Compare table for group: Stereo signal level indicators based on LED tapes

Characteristic	StereoLM-EC	StereoLM-EX	StereoLM-RX	Notes
Type of module	Embed lowcost version	Embed version	Standalone wireless version	A printed circuit board with components. The enclosure is not provided. LED tapes can be provided for a additional fee and are not included in the base package.
Lots of LEDs supported	128	64	64	StereoLM-EX: A single tape of 64 LEDs or two tapes of 32 LEDs each. StereoLM-RX: A single tape with 64 LEDs. StereoLM-EC: Two tapes of 64 LEDs each. The minimum number of LEDs is 6. The number of LEDs can be reduced within the specified limits.
Supported LED types	WS2812B	WS2812B	WS2812B	
The need to use capacitors in parallel to each LED	Yes	No	No	StereoLM-EX, StereoLM-RX: With a large length of tape (large distances between LEDs) it is recommended to install capacitors according to the manufacturer's documentation of the LEDs used.
Indication of the inert maximum point thrown up by the main column	Yes	Yes	Yes	The color of the maximum point is always equal to the color of the last (upper) LED in the tape.
Connectors for external wires	No	Two ports for connecting LED tapes (USB 2.0 A female). One power supply connection port (USB B micro female). Two universal audio inputs /outputs (Jack 3.5). It is also possible to solder wires to the pads.	One connection port for one common LED tape (USB 2.0 A female). One port for connecting a charging current source (USB B micro female). One audio output (Jack 3.5).	StereoLM-EC: Only soldering of wires to the provided contact pads.

Built-in wireless Bluetooth audio receiver	-	-	Yes	StereoLM-RX: The range of stable communication is up to 10 meters on open space without obstacles. During the design tests of several variants of Bluetooth modules were carried out, the project includes a module with the best price/quality ratio.
Size (Length x Width x Height), mm	27.0 x 12.0 x 5.0	40.0 x 40.0 x 15.0	99.5 x 32.3 x 25.0	Including components on the board.
The distance between the longitudinal centers of two parallel LED tapes	15.0 mm	20.0 mm	-	
Multidirectional physical connection of LED tapes option	Yes	No	No	StereoLM-EX, StereoLM-RX: It is possible to independently adjust the display of both levels on a single LED tape. StereoLM-EC: Parallel in one direction or in opposite directions along the same line.
Supply voltage	from 3.0 to 5.3 B	from 4.3 to 5.3 B	from 3.0 to 4.2 B	StereoLM-RX: No external power is required.
Incorrect power supply polarity protection	No	Yes	Not required	
Current consumption	<10.0 mA	<15.0 mA	In storage mode less than 0.6 mA	StereoLM-EC, StereoLM-EX: Without current consumed by the LEDs. StereoLM-RX: In active mode according to the energy saving algorithms. In storage mode the LEDs are completely turned off.
Additional power saving mode after 10 seconds of silence	No	Possible	Yes	StereoLM-EX: An optocoupler with an open collector/emitter is provided on the module board to control external devices (for example a relay interrupter for the supply of LED tapes or an amplifier).
Built-in battery	-	-	18650 Li-ion 3.7V >3000 mAh	
Color selection for each LED	24 bit	16	16	StereoLM-EC: > 16M colors
Support for Sleep mode (storage mode)	-	-	Yes	StereoLM-RX: Sending the Sleep command from a special (free) Windows-application. The shelf life can reach several months.
Independent color selection for stereo channel LED tapes	Yes	Yes	Yes	

Colors gradient	Yes	-	-	StereoLM-EC: The number of gradient points is unlimited (equal to the number of LEDs).
Mono mode (indication of the level of only the left or only the right channel on a single LED tape)	No	Yes	Yes	StereoLM-EC: You can simply not connect one of the LED tapes. StereoLM-RX: The function is especially useful because it is possible to pair two modules simultaneously and get two tapes of 64 LEDs each, while additionally getting two wireless audio points for connecting audio reproducing systems in different corners of the room (without wires between them).
Proportional limitation of the brightness of the LED tapes depending on the load current capacity of the power supply	Yes	-	-	StereoLM-EC: When ordering you can specify the current that the power supply is capable of providing. For example, a computer port (USB 2.0) can provide a current of 500 mA. Most cheap chargers also provide a current of 500-600 mA. Standard stabilizers 7805 provide a current of 1000 ... 1500 mA (if there is a heat sink). ATTENTION! When 128 LEDs are On at maximum white brightness the instantaneous/pulse current consumption of the LED tapes can reach 4800 mA. When setting the colors the brightness of the LEDs will be set automatically according to the maximum current value specified when ordering. If the current is not specified when ordering the maximum brightness will be set by default.
Automatic detection of the connection of LED tapes	No	Yes	-	StereoLM-EX: If the LED tape is connected to only one port then the levels of both channels are automatically displayed on single tape. If both scales are connected to two ports the levels are automatically displayed separately - each on its own separated tape.
The possibility of displaying the indication of two channels on a single LED tape	No	Yes	Yes	StereoLM-EC: It is possible to solder the LED tapes both in parallel and in different directions, which is visually equivalent to output to a single line.

Disabling the indication of the inert maximum point option	No	Yes	Yes	
Adjusting the overall brightness of the LEDs option (from 0 to 100%)	No	Yes	Yes	StereoLM-EC: The brightness is calculated automatically when specifying the current that an external power supply is capable of providing.
Reversing the indication of channels separately option	No	Yes	Yes	Indication from top to bottom (left to right) or bottom to top (right to left).
Noise reduction level selection	from 2 to 13 mV	from 0 to 30 mV	from 0 to 30 mV	StereoLM-EC: The noise reduction level is set to 2.15 mV by default. The level can be changed by short-circuiting the outputs (lines) of scales on PCB to a positive power line (before power supply): left output - 4.3 mV level, right output - 8.6 mV level, both outputs - 12.9 mV level. After change it is impossible to return to the value of the 2.15 mV level.
Self-configuration of module parameters	Noise reduction level only	Number of LEDs, LED colors, Off/On maximum's dot indication, brightness of the LED tapes, selection of mono/stereo modes, reverse display direction, noise reduction level.	Number of LEDs, LED colors, Off/On maximum's dot indication, brightness of the LED tapes, selection of mono/stereo modes, reverse display direction, noise reduction level.	StereoLM-EX, StereoLM-RX: A free software application is used for Windows OS 7,8,10, which allows you to configure the parameters yourself (it is enough to configure the usual connection of the module to the computer – the same as with the level indication).