

# Pneumatics

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## Overview

The pneumatics system will provide a means for controlling actuators within the submarine such as the claw, torpedos, and marker droppers. Pneumatics are controlled via simple on-off commands to the pneumatic in the form of high and low voltages.

## Design

A microcontroller will be utilized as a GPIO expander and will be implemented as a ROS node on the microcontroller itself. This node will subscribe to a topic to control actuators based on boolean values.

## Resources

Resource	Description
<a href="#">Arduino Tutorials</a>	Code tutorials for programming Arduino devices.
 <a href="#">ATMega1284P Arduino Core</a>	Arduino Core for the ATMega1284P
 <a href="#">RosSerial Documentation</a>	RosSerial is the communication protocol that allows implementation of a ROS node on a microcontroller.
<a href="#">ATMega1284P</a>	Microcontroller to be used on the project.

From:

<https://robosub.eecs.wsu.edu/wiki/> - **Palouse RoboSub Technical Documentation**

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