Working with Actuators in Embedded Systems

UQMARS

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What is an Actuator?

Just as a sensor is a component that 'senses', an actuator is a component that 'acts'. Essentially, an actuator is something you use to create motion from your system.

Types of Actuators

There are two categories of actuators that you may deal with:

- linear
- rotary

As their names suggest, these create linear motion (along a straight path) and rotational motion respectively.

Rotary Actuators

Likely the type of actuator that you will initially have greater exposure to, a rotary actuator is responsible for making things spin. The standard types that you will be exposed to within embedded systems are:

- Servo Motor
- Brushed DC Motor
- Brushless DC Motor
- Stepper Motor

Rotary Actuators Activity

Linear Actuators

Linear actuators are useful when you seek axial extension. Standard varieties that you may encounter are:

- Screw Actuators
- Wheel and Axle
- Hydraulic / Pneumatic Cylinders

Linear Actuators Activity