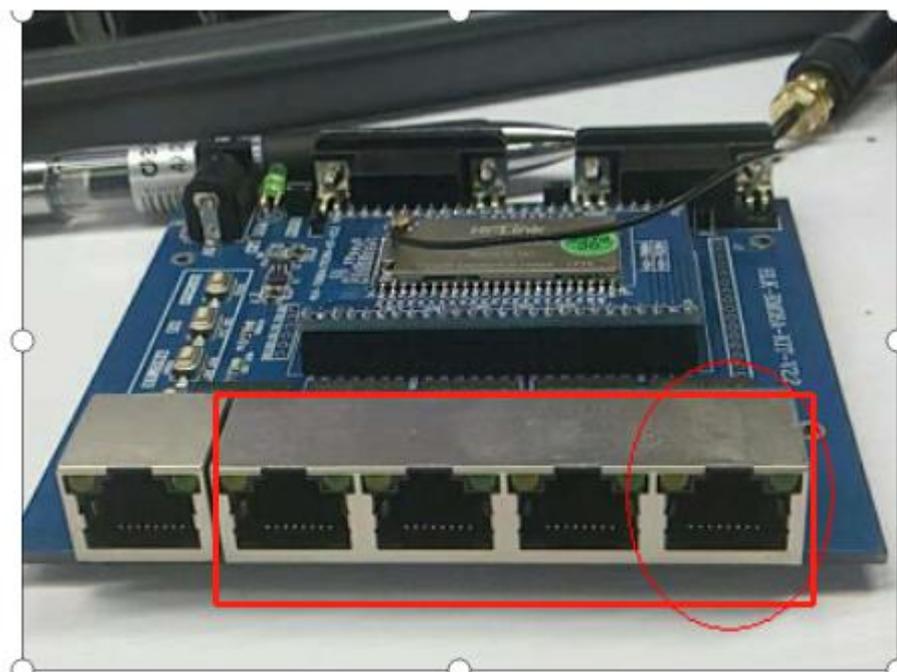


# Openwrt 固件模块升级方法

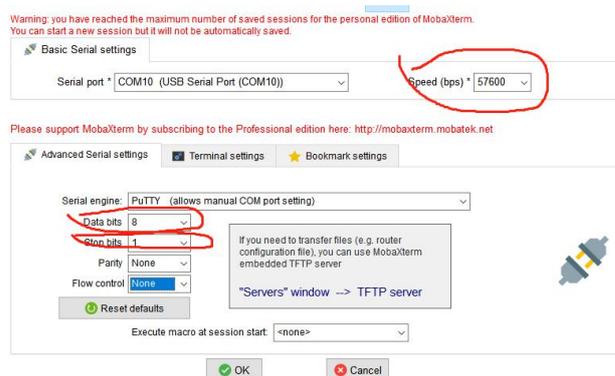
出厂固件时 openwrt 的模块可以采用下面两种固件升级方法

## A. uboot 下通过网口升级固件

升级网口：需要使用 P1~P4 其中的一个网口，P0 口无法升级



PC 使用串口接到 HLK7688 的调试串口



串口设置：

上电启动时，会倒数计数，此时在键盘上敲 2，可以通过 TFTP 升级固件

```
=====
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
```

提示是否擦除 Flash 中的 Linux 键入: 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)
█
```

指定 TFTP 的参数:

Input device IP: 设备 IP (单板的 IP)

Input server IP: 电脑 IP (在 PC 的网卡上设置)

注意: 两个 IP 必须在同一个网段, 且 IP 不能相同。

```
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█
```

上图所示: 把电脑的 IP 地址改为: 10.10.10.3

填入要升级的固件名称: xxx.bin

在电脑中打开 TFTP



设备出货的默认升级网口是 P1~P4 口, 如果使用的是海凌科的底板, 底板中有 5 个网口, 其中分离的那个网口是 P0 口

注意: 如果客户的板子只引出了 P0 口, 则默认的 UBOOT 无法通过网口升级

```
checksum bad
```

如果提示：

请检查 PC 的 IP 以及是否插对了网口

## B. 使用页面升级

打开页面，



进入到固件升级页面： 选择固件， 完成后， 点击 Flash Image...

## Flash operations

Actions

Configuration

### 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" (with squashfs images).

Download backup: Reset to defaults: 

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

Restore backup:  未选择任何文件 

### 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:  未选择任何文件Image:  openwrt-ramip...supgrade.bin 

查看信息无误后， 点击 **Proceed** 进行固件升级

### Flash Firmware - Verify

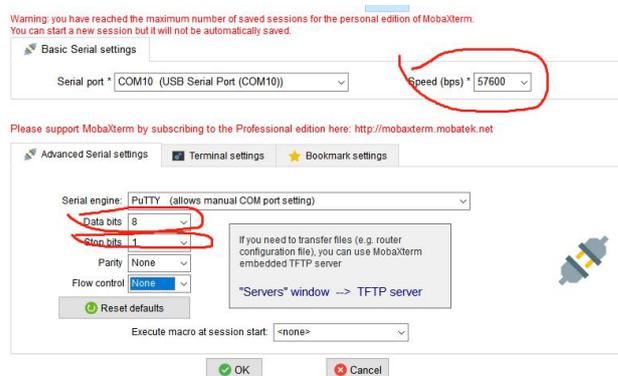
The flash image was uploaded. Below is the checksum and file size listed, compare them with the original file to ensure data integrity. Click "Proceed" below to start the flash procedure.

- Checksum: 351b0bb260beeccc9665cfdac32779e7
- Size: 5.25 MB (31.69 MB available)
- Configuration files will be kept.

# 升级 uboot

## uboot 升级 uboot

需要 PC 使用串口接到 HLK7688 的调试串口



串口设置:

上电启动时， 会倒数计数， 此时在键盘上敲 9， 可以通过 TFTP 升级 uboot

```
=====
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.
 5: Load system code then write to Flash via Httpd.
 7: Load Boot Loader code then write to Flash via Serial.
 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)
```

按 Y 确认升级 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 模块自身 IP

Input server IP 服务器 IP (TFTP server) PC 上的 IP

Input uboot filename tftp 服务器上的 uoot 的文件名,