OpenPnP

Setup a Tape Strip or Tray Feeder

In this guide you'll learn how to fix a tape strip of components to your machine and configure OpenPnP to use it as a feeder. You can also use this guide to setup a tray of parts.

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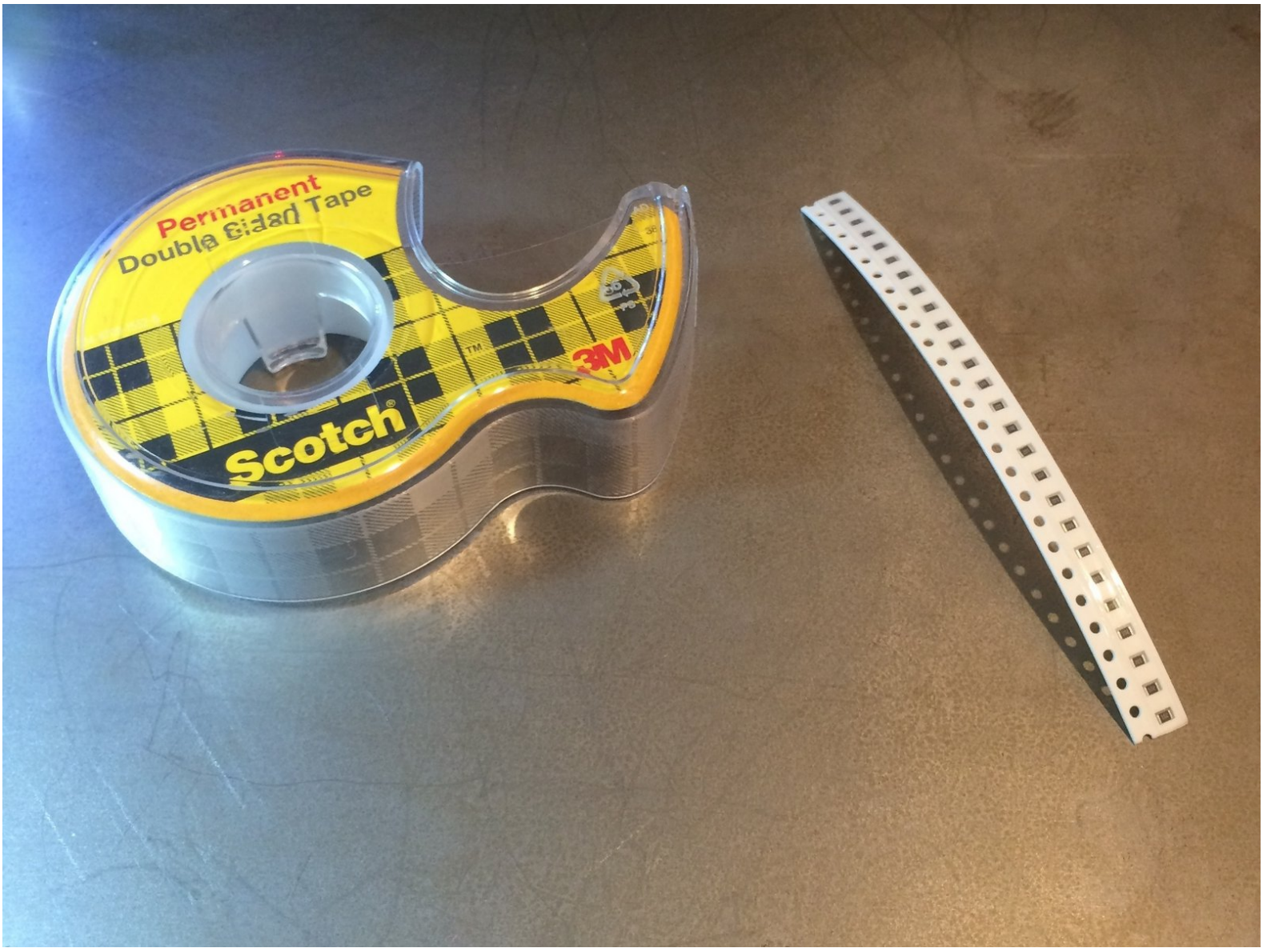
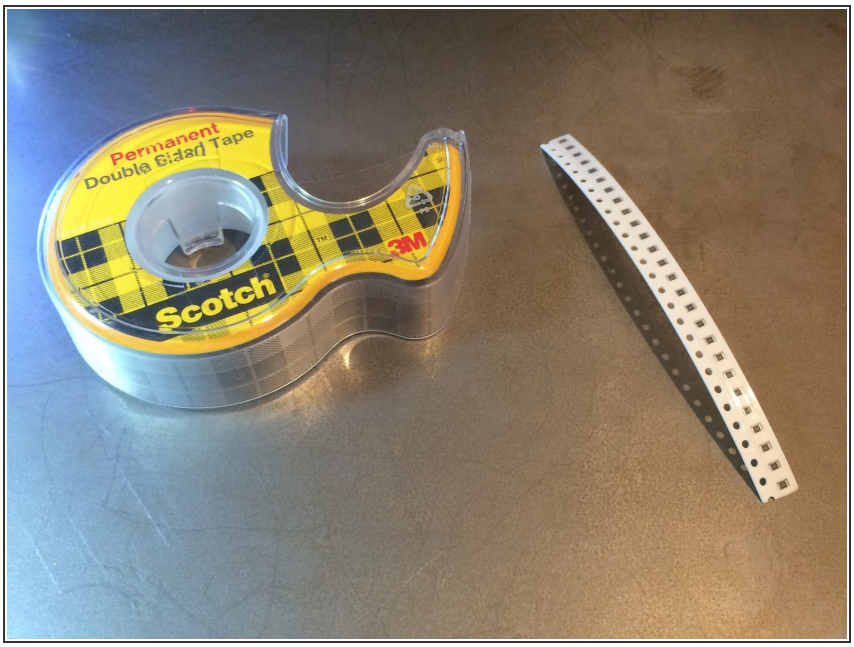
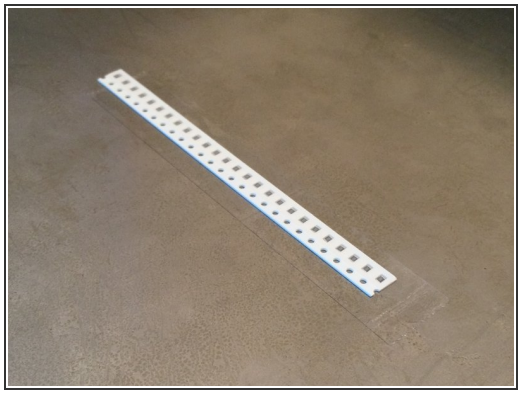
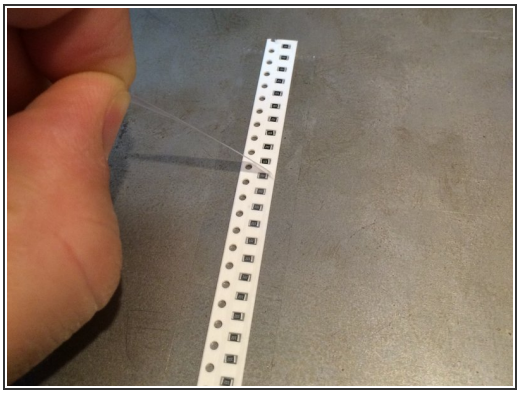


Step 1 — Gather Supplies



- You'll need a pick and place machine, some double sided tape and a tape strip of parts that you want to feed.

Step 2 — Mount The Tape Strip

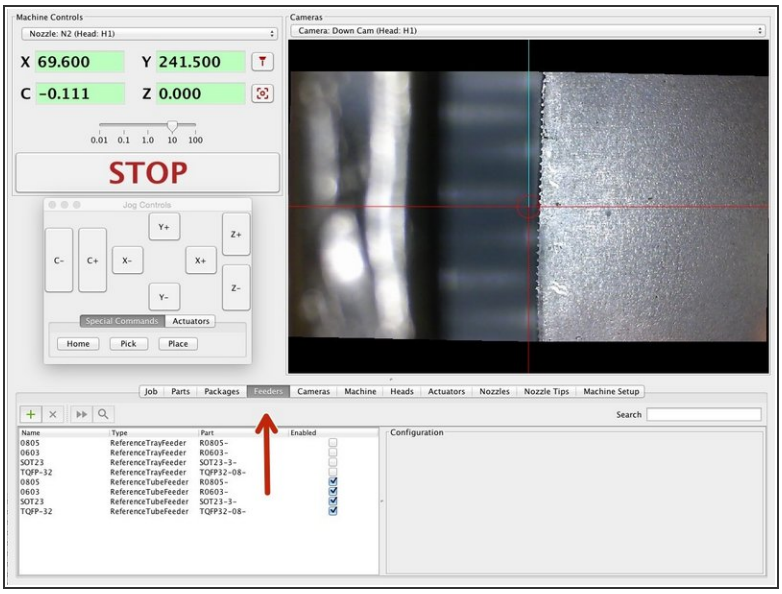




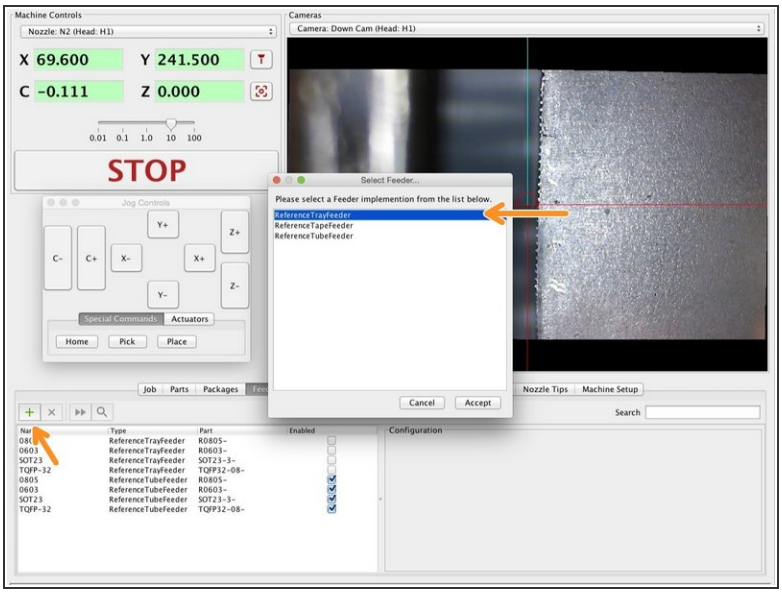
- Put some double sided tape down on the bed of your machine.
- Place a strip of components down on the double sided tape.
- Peel the cover tape off the strip to expose the components.

⚠ Be careful when peeling the cover tape back. If you do it too fast the components might jump from their pockets.

ⓘ You can also use a tape strip holder or a tray of parts. Anything that holds one or more parts in place will do.

Step 3 — Create a Tray Feeder in OpenPnP

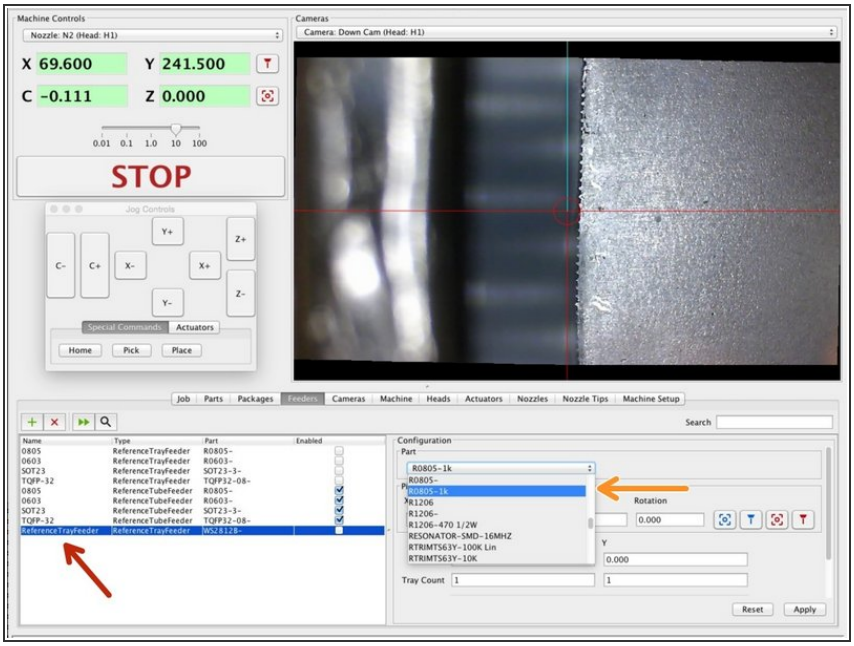




- Open OpenPnP and navigate to the Feeders panel.
- Click the Add button and select the ReferenceTrayFeeder option.

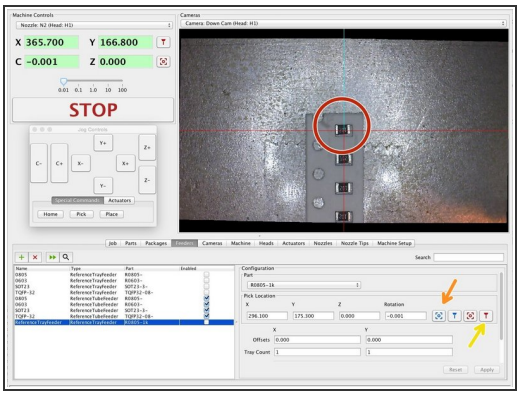
ReferenceTrayFeeder is used for any type of feeder where picks are performed by indexing by a 1D or 2D offset.

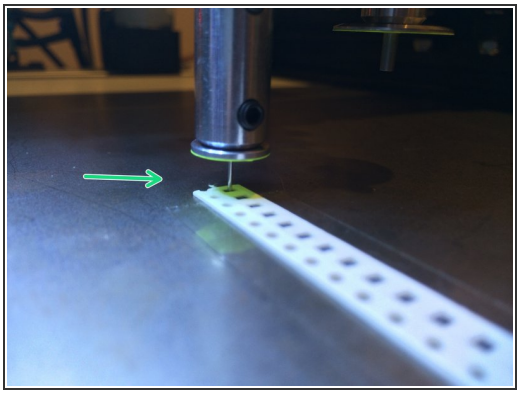
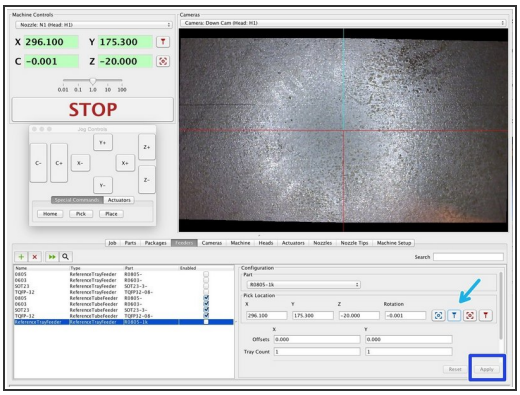
Step 4 — Choose Your Part



- Select the new Feeder in the table on the left. You can double click the Name to give it a new name, if you like.
- Select the Part that this Feeder will feed. If it's not listed, see Part Setup for how to create it first.

Step 5 — Set Pick Location



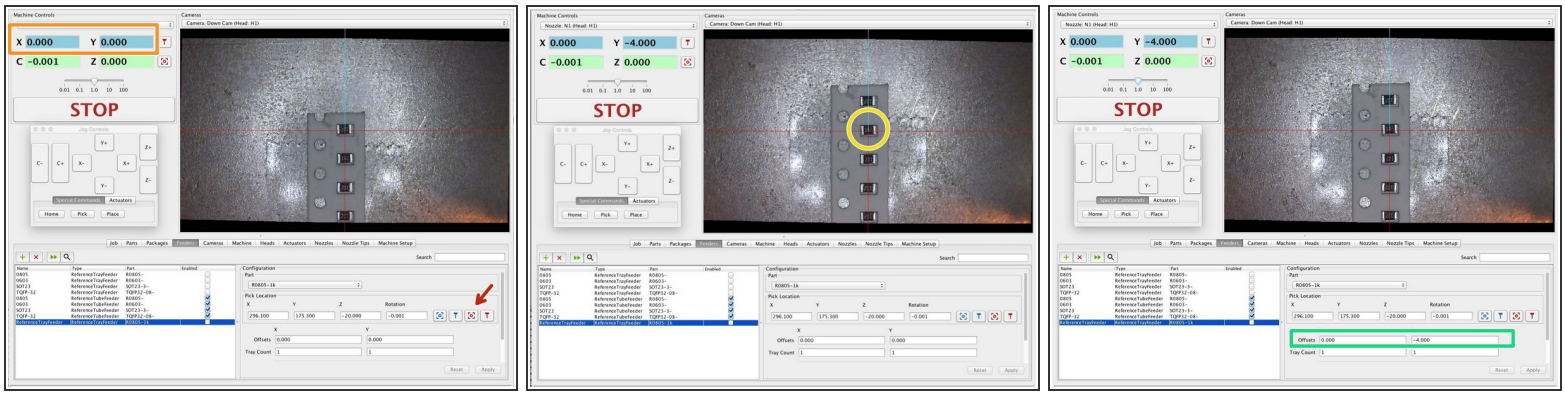
ⓘ The Pick Location is the place where OpenPnP will pick the first part from your tape.

- Using the camera view, move the machine so that the first component in the tape is centered.

ⓘ Try to center the pocket the part is in, rather than the part itself.

- Click the Capture Camera Coordinates button to fill in the coordinates of the first component.
- Click the Position Tool button to move the nozzle over the position you just selected.
- Using the jog controls, or hotkeys, move the nozzle down so that it is just touching the part.
- Click the Capture Tool Coordinates button to finish filling in the component's coordinates.
- Press the Apply button to lock in your changes.

Step 6 — Set Offsets



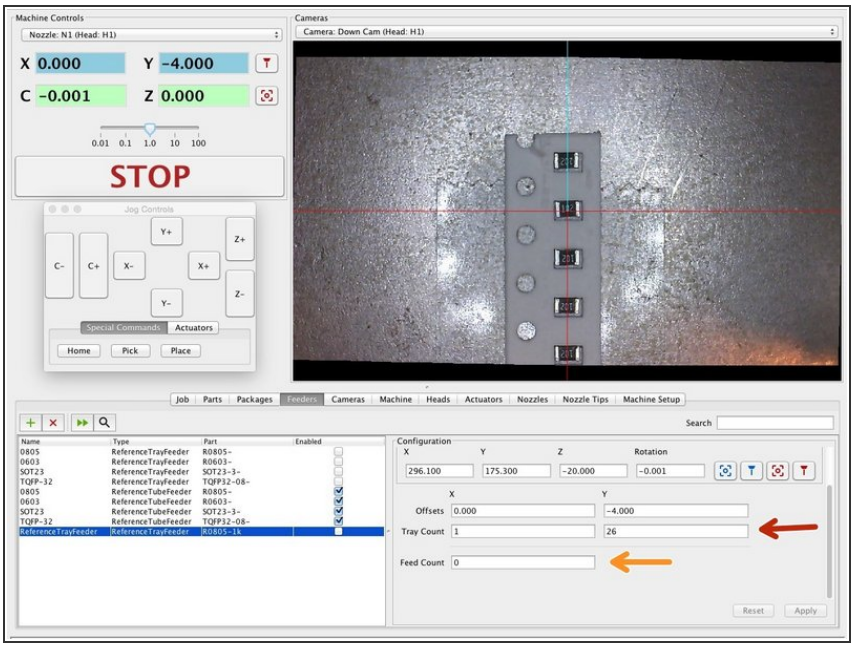
Offsets tell OpenPnP how far to move from the pick location to the next part. It can move any distance in either X or Y.

- Click the Position Camera button to move the camera back over the pick location.
- Click the X and Y digital readouts (DROs) once each to put them in relative mode.

When the DROs are in relative mode they show the distance you've moved the machine since clicking them. You can click them again to clear it.

- Center the camera over the next part in the strip.
- Type in the values from the X and Y DROs into the X and Y Offsets fields in the feeder configuration.

Step 7 — Set Tray Counts



Tray Counts tell the feeder how large the strip or tray is. A strip will only count in one direction while a tray will count in two.

- Count the number of components in your tape strip and enter that value into the Tray Count field.
- You can also enter a Feed Count. Feed Count is the number of parts that have been fed so far. Resetting it to 0 starts over again at the pick location.