AdafruitMAX9744 Library Documentation

Release 1.0

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Contents

CircuitPython module for the MAX9744 20W class D amplifier.

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-max9744
```

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

```
sudo pip3 install adafruit-circuitpython-max9744
```

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-max9744
```

CHAPTER 3

Usage Example

See examples/max9744_simpletest.py for a demo of the usage.

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

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6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/mas9744_simpletest.py

```
# Simple demo of the MAX9744 20W class D amplifier I2C control.
# This show how to set the volume of the amplifier.
# Author: Tony DiCola
import board
import busio

import adafruit_max9744


# Initialize I2C bus.
i2c = busio.I2C(board.SCL, board.SDA)

# Initialize amplifier.
amp = adafruit_max9744.MAX9744(i2c)
# Optionally you can specify a different addres if you override the AD1, AD2
# pins to change the address.
#amp = adafruit_max9744.MAX9744(i2c, address=0x49)

# Setting the volume is as easy as writing to the volume property (note
# you cannot read the property so keep track of volume in your own code if
# you need it).
amp.volume = 31  # Volume is a value from 0 to 63 where 0 is muted/off and
                 # 63 is maximum volume.

# In addition you can call a function to instruct the amp to move up or down
# a single volume level.  This is handy if you just have up/down buttons in
# your project for volume:
```

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```
amp.volume_up()     # Increase volume by one level.

amp.volume_down()   # Decrease volume by one level.
```

6.2 adafruit_max9744

CircuitPython module for the MAX9744 20W class D amplifier. See examples/simpletest.py for a demo of the usage.

- Author(s): Tony DiCola

6.2.1 Implementation Notes

Hardware:

- Adafruit MAX9744 Stereo 20W Class D Audio Amplifier (Product ID: 1752)

Software and Dependencies:

- Adafruit CircuitPython firmware for the ESP8622 and M0-based boards: https://github.com/adafruit/circuitpython/releases

class adafruit_max9744.**MAX9744**(*i2c*, *, *address=75*)

MAX9744 20 watt class D amplifier.

Parameters

- **i2c** – The I2C bus for the device.
- **address** – (Optional) The address of the device if it has been overridden from the default with the AD1, AD2 pins.

volume_down()

Decrease the volume by one level.

volume_up()

Increase the volume by one level.

CHAPTER 7

Indices and tables

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