
AdafruitSlideshow Library Documentation

Release 1.0

Kattni Rembor

Mar 20, 2020

Contents

1	Dependencies	3
2	Installing from PyPI	5
3	Usage Example	7
4	Contributing	9
5	Documentation	11
6	Table of Contents	13
6.1	Simple test	13
6.2	adafruit_slideshow	13
6.2.1	Implementation Notes	14
7	Indices and tables	17
	Python Module Index	19
	Index	21

CircuitPython helper library for displaying a slideshow of images on a display.

CHAPTER 1

Dependencies

This driver depends on:

- [Adafruit CircuitPython](#)

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-slideshow
```

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

```
sudo pip3 install adafruit-circuitpython-slideshow
```

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-slideshow
```


CHAPTER 3

Usage Example

```
from adafruit_slideshow import PlayBackOrder, SlideShow
import board
import pulseio

# Create the slideshow object that plays through once alphabetically.
slideshow = SlideShow(board.DISPLAY, pulseio.PWMOut(board.TFT_BACKLIGHT), folder="/",
                    loop=False, order=PlayBackOrder.ALPHABETICAL)

while slideshow.update():
    pass
```


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](#).

6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/slideshow_simpletest.py

```
1 import board
2 import pulseio
3 from adafruit_slideshow import PlayBackOrder, SlideShow
4
5 # pylint: disable=no-member
6
7 # Create the slideshow object that plays through once alphabetically.
8 slideshow = SlideShow(
9     board.DISPLAY,
10    pulseio.PWMOut(board.TFT_BACKLIGHT),
11    folder="/",
12    loop=False,
13    order=PlayBackOrder.ALPHABETICAL,
14 )
15
16 while slideshow.update():
17     pass
```

6.2 adafruit_slideshow

CircuitPython helper library for displaying a slideshow of images on a display.

- Author(s): Kattni Rembor, Carter Nelson, Roy Hooper

6.2.1 Implementation Notes

Hardware:

- Adafruit Hallowing M0 Express

Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: <https://github.com/adafruit/circuitpython/releases>

class `adafruit_slideshow.PlayBackDirection`

Defines possible slideshow playback directions.

BACKWARD = -1

The next image is before the current image. When alphabetically sorted, this is towards A.

FORWARD = 1

The next image is after the current image. When alphabetically sorted, this is towards Z.

class `adafruit_slideshow.PlayBackOrder`

Defines possible slideshow playback orders.

ALPHABETICAL = 0

Orders by alphabetical sort of filenames

RANDOM = 1

Randomly shuffles the images

class `adafruit_slideshow.SlideShow`(*display*, *backlight_pwm=None*, *, *folder='/'*, *order=0*, *loop=True*, *dwell=3*, *fade_effect=True*, *auto_advance=True*, *direction=1*)

Class for displaying a slideshow of .bmp images on displays.

Parameters

- **folder** (*str*) – Specify the folder containing the image files, in quotes. Default is the root directory, `"/"`.
- **order** (`PlayBackOrder`) – The order in which the images display. You can choose random (`RANDOM`) or alphabetical (`ALPHABETICAL`). Default is `ALPHABETICAL`.
- **loop** (*bool*) – Specify whether to loop the images or play through the list once. `True` if slideshow will continue to loop, `False` if it will play only once. Default is `True`.
- **dwell** (*int*) – The number of seconds each image displays, in seconds. Default is 3.
- **fade_effect** (*bool*) – Specify whether to include the fade effect between images. `True` tells the code to fade the backlight up and down between image display transitions. `False` maintains max brightness on the backlight between image transitions. Default is `True`.
- **auto_advance** (*bool*) – Specify whether to automatically advance after dwell seconds. `True` if slideshow should auto play, `False` if you want to control advancement manually. Default is `True`.
- **direction** (`PlayBackDirection`) – The playback direction.

Example code for Hallowing Express. With this example, the slideshow will play through once in alphabetical order:

```
from adafruit_slideshow import PlayBackOrder, SlideShow
import board
import pulseio
```

(continues on next page)

(continued from previous page)

```

slideshow = SlideShow(board.DISPLAY, pulseio.PWMOut(board.TFT_BACKLIGHT), folder=
↳"/",
                        loop=False, order=PlayBackOrder.ALPHABETICAL)

while slideshow.update():
    pass

```

Example code for Hallowing Express. Sets dwell to 0 seconds, turns auto_advance off, and uses capacitive touch to advance backwards and forwards through the images and to control the brightness level of the backlight:

```

from adafruit_slideshow import PlayBackOrder, SlideShow, PlayBackDirection
import touchio
import board
import pulseio

forward_button = touchio.TouchIn(board.TOUCH4)
back_button = touchio.TouchIn(board.TOUCH1)

brightness_up = touchio.TouchIn(board.TOUCH3)
brightness_down = touchio.TouchIn(board.TOUCH2)

slideshow = SlideShow(board.DISPLAY, pulseio.PWMOut(board.TFT_BACKLIGHT), folder=
↳"/",
                        auto_advance=False, dwell=0)

while True:
    if forward_button.value:
        slideshow.direction = PlayBackDirection.FORWARD
        slideshow.advance()
    if back_button.value:
        slideshow.direction = PlayBackDirection.BACKWARD
        slideshow.advance()

    if brightness_up.value:
        slideshow.brightness += 0.001
    elif brightness_down.value:
        slideshow.brightness -= 0.001

```

advance()

Displays the next image. Returns True when a new image was displayed, False otherwise.

auto_advance = None

Enable auto-advance based on dwell time. Set to False to manually control.

brightness

Brightness of the backlight when an image is displaying. Clamps to 0 to 1.0

current_image_name

Returns the current image name.

direction = None

Specify the playback direction. Default is PlayBackDirection.FORWARD. Can also be PlayBackDirection.BACKWARD.

dwell = None

The number of seconds each image displays, in seconds.

fade_effect = None

Whether to include the fade effect between images. `True` tells the code to fade the backlight up and down between image display transitions. `False` maintains max brightness on the backlight between image transitions.

loop = None

Specifies whether to loop through the images continuously or play through the list once. `True` will continue to loop, `False` will play only once.

order

The order in which the images display. You can choose random (`RANDOM`) or alphabetical (`ALPHA`).

update ()

Updates the slideshow to the next image.

CHAPTER 7

Indices and tables

- `genindex`
- `modindex`
- `search`

a

`adafruit_slideshow`, 13

A

adafruit_slideshow (*module*), 13
advance () (*adafruit_slideshow.SlideShow method*), 15
ALPHABETICAL (*adafruit_slideshow.PlayBackOrder attribute*), 14
auto_advance (*adafruit_slideshow.SlideShow attribute*), 15

B

BACKWARD (*adafruit_slideshow.PlayBackDirection attribute*), 14
brightness (*adafruit_slideshow.SlideShow attribute*), 15

C

current_image_name
(*adafruit_slideshow.SlideShow attribute*), 15

D

direction (*adafruit_slideshow.SlideShow attribute*), 15
dwell (*adafruit_slideshow.SlideShow attribute*), 15

F

fade_effect (*adafruit_slideshow.SlideShow attribute*), 15
FORWARD (*adafruit_slideshow.PlayBackDirection attribute*), 14

L

loop (*adafruit_slideshow.SlideShow attribute*), 16

O

order (*adafruit_slideshow.SlideShow attribute*), 16

P

PlayBackDirection (*class in adafruit_slideshow*), 14

PlayBackOrder (*class in adafruit_slideshow*), 14

R

RANDOM (*adafruit_slideshow.PlayBackOrder attribute*), 14

S

SlideShow (*class in adafruit_slideshow*), 14

U

update () (*adafruit_slideshow.SlideShow method*), 16