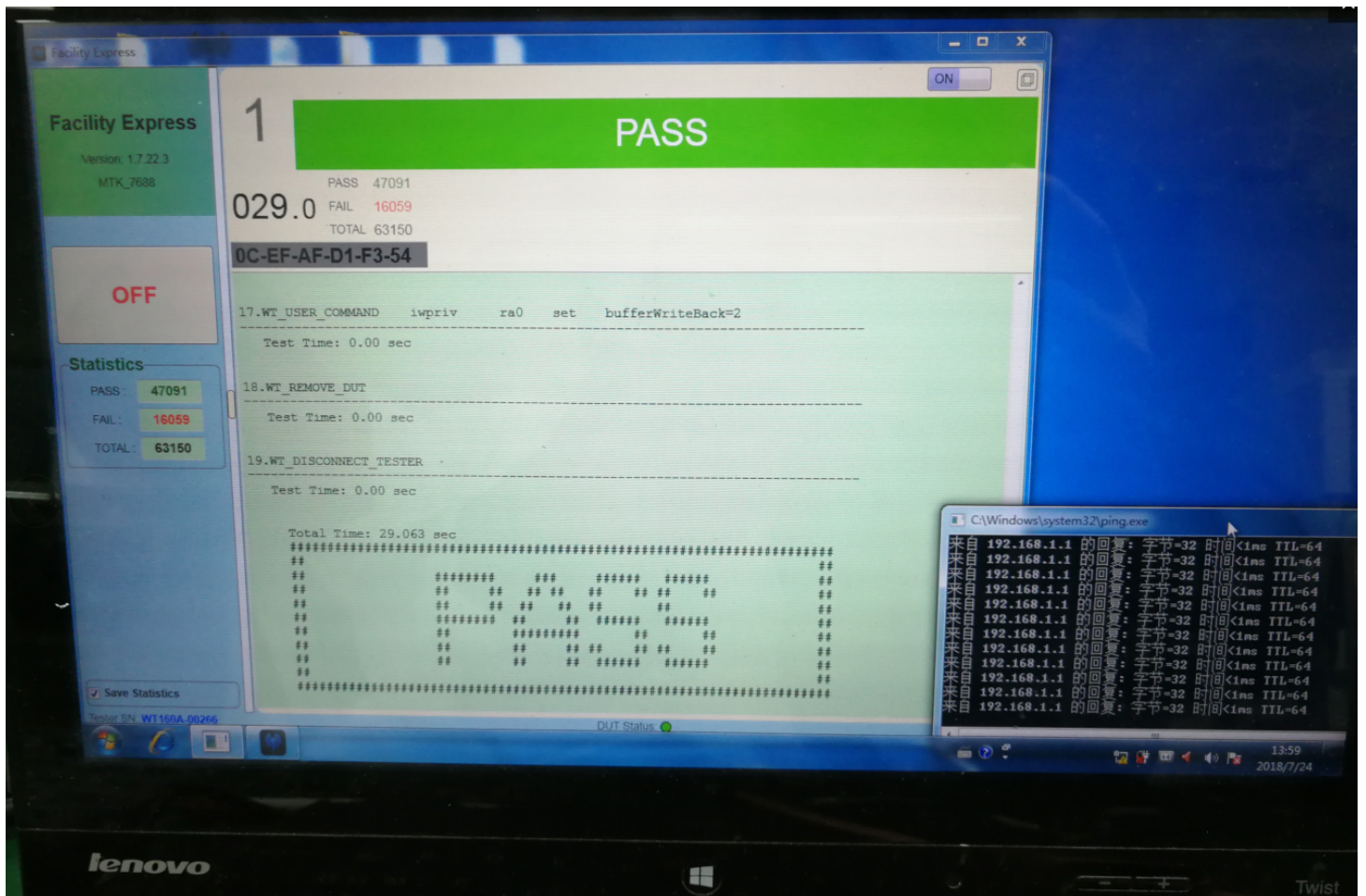


检测工序与步骤：

1. 无线校准
2. 检灯、GPIO 检测
3. 校准数据检测、USB 测试、网口测试
4. 刷客户固件与 UBOOT
5. 客户出厂固件检测
6. WIFI 检测

1. 校准检测，按工程设定的功率进行校准测试，测试结果：**PASS/通过**
(详细测试 LogFile 与参数详见附表)



2. 检灯、GPIO 检测（进串口按 5，并观察测试底板 LED 灯），检测结果：**通过**

```
serial-com8 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 窗口(W) 帮助(H)
输入主机 <Alt+R>

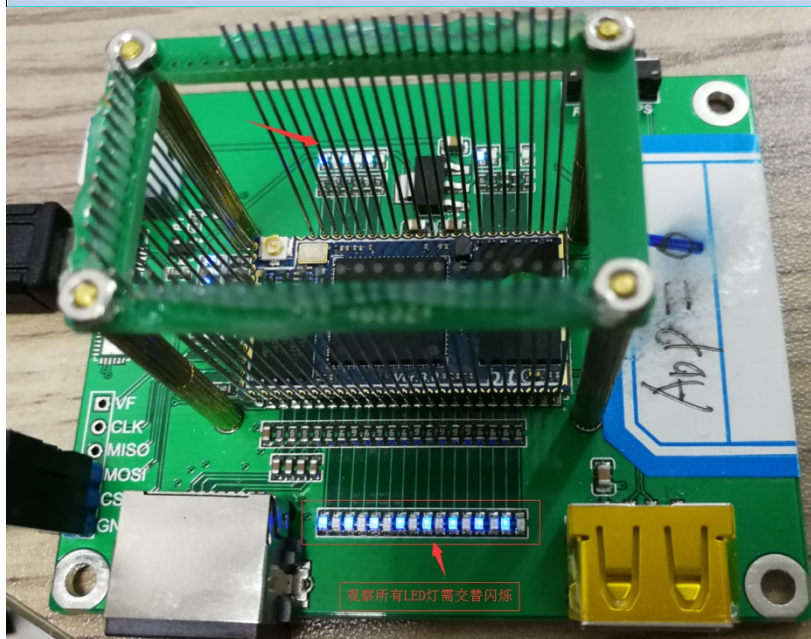
serial-com8 x
Flash manufacture id: ef, device id 40 19
Find flash: w25q256v
*** Warning - bad CRC, using default environment

=====
Ralink UBoot Version: 4.3.0.0
=====
ASIC 7628_MP (Port5<->None)
DRAM component: 1024 Mbits DDR, width 16
DRAM bus: 16 bit
Total memory: 128 Mbytes
Flash component: SPI Flash
Date:Jun 12 2018 Time:15:16:26
=====
icache: sets:512, ways:4, linesz:32 ,total:65536
dcache: sets:256, ways:4, linesz:32 ,total:32768

#### The CPU freq = 580 MHZ ####
estimate memory size =128 Mbytes
RESET MT7628 PHY!!!!!! ONLY 0
MT7688 gpio init : wled and wdt by mango

if you press the WPS button will automatically enter the update mode
0
1
2
3
4
5
6
7
8
9
Please choose the operation:
1: Load system code to SDRAM via TFTP.
2: Load system code then write to Flash via TFTP.
3: Boot system code via Flash (default).
4: Entr boot command line interface.
5: Entr ALL LED test mode.
6: Entr web failsafe mode.
7: Load Boot Loader code then write to Flash via Serial.
9: Load Boot Loader code then write to Flash via TFTP.

You choosed 5
0
all led off
all led on
all led off
```



3. 校准数据检测、USB 测试、网口测试: 通过

3.1 校准数据检测: 通过 (表明已校准)

```

U-Boot 1.1.3 (Jun 12 2018 - 15:16:26)
MT7628 # md.b 0xbc0400f4 1
bc0400f4: bd
MT7628 # 板子已经校准, 谢谢!
Unknown command '板子已经校准, 谢谢!' - try 'help'
MT7628 # bootm 0xbc050000
## Booting image at bc050000 ...
Image Name: MIPS OpenWrt Linux-3.18.29
Image Type: MIPS Linux Kernel Image (lzma compressed)
Data Size: 1150285 Bytes = 1.1 MB
Load Address: 80000000
Entry Point: 80000000
Verifying Checksum ... OK
Uncompressing Kernel Image ... OK
No initrd
## Transferring control to Linux (at address 80000000) ...
## Giving linux memsize in MB, 128

Starting kernel ...

[ 0.000000] Linux version 3.18.29 (mango@mangodmacbook-Pro.local) (gcc version 4.8.3 (openwrt/L
naro gcc 4.8-2014.04 r49378) ) #3 Sun Jan 14 11:30:11 CST 2018
[ 0.000000] Board has GPR2
[ 0.000000] Analog PMU set to hw control

```

3.2 USB 功能测试结果: 通过

```

[ 0.480000] bridge: automatic filtering via arp/ip6tables has been deprecated. update your sc
ripts to load br_netfilter if you need this.
[ 0.490000] 8021q: 802.1Q VLAN Support v1.8
[ 0.500000] VFS: Mounted root (squashfs filesystem) readonly on device 31:5.
[ 0.510000] Freeing unused kernel memory: 196K (8031f000 - 80350000)
[ 1.780000] init: Console is alive
[ 1.780000] init: - watchdog -
[ 4.100000] usbcore: registered new interface driver usbfs
[ 4.110000] usbcore: registered new interface driver hub
[ 4.110000] usbcore: registered new device driver usb
[ 4.120000] reg_opt_init
[ 4.130000] exFAT: Version 1.2.9
[ 4.170000] SCSI subsystem initialized
[ 4.180000] ehci_hcd: USB 2.0 'Enhance
[ 4.190000] ehci-platform: EHCI gener
[ 4.370000] U2PHY P0 set SMCRTL calibr
[ 4.370000] ehci-platform 101c0000.ehc
[ 4.380000] ehci-platform 101c0000.ehc
[ 4.380000] ehci-platform 101c0000.ehc
[ 4.410000] ehci-platform 101c0000.ehc
[ 4.410000] hub 1-0:1.0: USB hub found
[ 4.420000] hub 1-0:1.0: 1 port detected
[ 4.420000] ohci_hcd: USB 1.1 'Open' Host Controller (OHCI) Driver
[ 4.430000] ohci-platform: OHCI generic platform driver
[ 4.440000] ohci-platform 101c1000.ohci: Generic Platform OHCI controller
[ 4.440000] ohci-platform 101c1000.ohci: new USB bus registered, assigned bus number 2
[ 4.450000] ohci-platform 101c1000.ohci: irq 26, io mem 0x101c1000
[ 4.520000] hub 2-0:1.0: USB hub found
[ 4.520000] hub 2-0:1.0: 1 port detected
[ 4.540000] MTK MSDC device init.
[ 4.580000] mtk-sd: Mediatek MT6575 MSDC Driver
[ 4.580000] sdhci: Secure Digital Host Controller Interface driver
[ 4.590000] sdhci: Copyright(c) Pierre Ossman
[ 4.590000] sdhci-pltfm: SDHCI platform and OF driver helper
[ 4.600000] usbcore: registered new interface driver usb-storage
[ 4.740000] usb 1-1: new high-speed USB device number 2 using ehci-platform
[ 4.840000] init: preinit
[ 4.890000] usb-storage 1-1:1.0: USB Mass Storage device detected
[ 4.920000] scsi host0: usb-storage 1-1:1.0
[ 5.450000] rt303x-esw 10110000.esw: link changed 0x00
[ 5.620000] random: proc urandom read with 9 bits of entropy available
Press the [F] key and hit [enter] to enter failsafe mode
Press the [1], [2] or [4] key and hit [enter] to select the debug level
[ 5.930000] scsi 0:0:0:0: Direct-Access Kingston DT 101 G2 1.00 PQ: 0 ANSI: 4
[ 5.940000] sd 0:0:0:0: [sda]

```

3.3 网口测试结果: 通过

```

* 3/4 oz Lime Juice      unstrained into a goblet.
* 1 1/2 oz Orange Juice
* 1 tsp. Grenadine Syrup

root@widora:~# ifconfig
br-lan Link encap:Ethernet HWaddr 0C:EF:AF:D1:EE:59
inet addr:192.168.1.1 Bcast:192.168.1.255 Mask:255.255.2
inet6 addr: fe80::eef:afff:fed1:ee59/64 scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:137 errors:0 dropped:0 overruns:0 frame:0
TX packets:64 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:22901 (22.3 KiB) TX bytes:8487 (8.2 KiB)

eth0 Link encap:Ethernet HWaddr 0C:EF:AF:D1:EE:58
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:137 errors:0 dropped:0 overruns:0 frame:0
TX packets:75 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:11260 (11.0 KiB) TX bytes:11260 (11.0 KiB)

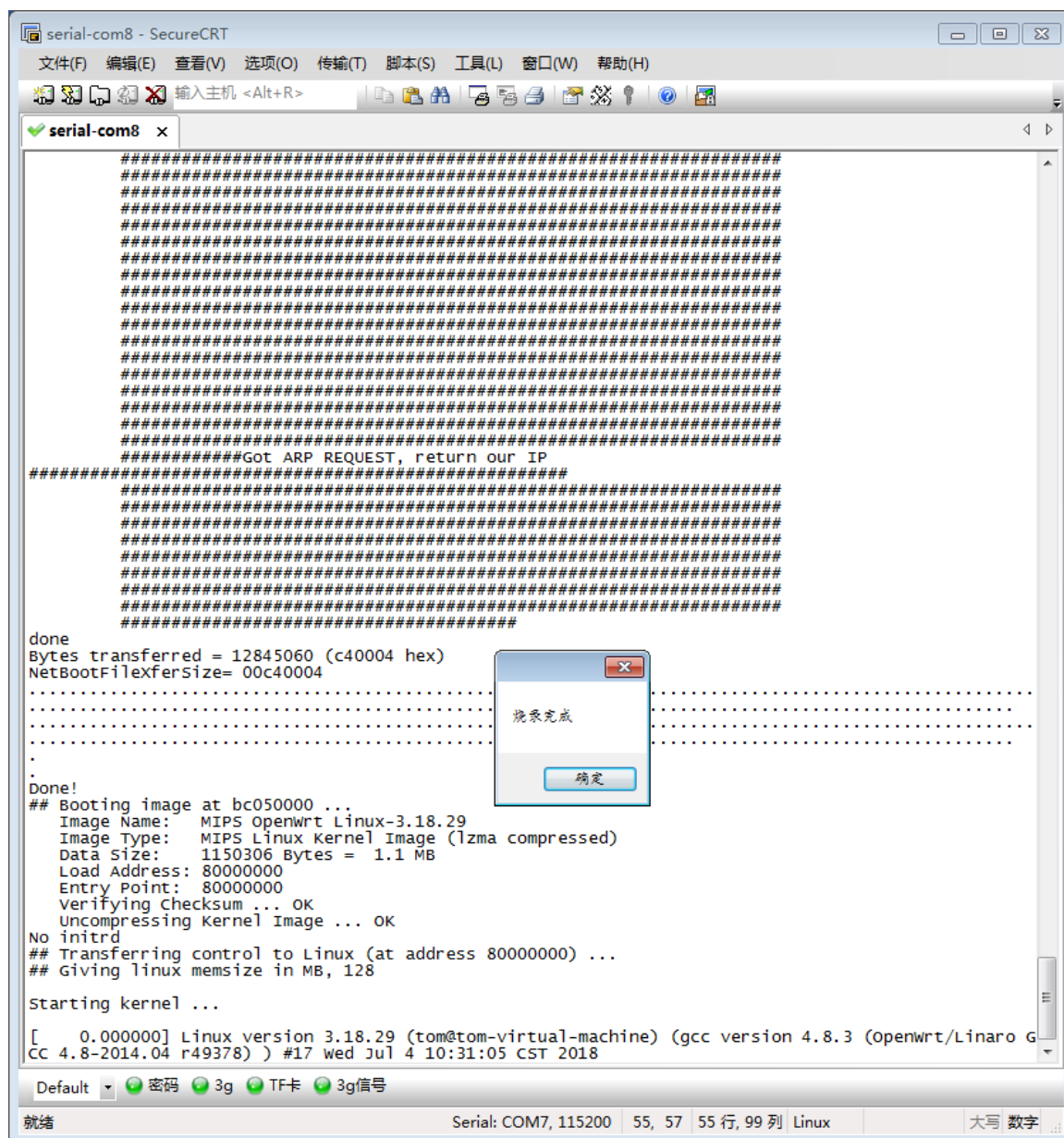
```

```

C:\Windows\system32\ping.exe
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间=2ms TTL=64

```

4. 刷客户固件: 通过 (烧录客户固件成功)



5.出厂固件检测，测试结果：通过

5.1 检测产品 DRAM、RAM、FLASH 的大小：

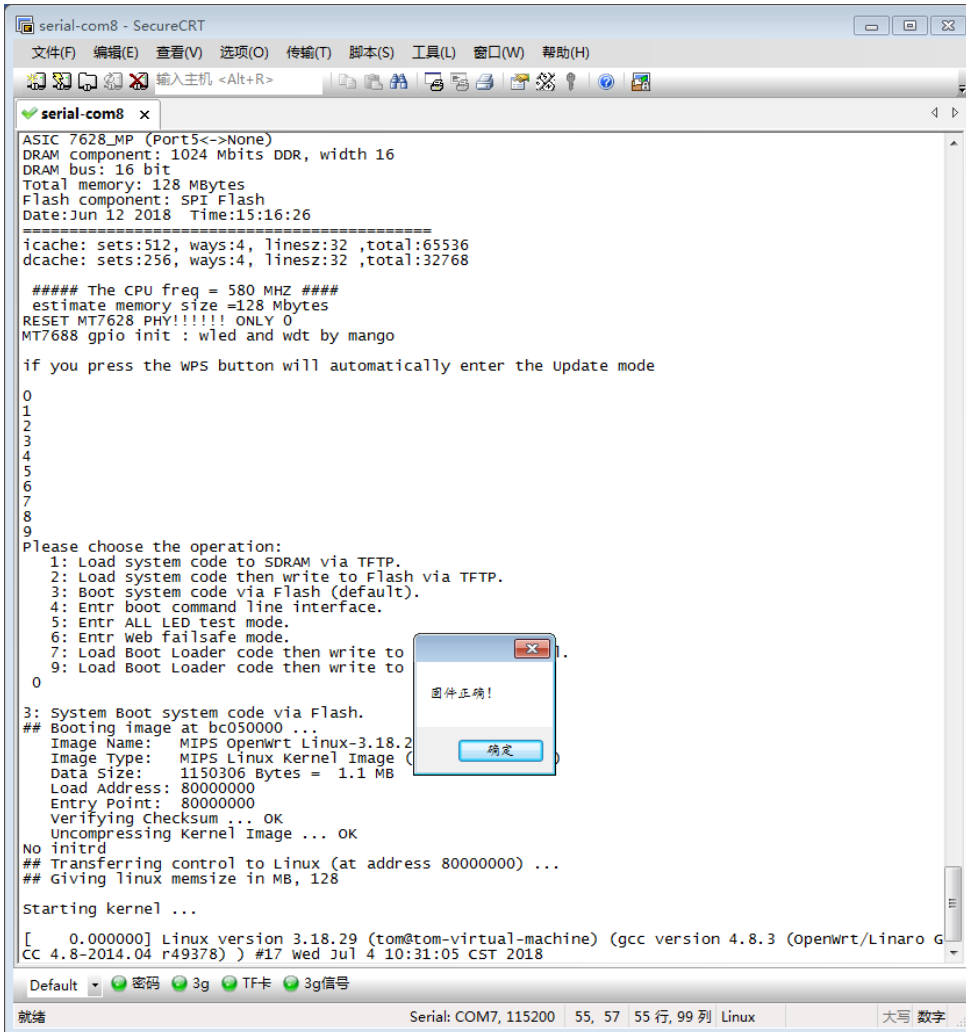
```
Serial-COM4
widora by mango,v1.0.8
Board: Ralink APSoC DRAM: 128 MB
relocate_code Pointer at: 87fb4000
flash manufacture id: ef, device id 40 19
find flash: w25q256fv
*** warning - bad CRC, using default environment

Ralink UBoot Version: 4.3.0.0

ASIC 7628_MP (Port5<->None)
DRAM component: 1024 Mbits DDR width 16
```

UBOOT
RAM
FLASH

5.2 脚本判定固件正确:



```
serial-com8 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 窗口(W) 帮助(H)
输入主机: <Alt+R>

serial-com8 x
ASIC 7628_MP (Port5<->None)
DRAM component: 1024 Mbits DDR, width 16
DRAM bus: 16 bit
Total memory: 128 Mbytes
Flash component: SPI Flash
Date:Jun 12 2018 Time:15:16:26

icache: sets:512, ways:4, linesz:32 ,total:65536
dcache: sets:256, ways:4, linesz:32 ,total:32768

#### The CPU freq = 580 MHZ ####
estimate memory size =128 Mbytes
RESET MT7628 PHY!!!!!! ONLY 0
MT7688 gpio init : wled and wdt by mango

if you press the WPS button will automatically enter the update mode

0
1
2
3
4
5
6
7
8
9
Please choose the operation:
1: Load system code to SDRAM via TFTP.
2: Load system code then write to Flash via TFTP.
3: Boot system code via Flash (default).
4: Entr boot command line interface.
5: Entr ALL LED test mode.
6: Entr web failsafe mode.
7: Load Boot Loader code then write to
8: Load Boot Loader code then write to
9: Load Boot Loader code then write to
0

3: System Boot system code via Flash.
## Booting image at bc050000 ...
Image Name: MIPS Openwrt Linux-3.18.2
Image Type: MIPS Linux Kernel Image (
Data Size: 1150306 Bytes = 1.1 MB
Load Address: 80000000
Entry Point: 80000000
Verifying Checksum ... OK
Uncompressing Kernel Image ... OK
No initrd
## Transferring control to Linux (at address 80000000) ...
## Giving linux memsize in MB, 128

starting kernel ...

[ 0.000000] Linux version 3.18.29 (tom@tom-virtual-machine) (gcc version 4.8.3 (OpenWrt/Linaro GCC 4.8-2014.04 r49378) ) #17 wed Jul 4 10:31:05 CST 2018

Default 密码 3g TF卡 3g信号
就绪 Serial: COM7, 115200 55, 57 55 行, 99 列 Linux 大写 数字
```

6.WIFI 检测，测试结果：通过

6.1 查询产品 SSID:

```

root@ZK8GW2:~# iwconfig
ra2      MT7603E PCie  ESSID:"HT_AP2"
          Mode:Managed  Frequency:2.432 GHz  Access Point: 0E:EF:AF:E1:EE:D0
          Bit Rate=72 Mb/s   Tx-Power=18 dBm
          Encryption key:off
          Power Management:on

wds1     MT7603E PCie  ESSID:"HT_AP1"
          Mode:Managed  Frequency:2.432 GHz  Access Point: 0E:EF:AF:D1:EE:D0
          Bit Rate=72 Mb/s   Tx-Power=18 dBm
          Encryption key:off
          Power Management:on

eth0.1   no wireless extensions.

lo       no wireless extensions.

ra1      MT7603E PCie  ESSID:"HT_AP1"
          Mode:Managed  Frequency:2.432 GHz  Access Point: 0E:EF:AF:D1:EE:D0
          Bit Rate=72 Mb/s   Tx-Power=18 dBm
          Encryption key:off
          Power Management:on

wds0     MT7603E PCie  ESSID:"Zelkova-D1EED0"
          Mode:Managed  Frequency:2.432 GHz  Access Point: 0C:EF:AF:D1:EE:D0
          Bit Rate=72 Mb/s   Tx-Power=18 dBm
          Encryption key:off
          Power Management:on

ra0      MT7603E PCie  ESSID:"Zelkova-D1EED0"
          Mode:Managed  Frequency:2.432 GHz  Access Point: 0C:EF:AF:D1:EE:D0
          Bit Rate=72 Mb/s   Tx-Power=18 dBm
          Encryption key:off
          Power Management:on
          Link Quality=10/100  Signal level:0 dBm  Noise level:-107 dBm
          Rx invalid nwid:0  Rx invalid crypt:0  Rx invalid frag:0
          Tx excessive retries:0  Invalid misc:0  Missed beacon:0

```

6.2 产品插上外网网线，使用手机或网卡添加连接产品 SSID 可上网。
测试结果：通过



最终判定结果：合格