
AdafruitSlideshow Library Documentation

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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](#).

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](#).

6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/slideshow_simpletest.py

```
1  # SPDX-FileCopyrightText: 2021 ladyada for Adafruit Industries
2  # SPDX-License-Identifier: MIT
3
4  """Basic demonstration script will create a slideshow
5  object that plays through once alphabetically."""
6  import board
7  from adafruit_slideshow import PlayBackOrder, SlideShow
8
9  # use built in display (PyPortal, PyGamer, PyBadge, CLUE, etc.)
10 # see guide for setting up external displays (TFT / OLED breakouts, RGB matrices, etc.
11 ↪)
12 # https://learn.adafruit.com/circuitpython-display-support-using-displayio/display-
13 ↪and-display-bus
14 display = board.DISPLAY
15
16 # pylint: disable=no-member
17
18 slideshow = SlideShow(
19     board.DISPLAY,
20     None,
21     folder="/images/",
22     loop=False,
23     order=PlayBackOrder.ALPHABETICAL,
24     dwell=10,
25 )
26
27 while slideshow.update():
```

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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** (*HorizontalAlignment*) – 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 pwmio

slideshow = SlideShow(board.DISPLAY, pwmio.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 pwmio

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, pwmio.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

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