

# 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:

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

Permanent link:

<http://robosub-old.eecs.wsu.edu/wiki/ee/pneumatics/start?rev=1474677933>



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