

VINT Hub Phidget



If you place an order with Phidgets, it's very likely you'll want a VINT Hub Phidget to tie it all together.

Six Versatile I/O Ports

With a VINT Hub Phidget, you can interface six devices to your computer through a single USB port. Each VINT port can perform one of four roles: Communicating with an intelligent VINT Device, reading a 0-5V Voltage or ratiometric sensor, acting as a digital output, or reading switches as a digital input. Each port has a power and ground pin, so you can also use the ports to gain access to the USB voltage supply directly.

Plug in one of our many VINT-enabled Phidgets that perform a wide variety of functions. Control motors and LEDs, measure temperature or motion, or build a large scale system with many inputs and outputs.

Easy to Use

VINT Devices are 'plug and program': automatically discovered by the Phidget API with the same ease of programming you've come to expect from Phidgets. Each VINT device has a full API with functions and events to make programming a snap.

Analog Sensor Compatible

Sometimes, you just need a few simple analog voltage sensors. Luckily, your collection of Phidget Analog Input sensors is not obsolete; each port on the USB VINT Hub can interface a 0-5V sensor. The VINT Port is backwards compatible with both ratiometric and non-ratiometric Phidget analog sensors.

Digital I/O Mode

In digital output mode, a VINT port can be used to drive LEDs, relays, digital circuits, and other simple electronics. Each port is PWM-enabled, allowing you to dim LEDs to a specific brightness.

Wire a switch or sensor contact directly into a VINT Port, and use the Digital Input mode to read the state of the switch.

If you need more than six inputs or outputs, you can expand by attaching a VINT I/O module. For example, there are VINT digital output modules with 16 outputs, allowing 96 digital outputs on a single VINT HUB Phidget!

Product Specifications

Board

Controlled By USB (Mini-USB)
Number of VINT Ports 6

Electrical Properties

USB Voltage Min 4.5 V DC
USB Voltage Max 5.3 V DC
USB Speed High Speed
Current Consumption Min 32.5 mA
Available External Current 470 mA

Voltage Inputs

Voltage Input Resolution * 16 bit
Sensor Input Impedance 324 k Ω
Input Voltage Min (DC) 0 V DC
Input Voltage Max (DC) 5 V DC
Voltage Input Noise $\pm 630 \mu\text{V}$ DC
Sampling Interval Max 60 s/sample
Number of Voltage Inputs 6 (Shared)
Sampling Interval Min 1 ms/sample

Digital Inputs

Pull-up Resistance 124 k Ω
Low Voltage Max (True) 1 V DC
High Voltage Min (False) 1.8 V DC
Low Voltage Trigger Length Min 3 ms
High Voltage Trigger Length Min 3 ms
Digital Input Voltage Max 5.5 V DC
Digital Input Type Switch (Active Low)
Number of Digital Inputs 6 (Shared)

Digital Outputs

Series Resistance 510 Ω
Digital Output Available Current 8.1 mA
Digital Output Voltage Min 0 V DC
Digital Output Voltage Max 3.3 V DC
PWM Frequency Max 50 kHz
PWM Resolution 0.8 %
Number of Digital Outputs 6 (Shared)

Physical Properties

Operating Temperature Min -40 $^{\circ}\text{C}$
Operating Temperature Max 85 $^{\circ}\text{C}$

*Voltage measured with a 10-bit ADC, **oversampled** to 16-bits.

Software Objects

Channel Name	API	Channel	Hub Port
Hub Port – Digital Input Mode			
Digital Input	DigitalInput	0	0 – 5
Hub Port – Digital Output Mode			
Digital Output	DigitalOutput	0	0 – 5
Hub Port – Voltage Input Mode			
Voltage Input	VoltageInput	0	0 – 5
Hub Port – Voltage Ratio Mode			
Voltage Ratio Input	VoltageRatioInput	0	0 – 5
6-Port USB VINT Hub Phidget			
VINT Hub	Hub	0	