Subject: Gantry distance sensor`
Posted by BobSmith on Mon, 13 Apr 2020 03:56:11 GMT
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Build a distance sensor for use on t-slot channel.
Put a tape measure along the slot in a t-slot channel. Use a linear image sensor to look at the lines on the edge of the tape measure. A 3D printed carriage could keep the sensor aligned on the t-slot channel. The 3D printed carriage could be generic or custom designed for each application.

The Toshiba TCD1304 sensor might work. There are about 3000 pixels per inch, so a movement of 0.001 inch would move the image 3 pixels.

Later, a custom tape could be built that uses Gray codes to embed the absolute location onto the tape itself.

File Attachments
1) ruler_image.jpg, downloaded 1667 times
2) tslot_ruler.jpg, downloaded 1613 times