Recover a Faulty 9130AX Series Access Point via USB

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Introduction

This document describes USB recovery for Catalyst 9130AX APs with faulty Ethernet ports unable to transfer recovery files via traditional methods.

Recovery Procedure – Overview

1. Download the special image **axel-qca-single-ng.img** .
2. Copy the image in a USB flash drive and connect it to the access point's USB port.
3. Console into the affected access point.
4. Break into U-Boot mode.
5. Run the required commands to copy the image to the access pointfrom the USB Drive.

⚠ **Caution**: Do not attempt to use the recovery image on a non-9130 model. Doing so renders the access point unusable.

Detailed Steps

Download The Special Image

Download a file named **axel-qca-single-ng-8_10_130_0.img.** You can find the file here.

Put the image in a USB stick and connect it to the access pointUSB port Prepare the USB Drive

Format the USB flash drive in FAT32.
Copy the correct single image (for example, **axel-qca-single-ng.img** for the 9130 model) onto the USB drive.
Insert the USB drive into the access point’s USB port.

Access the U-boot on the console.

1. Connect a serial cable to the access point's console port (this has a pale blue label that is not labeled "2.5G"). The serial port can be configured for 9600 bps, 8 databits, 1 stopbit, no parity, no flow control.
2. Power up the access point.

As soon as the access point starts powering up, enter the ESC key repeatedly in the terminal window, until you see the u-boot prompt.

```
Auto boot mode, use bootipq directly
APPS power cycled and restart reason is 0x10
 Hit ESC key to stop autoboot:  2
(BTLDR) #
```

Transfer the Image from USB

Run these commands in sequence to initialize the USB drive and transfer the image:

1. usb start
2. fatls usb 0:1
3. fatload usb 0:1 0x60000000 <filename>
4. imgaddr=0x60000000 && source $imgaddr:script
5. reset

Example outputs :

1. Initialize the USB Drive:

```
(BTLDR) # usb start
starting USB...
USB0: Register 2000140 NbrPorts 2
Starting the controller
USB XHCI 1.10
scanning bus 0 for devices... 2 USB Device(s) found
USB1: Register 2000140 NbrPorts 2
Starting the controller
USB XHCI 1.10
scanning bus 1 for devices... 1 USB Device(s) found
(BTLDR) #
```

2. Display the USB Contents:

```
(BTLDR) # fatls usb 0:1
system volume information/
150080276 axel-qca-single-ng.img
1 file(s), 1 dir(s)
(BTLDR) #
```

3. Load the image to the access point

```
(BTLDR) # fatload usb 0:1 0x60000000 axel-qca-single-ng.img
reading axel-qca-single-ng.img
150080276 bytes read in 77816 ms (1.8 MiB/s)
(BTLDR) #
```

4. Execute the script

```
(BTLDR) # imgaddr=0x60000000 && source $imgaddr:script
## Executing script at 60000000
crc32+ Flashing btldr: [ done ]
Flashing ubi: [ done ]
(BTLDR) #
```

5. Reboot the access point and use the reset command. Once it is fully rebooted, it must respond to Enter with a "Username:" prompt.

```
(BTLDR) # reset
resetting ...
?h(IH
iw
Board type: C9130AX
U-Boot REL 2016.01 (btldr release 298) (Jul 05 2022 - 14:33:36 -0700)
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"GNU General Public License, version 2" provided with
ABSOLUTELY NO WARRANTY under the terms of
"GNU General Public License, version 2", available here:
http://www.gnu.org/licenses/old-licenses/gpl-2.0.html
DRAM: 2 GiB
Nand: Detected ONFI Micron TH58NYG3S0H 8G 1.8V 8-bit
qpic_nand: changing oobsize to 160 from 224 bytes
SF: Detected MX25U6435F with page size 256 Bytes, erase size 4 KiB, total 8 MiB
Scanning shenv data blocks
Total valid parts=4
Active shenv part[0:1], write_counter=22
MFG data loaded
PCI Link Intialized
```