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10/01/2019	0.0.1	Carlo Maria Curinga	First release

FAQ

Is Balena Fin compatible with the Raspberry Pi Compute Module with integrated eMMC (CM1, CM3) ?

No. Balena Fin is only compatible with the eMMC-less Raspberry Pi compute modules (aka `lite`)

Is Balena Fin compatible with standard rasbian or its derivates?

It will boot, but some peripherials won't work without some minor modification:

- WiFi+BT: while the `balena-fin` device tree overlay is merged upstream, you still need to set in in your `config.txt` (`dtoverlay=balena-fin`). You also need to compile and install the drivers, a process we are working on simplifying. In the meantime, we can provide you guidance on how to do it yourself
- RTC (Real Time Clock): while the `balena-fin` device tree overlay is merged upstream, you still need to set in in your `config.txt` (`dtoverlay=balena-fin`).
- RGB LED: while the `balena-fin` device tree overlay is merged upstream, you still need to set in in your `config.txt` (`dtoverlay=balena-fin`).
- miniPCIe airplane mode switch GPIO: while the `balena-fin` device tree overlay is merged upstream, you still need to set in in your `config.txt` (`dtoverlay=balena-fin`).
- DSI and CSI connectors (camera and display) + automatic HAT identification over I2C: As per the standard Raspberry Pi Foundation design (dt-blob.bin section of https://www.raspberrypi.org/documentation/hardware/computemodule/cm-peri-sw-guide.md) you need to add the Balena Fin [dt-blob.bin (https://github.com/resin-io/balena-fin/raw/master/software/dt-blob/dt-blob.bin)](https://github.com/resin-io/balena-fin/raw/master/software/dt-blob/dt-blob.bin) in the root of the boot partition

Is Balena Fin HAT compliant?

Yes it is, including power over HAT (5V @2.5A)

Can I deploy Balena Fin in my Raspberry Pi 3 resin.io application?

Yes, we support mixed fleet https://resin.io/blog/evolve-your-fleet-manage-multiple-device-types-in-one-application/

Does the RTC always run on its battery?

No - the RTC only runs on its battery when the device is powered off. This means that the real battery lifetime is way longer than the nominal one.

How can I power Balena Fin?

You can power the board from the DC 5.5/2.1mm barrel jack connector or the 2 position phoenix connector with any input voltage between 6 and 24V with at least 12.5W (that is 12V @1A for example). You can also power Balena Fin from its 5V HAT pins with 5V @2.5A

I cannot see any wireless interface listed, wifi does not work

Please make sure you have the `balena-fin` device tree overlay set in in your `config.txt` (`dtoverlay=balena-fin`).

My HAT does not work on the Balena Fin unless I manually set up things that are automatic on a Raspberry Pi 3

Please make sure you have the Balena Fin dt-blob.bin (https://github.com/resin-io/balena-fin/raw/master/software/dt-blob/dt-blob.bin) in the root of the boot partition

Raspberry Pi camera or display don't work on my Balena Fin

Please make sure you have the Balena Fin dt-blob.bin (https://github.com/resin-io/balena-fin/raw/master/software/dt-blob/dt-blob.bin) in the root of the boot partition

WiFi signal is very weak

Please make sure you have the antenna switch on the right position based on your setup (OFF for internal antenna, ON for external antenna)

My Balena Fin is heating a lot while running my application

The thermal performance of the Raspberry Pi Compute Module 3 Lite (aka CM3L) on Balena Fin has been benchmarked against the reference IO carrier board reference design from the Raspberry Pi Foundation and the Raspberry Pi 3 model B. IF your application does GPU intensive logic we suggest adding an heatsink to the SoC of the CM3L (the ones for the Raspberry Pi 3 model B are compatible)