Adafruit74HC595 Library Documentation

Release 1.0

Kattni Rembor

Jan 24, 2020

Contents

CircuitPython driver for 74HC595 shift register.

CHAPTER 1

Dependencies

This driver depends on:

- Adafruit CircuitPython
- Bus Device

Please ensure all dependencies are available on the CircuitPython filesystem. This is easily achieved by downloading the Adafruit library and driver bundle.

CHAPTER 2

Installing from PyPI

On supported GNU/Linux systems like the Raspberry Pi, you can install the driver locally from PyPI. To install for current user:

```
pip3 install adafruit-circuitpython-74hc595
```

To install system-wide (this may be required in some cases):

```
sudo pip3 install adafruit-circuitpython-74hc595
```

To install in a virtual environment in your current project:

```
mkdir project-name && cd project-name
python3 -m venv .env
source .env/bin/activate
pip3 install adafruit-circuitpython-74hc595
```

CHAPTER 3

Usage Example

```
import board
import adafruit_74hc595
import busio
import digitalio
import time

spi = busio.SPI(board.SCK, MOSI=board.MOSI)

latch_pin = digitalio.DigitalInOut(board.D5)
sr = adafruit_74hc595.ShiftRegister74HC595(spi, latch_pin)

pin1 = sr.get_pin(1)

while True:
pin1.value = True
time.sleep(1)
pin1.value = False
time.sleep(1)
```

CHAPTER 4

Contributing

Contributions are welcome! Please read our Code of Conduct before contributing to help this project stay welcoming.

CHAPTER 5

Documentation

For information on building library documentation, please check out this guide.

CHAPTER 6

Table of Contents

6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/74hc595_simpletest.py

```
import time
import board
import busio
import digitalio
import adafruit_74hc595

spi = busio.SPI(board.SCK, MOSI=board.MOSI)

latch_pin = digitalio.DigitalInOut(board.D5)
sr = adafruit_74hc595.ShiftRegister74HC595(spi, latch_pin)

pin1 = sr.get_pin(1)

while True:
    pin1.value = True
    time.sleep(1)
    pin1.value = False
    time.sleep(1)
```

6.2 adafruit_74hc595

CircuitPython driver for 74HC595 shift register.

- Author(s): Kattni Rembor, Tony DiCola

6.2.1 Implementation Notes

Hardware:

"* 74HC595 Shift Register - 3 pack"

Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: https://github.com/adafruit/circuitpython/releases
- Adafruit's Bus Device library: https://github.com/adafruit/Adafruit_CircuitPython_BusDevice

class adafruit_74hc595.**DigitalInOut**(*pin_number*, *shift_register_74hc595*)
Digital input/output of the 74HC595. The interface is exactly the same as the `digitalio.DigitalInOut` class, however note that by design this device is OUTPUT ONLY! Attempting to read inputs or set direction as input will raise an exception.

direction
`Direction` can only be set to `OUTPUT`.

pull
Pull-up/down not supported, return None for no pull-up/down.

switch_to_input(***kwargs*)
`switch_to_input` is not supported.

switch_to_output(*value=False*, ***kwargs*)
`DigitalInOut switch_to_output`

value
The value of the pin, either True for high or False for low.

class adafruit_74hc595.**ShiftRegister74HC595**(*spi*, *latch*)
Initialise the 74HC595 on specified SPI bus.

get_pin(*pin*)
Convenience function to create an instance of the DigitalInOut class pointing at the specified pin of this 74HC595 device .

gpio
The raw GPIO output register. Each bit represents the output value of the associated pin (0 = low, 1 = high).

CHAPTER 7

Indices and tables

- genindex
- modindex
- search

Python Module Index

a

Index