

StereoLM-EC ver 1.0

Embed lowcost-module of audio stereo-signal level indicator with automatic gain/scaling adjustment



Description

The module is designed for embedding into the equipment and to display the dynamics of changes in the amplitude of the audio frequency signal using a linear LED scale. The device allows you to evaluate the dynamism of musical audio recordings due to the built-in automatic signal level adjustment system (AGC). For this reason, the device is not designed to measure absolute voltage values.

The AGC system allows you to scale the signal evenly over the full length of the scale, regardless of the actual amplitude of the signal which allows you to use the indicator in circuits after volume/tone control devices without the need for manual adjustment of the indicator when used with various sound reproducing equipment. Even with the minimum value of the set volume, the indicator will scale a small signal amplitude to the full scale. When the indicator is disconnected from one signal source and connected to another source, automatic adjustment will occur and no additional user actions will be required.

To assess the difference in peak voltage values of both channels, an indication of maximum points is provided. With musical bursts, these points are "thrown up" by the main column of LEDs, and slowly "decrease" with sharp drops, which allows you to see short bursts.

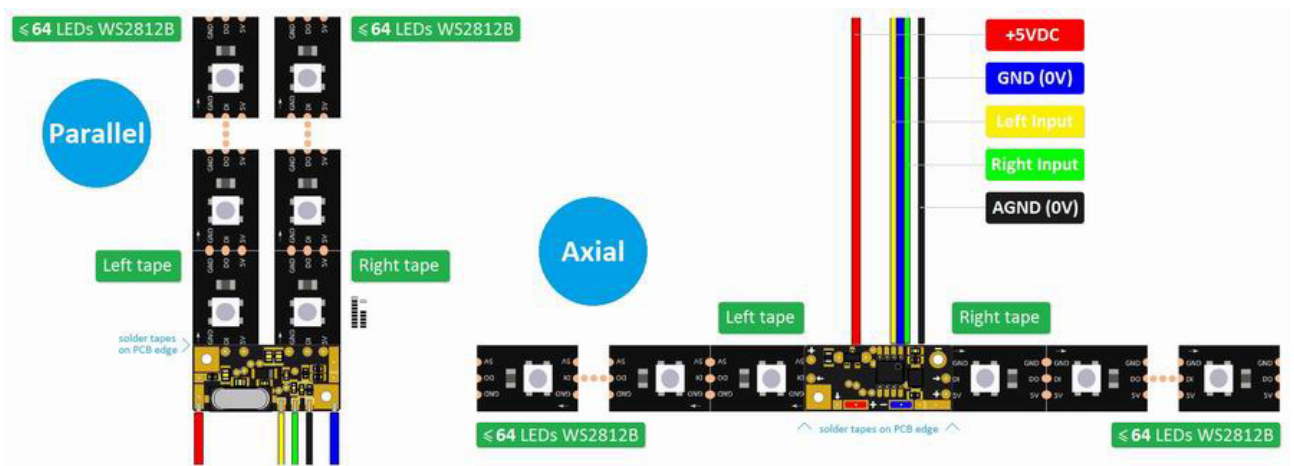
Key Features

- The compact size of the module allow you to embed it in any audio equipment.
- Audio signals and power supply voltage are supplied via wires that are soldered to the module pads by yourself.
- The module's printed circuit board is designed in such a way as to be able to directly solder LED tapes to the edges of the module. At the same time, two soldering options are

provided for each channel: two parallel tapes - soldering on same side (edge) of the board; two tapes in different directions under one axis - soldering at two opposite edges of the board.

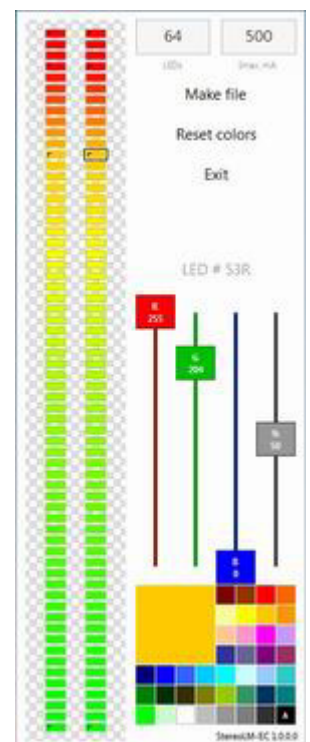
- The device works with a large number of addressable WS2812B LEDs (128 max. that twice as many as other devices of the same type).
- When order you can pre-adjust number of LEDs, the color of each LED and/or smooth color transitions (gradients), as well as brightness in accordance with the power of your 5 Volt power supply.
- After purchase, you can change the noise reduction level yourself if necessary.

Block Diagram



Software application: Stereo Level Meter EC 1.0 (StereoLM-EC.exe)

- **Application is intended only for making the module firmware file.** With its help you can configure the module before it will be sent to your postal address, so self-configuration after purchase is impossible. You can only change the noise reduction level yourself.
- It is possible to specify qty of LEDs and the colors of any number of gradient points, between which there will be a smooth change in the color of the LEDs.
- The application allows to set the maximum current of the power supply and automatically calculate the total brightness of the LED tapes corresponding to the power of the power supply.



For details see <https://stereolm.ru/?StereoLM-EC>