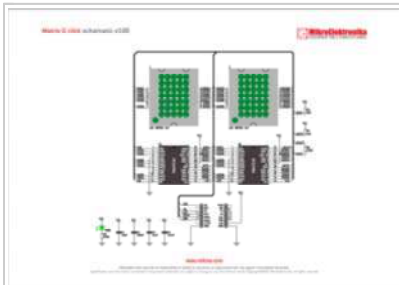


# Matrix click

From MikroElektronika Documentation

**Matrix click** is a mikroBUSTM add-on board with two red or green (there are two options) 5x7 matrices driven by two MAX7219 8-bit LED Display Drivers. The active area of each matrix is 7.62mm high and 5.08 mm wide. 7x5 is a standard resolution for displaying ASCII characters, so 7x10 click is essentially a dual-character display capable of showing letters in more readable typefaces compared to a 14-segment display. The click communicates with the target MCU through the mikroBUSTM SPI interface with two separate Chip Select lines for each matrix (CSL for the left, CSR for the right). This board is designed to use a 5V power supply.

## Features and usage notes



Schematic also available in PDF ([http://cdn-docs.mikroe.com/images/f/f4/Matrix\\_G\\_click\\_schem](http://cdn-docs.mikroe.com/images/f/f4/Matrix_G_click_schem))

The 7x5 LED matrix is a standard resolution for displaying ASCII characters. Matrix click is essentially a dual-character display capable of showing letters in more readable typefaces compared to a 14-segment display.

If you double up on a board with two adjacent mikroBUS sockets, such as clicker 2 or Flip & click, you will get four characters.

The possibility to horizontally scroll the text makes for a

virtually unlimited space for displaying written information.

## Programming

The code snippet results in blinking two by two letters of string provided as a first parameter.

```
void main()
{
  system_init();
  matrix_init();
  matrix_text_blink( "MIKROELEKTRONIKA", MATRIX_MED_FAST );
  Delay_ms( 1000 );
}
```

Code examples that demonstrate the usage of Matrix clicks with MikroElektronika hardware, written for mikroC for ARM, AVR, dsPIC, FT90x, PIC and PIC32 are available on Libstock (<http://libstock.mikroe.com/projects/view/1852/matrix-click>).

## Resources

- Data sheet for LED drivers (<https://www.maximintegrated.com/en/datasheet/index.mvp/id/1339>)
- LTP-305HR LED matrix data sheet ([http://optoelectronics.liteon.com/upload/download/DS-30-97-087/S\\_110\\_LTP-305HR.pdf](http://optoelectronics.liteon.com/upload/download/DS-30-97-087/S_110_LTP-305HR.pdf))
- mikroBUS standard specifications ([http://www.mikroe.com/downloads/get/1737/mikrobus\\_specification.pdf](http://www.mikroe.com/downloads/get/1737/mikrobus_specification.pdf))

Retrieved from "[http://docs.mikroe.com/index.php?title=Matrix\\_click&oldid=484](http://docs.mikroe.com/index.php?title=Matrix_click&oldid=484)"

### TK click



### Matrix G click

<b>IC/Module</b>	MAX7219 8-bit LED Display Drivers ( <a href="https://www.maximintegrated.com/en/datasheet/index.mvp/id/1339">https://www.maximintegrated.com/en/datasheet/index.mvp/id/1339</a> ) and a pair of 7x5 LED matrices ( <a href="http://optoelectronics.liteon.com/upload/download/DS-30-97-087/S_110_LTP-305HR.pdf">http://optoelectronics.liteon.com/upload/download/DS-30-97-087/S_110_LTP-305HR.pdf</a> )
<b>Interface</b>	SPI, CSL, CSR
<b>Power supply</b>	5V
<b>Website</b>	<a href="http://www.mikroe.com/click/matrix-g">www.mikroe.com/click/matrix-g</a> ( <a href="http://www.mikroe.com/click/matrix-g">http://www.mikroe.com/click/matrix-g</a> )  <a href="http://www.mikroe.com/click/matrix-r">www.mikroe.com/click/matrix-r</a> ( <a href="http://www.mikroe.com/click/matrix-r">http://www.mikroe.com/click/matrix-r</a> )

- This page was last modified on 8 July 2016, at 23:14.
- Content is available under Creative Commons Attribution unless otherwise noted.