# Burning HPE Firmware on H3C switch

The H3C Switch can be upgraded to use HP firmware for the A5120. While the switch (and firmware) are older, the switches can be picked up inexpensively and, with the addition of an *HP A550/A5120-EI 2p 10-Gbe CX4 Module* and cable, two or more switches can be connected in such a way as to truly act as one switch. We have a pair at our NOC which has the equivalent of 96 ports, with LAGG running across the switches (ie, BAGG10 may be port 10 on one switch and port 10 on the second switch, giving us failover).

To upgrade, we get the most recent version of the bootrom and the boot loader, upload to the switch, and place the switch in HP mode. The firmware we have is:

- bootrom - A5120EI-BTM-621.btm
- boot loader - A5120EI-CMW520-R2221P30.bin

**Note**: I'm using 192.168.1.1 as the IP address of the tftp server. Adjust accordingly.

## Initial Connection

This will cover making a connection via a serial cable. **WARNING**: do not use the HP cable, as it has been reported to have serious issues. Find a Cisco cable.

Make a serial connection. 9600 8N1 with no hardware handshaking (or software, ie no handshaking). If you have an existing configuration you want to remove, press ^b (ctl-B) immediately on boot. You only have 1 second in “quick boot” mode. Once you are in there, you can choose to reset to factory. You should have full access at this point.

## Make image files accessible

You can use XModem, or even http(s) to upload, but it is simpler if you have a tftp server someplace (which we'll cover here).

1. Install a tftp server if you don't have one
2. Copy the files A5120EI-BTM-621.btm and A5120EI-CMW520-R2221P30.bin into the tftp root

You may or may not have a network connection on the switch. You can temporarily assign an IP address to vlan 1 (which is always there) with the following:

```
system
interface Vlan-interface1
   ip address dhcp
   quit
display vlan 1
```

The first line puts you in system set up mode. The second says “hey, I want to work on interface Vlan-interface 1” and the next line sets an IP address for Vlan-interface1 to a DHCP assigned IP. quit exits

the configuration for Vlan-interface1 and the display command shows you the IP (may take 30-60 seconds).

**Warning**: this is very insecure, and not desirable for production. This is simply to get a connection so you can download the files from the tftp server.

At this point, you should be able to

```
ping 192.168.1.1
```

## Make the web interface accessible (optional)

If you want the web interface, you can do the following. You'll need to create a user with permissions.

```
ip http enable
local-user admin
   password simple admin
   service-type web
   authorization-attribute level 3
   quit
```

This enables the http server, and creates a user (admin) with password admin who can access the web UI at management level (authorization-attribute level 3). Note: this is using http, **not** https.

## Download and install firmware

First, we must remove the existing image, as there is likely not enough room to have it and the new version. In the following, I'm assuming when you type *dir* you see a boot loader file named a5120ei-cmw520-r2221p20.bin. Modify accordingly.

```
dir
delete /unreserved a5120ei-cmw520-r2221p20.bin
```

Now, download the two files. Note that I've changed the case on the files when I store them into the flash drive (they came all upper case, I convert them to all lower case).

```
tftp 192.168.1.1 get A5120EI-BTM-621.btm flash:/a5120ei-btm-621.btm
tftp 192.168.1.1 get A5120EI-CMW520-R2221P30.bin flash:/a5120ei-cmw520-
r2221p30.bin
```

Finally, we do the installation

```
bootrom update file a5120ei-btm-621.btm slot 1
boot-loader file a5120ei-cmw520-r2221p30.bin slot 1 main
```

In both cases, you will be asked to verify.

Now, put the switch into HP mode, save your config, and reboot

```
brand hp
save
reboot
```

## Verify everything is working

```
display version
display brand
display default-configuration
```

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