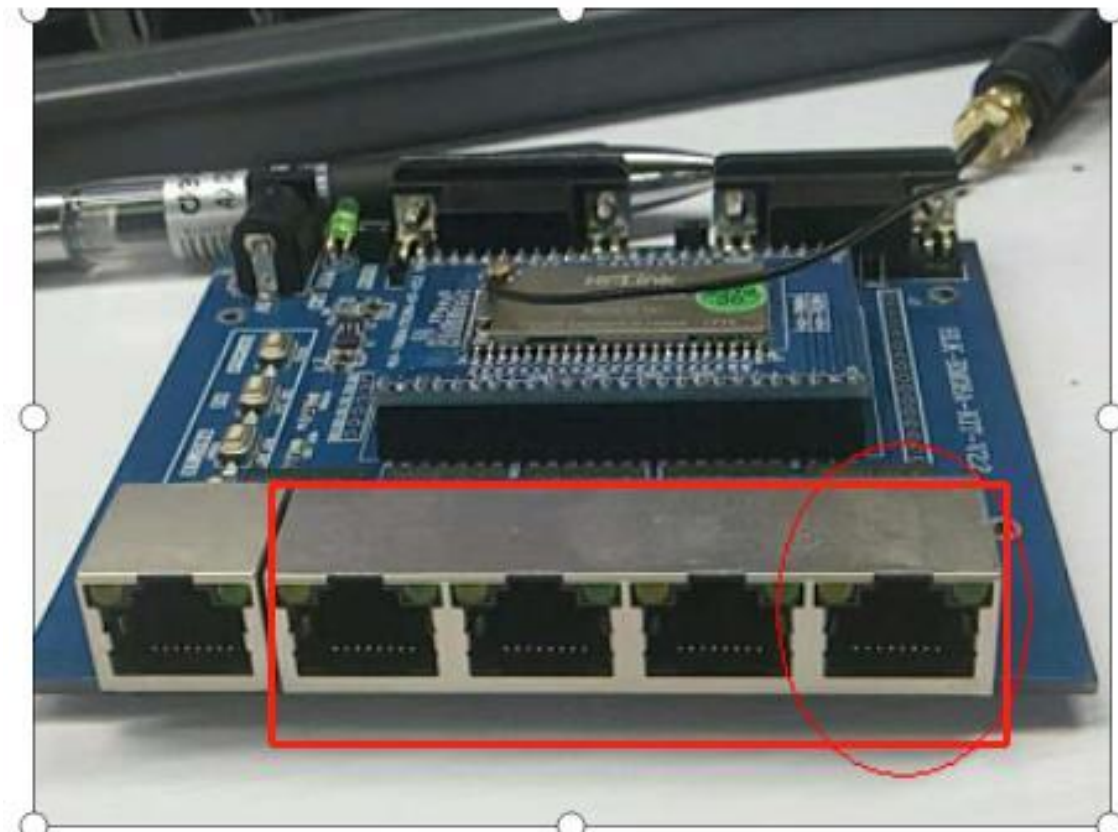


Openwrt firmware module upgrade method

The modules of openwrt can use the following two firmware upgrade methods when the firmware is delivered from the factory

A. Upgrade firmware through network interface under uboot

Upgrade network interface: one of P1~P4 network interfaces needs to be used, and P0 interface cannot be upgraded



PC uses serial port to connect to HLK7688 debugging serial port

Serial port setting as:

Warning: you have reached the maximum number of saved sessions for the personal edition of MobaXterm.
You can start a new session but it will not be automatically saved.

Basic Serial settings

Serial port * COM10 (USB Serial Port (COM10))

Speed (bps) * 57600

Please support MobaXterm by subscribing to the Professional edition here: <http://mobaxterm.mobatek.net>

Advanced Serial settings

Serial engine: PUTTY (allows manual COM port setting)

Data bits 8

Stop bits 1

Parity None

Flow control None

Reset defaults

Execute macro at session start <none>

OK Cancel

If you need to transfer files (e.g. router configuration file), you can use MobaXterm embedded TFTP server

"Servers" window --> TFTP server

When powering on and starting, it will count down. At this time, press 2 on the keyboard to upgrade the firmware through TFTP

```
=====
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:Mar  4 2017 Time:16:37:55
=====
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!!!!!!
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.
  7: Load Boot Loader code then write to Flash via Serial.
  9: Load Boot Loader code then write to Flash via TFTP.
default: 3
```

Prompt whether to erase Linux in Flash Type: y

```
2: System Load Linux Kernel then write to Flash via TFTP.
Warning!! Erase Linux in Flash then burn new one. Are you sure?(Y/N)
█
```

Specify parameters for TFTP:

Input device IP: device IP (board IP)

Input server IP: computer IP (set on PC network card)

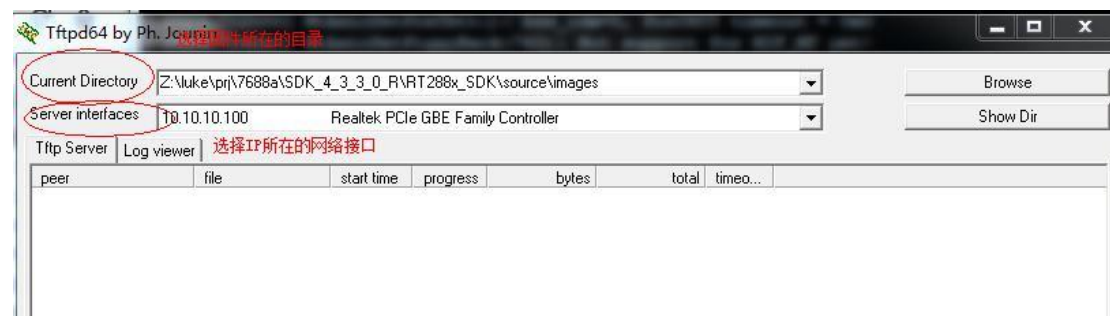
Note: The two IPs must be in the same network segment, and the IPs cannot be the same

```
2: System Load Linux Kernel then write to Flash via TFTP.  
Warning!! Erase Linux in Flash then burn new one. Are you sure?(Y/N)  
Please Input new ones /or Ctrl-C to discard  
Input device IP (10.10.10.123) ==:10.10.10.123  
Input server IP (10.10.10.3) ==:10.10.10.3  
Input Linux Kernel filename ==:firmware.bin
```

As shown in the figure above, change the IP address of the computer to 10.10.10.3

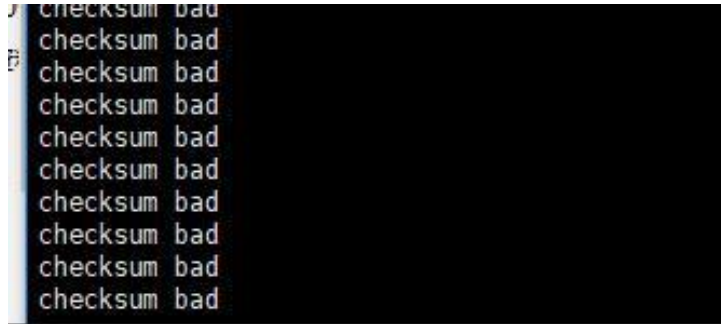
Fill in the firmware name to be upgraded: xxx.bin

Open TFTP on your computer



The default upgrade network ports for equipment shipment are P1~P4 ports. If Hailingke's backplane is used, there are five network ports in the backplane, and the separated network port is P0 port

Note: If the customer's board only leads out the P0 port, the default UBOOT cannot be upgraded through the network port

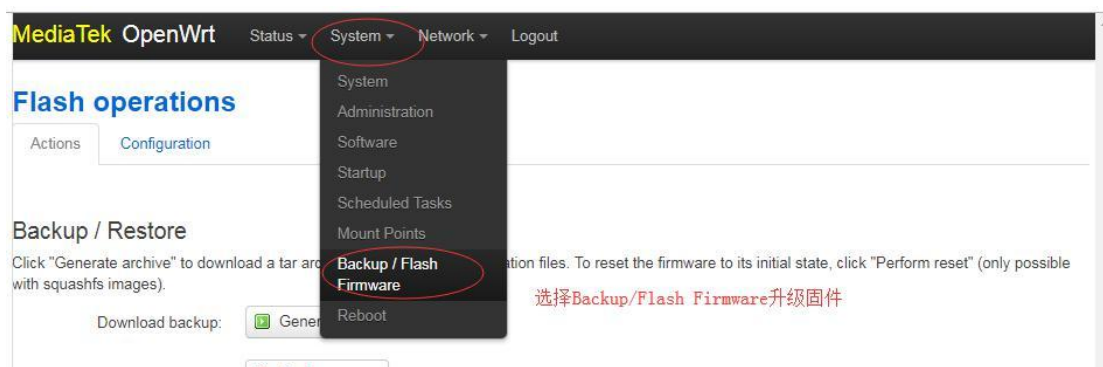


If promoted

Please check the IP address of the PC and whether the network port is plugged correctly

B. Use web page upgrade

Open Web Page:



Enter the firmware upgrade page: select the firmware, and click Flash Image

MediaTek OpenWrt

Status ▾System ▾Network ▾Logout

Flash operations

ActionsConfiguration

Backup / Restore

Click "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset" (only with squashfs images).

Download backup:

Generate archive

Reset to defaults:

Perform reset

To restore configuration files, you can upload a previously generated backup archive here.

Restore backup:

选择文件

 未选择任何文件

Upload archive...

Flash new firmware image

Upload a sysupgrade-compatible image here to replace the running firmware. Check "Keep settings" to retain the current configuration (requires a compatible firmware image).

Keep settings: ☒

Image:

选择文件

 未选择任何文件

Flash image...

After checking the information, click Process to upgrade the firmware

Flash Firmware - Verify

The flash image was uploaded. Below is the checksum and file size listed, compare them with the original file to ensure data integrity.
Click "Proceed" below to start the flash procedure.

- Checksum: 351bcb260bee00c9665cfdac32779e7
- Size: 5.25 MB (31.69 MB available)
- Configuration files will be kept.

Cancel

Proceed

Powered by LuCI Trunk (unknown) OpenWrt Barrier Breaker 14.07

Upgrade uboot

Uboot Upgrade uboot

The PC needs to use the serial port to connect to the HLK7688 debugging serial port

Serial port setting:

Warning: you have reached the maximum number of saved sessions for the personal edition of MobaXterm. You can start a new session but it will not be automatically saved.

Basic Serial settings

Serial port * COM10 (USB Serial Port (COM10))

Speed (bps) * 57600

Please support MobaXterm by subscribing to the Professional edition here: <http://mobaxterm.mobatek.net>

Advanced Serial settings

Terminal settings

Bookmark settings

Serial engine: PuTTY (allows manual COM port setting)

Data bits 8

Stop bits 1

Parity None

Flow control None

Reset defaults

Execute macro at session start: <none>

OK

Cancel

If you need to transfer files (e.g. router configuration file), you can use MobaXterm embedded TFTP server

"Servers" window --> TFTP server

When powering on and starting, it will count down. At this time, you can press 9 on the keyboard to upgrade uboot through TFTP

```
=====
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:Mar  4 2017  Time:16:37:55
=====
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!!!!!!
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.
  7: Load Boot Loader code then write to Flash via Serial.
  9: Load Boot Loader code then write to Flash via TFTP.
default: 3
```

```
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.
  7: Load system code then write to Flash via Httpd.
  9: Load Boot Loader code then write to Flash via TFTP.
You chose 9

9: System Load Boot Loader then write to Flash via TFTP.
Warning!! Erase Boot Loader in Flash then burn new one. Are you sure?(Y/N)
```

Press Y to confirm the upgrade of uboot

```
9: System Load Boot Loader then write to Flash via TFTP.  
Warning!! Erase Boot Loader in Flash then burn new one. Are you sure?(Y/N)  
Please Input new ones /or Ctrl-C to discard  
Input device IP (10.10.10.123) ==:10.10.10.123  
Input server IP (10.10.10.3) ==:10.10.10.3  
Input Uboot filename ==:uboot_7628N.bin
```

Input device IP module's own IP

Input server IP server IP (TFTP server) IP on PC

Input uboot filename File name of the uoot on the tftp server