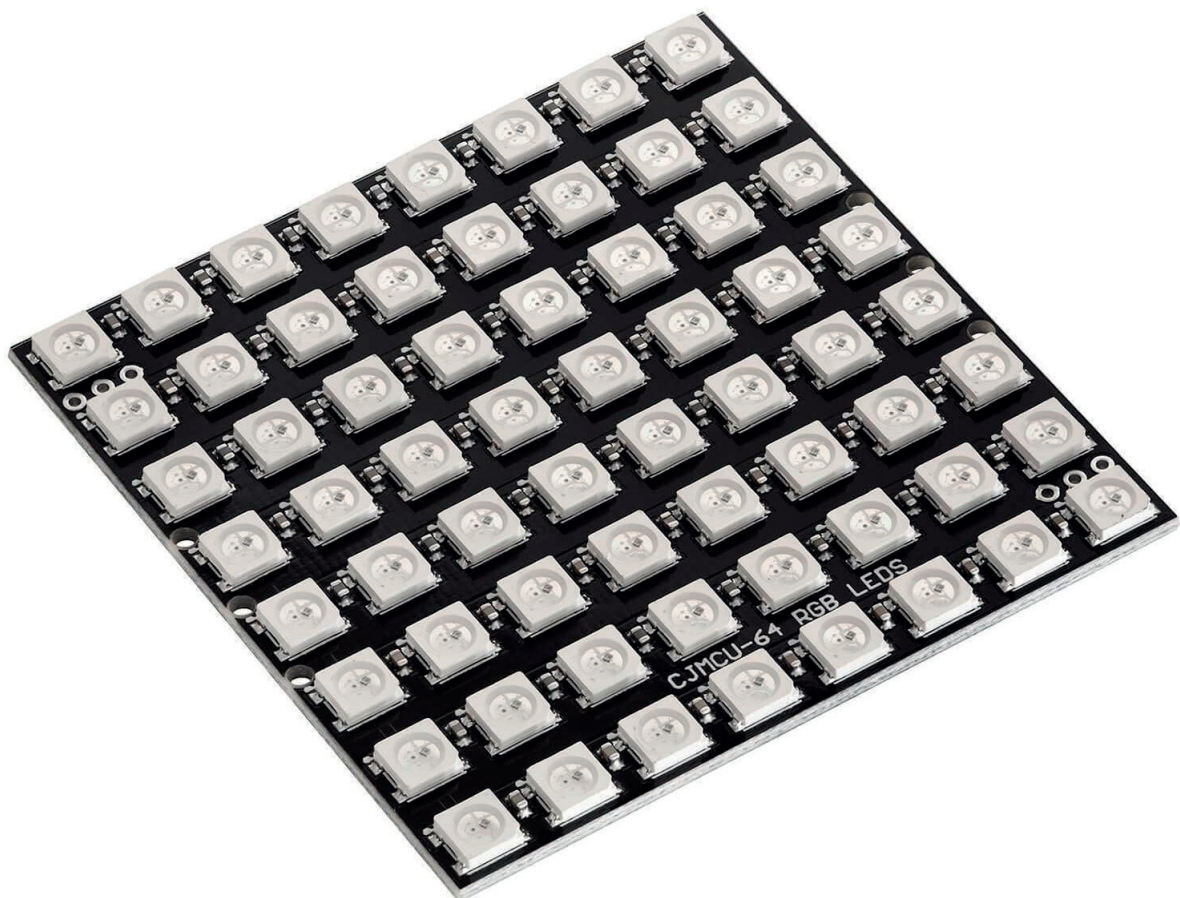


## U64 LED Matrix Datenblatt



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## 1. Specifications

Operating Voltage	5VDC
Operating Current	64 x 60mA = 3840mA (3.84A)
Power Consumption	11W @max. brightness (White Color)
LED Count	64 (8x8)
LED Type	WS2812B (SMD 5050)
LED Color Range	16 milion (Full range)
Interface	IO
Dimensions	65mm x 65mm x 3mm (0.9in x 0.5in x 0.3in)

Power consumption equation example:

To estimate power supply requirements for one LED matrix panel, the number of pixels has to be multiplied by 20, then the result divided by 1000 as the "rule of thumb" power supply rating in Amperes. For maximum current consumption, the number 60 is to be used (instead of 20), if absolute margin of safety is to be guaranteed for all situations.

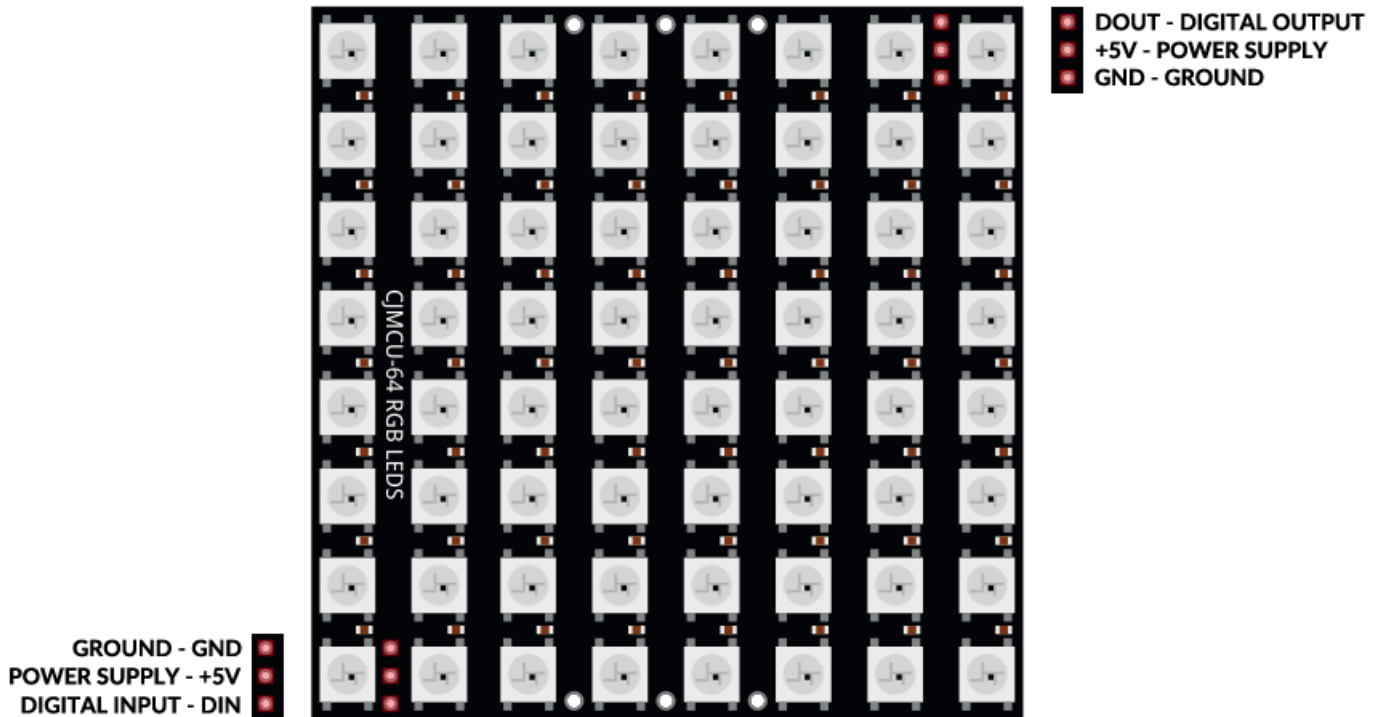
For example:

60 pixels \* 20 mA ÷ 1000 = 1.2A minimum

60 pixels \* 60 mA ÷ 1000 = 3.6A minimum

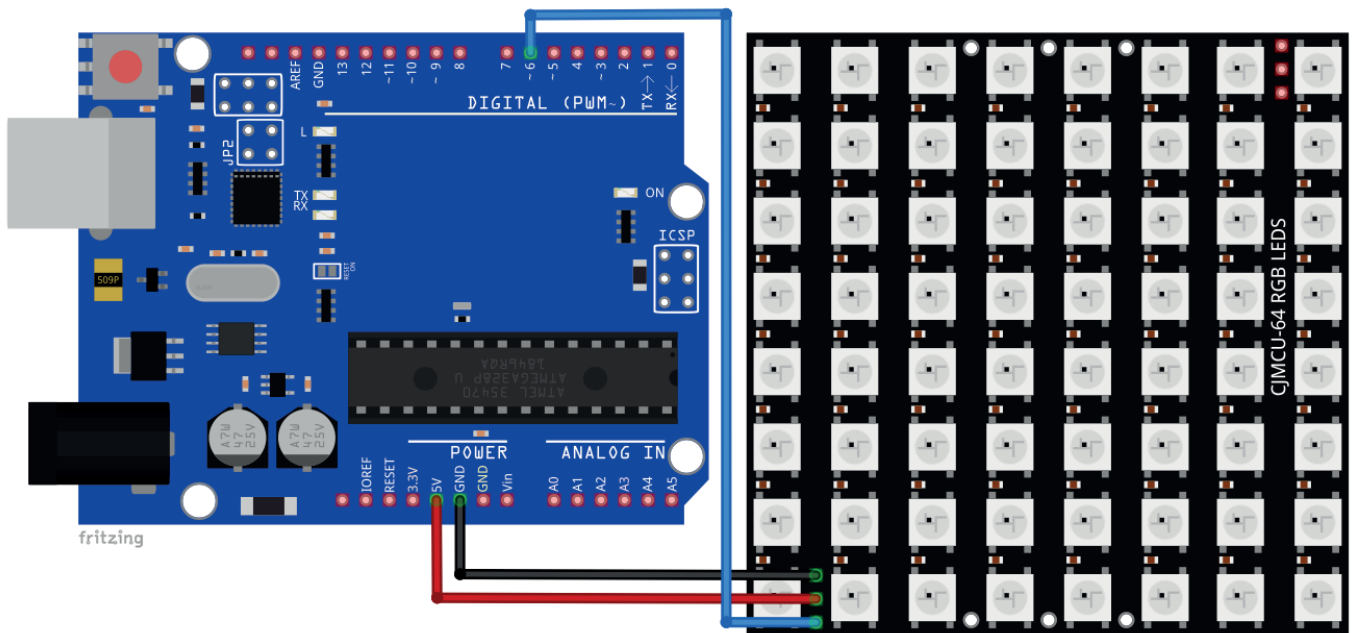
**WARNING:** When the light levels are set close to the maximum, power consumption of one matrix pannel exceeds the current limit that is supplied from the Microcontroller 5V pin. It is preferable to always use external power supply otherwise the Microcontroller may be damaged.

## 2. Pinout



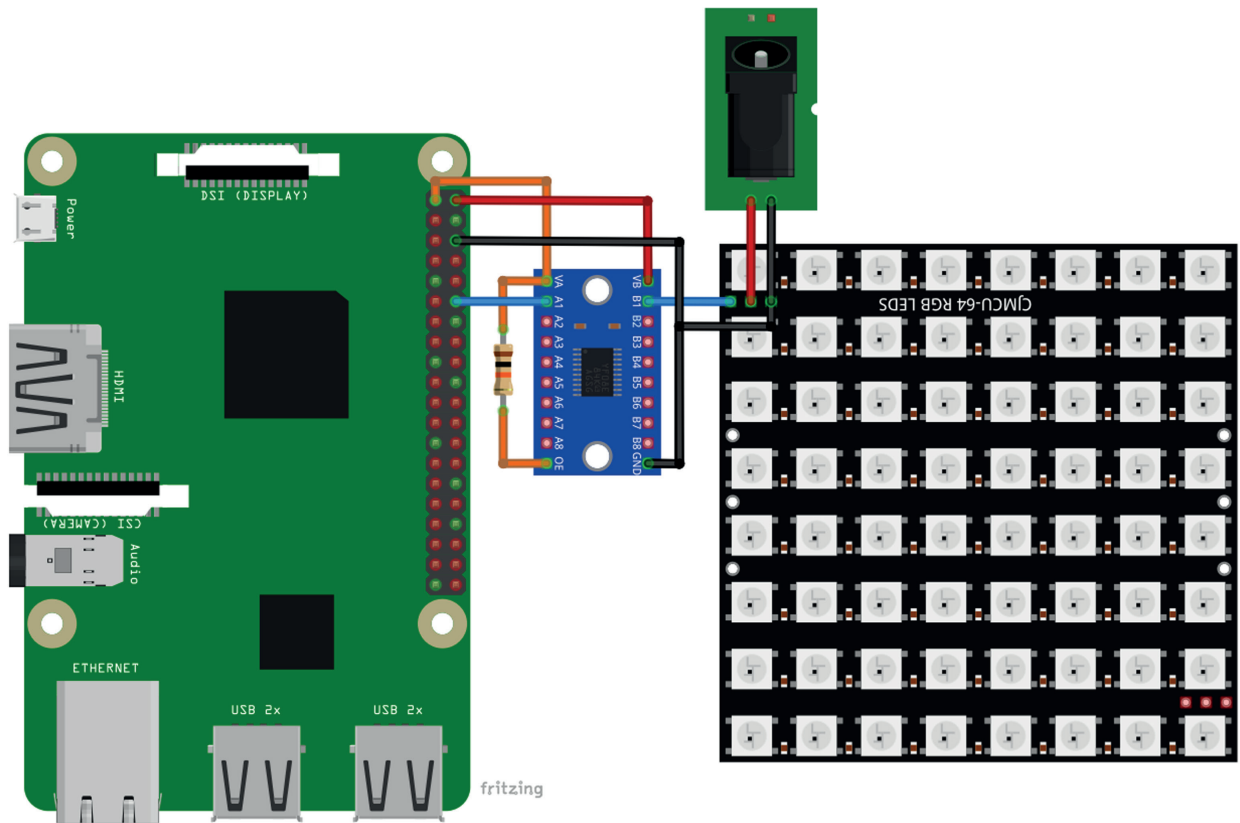
**Note:** Before connecting the pannel to any live (working) power supply, make sure that ground is always connected first before any other wire!

### 3. Connection Diagram



Module Pin	Microcontroller Pin	Wire Color
VCC	5V	Red Wire
GND	GND	Black Wire
DIN	D6	Blue Wire

**NOTE:** For testing purposes, only one LED matrix panel should be connected to the Microcontroller. The brightness level in the sketch example should not exceed the value of 50 so that power consumption should not exceed the Microcontroller voltage regulator capabilities, otherwise Microcontroller may be damaged!



TXS0108E pin	Microcontroller Pin	Wire Color
VA	3V3 - pin 1	Orange Wire
VB	5V - pin 2	Red Wire
GND	GND - pin 6	Black Wire
A1	GPIO18 - pin 12	Blue Wire
Module Pin	TXS0108E pin	
DIN	B1	Blue Wire
GND	GND	Black Wire
Module Pin	DC Power Supply	
+5V	+5V	Red Wire
GND	GND	Black Wire

**Note: The module pins are working in the 5V range. In order to use the module with the Microcontrollers Compatible with Raspberry Pi, the Logic Level Converter must be used.**

**For this purpose use the device called TXS0108E 8ch Logic Level Converter that AZ-Delivery offers.**

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