168.1.178

serial-com3

serial-com4

```
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.100
ipdaar=192.168.1.100
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial
```

```
Environment size: 482/16380 bytes
U-Boot 2013.01 (Apr 11 2020 - 04:15:49) for fs4412
```

CPU: Exynos4412@1000MHz

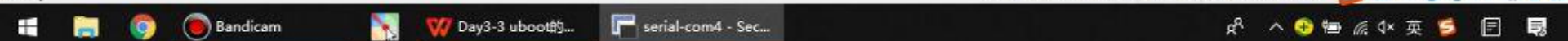
```
Board: ORIGIN
DRAM: 1 GiB
WARNING: Caches not enabled
PMIC: S5M8767 (VER5.0)
MMC: MMC0: 14910 MB
In: serial
Out: serial
Err: serial
```

```
MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK
eMMC CLOSE Success.!!
```

```
Checking Boot Mode ... EMMC4.41
Net: dm9000
Hit any key to stop autoboot: 0
fs4412 # print
```

Ready

Serial: COM4, 115200 33, 15 33 Rows, 99 Cols



serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

Sessions  
192.168.1.178  
serial-com3  
serial-com4

serial-com4

DRAM: 1 GiB  
WARNING: Caches not enabled  
PMIC: S5M8767 (VER5.0)  
MMC: MMC0: 14910 MB  
In: serial  
Out: serial  
Err: serial

MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK  
eMMC CLOSE Success.!!

Checking Boot Mode ... EMMC4.41

Net: dm9000

Hit any key to stop autoboot: 0

fs4412 # printenv

baudrate=115200

bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk\_

ignore\_unused init=/linuxrc ip=192.168.1.100

bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000

bootdelay=3

ethact=dm9000

ethaddr=11:22:33:44:55:66

gatewayip=192.168.1.1

ipaddr=192.168.1.150

netmask=255.255.255.0

serverip=192.168.1.200

stderr=serial

stdin=serial

stdout=serial

Environment size: 459/16380 bytes

fs4412 #

Ready

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...

大纲 幻灯片

1 uboot的使用

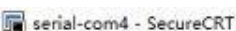
2 uboot模式

3 uboot启动命令

4 uboot环境变量命令

## uboot环境变量命令

- **printenv**  
打印uboot中的所有环境变量
- **setenv**  
设置指定的环境变量（保存在RAM中）  
setenv 环境变量 环境变量的值
- **saveenv**  
保存所有环境变量到EMMC中



File Edit View Options Transfer Script Tools Window Help

•    Enter host <Alt+R>

## Session Manager

Filter by session name <Alt+I>

▼ Sessions

192.168.1.178

serial-com3

serial-com4

```

DRAM: 1 GiB
WARNING: Caches not enabled
PMIC: S5M8767 (VER5.0)
MMC: MMC0: 14910 MB
In: serial
Out: serial
Err: serial

```

```
MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK
eMMC CLOSE Success.!!
```

```
Checking Boot Mode ... EMMC4.41
```

Net: dm9000

```
Hit any key to stop autoboot: 0
```

```
fs4412 # printenv
```

```
baudrate=115200
```

```
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
```

```
ignore_unused init=/linuxrc ip=192.168.1.100
```

```
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
```

```
bootdelay=3
```

ethact=dm9000

```
ethaddr=11:22:33:44:55:66
```

```
gatewayip=192.168.1.1
```

```
ipaddr=192.168.1.150
```

```
netmask=255.255.255.0
```

```
serverip=192.168.1.200
```

```
serverip=192.168.1.100
stderr=serial
```

```
stdin=serial
```

```
stdout=serial
```

```
Environment size: 459/16380 bytes
```

fs4412 #

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols

Ready

Bandicam

### Day3-3 uboot的...

serial-com4 - Sec...

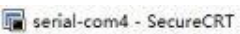


- 192.168.1.178
- serial-com3
- serial-com4

```
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
version - print monitor, compiler and linker version
fs4412 # printenv
baudrate=115200
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused_init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.150
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial

Environment size: 459/16380 bytes
fs4412 # setenv ipaddr 192.168.1.100
fs4412 # saveenv
Saving Environment to MMC...
Writing to MMC(0)... .done
fs4412 #
```





File Edit View Options Transfer Script Tools Window Help

⚡ ⏪ ⌂ Enter host <Alt+R>

Session Manager



Filter by session name <Alt+I>

▼ Sessions

192.168.1.178

serial-com3

serial-com4

```
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial
```

```
Environment size: 459/16380 bytes
fs4412 # setenv ipaddr 192.168.1.100
fs4412 # saveenv
Saving Environment to MMC...
Writing to MMC(0)... done
fs4412 #
U-Boot 2013.01 (Apr 11 2020 - 04:15:49) for fs4412
```

CPU: Exynos4412@1000MHz

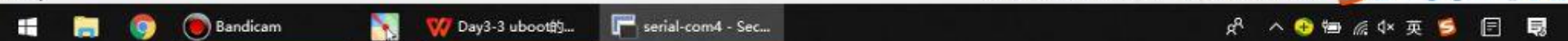
```
Board: ORIGIN
DRAM: 1 GiB
WARNING: Caches not enabled
PMIC: S5M8767 (VER5.0)
MMC: MMC0: 14910 MB
In: serial
Out: serial
Err: serial
```

```
MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK
eMMC CLOSE Success.!!
```

```
Checking Boot Mode ... EMMC4.41
Net: dm9000
Hit any key to stop autoboot: 0
fs4412 #
```

Ready

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols



serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

Sessions

192.168.1.178  
serial-com3  
serial-com4

✓ serial-com4  
DRAM: 1 GiB  
WARNING: Caches not enabled  
PMIC: S5M8767(VER5.0)  
MMC: MMC0: 14910 MB  
In: serial  
Out: serial  
Err: serial

MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK  
eMMC CLOSE Success.!!

Checking Boot Mode ... EMMC4.41

Net: dm9000

Hit any key to stop autoboot: 0

fs4412 # printenv

baudrate=115200

bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk\_

ignore\_unused init=/linuxrc ip=192.168.1.100

bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000

bootdelay=3

ethact=dm9000

ethaddr=11:22:33:44:55:66

gatewayip=192.168.1.1

ipaddr=192.168.1.100

netmask=255.255.255.0

serverip=192.168.1.200

stderr=serial

stdin=serial

stdout=serial

Environment size: 459/16380 bytes

fs4412 #

Ready

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...



serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

Sessions  
192.168.1.178  
serial-com3  
serial-com4

```
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.100
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial
```

Environment size: 459/16380 bytes

fs4412 # printenv

baudrate=115200

bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk\_

ignore\_unused init=/linuxrc ip=192.168.1.100

bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000

bootdelay=3

ethact=dm9000

ethaddr=11:22:33:44:55:66

gatewayip=192.168.1.1

ipaddr=192.168.1.100

netmask=255.255.255.0

serverip=192.168.1.200

stderr=serial

stdin=serial

stdout=serial

Environment

fs4412

0 bytes

Ready

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...







## Session Manager

Filter by session name &lt;Alt+I&gt;

- Sessions
- 192.168.1.178
- serial-com3
- serial-com4

```
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.100
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial

Environment size: 459/16380 bytes
fs4412 # printenv
baudrate=115200
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.100
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial

Environment size: 459/16380 bytes
fs4412 #
```

Current selection: 27, 23 to 27, 10

Serial: COM4, 115200 33, 10 33 Rows, 99 Cols

进入自启动模式之前倒计时的秒数

- 192.168.1.178
- serial-com3
- serial-com4

```
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.100
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial

Environment size: 459/16380 bytes
fs4412 # printenv
baudrate=115200
bootargs=root=/dev/nfs nfsroot=192.168.1.200:/home/hyr/source/rootfs rw console=ttySAC2,115200 clk_
ignore_unused init=/linuxrc ip=192.168.1.100
bootcmd=tftp 41000000 uImage;tftp 42000000 exynos4412-fs4412.dtb;bootm 41000000 - 42000000
bootdelay=3
ethact=dm9000
ethaddr=11:22:33:44:55:66
gatewayip=192.168.1.1
ipaddr=192.168.1.100
netmask=255.255.255.0
serverip=192.168.1.200
stderr=serial
stdin=serial
stdout=serial

Environment size: 459/16380 bytes
fs4412 #
```

serial-com4 - SecureCRT

File Edit View Options Transfer Script Tools Window Help

Enter host <Alt+R>

Session Manager

Filter by session name <Alt+I>

Sessions

192.168.1.178  
serial-com3  
serial-com4

MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK  
eMMC CLOSE Success.!!

Checking Boot Mode ... EMMC4.41  
Net: dm9000  
Hit any key to stop autoboot: 0  
fs4412 # setenv bootdelay 5  
fs4412 # saveenv  
Saving Environment to MMC...  
Writing to MMC(0)... .done  
fs4412 #

U-Boot 2013.01 (Apr 11 2020 - 04:15:49) for fs4412

CPU: Exynos4412@1000MHz

Board: ORIGIN  
DRAM: 1 GiB  
WARNING: Caches not enabled  
PMIC: S5M8767(VER5.0)  
MMC: MMC0: 14910 MB  
In: serial  
Out: serial  
Err: serial

MMC read: dev # 0, block # 48, count 16 ...16 blocks read: OK  
eMMC CLOSE Success.!!

Checking Boot Mode ... EMMC4.41  
Net: dm9000  
Hit any key to stop autoboot: 4

Ready

Serial: COM4, 115200 33, 34 33 Rows, 99 Cols

Bandicam

Day3-3 uboot的...

serial-com4 - Sec...



# uboot常用环境变量

- ipaddr**  
uboot的IP地址
- serverip**  
服务器的IP地址 (即ubuntu的IP)
- bootdelay**  
进入自启动模式之前倒计时的秒数



进入自启动模式之前倒计时的秒数