sparkfun$_{q}wiic_{k}eypad$

Release 0.0.9

Jul 15, 2019

Contents:

Python module for the qwiic joystick, which is part of the SparkFun Qwiic Joystick

This python package is a port of the existing SparkFun Qwiic Joystick Arduino Library

This package can be used in conjunction with the overall SparkFun qwiic Python Package

New to qwiic? Take a look at the entire SparkFun qwiic ecosystem.

CHAPTER 1

Contents

CHAPTER 2

Dependencies

This driver package depends on the qwiic I2C driver: Qwiic_I2C_Py

CHAPTER 3

Documentation

The SparkFun qwiic Joystick module documentation is hosted at ReadTheDocs

CHAPTER 4

Installation

4.1 PyPi Installation

This repository is hosted on PyPi as the sparkfun-qwiic-joystick package. On systems that support PyPi installation via pip, this library is installed using the following commands

For all users (note: the user must have sudo privileges):

```
sudo pip install sparkfun-qwiic-joystick
```

For the current user:

```
pip install sparkfun-qwiic-joystick
```

4.2 Local Installation

To install, make sure the setuptools package is installed on the system.

Direct installation at the command line:

```
python setup.py install
```

To build a package for use with pip:

```
python setup.py sdist
```

A package file is built and placed in a subdirectory called dist. This package file can be installed using pip.

```
cd dist
pip install sparkfun_qwiic_joystick-<version>.tar.gz
```

CHAPTER 5

Example Use

See the examples directory for more detailed use examples.

```
from __future__ import print_function
import qwiic_joystick
import time
import sys

def runExample():

    print("\nSparkFun qwiic Joystick   Example 1\n")
    myJoystick = qwiic_joystick.QwiicJoystick()

    if myJoystick.isConnected() == False:
        print("The Qwiic Joystick device isn't connected to the system. Please check␣
↪your connection", \
            file=sys.stderr)
        return

    myJoystick.begin()

    print("Initialized. Firmware Version: %s" % myJoystick.getVersion())

    while True:

        print("X: %d, Y: %d, Button: %d" % ( \
                    myJoystick.getHorizontal(), \
                    myJoystick.getVertical(), \
                    myJoystick.getButton()))

        time.sleep(.5)

if __name__ == '__main__':
    try:
        runExample()
```

(continues on next page)

(continued from previous page)

```
    except (KeyboardInterrupt, SystemExit) as exErr:
        print("\nEnding Example 1")
        sys.exit(0)
```

CHAPTER 6

Table of Contents

6.1 API Reference

6.1.1 qwiic_joystick

Python module for the[SparkFun Qwiic Joystick](https://www.sparkfun.com/products/15168)

This python package is a port of the existing [SparkFun Qwiic Joystick Arduino Library](https://github.com/sparkfun/SparkFun_Qwiic_Joystick_Arduino_Library)

This package can be used in conjunction with the overall [SparkFun qwiic Python Package](https://github.com/sparkfun/Qwiic_Py)

New to qwiic? Take a look at the entire [SparkFun qwiic ecosystem](https://www.sparkfun.com/qwiic).

class qwiic_joystick.**QwiicJoystick**(*address=None*, *i2c_driver=None*)

Parameters

- **address** – The I2C address to use for the device. If not provided, the default address is used.
- **i2c_driver** – An existing i2c driver object. If not provided a driver object is created.

Returns The QwiicJoystick device object.

Return type Object

begin()

Initialize the operation of the Joystick module

Returns Returns true of the initializtion was successful, otherwise False.

Return type bool

button

Returns 0 button is currently being pressed.

Returns button status

Return type integer

check_button()
Returns 1 if button was pressed between reads of .getButton() or .checkButton() the register is then cleared after read.

Returns button status

Return type integer

connected
Determine if a Joystick device is conntected to the system..

Returns True if the device is connected, otherwise False.

Return type bool

get_button()
Returns 0 button is currently being pressed.

Returns button status

Return type integer

get_horizontal()
Returns the 10-bit ADC value of the joystick horizontal position

Returns The next button value

Return type byte as integer

get_version()
Returns a string of the firmware version number

Returns The firmware version

Return type string

get_vertical()
Returns the 10-bit ADC value of the joystick vertical position

Returns The next button value

Return type byte as integer

horizontal
Returns the 10-bit ADC value of the joystick horizontal position

Returns The next button value

Return type byte as integer

is_connected()
Determine if a Joystick device is conntected to the system..

Returns True if the device is connected, otherwise False.

Return type bool

version
Returns a string of the firmware version number

Returns The firmware version

Return type string

vertical
Returns the 10-bit ADC value of the joystick vertical position

Returns The next button value

Return type byte as integer

6.2 Read a Position and Button State

Listing 1: examples/qwiic_joystick_ex1.py

```
#!/usr/bin/env python
#-----------------------------------------------------------------------------
# qwiic_env_joystick_ex1.py
#
# Simple Example for the Qwiic Joystick Device
#-----------------------------------------------------------------------
#
# Written by  SparkFun Electronics, May 2019
#
# This python library supports the SparkFun Electroncis qwiic
# qwiic sensor/board ecosystem on a Raspberry Pi (and compatable) single
# board computers.
#
# More information on qwiic is at https://www.sparkfun.com/qwiic
#
# Do you like this library? Help support SparkFun. Buy a board!
#
#==================================================================================
# Copyright (c) 2019 SparkFun Electronics
#
# Permission is hereby granted, free of charge, to any person obtaining a copy
# of this software and associated documentation files (the "Software"), to deal
# in the Software without restriction, including without limitation the rights
# to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
# copies of the Software, and to permit persons to whom the Software is
# furnished to do so, subject to the following conditions:
#
# The above copyright notice and this permission notice shall be included in all
# copies or substantial portions of the Software.
#
# THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
# IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
# FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
# AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
# LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
# OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
# SOFTWARE.
#==================================================================================
# Example 1
#

from __future__ import print_function
import qwiic_joystick
import time
import sys

def runExample():

```

(continues on next page)

(continued from previous page)

```
        print("\nSparkFun qwiic Joystick   Example 1\n")
        myJoystick = qwiic_joystick.QwiicJoystick()

        if myJoystick.connected == False:
                print("The Qwiic Joystick device isn't connected to the system. Please check your connection", \
                        file=sys.stderr)
                return

        myJoystick.begin()

        print("Initialized. Firmware Version: %s" % myJoystick.version)

        while True:

                print("X: %d, Y: %d, Button: %d" % ( \
                                        myJoystick.horizontal, \
                                        myJoystick.vertical, \
                                        myJoystick.button))

                time.sleep(.5)

if __name__ == '__main__':
        try:
                runExample()
        except (KeyboardInterrupt, SystemExit) as exErr:
                print("\nEnding Example 1")
                sys.exit(0)


```

6.3 Output Direction

Listing 2: examples/qwiic_joystick_ex2.py

```
#!/usr/bin/env python
#-----------------------------------------------------------------------------
# qwiic_env_joystick_ex2.py
#
# Simple Example for the Qwiic Joystick Device
#-----------------------------------------------------------------------------
#
# Written by  SparkFun Electronics, May 2019
#
# This python library supports the SparkFun Electroncis qwiic
# qwiic sensor/board ecosystem on a Raspberry Pi (and compatable) single
# board computers.
#
# More information on qwiic is at https://www.sparkfun.com/qwiic
#
# Do you like this library? Help support SparkFun. Buy a board!
#
#==================================================================================
# Copyright (c) 2019 SparkFun Electronics
```

(continues on next page)

(continued from previous page)

```
#
# Permission is hereby granted, free of charge, to any person obtaining a copy
# of this software and associated documentation files (the "Software"), to deal
# in the Software without restriction, including without limitation the rights
# to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
# copies of the Software, and to permit persons to whom the Software is
# furnished to do so, subject to the following conditions:
#
# The above copyright notice and this permission notice shall be included in all
# copies or substantial portions of the Software.
#
# THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
# IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
# FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
# AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
# LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
# OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
# SOFTWARE.
#===============================================================================
# Example 2
#

from __future__ import print_function
import qwiic_joystick
import time
import sys

def runExample():

        print("\nSparkFun qwiic Joystick   Example 2\n")
        myJoystick = qwiic_joystick.QwiicJoystick()

        if myJoystick.connected == False:
                print("The Qwiic Joystick device isn't connected to the system. Please check your connection", \
                        file=sys.stderr)
                return

        myJoystick.begin()

        print("Initialized. Firmware Version: %s" % myJoystick.version)

        while True:

                x = myJoystick.horizontal
                y = myJoystick.vertical
                b = myJoystick.button

                if x > 575:
                        print("L")
                elif x < 450:
                        print("R")

                if y > 575:
                        print("U")
                elif y < 450:
                        print("D")
```

(continues on next page)

(continued from previous page)

```
76
77                  if b == 0:
78                          print("Button")
79
80                  time.sleep(.5)
81
82  if __name__ == '__main__':
83          try:
84                  runExample()
85          except (KeyboardInterrupt, SystemExit) as exErr:
86                  print("\nEnding Example 1")
87                  sys.exit(0)
88
89
```

CHAPTER 7

Indices and tables

- genindex
- modindex
- search

Python Module Index

q

Index