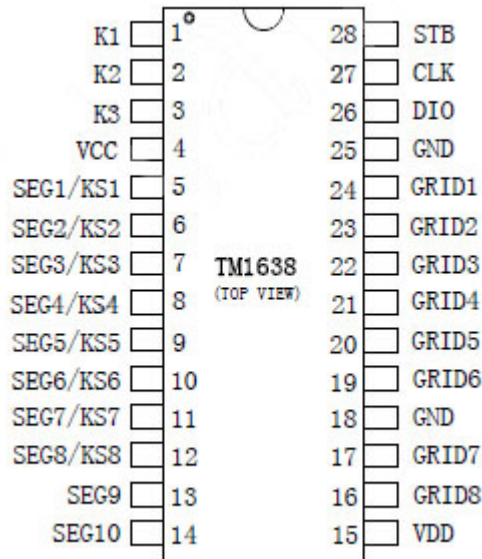


TM1638 library for Arduino

This is a 3-pin serial TM1638 chip library for Arduino. It supports a combined LED driver controller and key-scan interface.



Hardware

Connect power and 3 data pins to an Arduino board DIGITAL pins:

- VDD (Power 5V +/- 10%)
- GND (Ground)
- DIO (Bi-directional data input/output)
- STB (Chip select)
- CLK (Clock)

The following TM1638 pins should be connected to LED's and buttons in a matrix:

- K1~K3 (Key-scan data input)
- SEG/GRID (Output for LED matrix)

Documentation

[TM1638 Datasheet](#)

Example

Examples | TM1638 | [Example](#)

Usage

Initialization

```
1 // Include TM1638 library
2 #include "TM1638.h"
3
4 // Connect display pins to the Arduino DIGITAL pins
5 #define DIO_PIN 2
6 #define SCL_PIN 3
7 #define STB_PIN 4
8
9 // Create TM1638 object
10 TM1638 tm1638(DIO_PIN, SCL_PIN, STB_PIN);
```

Display on/off

```
1 // Turn display off
2 tm1638.displayOff();
3
4 // Turn display on
5 tm1638.displayOn();
```

Turn all LED's off

```
1 // Turn all LED's off
2 tm1638.clear();
```

Get key-scan

```
1 // Get 32-bit key-scan
2 uint32_t keys = tm1638.getKeyScan();
```

Write display register

```
1 // Write segment LED's to the first display register
2 // The LED's turned on depends on your hardware SEG/GRID connections
3 // Experiment with the registers 0x00..0x0F value 0x00..0xff to display numbers
4 // and characters, for example:
5 tm1638.writeDisplayRegister(0x01, 0x01);
```

Library dependencies

- None