# READY BOARD mDot Carrier PCB

## Three Labs, LLC
## www.threelabs.io



https://threelabs.io/readyboard.html
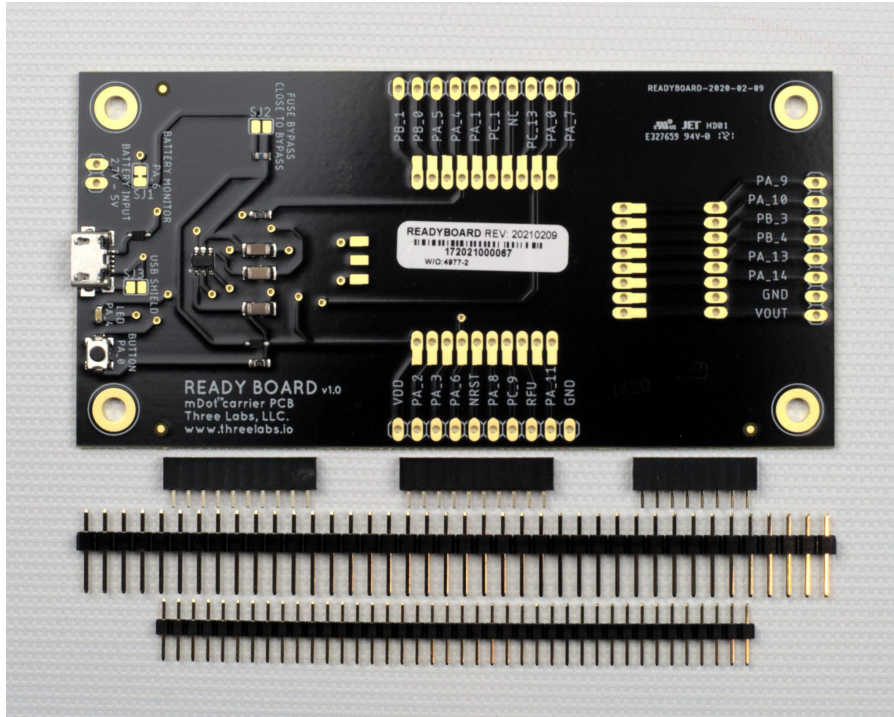
## Introduction:

The Three Labs READY Board for mDot™ is a powered carrier board designed to speed up your prototyping and even alpha/beta system time to market.

The carrier board contains a high dynamic range power supply, perfect for ultra-low power battery applications - yet can still handle the current burst required from the mDot during system boot, join, and normal Tx/Rx, + current draw from user specific application hardware.
The carrier board can be used in prototyping, as well as production, and may entirely eliminate your need to spin a custom PCB for your application.

The 2.54mm (0.1") pitch pin headers line up with standard perfboard, for easy inclusion in your design or prototype.

# Table of Contents

## Physical Features:

- SMD or THT options for mounting mDot
- Adapts to 0.1" (2.54mm) pitch pins
- Pins are placed to allow for direct placement on 0.1" (2.54mm) pitch perf-board.

## Power Features:

- High dynamic range power supply, capable of powering the mDot reliably down to input voltages of 2.7v - 5V.
- Capable of supplying additional current for sensors/peripherals.
- System can run on 2 AA lithium batteries in series (max 5v input).
- Micro USB connector for providing input power.
- Fuse included, which contains a bypass jumper for prototyping. Can be used for safe deployment, and production systems.
- Button, general use - connected to IO pin that is capable of waking the mDot from sleep.
- LED, general use - connected to GPIO.
- Voltage feedback, for input voltage monitoring - connected to Analog Input pin.
- Dimensions: 50.8mm x 101.6mm (2"x4") to match standard perf board.
- Contains all hardware for socket mounting an mDot, and pads are designed to accept surface mount soldering of an mDot (mDot not included).
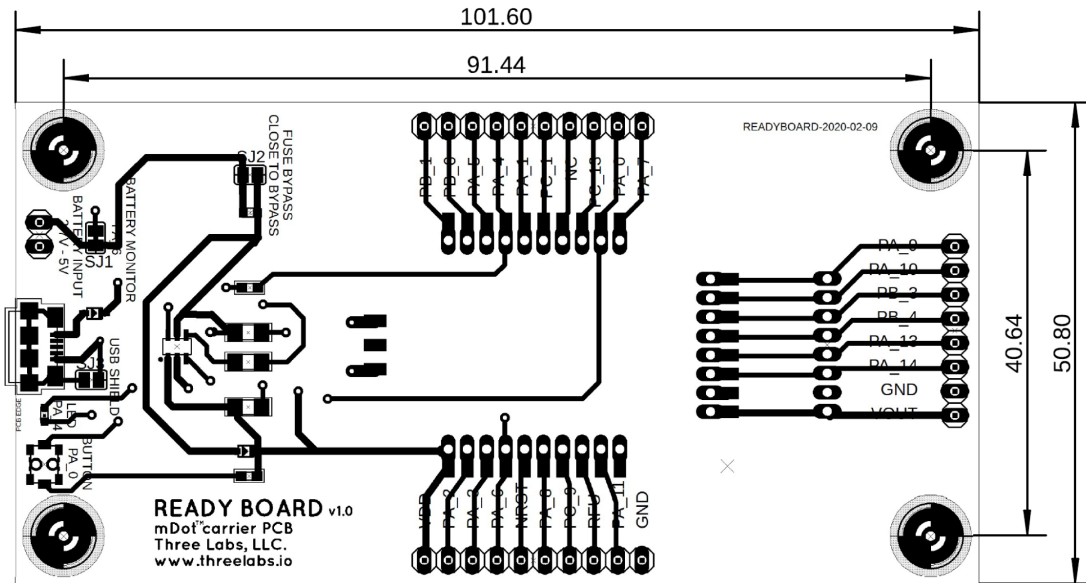
## Included in Package:

| | |
|---|---|
| READY BOARD for mDot Carrier PCB | QTY 1 |
| 8 Position Header Connector 0.079" (2.00mm) pitch | QTY 1 |
| 10 Position Header Connector 0.079" (2.00mm) pitch | QTY 2 |
| 40 Position pin header 0.079" (2.00mm) pitch | QTY 1 |
| 40 position pin header 0.100" (2.54mm) pitch | Qty 1 |

## UI and Ref Des Table:

| Ref Des | Description | Notes |
|---|---|---|
| SJ1 | Battery voltage feedback to PA_6 | Scratch to disconnect |
| SJ2 | Power Fuse bypass | Bypass fuse by soldering closed |
| SJ3 | USB shield ground | Solder to ground USB shield |
| Button | Button connected to PA_0 | Button press supplies Vdd to PA_0 |
| LED | LED connected to PA_4 | |

## Board Layout (Top View):



## Board Layout (Bottom View):