

BB-AN-0002

SwitchBlox Nano Handling and Mounting Considerations

Application Note

March 2022

1 Introduction

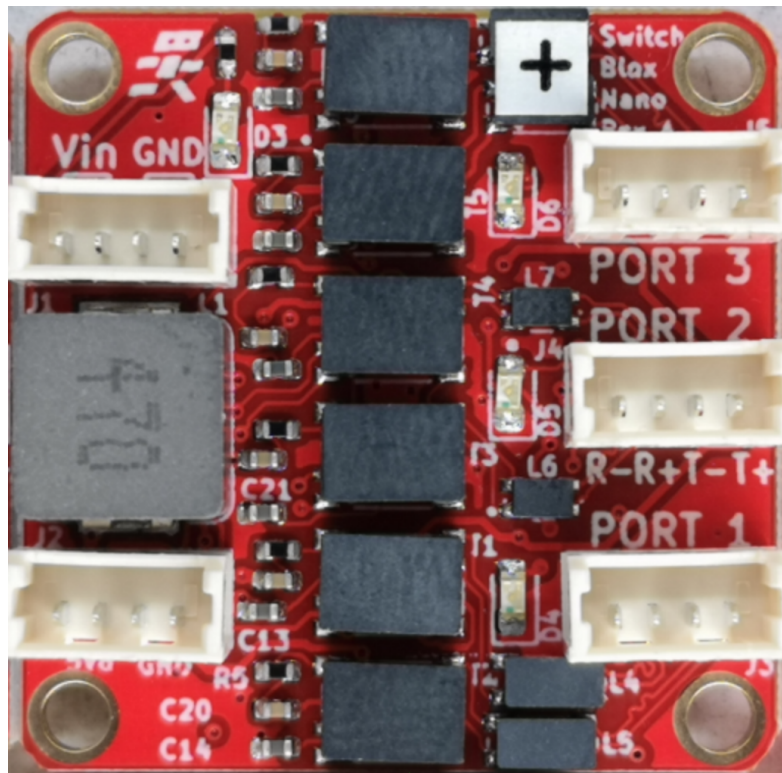
When working with a board as small as SwitchBlox Nano's there are certain considerations to make when both handling and mounting the device. The user must be careful to ensure the board is not damaged. This application note details the most common handling and mounting issues that can cause board failure.

2 Problem Areas

The two main reasons SwitchBlox Nano is more prone to damage are the proximity of the components and the board edge, and the very small surface mount transformers.

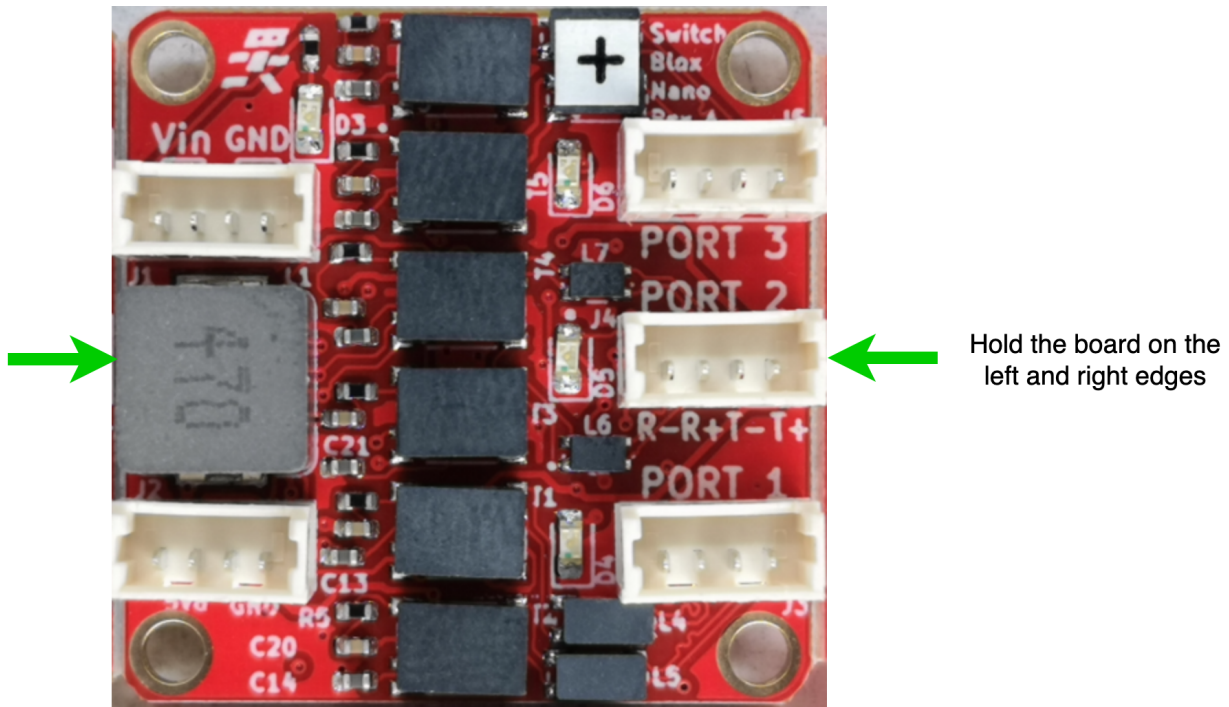
2.1 Proximity of components to the board edge

To reduce the size of the board, some components on the board are less than 0.4mm away from the board edge. This can make it easy for these components to be knocked off. Such events can occur when the user holds the board tightly or when a nearby moving component collides with the board.



Component is very close to the board edge

To prevent components from being damaged it is best to grip the board from the left and right sides, where the connectors are, rather than from top to bottom, which can apply pressure on the surface mount transformers. The connectors are through hole components, and are far less likely to be unseated from the board during handling.



During and after assembly it is important to ensure that no objects (eg cable assemblies, other boards) can easily collide with the board, as there is not much on the board that can protect its components. If collisions are unavoidable, we have experimented with using an epoxy compound on the board to provide protection, which can work well.

2.2 Surface mount transformer

The black rectangles on the front of the board are the surface mount transformers, which are crucial to operation of the device. These can be prone to popping off the board during handling, or board mounting. To prevent this, hold the board from the left and right hand sides to avoid putting pressure on these components.

During mounting the board, it is essential to ensure that the board is not subject to torsion or bending. The best way to avoid this is to ensure that the board is mounted onto a flat surface.

3 Summary

As long as the customer follows the rules above, and handles the board with care, they should have no problem integrating SwitchBlox Nano into their system.

4 Warranty

All our boards are sold with a two year warranty, however we cannot extend this warranty to cover damage to SwitchBlox Nano thanks to handling or damage during mounting. Therefore we recommend all customers take heed of the advice in this application note.

5 Datasheet Changelog

Date	Datasheet Version	Author	Notes
13/03/2022	A_A	Josh Elijah	Initial release

6 Contact

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