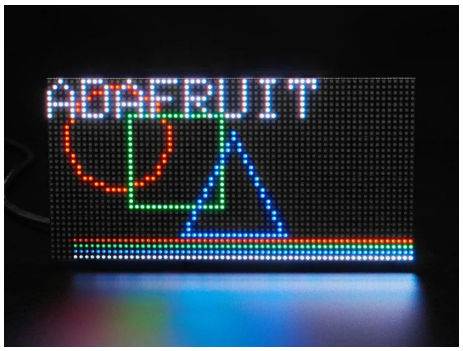
# 64x32 RGB LED matrix - 2.5mm grid




Bring a bit of Times Square into your home with this cute 64 x 32 square RGB LED matrix panel. These panels are normally used for video walls. Here in New York, you can see them on the sides of buses and

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| **Product number** | ADA5036 |
| **Weight** | 0.223kg |

## Product description

Bring a bit of Times Square into your home with this cute 64 x 32 square RGB LED matrix panel. These panels are normally used for video walls. Here in New York, you see them on the sides of buses and bus stops to display animations or short video clips. We thought they looked really cool, so we picked up a few boxes of them from a factory.

**This version is the 2.5mm pitch 64x32 RGB LED matrix. Please note that you can't use an Arduino UNO to drive this size, it's way too big!** Use an Arduino Mega, Raspberry Pi, BBB or other device that can display RGB matrices and has sufficient RAM.

This matrix has 2048 bright RGB LEDs arranged on the front in a 64x32 grid. On the back is a board with two IDC connectors (one input, one output: theoretically you can daisy-chain them together) and 12 16-bit latches that allow the display to be driven at a 1:16 sampling rate.

These displays are technically "daisy-chainable" - you can connect one output to the next input - but our Arduino example code doesn't support this (yet). It requires a high-speed processor and more RAM than the Arduino has!

These panels require 13 digital pins (6-bit data, 7-bit control) and a good 5V supply of up to 4A per panel. We recommend a 4A regulated 5V adapter and then connecting a 2.1mm jack. Please have a look at our tutorial for more details!

**Scope of delivery:**

- A single 64x32 RGB panel,
- One IDC cable
- One pluggable power cable

Please note that these displays are designed to be driven by FPGAs or other high-speed processors: They do not have any built-in PWM control. Instead, you have to keep redrawing the screen to control the whole thing "manually" with PWM. On a 16 MHz Arduino Mega, we managed to generate 12-bit colours (4096 colours) with 40% CPU usage, but this display would really shine if it were controlled by an FPGA, CPLD, Propeller, XMOS or other high-speed multicore controller. The good news is that the display is pre-white balanced with a nice uniformity, so when you switch on all the LEDs, it's not a particularly tinted white.

Of course, we wouldn't leave you with a datasheet and a "good luck!". We have a full schematic and working code for

the Arduino library with examples of drawing pixels, lines, rectangles, circles and text. You'll be making your colour pop within an hour! On an Arduino you need 16 digital pins and about 3200 bytes of RAM to buffer the 12-bit colour image.

## Product properties

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|---|---|
| **Zolltarifnummer** | 85414300 |
| **Country of Origin** | China |
| **Manufacturer ID** | 5036 |
| **Brand** | Adafruit |
| **Product ID** | ADA5036 |
| **EAN** | 4060137071324 |
| **Gross Weight (kg)** | 0.223 |

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