

USB 模块测试方法一

首先我们利用 JTAG/ICE 口来仿真，基本的准备工作如下：

1.9200 底版+核心板；

2.9 针串口插在底版上标号为“P1”的串口插座上(串口速率 115200)，25 针并口线通过 JTAG/ICE 转换器插在底版上标号为“J22”的 20Pins 接口上（排线另一头插在 JTAG/ICE 转换器的右边即靠近 SN74HC244 10 脚这边）；

3.将底版上标号为“J23”的跳线跳到左边（靠近 J5 这边）；

4.核心板上标号“J2”的跳线跳到靠近“C18”的这边；

5.9V DC 电源线（**最好用我公司提供的专用产品**）插在标号为“JACK1”的 DC 插座上。

当您上电后 ARM9 调试代理软件 9200 超级终端的显示内容和电路板上的现象如下图所示的话就说明连接正确：

(1).底版核心板的现象为：电源指示灯（D8）核心板指示灯（LED1）亮着，网口指示灯（D5~D7）同时闪烁一下；

(2).ARM9 调试代理软件 9200 超级终端的显示内容：



若您的板没出现以上的现象及出现其它现象，应进行检查。**在这里要说明的是，我们没有写出 ARM9 调试代理软件及 9200 超级终端的设置过程，详细设置过程请参考相关章节。**

通过编译器汇编和编译运行结果如下图所示(参加编译的文件目录为：**AT91RM9200-BasicUHP-ARM1_2-2_0/AT91RM9200-BasicUHP/compil/BasicUHP.mcp**

```
Out: serial
Err: serial
Uboot> loadb 20000000
## Ready for binary (kermit) download to 0x20000000 at 115200 bps...
## Total Size      = 0x000013f4 = 5108 Bytes
## Start Addr      = 0x20000000
Uboot> go 20000000
## Starting application at 0x20000000 ...?
-I- =====
-I- AT91RM9200 basic UHP example
-I- =====
-I- Connect the UDP port to a UHP port...
-I- =====
-I- Device detected on port 0
-I- A reset has been detected by the UDP
-I- A setup packet has been sent by UDP and received by UHP
-I- A data packet has been sent by UDP and received by UHP
-I- A data packet has been sent by UDP and received by UHP
-I- A data packet has been sent by UDP and received by UHP
-I- A status data packet has been sent by UHP and received by UDP
-I- Compare sent/received setup packet ... Success
-I- Compare sent/received data packet ... Success
-I- Test successfull...
```

在这里要说明的是：在测试结果中显示了“port 0”字样，若在连接硬件电路时，将 USB host 端插在底版上 USB 插槽的最下端的话，正确结果如下图所示（其它步骤相同）

```
In: serial
Out: serial
Err: serial
Uboot> loadb 20000000
## Ready for binary (kermit) download to 0x20000000 at 115200 bps...
## Total Size      = 0x000013f4 = 5108 Bytes
## Start Addr      = 0x20000000
Uboot> go 20000000
## Starting application at 0x20000000 ...?
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-I- A status data packet has been sent by UHP and received by UDP
-I- Compare sent/received setup packet ... Success
-I- Compare sent/received data packet ... Success
-I- Test successfull...
```

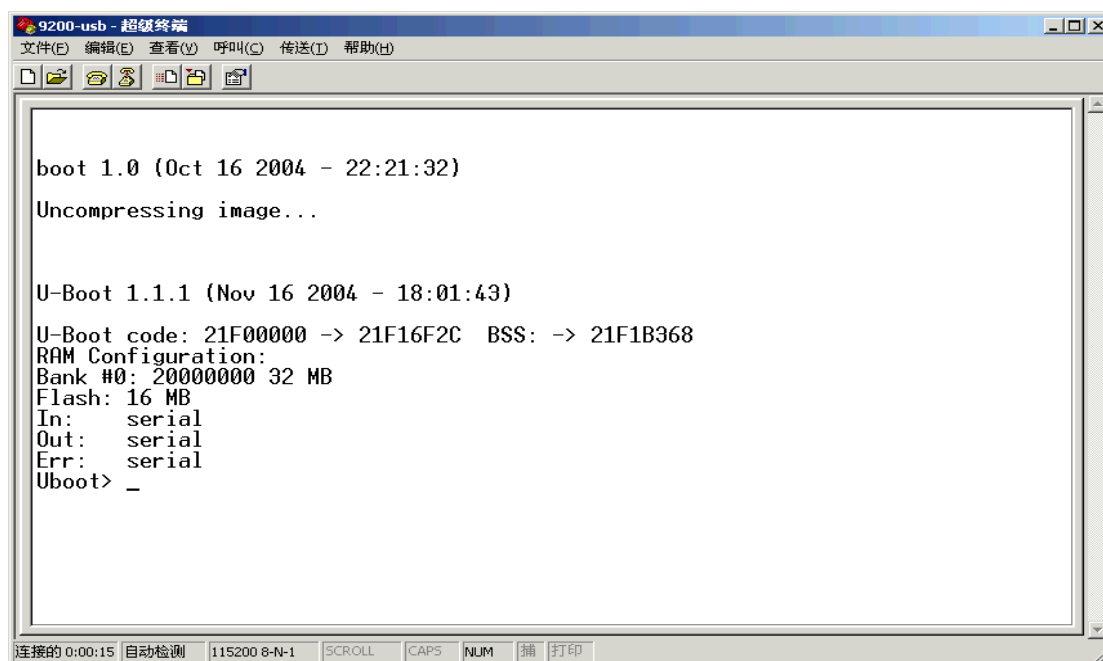
USB 测试方法二

USB 除了用 JTAG/ICE 的测试方式外，还可以直接将待测试程序下载到 RAM 中运行，下面将说明直接下载的方法。

首先要有正确的硬件电路，包括：

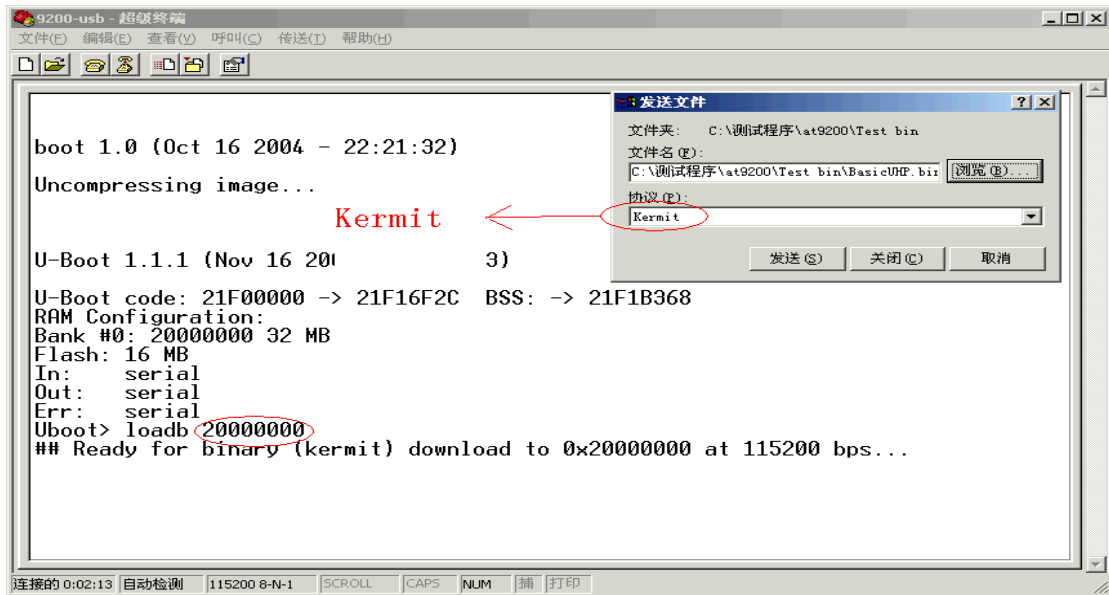
- 1.用 9 针串口线将 PC 机和 9200 底版连接好，注意串口线要插在标号为“P1”的串口上；
- 2.插好 9200 核心板，核心板上“J2”插在靠近 C18 这边；
- 3.其它跳线配置为：**J13, J16 要插好, JP1 插在靠近 C14 这边, J12 插在靠近 C22 这边**；
- 4.将 USB 线连接好。USB 线 host 端插在 9200 底版 USB 接口的最上面的插槽。

检查无误后上电在超级终端上显示的内容如下图：



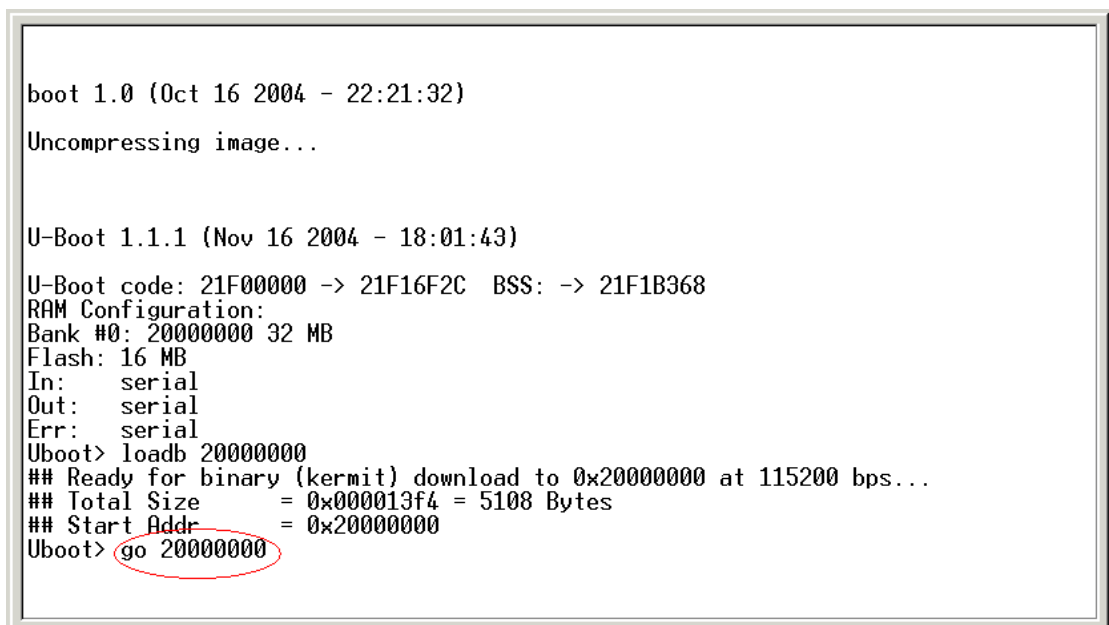
下载待测代码过程如下

在“Uboot>”字样后输入“loadb 20000000”后按回车如下图，要求将待测代码通过超级终端下载到 RAM 里（**要用 Kermit 协议**）



下载文件的目录为：
AT91RM9200-BasicUHP-ARM1_2-2_0/AT91RM9200-BasicUHP/compil/ BasicUHP.bin

点击“发送”便可下载到RAM中，接下来运行代码，如下图



正确结果如下图所示

```
Out:  serial
Err:  serial
Uboot> loadb 20000000
## Ready for binary (kermit) download to 0x20000000 at 115200 bps...
## Total Size      = 0x000013f4 = 5108 Bytes
## Start Addr     = 0x20000000
Uboot> go 20000000
## Starting application at 0x20000000 ...?
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-I- A data packet has been sent by UDP and received by UHP
-I- A data packet has been sent by UDP and received by UHP
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```

在这里要说明的是：在测试结果中显示了“port 0”字样，若在连接硬件电路时，将 USB host 端插在底版上 USB 插槽的最下端的话，正确结果如下图所示（其它步骤相同，和方法一结果是相同的）。

```
In:  serial
Out: serial
Err: serial
Uboot> loadb 20000000
## Ready for binary (kermit) download to 0x20000000 at 115200 bps...
## Total Size      = 0x000013f4 = 5108 Bytes
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-I- A data packet has been sent by UDP and received by UHP
-I- A data packet has been sent by UDP and received by UHP
-I- A status data packet has been sent by UHP and received by UDP
-I- Compare sent/received setup packet ... Success
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```