AdafruitSlideshow Library Documentation

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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` . . . 14
  - 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 pwmio

# Create the slideshow object that plays through once alphabetically.
slideshow = SlideShow(board.DISPLAY, pwmio.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.

CHAPTER 6

Table of Contents

6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/slideshow_simpletest.py

```
# SPDX-FileCopyrightText: 2021 ladyada for Adafruit Industries
# SPDX-License-Identifier: MIT

"""Basic demonstration script will create a slideshow
object that plays through once alphabetically."""
import board
from adafruit_slideshow import PlayBackOrder, SlideShow

# use built in display (PyPortal, PyGamer, PyBadge, CLUE, etc.)
# see guide for setting up external displays (TFT / OLED breakouts, RGB matrices, etc.)
# https://learn.adafruit.com/circuitpython-display-support-using-displayio/display-and-display-bus
display = board.DISPLAY

# pylint: disable=no-member

slideshow = SlideShow(
    board.DISPLAY,
    None,
    folder="/images/",
    loop=False,
    order=PlayBackOrder.ALPHABETICAL,
    dwell=10,
)

while slideshow.update():
```

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```
26      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, Melissa LeBlanc-Williams

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.**HorizontalAlignment**
Defines possible horizontal alignment orders.

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*, *h_align=1*, *v_align=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.
- **h_align** (*HorizonalAlignment*) – The Horizontal alignment of smaller/larger images
- **v_align** (`VerticalAlignment`) – The Vertical alignment of smaller/larger images

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

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
```

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```
    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_slide_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 slide displays, in seconds.

fade_effect = None
Whether to include the fade effect between slides. `True` tells the code to fade the backlight up and down between slide display transitions. `False` maintains max brightness on the backlight between slide transitions.

h_align
Get or Set the Horizontal Alignment

loop = None
Specifies whether to loop through the slides 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.

v_align
Get or Set the Vertical Alignment

class adafruit_slideshow.**VerticalAlignment**
Defines possible vertical alignment orders.

CHAPTER 7

Indices and tables

- genindex
- modindex
- search

Python Module Index

a

adafruit_slideshow, 14

Index

A

adafruit_slideshow (*module*), 14
advance() (*adafruit_slideshow.SlideShow method*), 16
ALPHABETICAL (*adafruit_slideshow.PlayBackOrder attribute*), 14
auto_advance (*adafruit_slideshow.SlideShow attribute*), 16

B

BACKWARD (*adafruit_slideshow.PlayBackDirection attribute*), 14
brightness (*adafruit_slideshow.SlideShow attribute*), 16

C

current_slide_name (*adafruit_slideshow.SlideShow attribute*), 16

D

direction (*adafruit_slideshow.SlideShow attribute*), 16
dwell (*adafruit_slideshow.SlideShow attribute*), 16

F

fade_effect (*adafruit_slideshow.SlideShow attribute*), 16
FORWARD (*adafruit_slideshow.PlayBackDirection attribute*), 14

H

h_align (*adafruit_slideshow.SlideShow attribute*), 16
HorizontalAlignment (*class in adafruit_slideshow*), 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

V

v_align (*adafruit_slideshow.SlideShow attribute*), 16
VerticalAlignment (*class in adafruit_slideshow*), 16