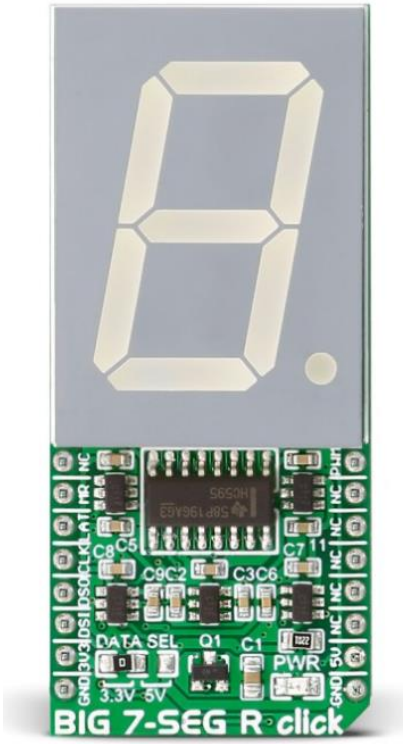
# BIG 7-SEG R click




PID: MIKROE-2269

RS Product Code: 136-0816

BIG 7-SEG R click is what you need if you want to add a seven-segment LED display to your project. This click features an SC10-21SRWA seven-segment display. Communication between the MCU and the SC10-21SRWA display is established via serial-IN, parallel-OUT shift register 74HC595 IC.

The click runs on either 3.3V of 5V power supply and communicates with the target MCU over an SPI interface.

## Display

The click displays letters, numbers and symbols in highly readable form. It can be used in any simple interface and combined with other click boards. The color of the displayed character is red, as the R in the name of the click states.

# Light intensity

The light intensity on the display is controlled via the PWM pin on the board.

# Applications

Adding a seven-segment LED display to your device with SPI interface.

# Key features

- SC10-21SRWA display
- inch digit height
- Standard: grey face, white segment
- Low current operation
- Serial-IN, parallel-OUT shift register 74HC595 IC
- Interface: SPI
- 3.3V or 5V power supply

# Specification

| | |
|---|---|
| Product Type | LED Segment |
| Applications | Adding a seven-segment LED display to your device with SPI interface |
| On-board modules | SC10-21SRWA seven-segment display, parallel-OUT shift register 74HC595 IC |
| Key Features | 1.0 inch digit height, Standard: grey face, white segment, Low current operation |
| Key Benefits | Letters, numbers and symbols in highly readable form |
| Interface | SPI |
| Power Supply | 3.3V or 5V |
| Compatibility | mikroBUS |
| Click board size | L (57.15 x 25.4 mm) |
| Weight | 37 |

# Pinout diagram

This table shows how the pinout on BIG 7-SEG R click corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

| Notes | Pin | mikroBUS™ | | | | Pin | Notes |
|---|---|---|---|---|---|---|---|
| Not connected | NC | 1 | AN | PWM | 16 | PWM | Display light intensity control |
| Master Reset for 74HC595 | MR | 2 | RST | INT | 15 | NC | Not connected |
| Latch for 74HC595 | LAT | 3 | CS | TX | 14 | NC | Not connected |
| Clock for 74HC595 | CLK | 4 | SCK | RX | 13 | NC | Not connected |
| Serial Data from 74HC595 to MCU | DSO | 5 | MISO | SCL | 12 | NC | Not connected |
| Serial Data from MCU to 74HC595 | DSI | 6 | MOSI | SDA | 11 | NC | Not Connected |
| Data line when interfaced with 3.3V MCU | 3.3V | 7 | +3.3V | +5V | 10 | 5V | Data line when interfaced with 5V MCU and also power supply pin for display and the whole click hardware |
| Ground | GND | 8 | GND | GND | 9 | GND | Ground |

# Jumpers and settings

Information about on board jumpers:

| Designator | Name | Default Position | Default Option | Description: describe the use + list all options with respective descriptions |
|---|---|---|---|---|
| JP1 | Logic level | Left | 3.3V | Logic Level Selection toward host mcu 3.3V/5V, left position 3.3V, right position 5V |

# Programming

This demo is using BIG 7-SEG R click board to display characters in an endless loop, with fixed time interval whilst changing its PWM duty.

- Operating Voltage Range: 2.0 to 6.0 V
- Operating Temperature: – 55 to 125 C

For an example for STM32F107VC MCU ( EasyMx PRO v7 for ARM ),to reset and initialize the BIG 7-SEG R click board takes characters from the static array and displays them while changing PWM duty cycle, all in an endless loop click on the link Mikroe.com

## Downloads

BIG 7-SEG R click Examples

BIG 7-SEG R click Documentation

BIG 7 SEG R click Schematic