

# 4x Digital Input Phidget

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# Getting Started

Welcome to the DAQ1200 user guide! In order to get started, make sure you have the following hardware on hand:

- DAQ1200 - 4x Digital Input Phidget
- VINT Hub
- Phidget cable
- USB cable and computer
- something to use with the DAQ1200 (e.g. switch or digital sensor with a digital output)

Next, you will need to connect the pieces:



1. Connect the DAQ1200 to the VINT Hub using the Phidget cable.
2. Connect the VINT Hub to your computer with a USB cable.
3. Connect a switch or digital sensor to one of the DAQ1200's inputs.

Now that you have everything together, let's start using the DAQ1200!

## Using the DAQ1200

### Phidget Control Panel

In order to demonstrate the functionality of the DAQ1200, 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.

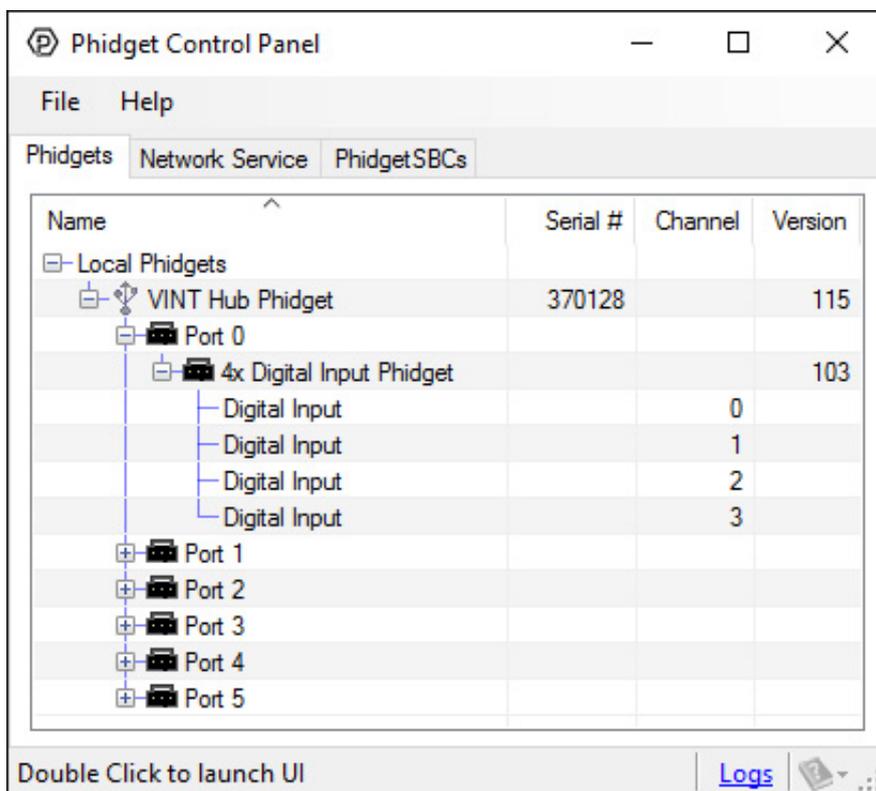
For more information, take a look at the getting started guide for your operating system:

- 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 DAQ1200.

# First Look

After plugging the DAQ1200 into your computer and opening the Phidget Control Panel, you will see something like this:



TO  
TOP

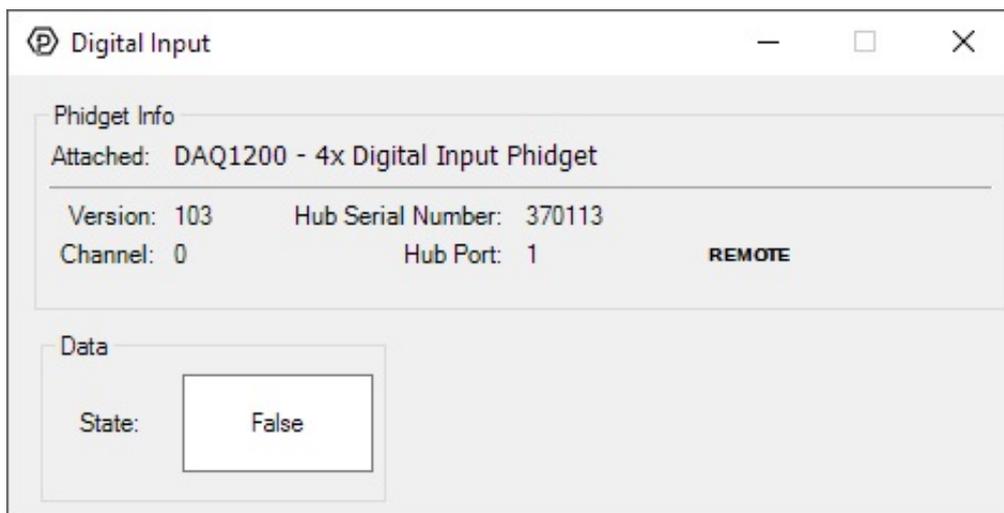
The Phidget Control Panel will list all connected Phidgets and associated objects, as well as the following information:

- **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.

# Digital Input

Double-click on a Digital Input object 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:

- This is an active-low device, therefore, it will be true when connected to ground, and false when connected to a high voltage.

## Technical Details

### General

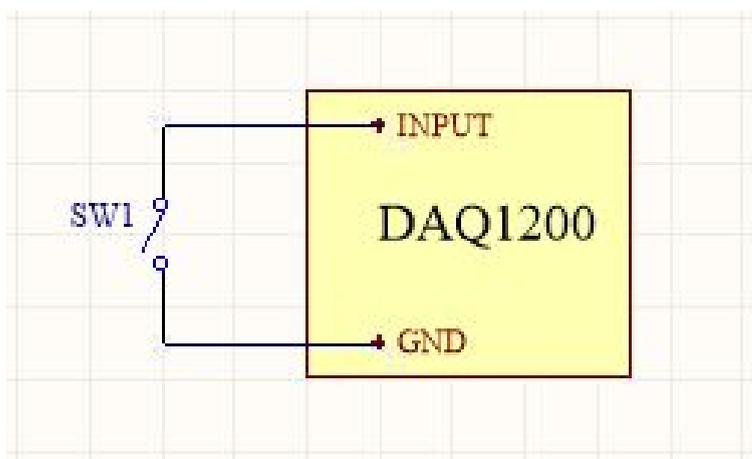
The DAQ1200 features four digital input terminals, all of which share a common ground. Each input has a built-in pull-up resistor to allow for easy interfacing to all manner of switches.

### Example Use

Here are a few things you can do with the DAQ1200 Digital Input Phidget

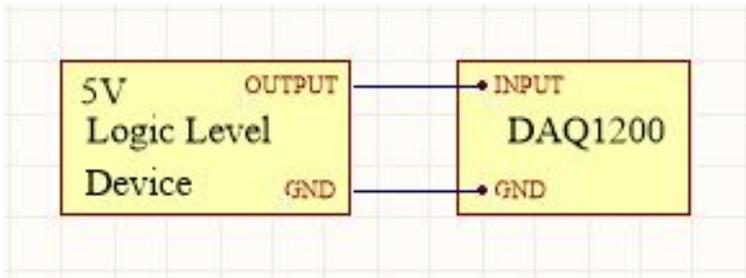
#### Use with a Switch

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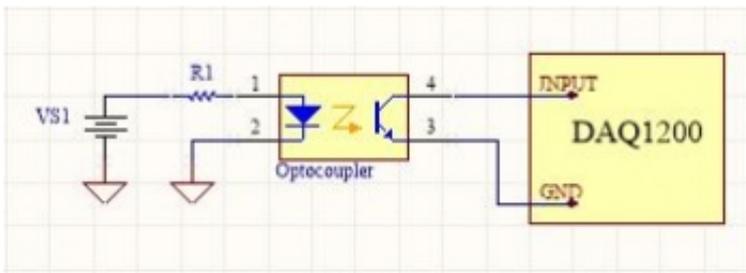
To interface a switch with the DAQ1200, simply connect the switch across the input and ground terminals for a channel.

#### Use with 5V Logic Level Devices



The DAQ1200 can also detect signals from 5V logic level devices. Be aware that the input is active-low, which means that LOW voltages will be detected as TRUE, and HIGH voltages as FALSE.

## Isolation with Optocouplers



In some applications, particularly where there is a lot of electrical noise (automotive), or where you want maximum protection of the circuitry (interactive installations, kiosks), electrical isolation buys you a huge margin of protection.

If wired according to the diagram, driving the LED will cause the DAQ1200 to report TRUE.

Note that in cases where many isolated inputs are required, or for simplicity's sake, you may want to consider using the DAQ1300 or DAQ1301, which are (more sophisticated) ready-made isolated digital input Phidgets.

## What to do Next

- Software Overview - Find your preferred programming language here to learn how to write your own code with Phidgets!
- General Phidget Programming - Read this general guide to the various aspects of programming with Phidgets. Learn how to log data into a spreadsheet, use Phidgets over the network, and much more.
- Phidget22 API - The API is a universal library of all functions and definitions for programming with Phidgets. Just select your language and device and it'll give you a complete list of all properties, methods, events, and enumerations that are at your disposal.