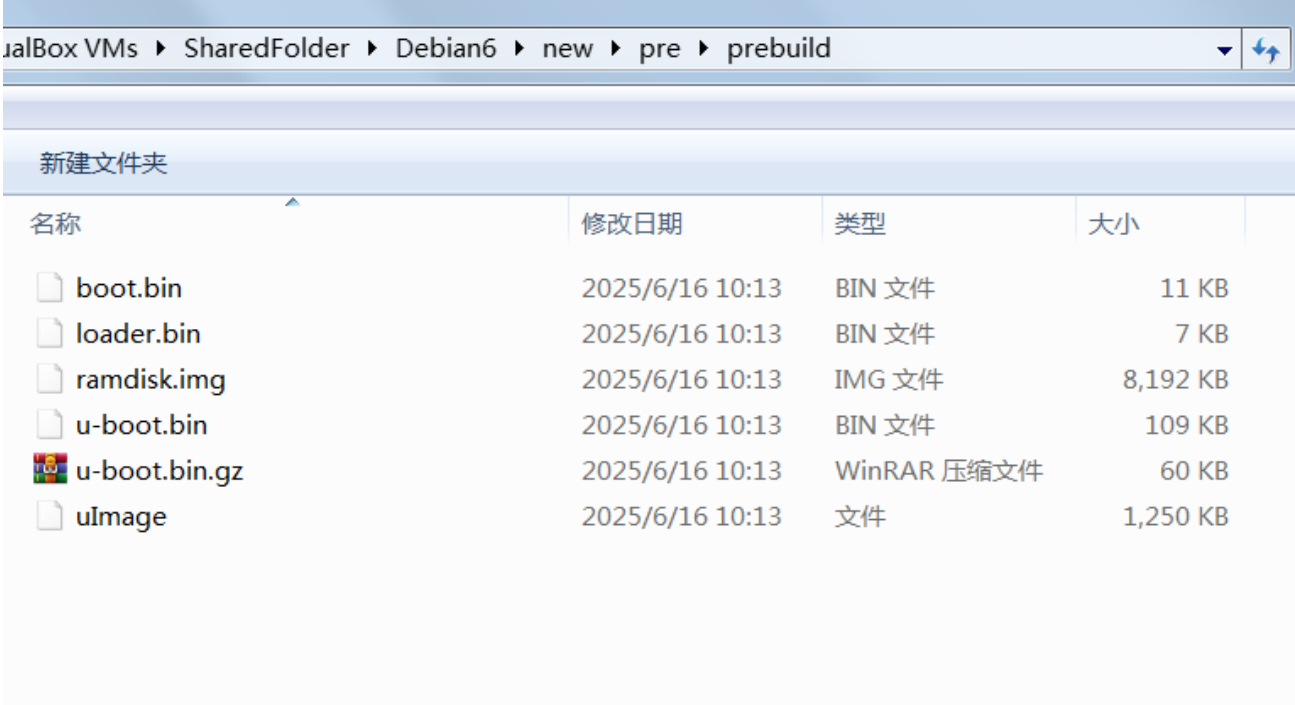


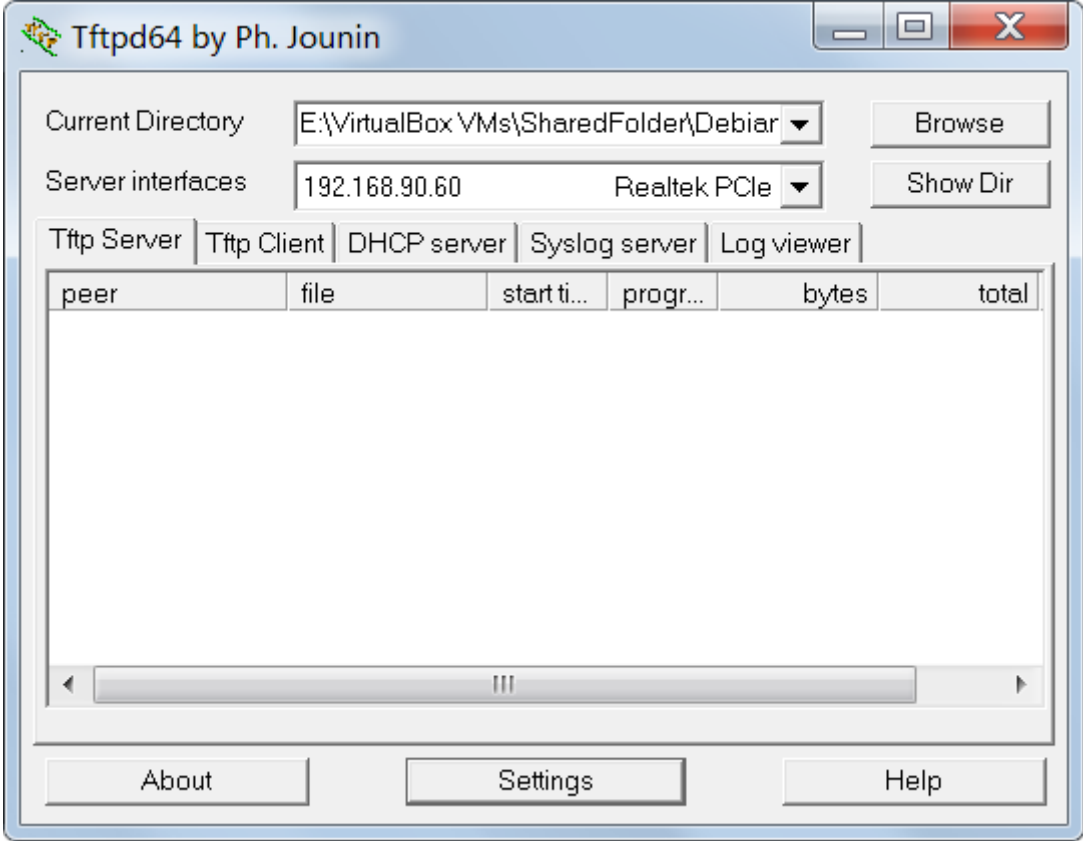
DEC操作说明

程序文件与服务准备

- 从代码仓库下载prebuild目录到某一个windows目录



- 启动tftp服务软件



- 配置目录并保存 (Settings-->TFTP)

Tftpd64: Settings

GLOBAL | TFTP | DHCP | SYSLOG | DNS

Base Directory

tualBox VMs\SharedFolder\Debian6\new\pre\prebuild Browse

TFTP Security

☐ None

☒ Standard

☐ High

☐ Read Only

TFTP configuration

Timeout (seconds) 3

Max Retransmit 6

Tftp port 69

local ports pool

Advanced TFTP Options

☒ Option negotiation

☐ PXE Compatibility

☒ Show Progress bar

☒ Translate Unix file names

☒ Bind TFTP to this address 192.168.90.60

☐ Allow '\ ' As virtual root

☐ Use anticipation window of 0 Bytes

☐ Hide Window at startup

☐ Create "dir.txt" files

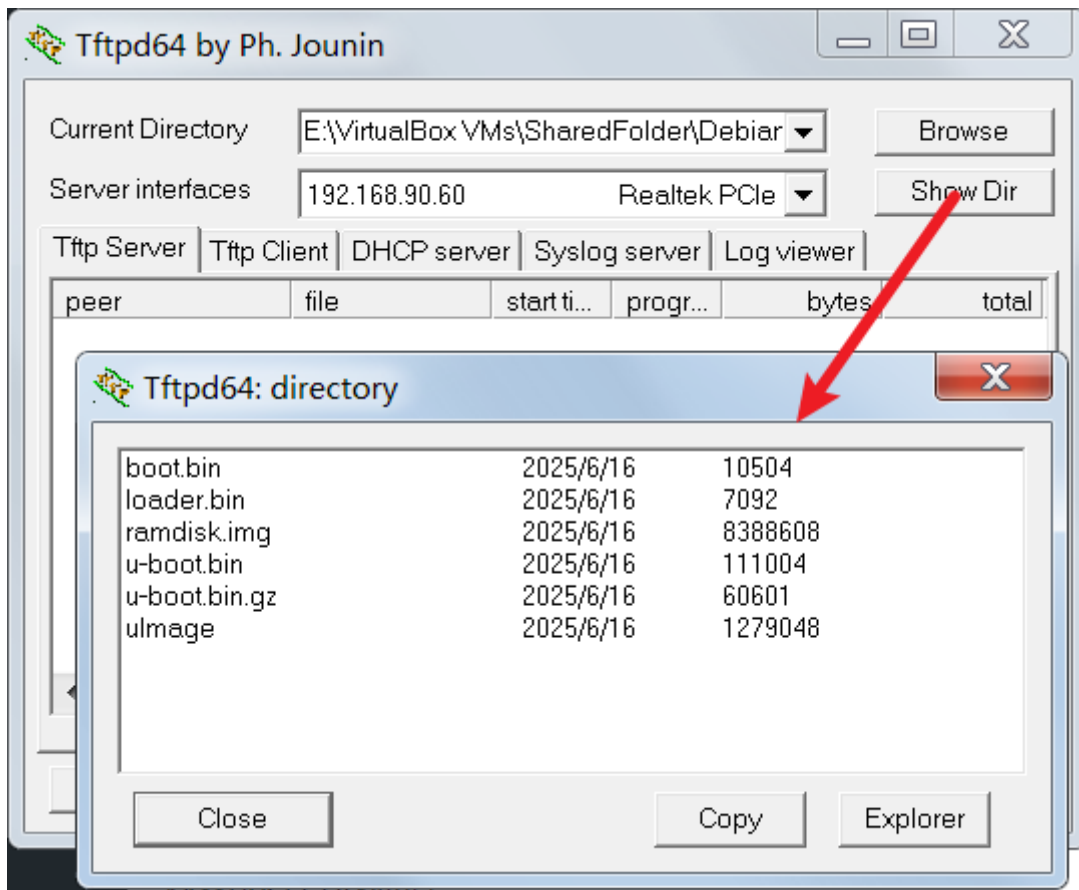
☐ Create md5 files

☐ Beep for long transfer

☐ Reduce '/' in file path

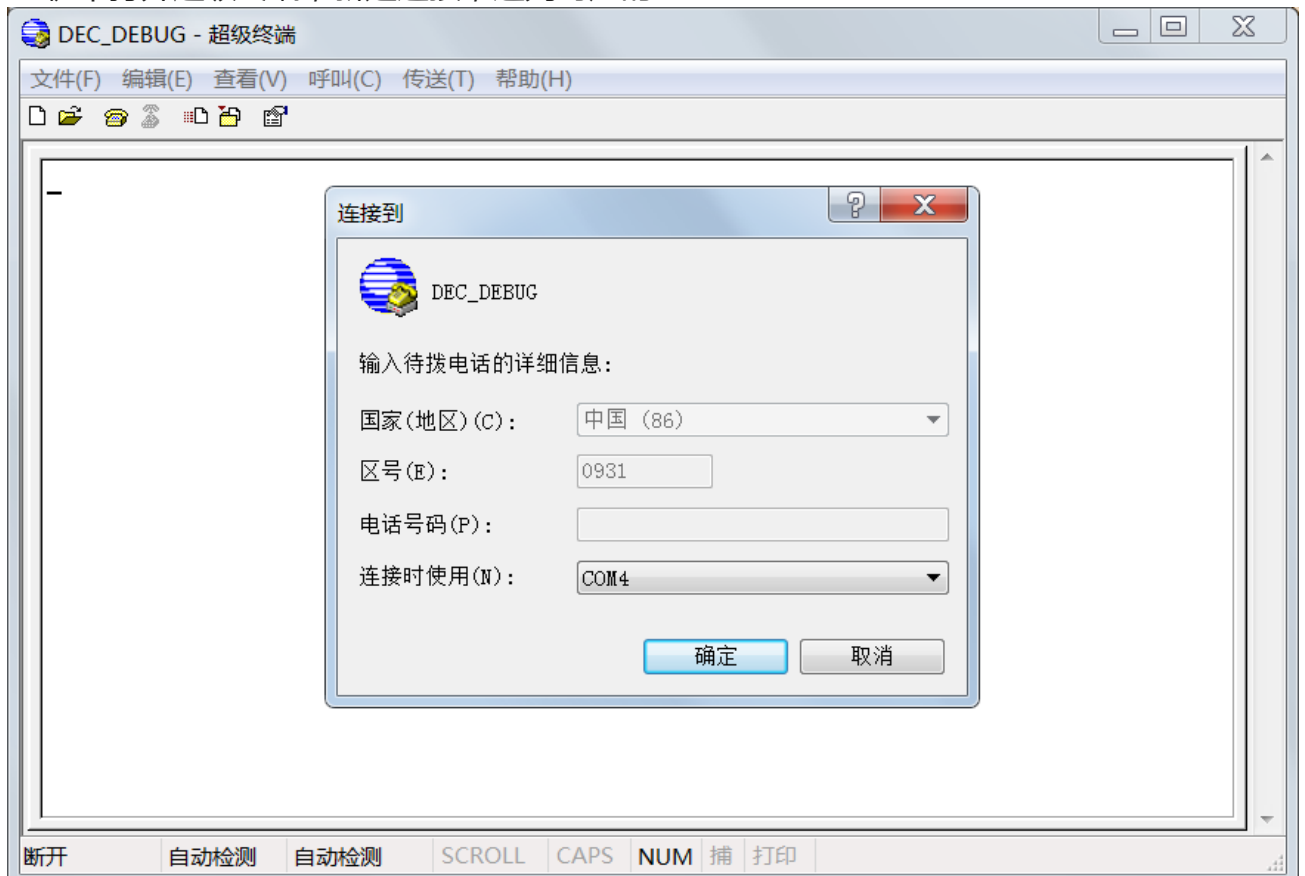
OK Default Help Cancel

- 就绪

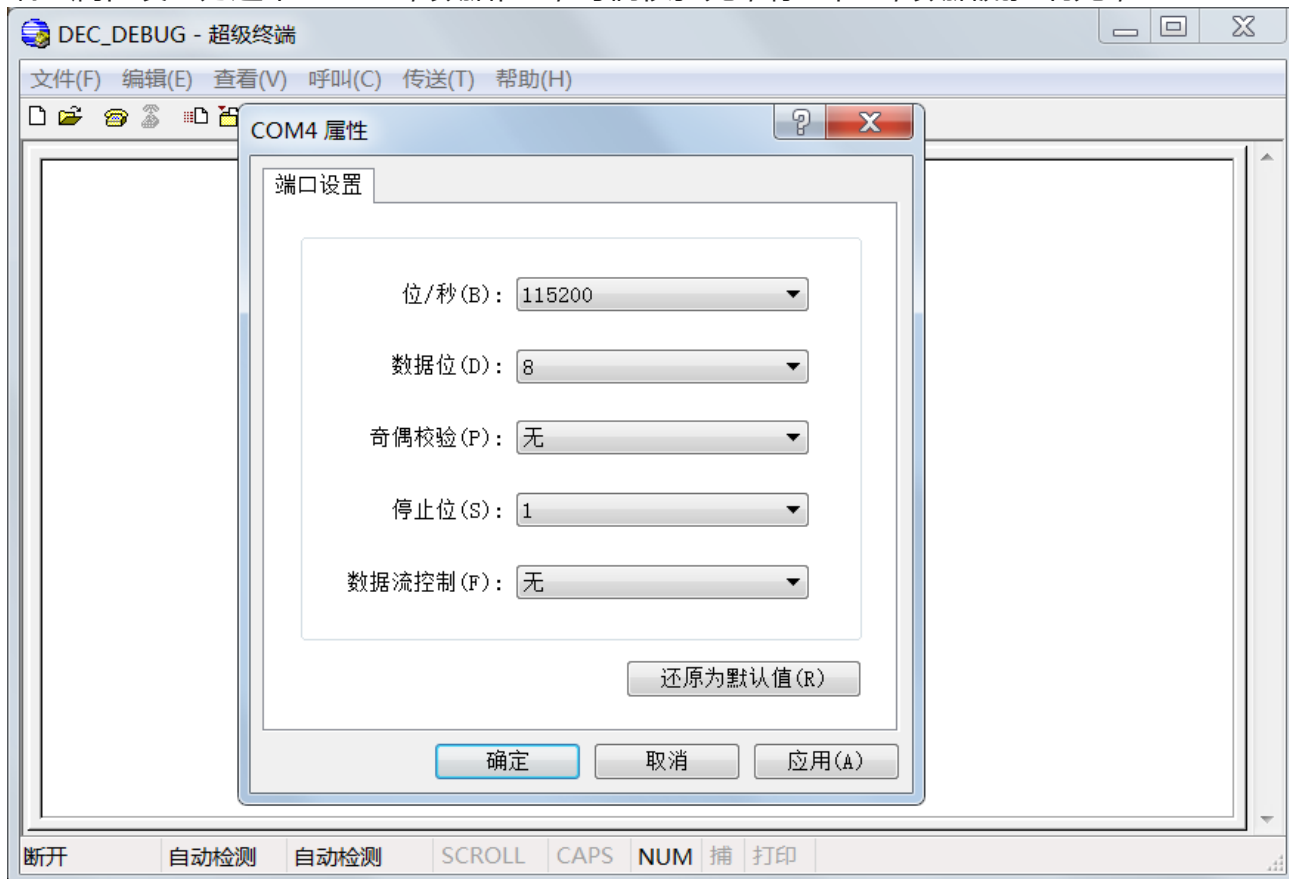


程序下载与系统启动

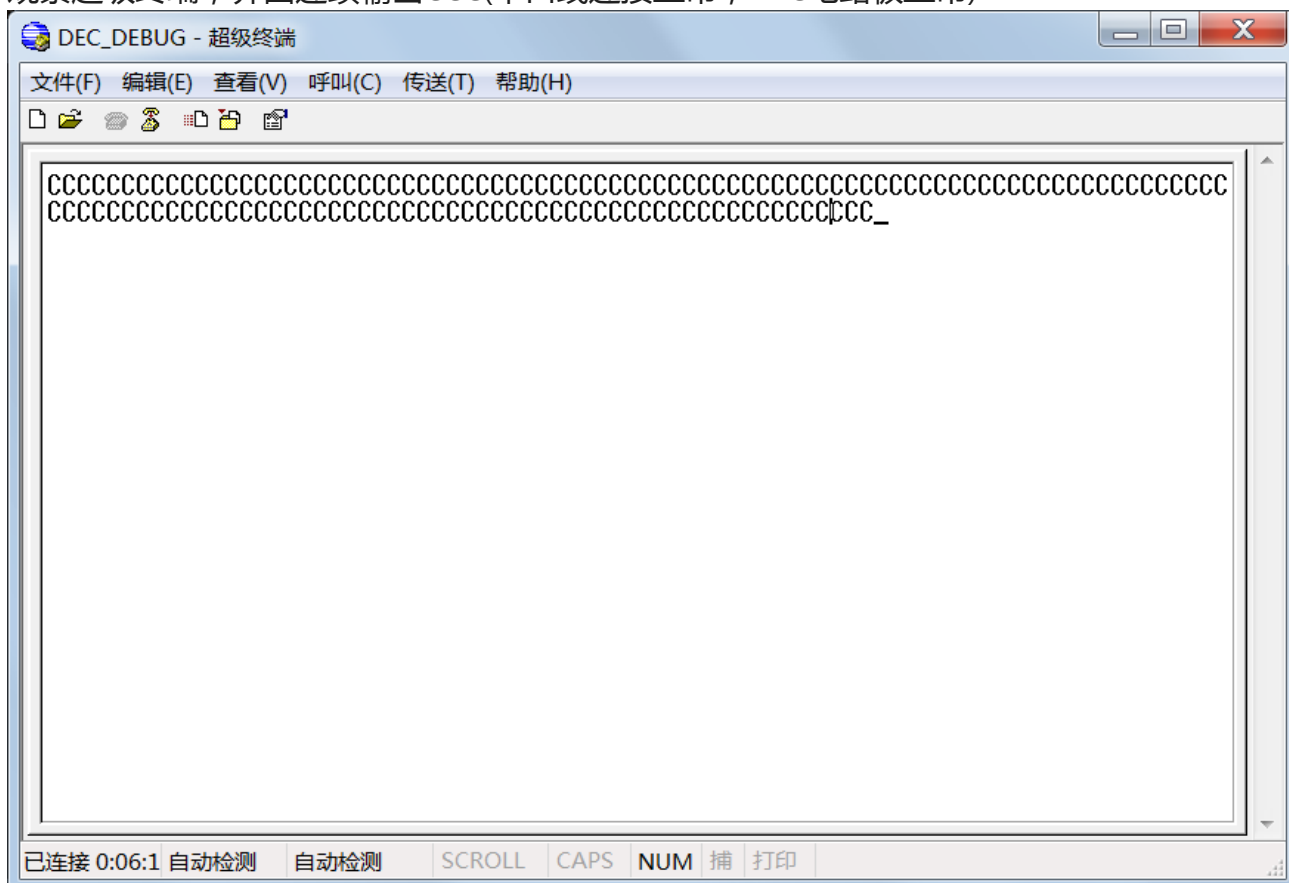
- PC使用串口线连接到DEC的DEBUG_COM口
- PC机中打开超级终端，新建连接，选则对应的com口



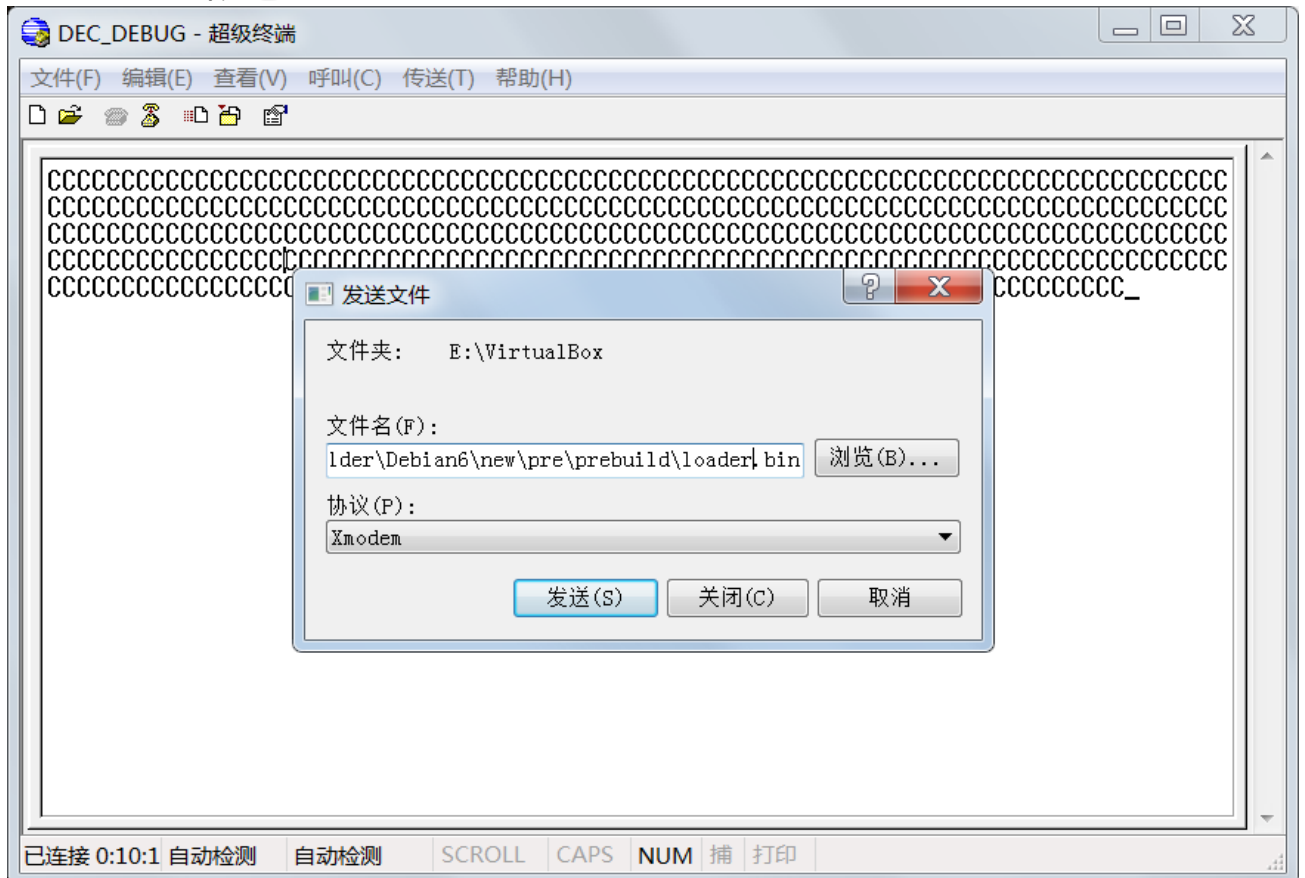
- 端口属性设置为速率115200，数据位8，奇偶校验无，停止位1，数据流控制无；



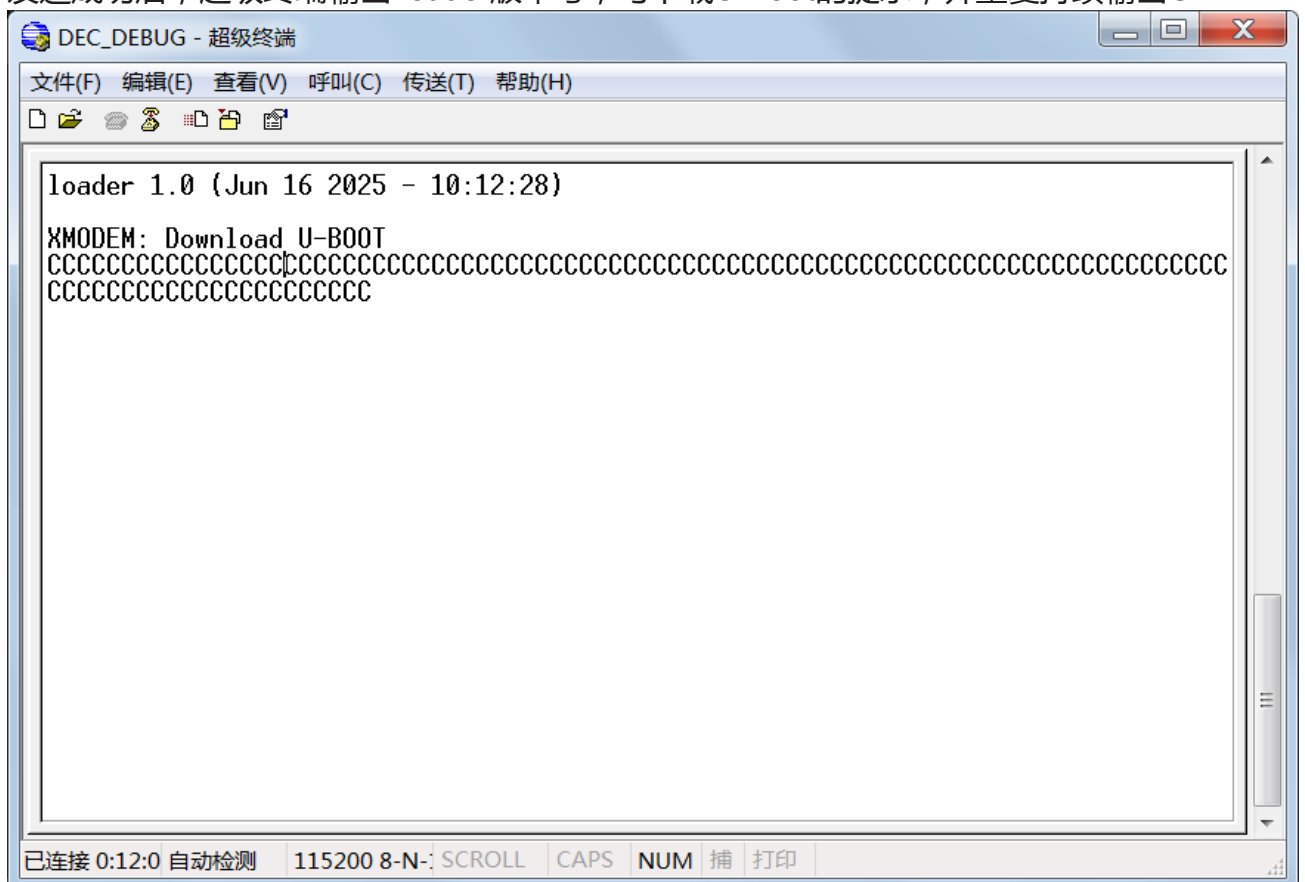
- 启动跳线J1(具体见附件板子上的红色方框所在位置)至internal，即跳线帽进行对应的跳线;(由于2.0DEC主板丝印印错，裸板调试时跳线需接至external侧);
- 通过按钮重置(reset)DEC电路板
- 观察超级终端，界面连续输出CCC(串口线连接正常，DEC电路板正常)



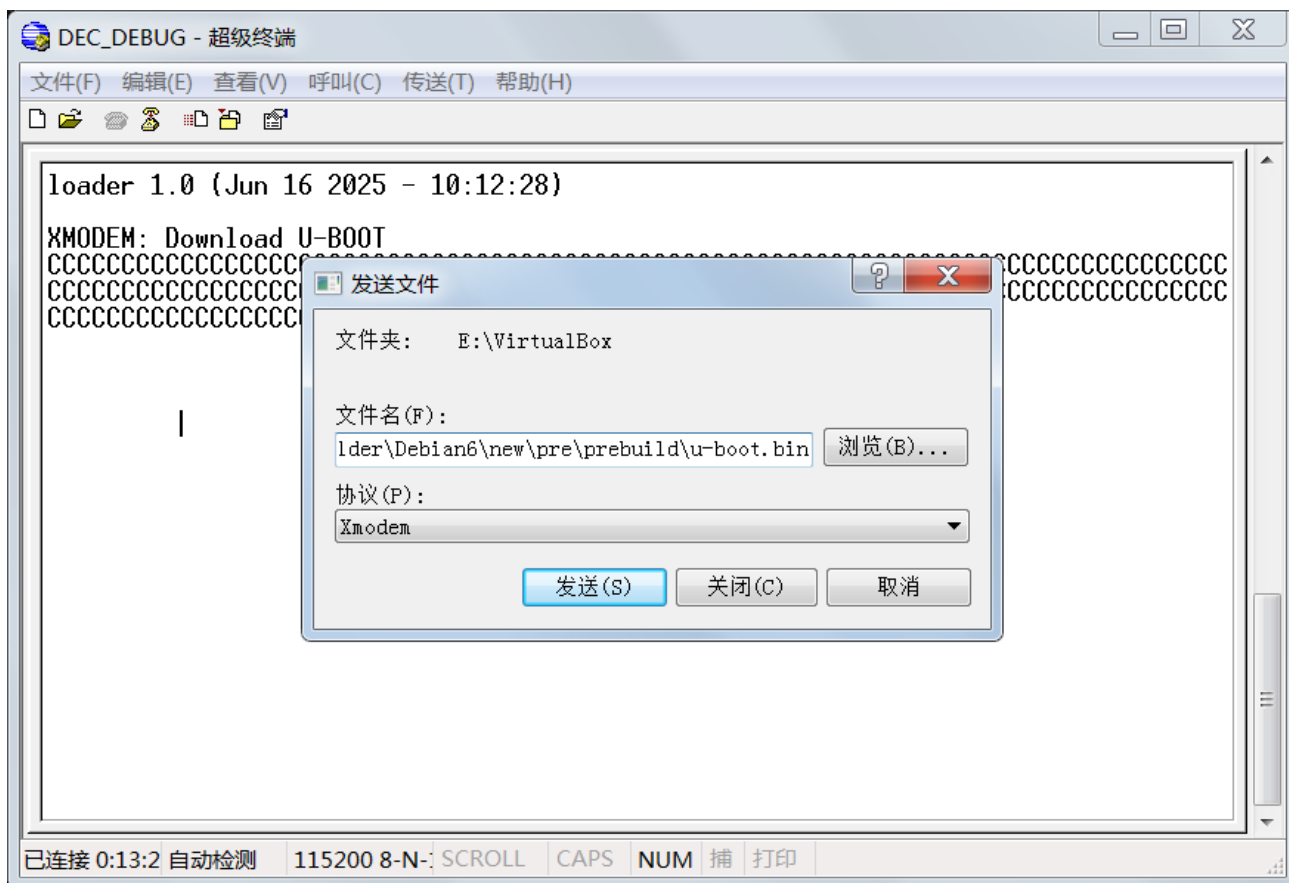
- 在超级终端界面菜单栏，选择 传送 ——> 发送文件，选择loader.bin文件路径，协议选择Xmodem, 点击发送



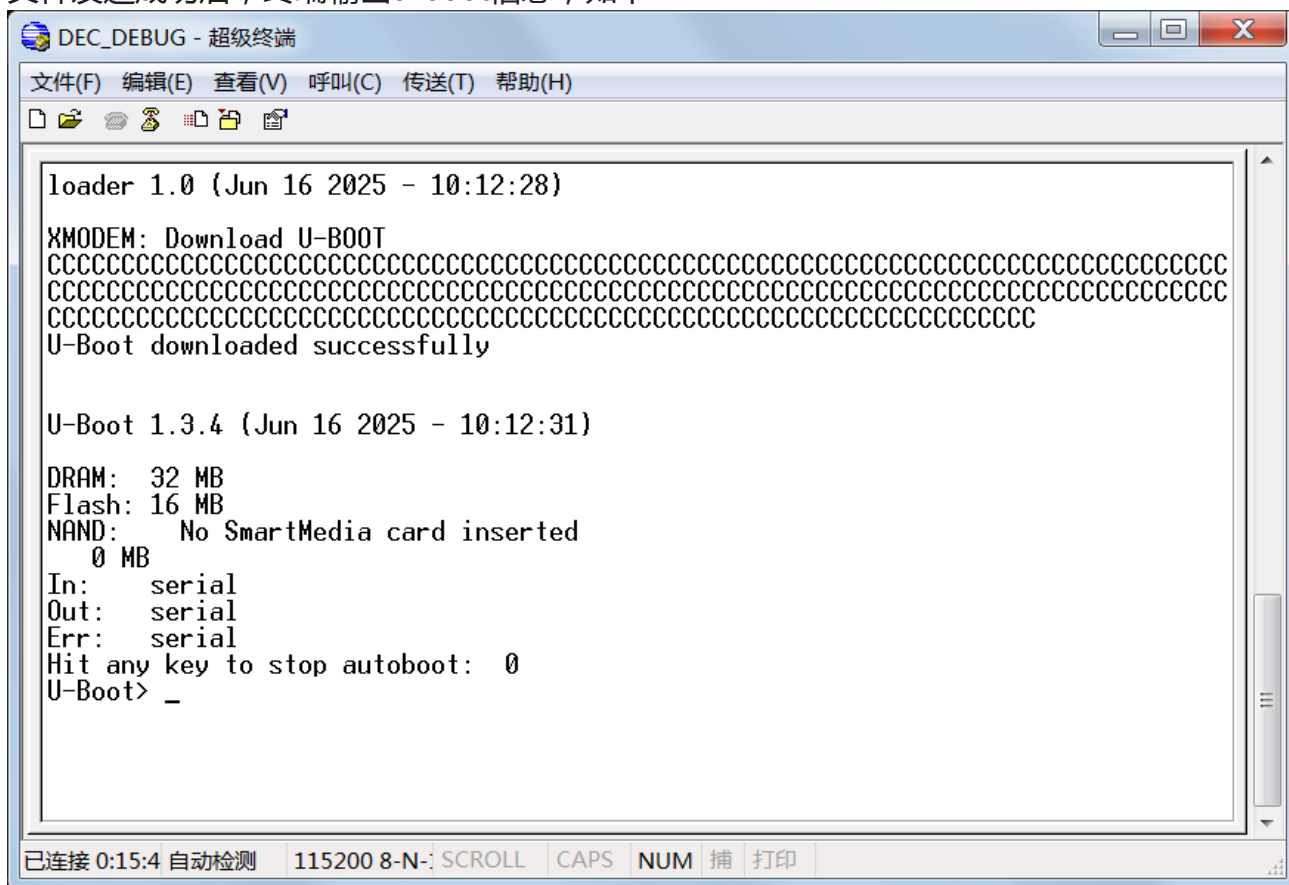
- 发送成功后，超级终端输出 loader版本号，与下载U-Boot的提示，并重复持续输出C



- 再次超级终端界面菜单栏，选择 传送 ——> 发送文件，文件选择u-boot.bin，协议选择Xmodem, 点击发送



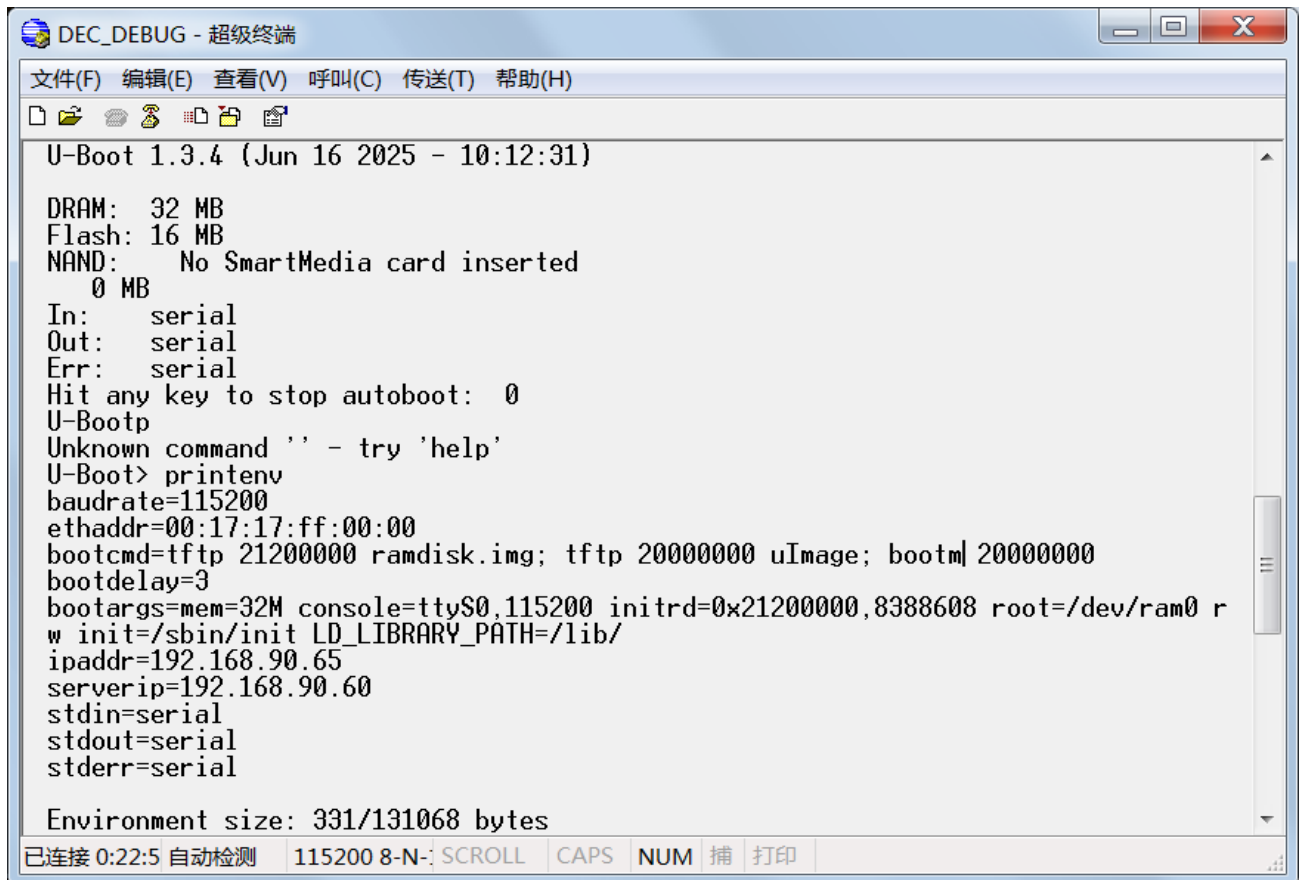
- 文件发送成功后，终端输出u-boot信息，如下



- 设置u-boot的环境变量，如ipaddr, serverip, ethaddr，参考值如下：

```
baudrate=115200
ethaddr=00:17:17:ff:00:00
bootcmd=tftp 21200000 ramdisk.img; tftp 20000000 uImage; bootm 20000000
bootdelay=3
bootargs=mem=32M console=ttyS0,115200 initrd=0x21200000,8388608 root=/dev/ram0 r
```

```
w init=/sbin/init LD_LIBRARY_PATH=/lib/  
ipaddr=192.168.90.65  
serverip=192.168.90.60  
stdin=serial  
stdout=serial  
stderr=serial
```



DEC_DEBUG - 超级终端

文件(F) 编辑(E) 查看(V) 呼叫(C) 传送(T) 帮助(H)

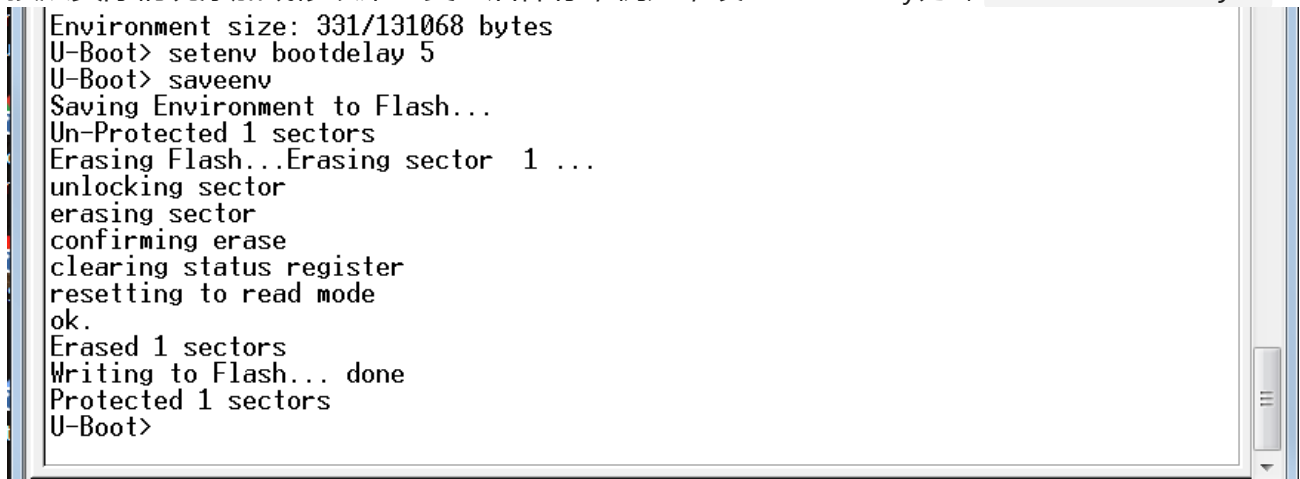
U-Boot 1.3.4 (Jun 16 2025 - 10:12:31)

DRAM: 32 MB
Flash: 16 MB
NAND: No SmartMedia card inserted
0 MB
In: serial
Out: serial
Err: serial
Hit any key to stop autoboot: 0
U-Boot
Unknown command '' - try 'help'
U-Boot> printenv
baudrate=115200
ethaddr=00:17:17:ff:00:00
bootcmd=tftp 21200000 ramdisk.img; tftp 20000000 uImage; bootm 20000000
bootdelay=3
bootargs=mem=32M console=ttyS0,115200 initrd=0x21200000,8388608 root=/dev/ram0 r
w init=/sbin/init LD_LIBRARY_PATH=/lib/
ipaddr=192.168.90.65
serverip=192.168.90.60
stdin=serial
stdout=serial
stderr=serial

Environment size: 331/131068 bytes

已连接 0:22:5 自动检测 115200 8-N- SCROLL CAPS NUM 捕 打印

- 按照实际情况添加或修改某些变量后保存，例如，设置bootdelay为5, `setenv bootdelay 5`



Environment size: 331/131068 bytes
U-Boot> setenv bootdelay 5
U-Boot> saveenv
Saving Environment to Flash...
Un-Protected 1 sectors
Erasing Flash...Erasing sector 1 ...
unlocking sector
erasing sector
confirming erase
clearing status register
resetting to read mode
ok.
Erased 1 sectors
Writing to Flash... done
Protected 1 sectors
U-Boot>

- 解除保护并擦除第一个flash块

```
protect off 10000000 1001ffff  
erase 10000000 1001ffff
```

```

U-Boot> protect off 10000000 1001ffff
Un-Protected 1 sectors
U-Boot> erase 10000000 1001ffff
Erasing sector 0 ...
unlocking sector
erasing sector
confirming erase
clearing status register
resetting to read mode
ok.
Erased 1 sectors
U-Boot>

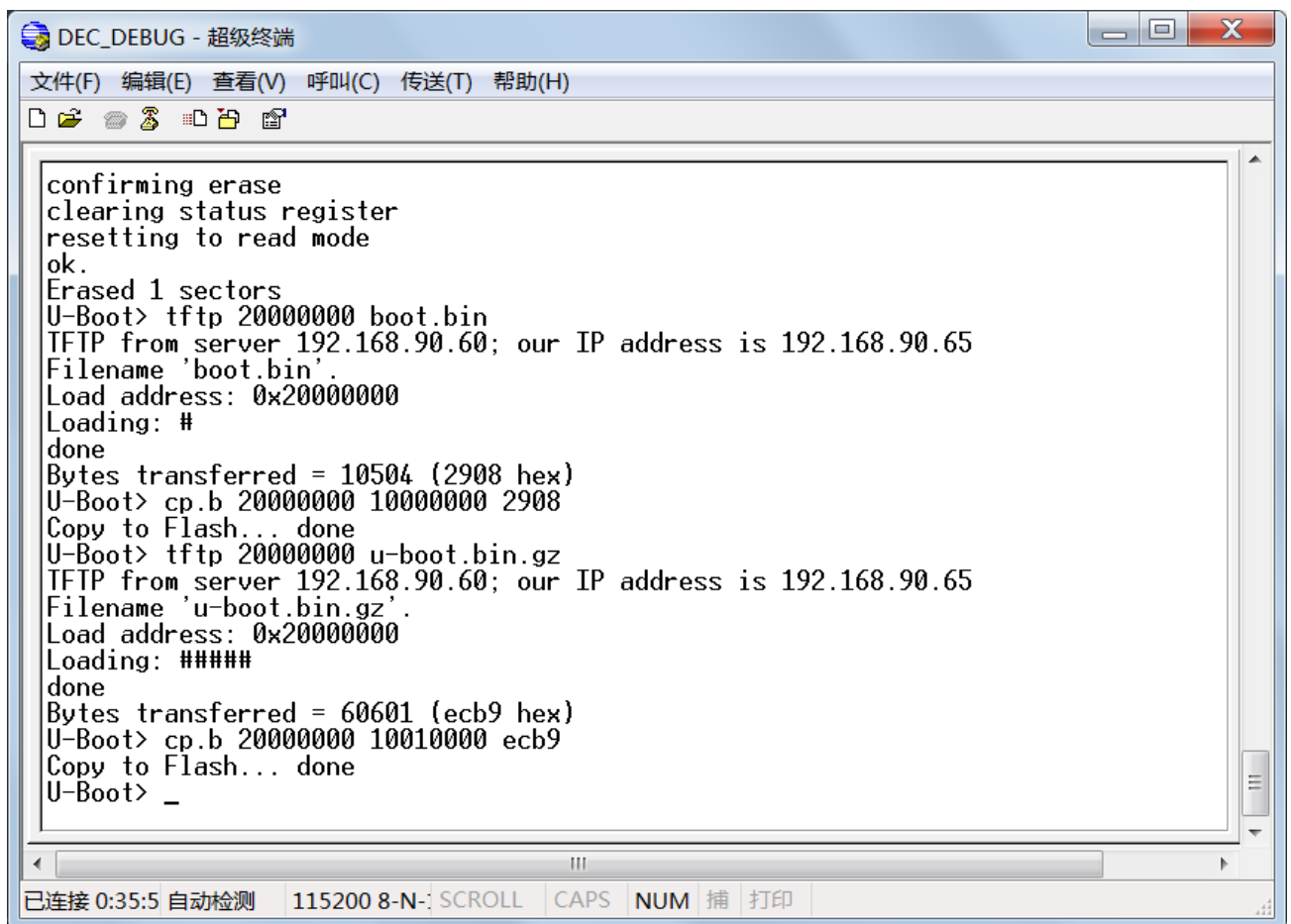
```

- 从tftp服务器下载boot.bin

```

tftp 20000000 boot.bin
cp.b 20000000 10000000 2908
tftp 20000000 u-boot.bin.gz
cp.b 20000000 10010000 ecb9

```



- 设置flash保护

```

protect on 10000000 1001ffff

```

```

U-Boot> protect on 10000000 1001ffff
Protected 1 sectors
U-Boot> flinfo

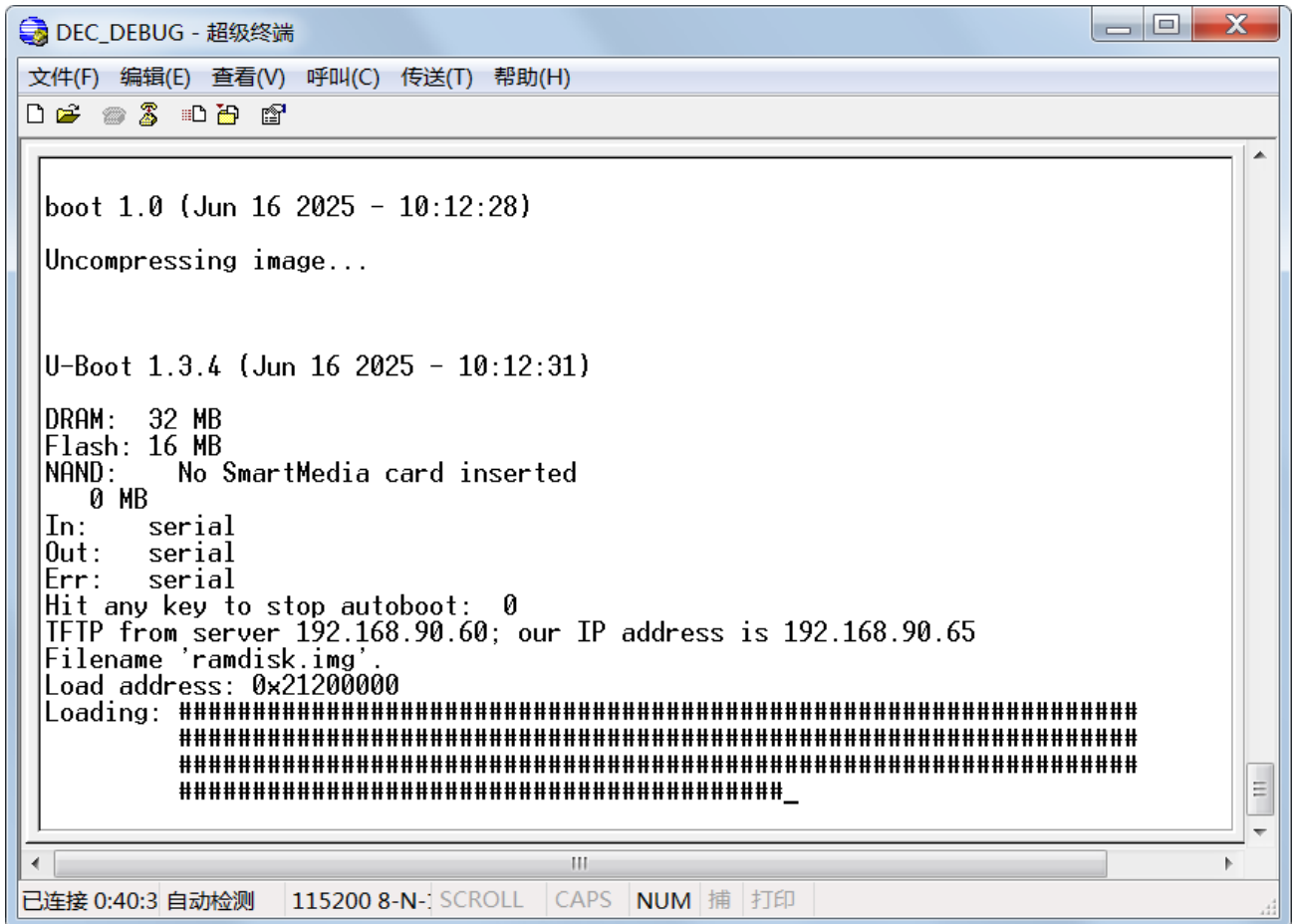
```

```

Bank # 1: Intel: 28F128J3 (128Mbit)
Size: 16 MB in 128 Sectors
Sector Start Addresses:
10000000 (RO) 10020000 (RO) 10040000      10060000      10080000
100A0000      100C0000      100E0000      10100000      10120000

```


- 启动跳线J1至external,并重置DEC电路板，等等系统重启



DEC_DEBUG - 超级终端

文件(F) 编辑(E) 查看(V) 呼叫(C) 传送(T) 帮助(H)

boot 1.0 (Jun 16 2025 - 10:12:28)

Uncompressing image...

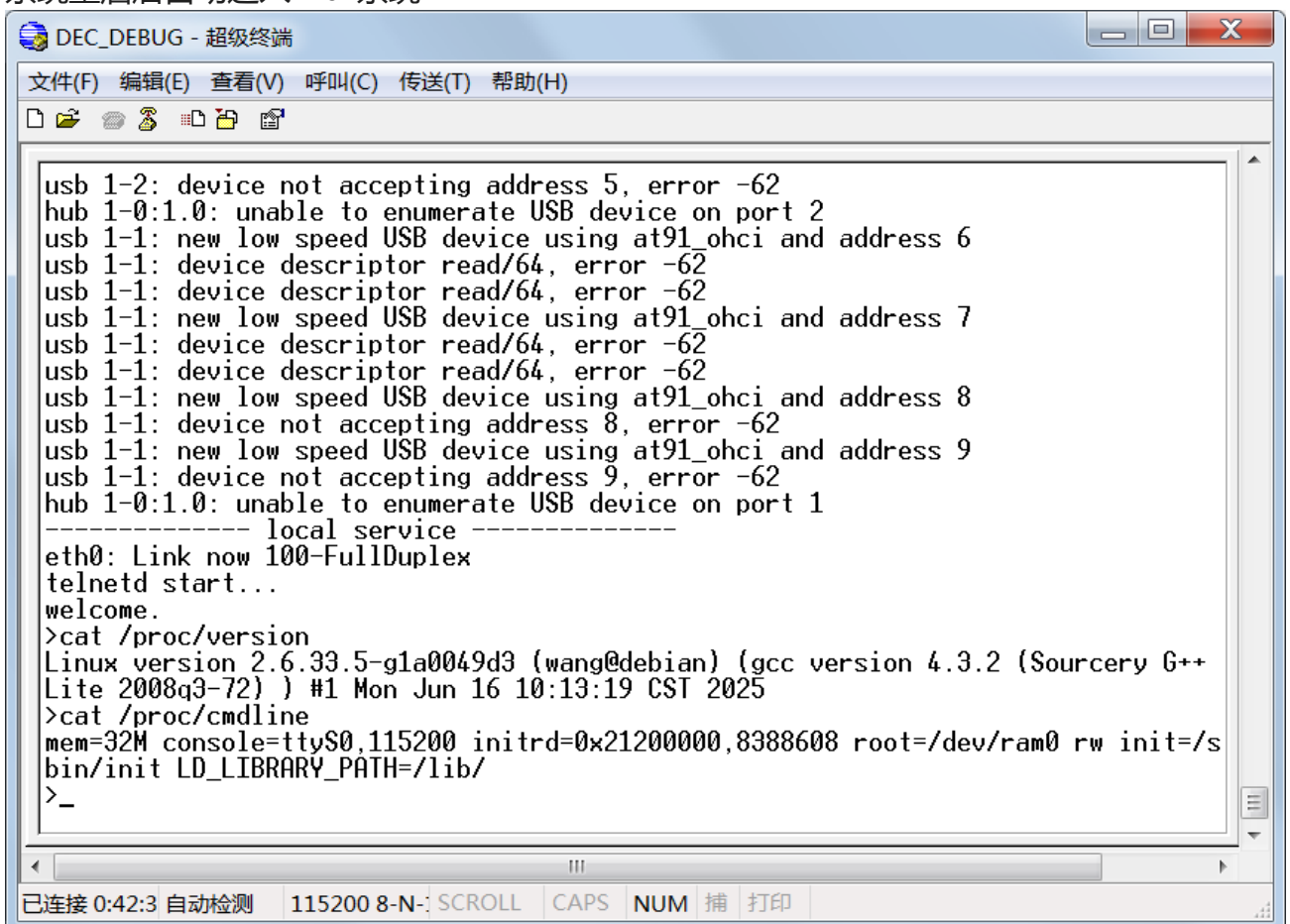
U-Boot 1.3.4 (Jun 16 2025 - 10:12:31)

DRAM: 32 MB
Flash: 16 MB
NAND: No SmartMedia card inserted
0 MB
In: serial
Out: serial
Err: serial
Hit any key to stop autoboot: 0
TFTP from server 192.168.90.60; our IP address is 192.168.90.65
Filename 'ramdisk.img'.
Load address: 0x21200000
Loading: #####

#####_

已连接 0:40:3 自动检测 115200 8-N- SCROLL CAPS NUM 捕 打印

- 系统重启后自动进入linux系统



DEC_DEBUG - 超级终端

文件(F) 编辑(E) 查看(V) 呼叫(C) 传送(T) 帮助(H)

usb 1-2: device not accepting address 5, error -62
hub 1-0:1.0: unable to enumerate USB device on port 2
usb 1-1: new low speed USB device using at91_ohci and address 6
usb 1-1: device descriptor read/64, error -62
usb 1-1: device descriptor read/64, error -62
usb 1-1: new low speed USB device using at91_ohci and address 7
usb 1-1: device descriptor read/64, error -62
usb 1-1: device descriptor read/64, error -62
usb 1-1: new low speed USB device using at91_ohci and address 8
usb 1-1: device not accepting address 8, error -62
usb 1-1: new low speed USB device using at91_ohci and address 9
usb 1-1: device not accepting address 9, error -62
hub 1-0:1.0: unable to enumerate USB device on port 1
----- local service -----
eth0: Link now 100-FullDuplex
telnetd start...
welcome.
>cat /proc/version
Linux version 2.6.33.5-g1a0049d3 (wang@debian) (gcc version 4.3.2 (Sourcery G++ Lite 2008q3-72)) #1 Mon Jun 16 10:13:19 CST 2025
>cat /proc/cmdline
mem=32M console=ttyS0,115200 initrd=0x21200000,8388608 root=/dev/ram0 rw init=/sbin/init LD_LIBRARY_PATH=/lib/
>_

已连接 0:42:3 自动检测 115200 8-N- SCROLL CAPS NUM 捕 打印