Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us
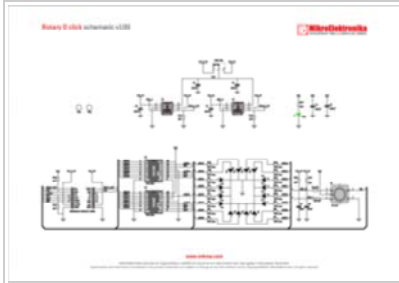
ROTARY click

Rotary click carries a 15-pulse incremental rotary encoder with detents, surrounded by a ring of 16 orange LEDs. The board is available in five different LED colors: red, green, blue, yellow and orange.

Rotary click

Features and usage notes

Schematic also available in PDF (http://cdn-docs.mikroe.com/images/a/a3/Rotary_O_click_schen

Rotary click with its LED ring is a perfect solution for implementing an input knob into your design (in contrast to a potentiometer, a rotary encoder can be spun round continuously). A single rotation is divided into 15 discrete steps. The encoder outputs A and B signals (out of phase to each other). The knob is also a push-button outputted through the interrupt line. The LED ring are controlled through the SPI interface.

In addition to the SPI lines (CS, SCK, MISO, MOSI), Rotary clicks have three additional lines for outputting the Encoder info: ENCB OUT, ENCA OUT and SW (in place of the standard AN, RST and INT pins, respectively).

All Rotary click boards can be used with either a 3.3V or 5V power supply. The configuration is set up with an onboard jumper (zero ohm resistor). By default, it's set to 3.3V

Rotary click

IC/Module	[Rotary encoder surrounded by ring of LEDs]
Interface	SPI, ENCA, ENCB
Power supply	3.3V, 5V
Website	www.mikroe.com/click/rotary-r (http://www.mikroe.com/click/rotary-r) www.mikroe.com/click/rotary-g (http://www.mikroe.com/click/rotary-g) www.mikroe.com/click/rotary-b (http://www.mikroe.com/click/rotary-b) www.mikroe.com/click/rotary-y (http://www.mikroe.com/click/rotary-y) www.mikroe.com/click/rotary-o (http://www.mikroe.com/click/rotary-o)

Programming

The following code snippet demonstrates the write procedure of Rotary click.
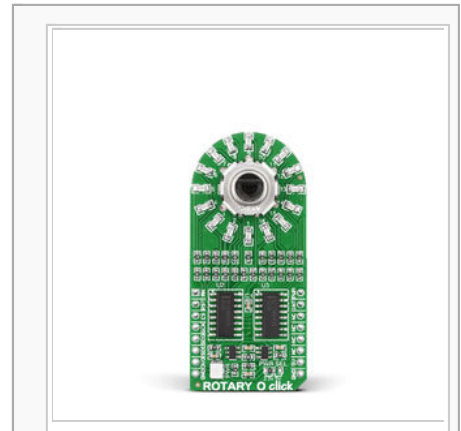
```
1 void HC595_Write( int value )
2 {
3     char first_byte, second_byte;
4
5     second_byte = value;
6     value = value >> 8;
7     first_byte = value;
8     SPI1_write( first_byte );
9     SPI1_write( second_byte );
10
11     HC595_cs = 0;
12     asm{ nop };
13     asm{ nop };
14     asm{ nop };
15     HC595_cs = 1;
16 }
```

Code examples that demonstrate the usage of Rotary click with MikroElektronika hardware, written for mikroC for ARM, AVR, dsPIC, FT90x, PIC and PIC32 are available on Libstock (http://libstock.mikroe.com/projects/view/1227/rotary-click).

Resources

- Rotary click Libstock example (http://libstock.mikroe.com/projects/view/1227/rotary-click)

- mikroBUS™ standard specifications (http://download.mikroe.com/documents/standards/mikrobus/mikrobus-standard-specification-v200.pdf)

- LEDs and bit shifting: a shift register tutorial (http://learn.mikroe.com/leds-bit-shifting-shift-register-tutorial/)