

# balenaFin

Document Type	Datasheet
Product ID:	FIN00028 (v2)
Product Name	Modular DIN-rail Case
Document Version	1.0.0
Author	Nicolas Tzovanis
State (Draft/Proposed/Approved)	Approved

## Revision history

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Date (dd/mm/yyyy)	Version	Author	Description
24/05/2018	0.0.1	Nicolas Tzovanis	First release
06/07/2019	0.0.2	Nicolas Tzovanis	Update phoenix ring pinout
11/07/2019	1.0.0	Nicolas Tzovanis	Fix balenaFin HAT pinout

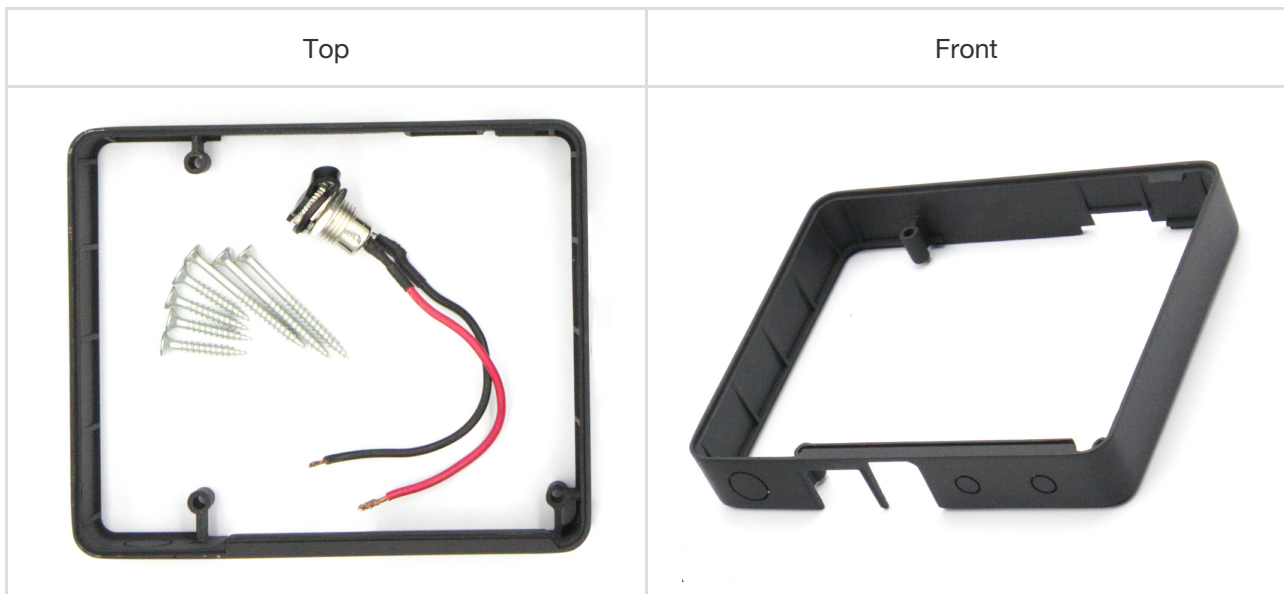
# 1. Introduction

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The modular DIN-rail case is the official protective enclosure for the balenaFin. It is compatible with all v1 balenaFins (v1.x.x). The modular ring design allows standard or custom HATs to be included inside the case.

## 1.1 Standard balenaFin ring

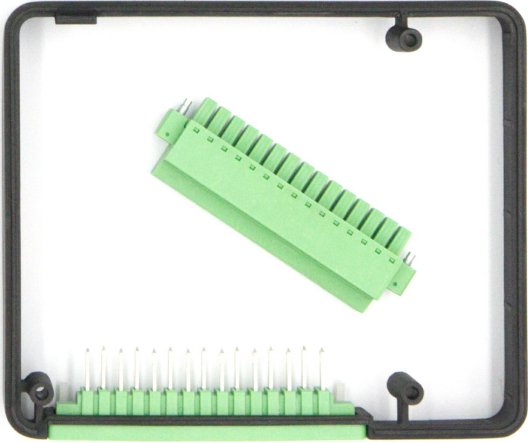

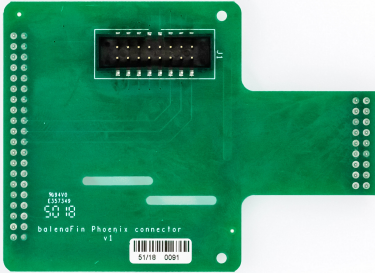

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Standard ring for balenaFin, exposes the following ports:

- USB port
- RJ45 ethernet port
- Barrel jack (5.5 x 2.1mm) input power
- Removable cap for WiFi external antenna
- Removable cap for Bluetooth external antenna

## 1.2 Terminal block ring

Top	Bottom
 A black plastic rectangular frame with a green terminal block mounted along the bottom edge. The terminal block has multiple pins extending outwards.	 A black plastic rectangular frame with a green terminal block mounted along the bottom edge. The terminal block has multiple pins extending outwards.
HAT	IDC cable
 A green printed circuit board (PCB) with a black header connector on one side and a green terminal block on the other. It has a barcode and text: "balenaFin Phoenix connector v1".	 A green terminal block with a white IDC cable connected to it. The cable has multiple pins extending outwards.

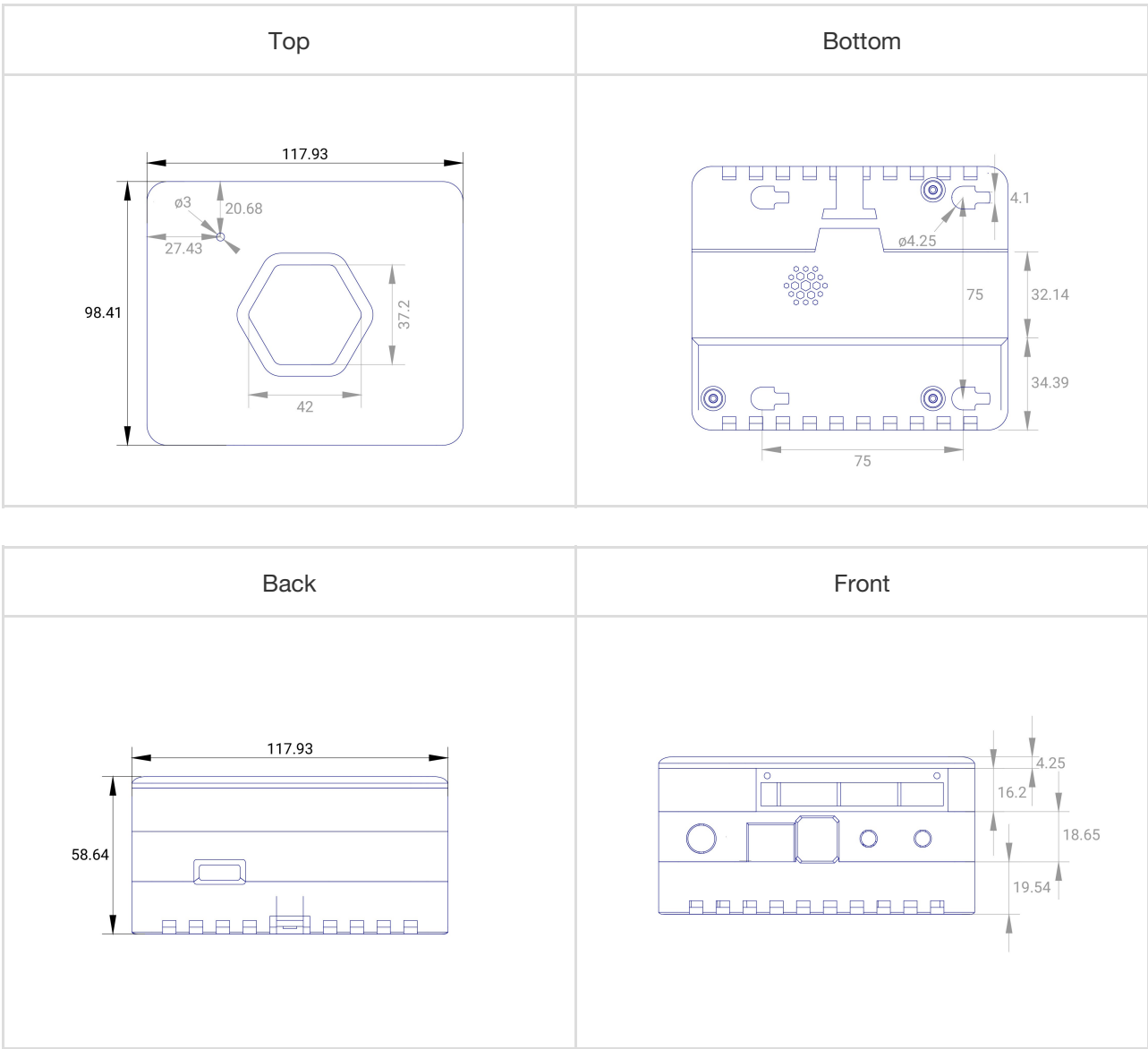
The terminal block ring extends balenaFin I/O headers to the exterior of the case. Comes with a HAT and IDC cable.

## 1.2.1 Terminal block ring pin map

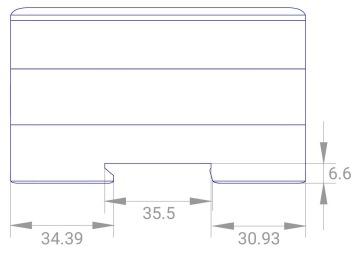
Fin header pin #	Co-processor header pin #	Case terminal pin #	Pin name
2	NC	1	5V
19	NC	2	BCM10 (MOSI)
6	NC	3	GND
21	NC	4	BCM9 (MISO)
8	NC	5	BCM14 (TXD)
23	NC	6	BCM11 (SCLK)
10	NC	7	BCM15 (RXD)
NC	1	8	PD14
3	NC	9	BCM2 (SDA)
NC	3	10	PA2
5	NC	11	BCM3 (SCL)
NC	5	12	PA3
12	NC	13	BCM18 (PWM0)
NC	13	14	PF6
16	NC	15	BCM23

# 2 Mechanical dimensions

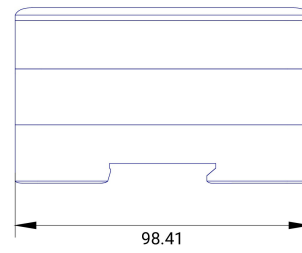
All units are in mm



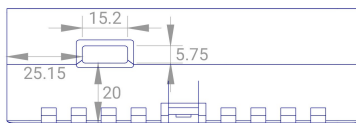
Right



Left



Back ports



Front ports

