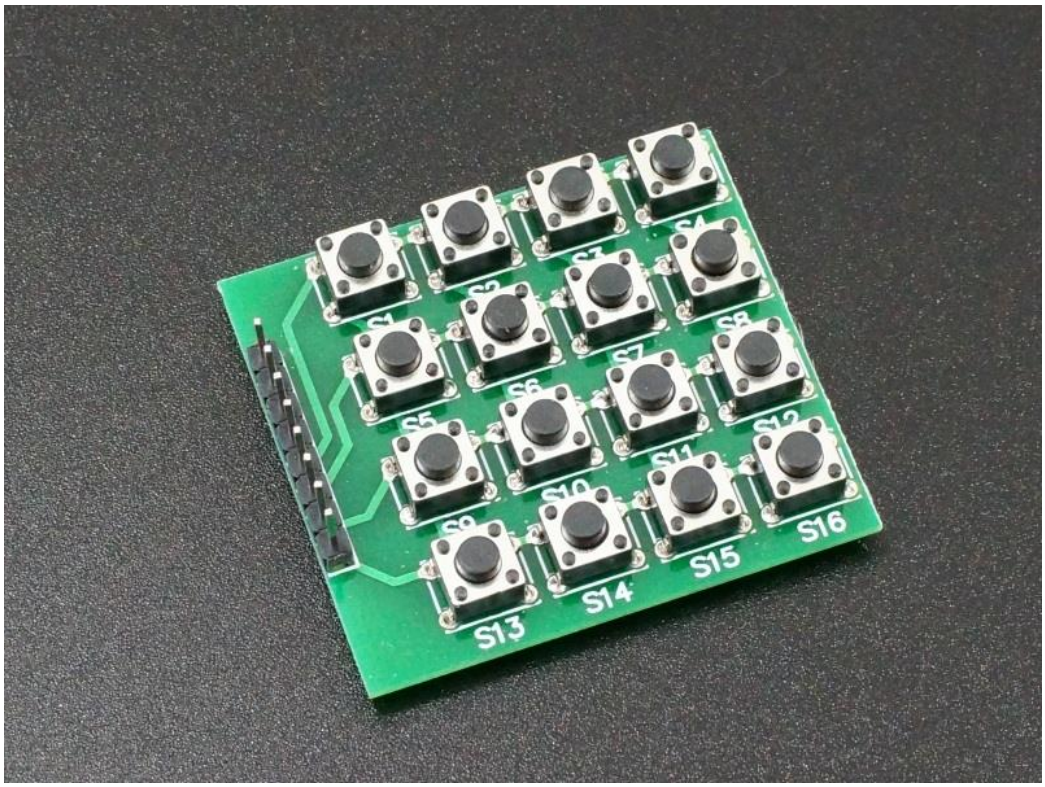

KEY FEATURES OF TACTILE KEYPAD 4×4 MATRIX:

- 16 tactile pushbutton switches with good 'clickability' mounted on a PCB.
- 3.3 and 5V compatible

The keypad consists of pushbutton switches that are arranged in a matrix of 4 rows and 4 columns. The pushbutton switches are labeled S1 thru S16 and are wired at the intersection of the rows and columns.

Button pushes can be detected using 8 pins on a MCU. The MCU uses 4 output pins to drive the columns one at a time. At the same time, it uses 4 input pins to scan the rows at the same time. This logic can be inverted so it drives the rows and scans the columns.

When no button is pushed, none of the row/column pins are electrically connected. If a button is pushed, the MCU will see it on an input pin and can determine which button was pushed by which output pin was active when the button push was detected. For example, if the 'S8' button is pressed, there will be a short between the Row 1 and Col 3 pins.

Module Connections

The keypad terminates in an 8-pin male header that brings out the 4 row pins and 4 column pins for connection to a MCU.

The header pin-out is shown from top to bottom as you look at the board with the header on the left. Note that the row and column pin order are opposite of each other.

1×8 Header (starting at top)

- Col 3
- Col 2
- Col 1
- Col 0
- Row 0
- Row 1
- Row 2
- Row 3