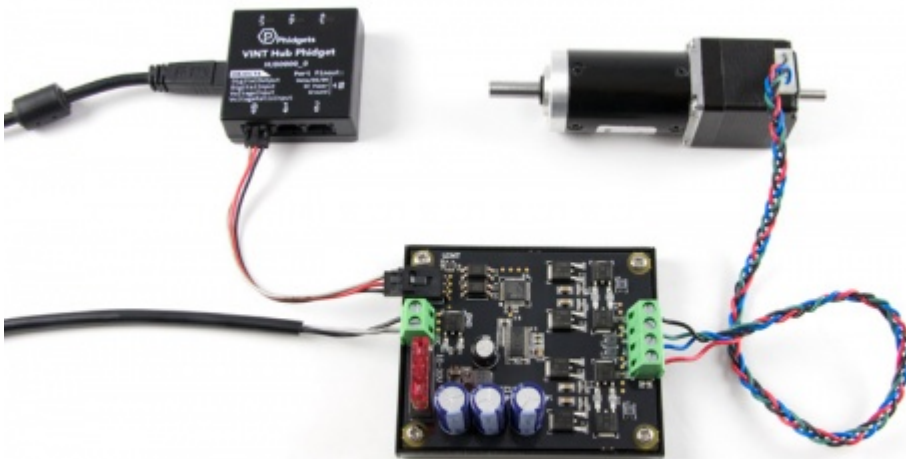# Contents

# Getting Started

Welcome to the STC1002 user guide! In order to get started, make sure you have the following hardware on hand:

- STC1002 - 8A Stepper Phidget
- VINT Hub
- Phidget cable
- USB cable and computer
- Power supply (10-30V DC)
- 4-wire, 6-wire, or 8-wire bipolar stepper motor

Next, you will need to connect the pieces:



1. Connect the STC1002 to the VINT Hub using the Phidget cable.
2. Connect the stepper motor to the Phidget's output terminals. See your motor's data sheet or product page for wiring instructions.
3. Connect the VINT Hub to your computer with a USB cable.
4. Connect the power supply to the power terminals.

Now that you have everything together, let's start using the STC1002!

# Using the STC1002
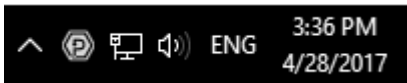
## Phidget Control Panel

In order to demonstrate the functionality of the STC1002, the Phidget Control Panel running on a Windows machine will be used.

The Phidget Control Panel is available for use on both macOS and Windows machines.

### Windows

To open the Phidget Control Panel on Windows, find the ⬡Ⓟ⬡ icon in the taskbar. If it is not there, open up the start menu and search for *Phidget Control Panel*



### macOS

To open the Phidget Control Panel on macOS, open Finder and navigate to the Phidget Control Panel in the Applications list. Double click on the ⬡Ⓟ⬡ icon to bring up the Phidget Control Panel.

For more information, take a look at the getting started guide for your operating system:

- Getting started with Windows
- Getting started with macOS

Linux users can follow the getting started with Linux guide and continue reading here for more information about the STC1002.

## First Look

After plugging the STC1002 into your computer and opening the Phidget Control Panel, you will see something like this:
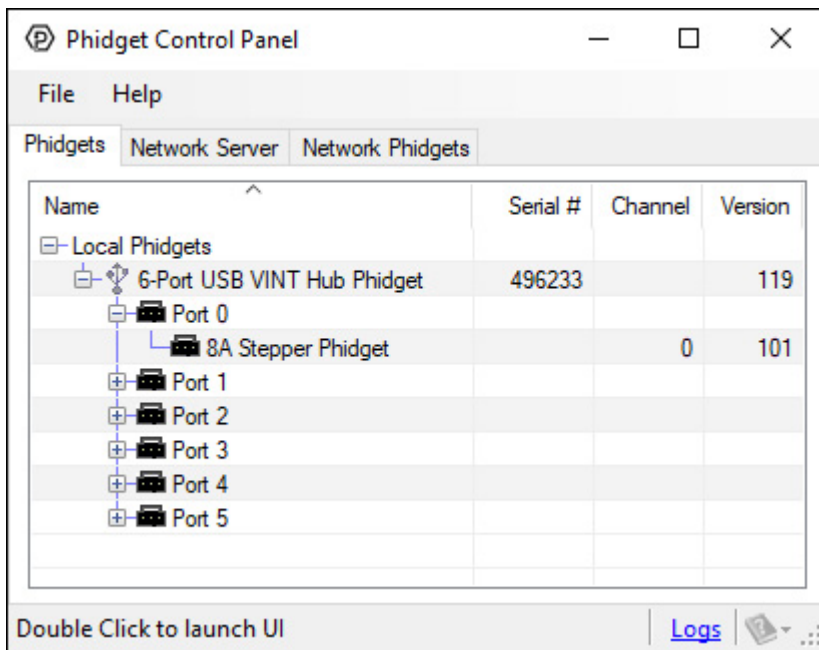
The Phidget Control Panel will list all connected Phidgets and associated objects, as well as the following information:

- Serial number: allows you to differentiate between similar Phidgets.
- Channel: allows you to differentiate between similar objects on a Phidget.
- Version number: corresponds to the firmware version your Phidget is running. If your Phidget is listed in red, your firmware is out of date. Update the firmware by double-clicking the entry.

The Phidget Control Panel can also be used to test your device. Double-clicking on an object will open an example.

## Stepper Motor

Double-click on the Stepper object, labelled *Stepper Phidget*, in order to run the example:

General information about the selected object will be displayed at the top of the window. You can also experiment with the following functionality:

- Toggle the *Engage* button to provide power to the motor coils.
- By default, motor position, velocity, and acceleration are measured in sixteenths of a step. If you want to use different units, change the value in the *Rescale Factor* textbox.
- Use the *Target Position* slider to set a new target position. Change the *Acceleration* and *Velocity* sliders to speed up or slow down the STC1002's approach.
- Select the *Velocity (Continuous) Control* tab for continuous rotation instead of specifiying a position.

## Finding The Addressing Information

Before you can access the device in your own code, and from our examples, you'll need to take note of the addressing parameters for your Phidget. These will indicate how the Phidget is physically connected to your application. For simplicity, these parameters can be found by clicking the button at the top of the Control Panel example for that Phidget.
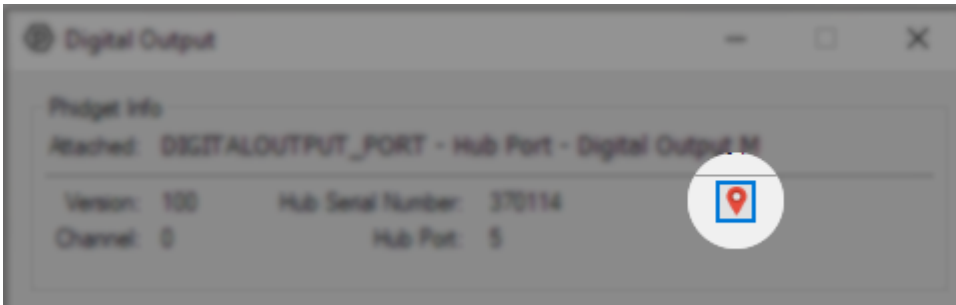
In the Addressing Information window, the section above the line displays information you will need to connect to your Phidget from any application. In particular, note the *Channel Class* field as this will be the API you will need to use with your Phidget, and the type of example you should use to get started with it. The section below the line provides information about the network the Phidget is connected on if it is attached remotely. Keep track of these parameters moving forward, as you will need them once you start running our examples or your own code.
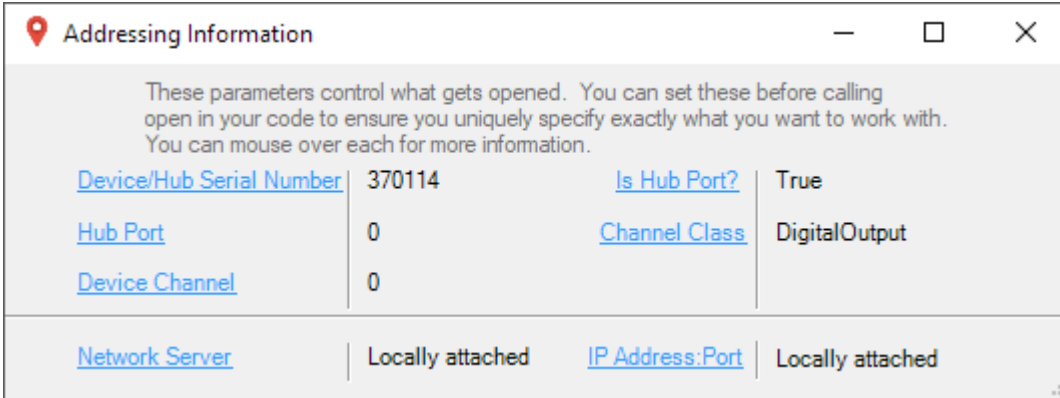


## Using Your Own Program

You are now ready to start writing your own code for the device. The best way to do that is to start from our examples:

This Phidget is compatible with the Stepper Examples.

Once you have your example, you will need to follow the instructions on the page for your programming language to get it running. To find these instructions, select your programming language from the Software Overview page.