

Aerohive AP121 - Installing OpenWRT



After more than 10 years in use and licensing issues we decided to replace our WiFi installation consisting of about 40 Aerohive AP121 and AP122 with newer models.

Because all APs are still able to work, we thought about the future use of our devices. As we already use a lot of open source software, we thought it would be nice if also our APs are running with Linux and this is actually possible with [OpenWRT](#)!

This page was build from two main sources:

- openwrt.org - [Aerohive AP121/HiveAP 121](#)
- github.com - [NWSpitfire - AP121 OpenWRT Install](#)

It's more or less a summary and an experience report from our side!

The AP121 Hardware

Model	AP121
CPU	Atheros AR9344
CPU MHz	560
Flash MB	1, 128 NAND
RAM MB	128
WLAN Hardware	Atheros AR9344, Atheros AR9382
WLAN 2.4GHz	b/g/n
WLAN 5.0GHz	a/n
Ethernet 100Mbit ports	-
Ethernet 1Gbit ports	1

RJ45 console ports	1
USB ports	1

Concerning hardware the OpenWRT wiki says:

The Aerohive AP121 or HiveAP 121 (the former designation used in company marketing, the latter printed on the device label) is a dual-band 2x2 MIMO 802.11a/n (5GHz) and 802.11b/g/n (2.4GHz) "enterprise grade" access point with a single Gigabit Ethernet port, powered via 802.3af PoE or a standard 12V 1.1A power adapter. It was produced by Aerohive Networks (which is now part of Extreme Networks) until 2017 when it was superseded by the Aerohive AP122.

*Do not confuse this device with the unrelated and completely different, yet similarly named ALFA Network AP121 which is maintained in the ath79/generic subtarget and a bit confusingly only carries ap121 in OpenWrt filenames. **Files for the Aerohive AP121 can be found in the ath79/nand subtarget and contain the string hiveap-121.***

Flashing OpenWRT on AP121

We do not take any warranty for this guide! After flashing the firmware there is no way back! You won't be able to use your AP anymore for a Aerohive/Extreme HiveManager!

Firmware check

Firstly confirm that the AP you want to flash OpenWRT on has one of the following firmware versions:

- v1.0.0.33
- v1.0.0.43 (supplied with HiveOS 6.2r1)
- v1.0.0.4f (supplied with HiveOS 6.5r4)
- v1.0.0.50 (supplied with HiveOS 6.5r3)
- v1.0.0.52 (supplied with HiveOS 6.5r8b)

You can either do this via the serial console which is also required later, or more easy within your old HiveManager.

Bootloader versions v1.0.0.25 and lower have been reported to fail!

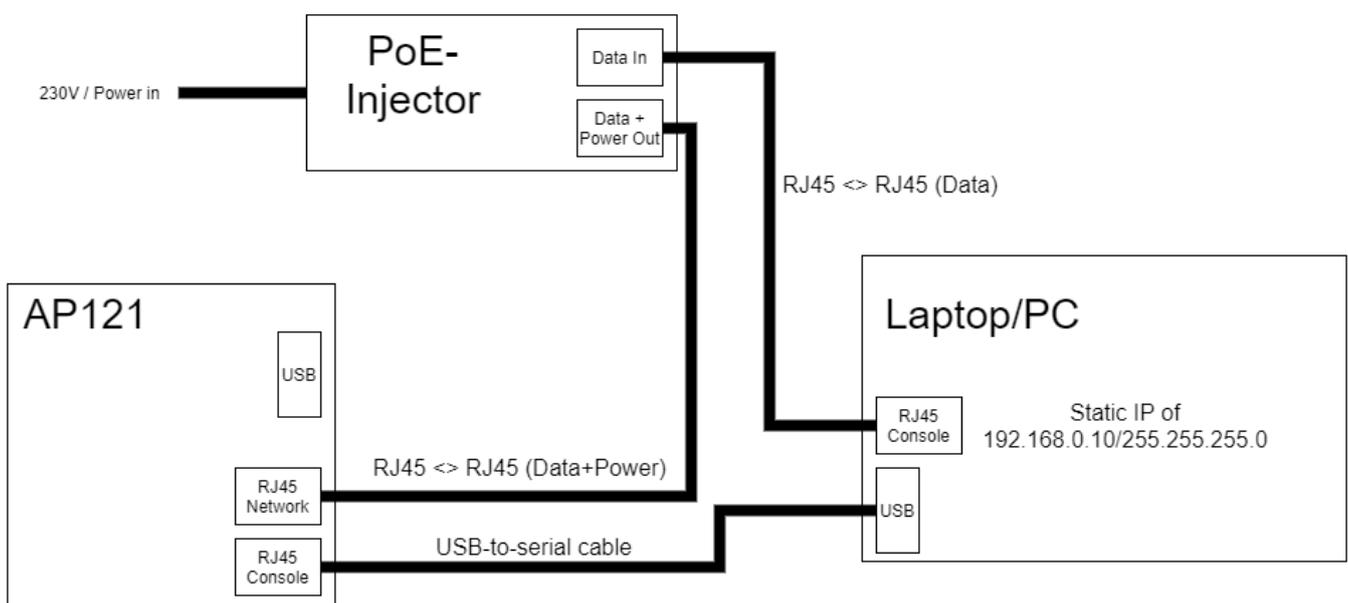
Downloads

This tutorial was tested on a Windows 11 machine and a PoE-powered AP121.

To host the image for the AP we going to use a TFTP-Server:

Setup

Then connect your AP with a Laptop or any PC as following:



For more information check the OpenWRT wiki: [openwrt.org - AP121](https://openwrt.org/AP121)

Further Thoughts

It might also be possible to flash OpenWRT on AP122, but we haven't tested this yet:

[github.com - Aerohacking - AP122](https://github.com/Aerohacking/AP122)

Sources used:

- [openwrt.org - Aerohive AP121/HiveAP 121](https://openwrt.org/AP121/HiveAP%20121)
- [github.com - NWSpitfire - AP121 OpenWRT Install](https://github.com/NWSpitfire/AP121-OpenWRT-Install)

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