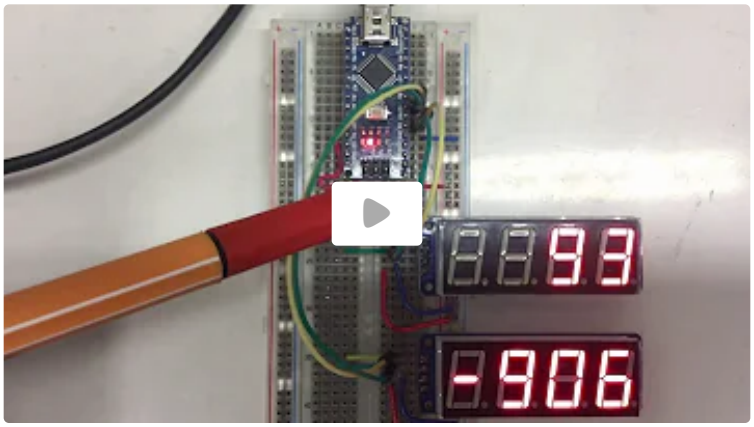
TM1650 LED Drive Control: Datasheet pdf, Circuit and Pinout

Tessie 16 November 2021 6556

TM1650 is a LED driver for controlling LEDs with a keyboard scanning interface. In this article, we will explain datasheet pdf, circuit, pinout, specifications, and other details about the TM1650 driver. Furthermore, there is a huge range of semiconductors, capacitors, resistors, and ICs in stock. Welcome your RFQ!



Arduino, TM1650 7-Segment LED Displays and TM16xx Library – The Details

Catalog

TM1650 Package Dimensions

TM1650 Manufacturer

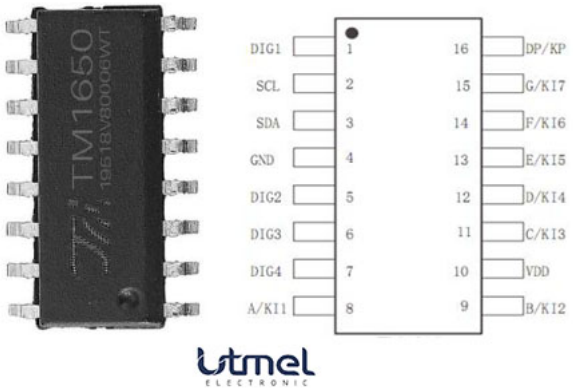
What is TM1650?

The **TM1650** is a special circuit with a keyboard scanning interface for controlling LED (light-emitting **diode** display) drive. Integrated MCU

Input and output control digital interface, data latch, LED drive, keyboard scanning, brightness adjustment, and other circuits. TM1650 has stable performance and quality

Reliable quantity, strong anti-interference ability are suitable for 24 hours long-term continuous work applications.

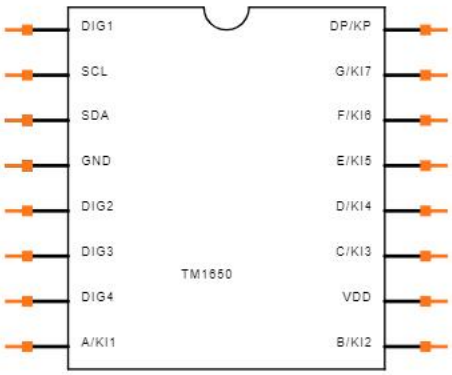
TM1650 Pinout



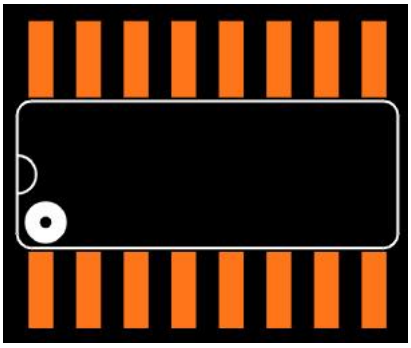
TM1650 Pinout

Pin Name	Description
DIG1	LED segment drive output 1 / keyboard scan output 1
DIG2	LED segment drive output 2 / keyboard scan output 2
DIG3	LED segment drive output 3 / keyboard scan output 3
DIG4	LED segment drive output 4 / keyboard scan output 4
SCL	I2C Serial Clock Input
SDA	I2C Serial Data Input/Output
A/K11	LED segment drive output A/key scan input K11
B/K12	LED segment drive output B/key scan input K12
C/K13	LED segment drive output C/key scan input K13
D/K14	LED segment drive output D/key scan input K14
E/K15	LED segment drive output E/key scan input K15
F/K16	LED segment drive output F/key scan input K16
G/K17	LED segment drive output G/key scan input K17
DP/KP	LED segment output DP/keyboard logo output KP
GND	Ground
VDD	VCC of Supply

TM1650 CAD Model



TM1650 Symbol



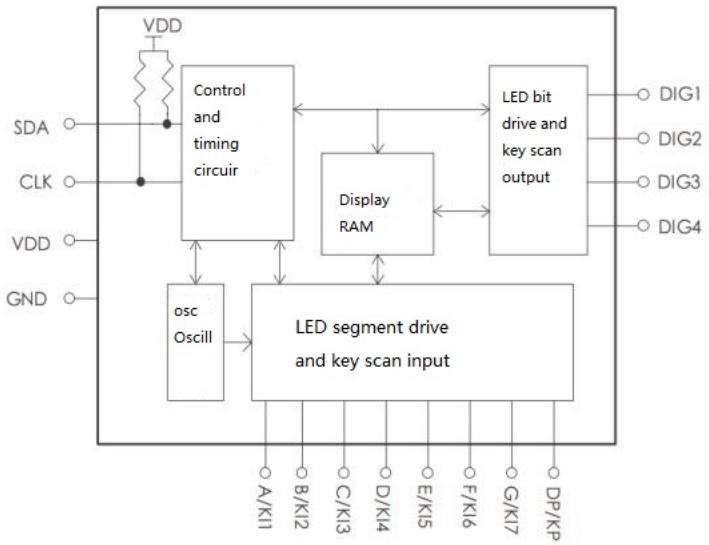
TM1650 Footprint

Specifications

TM(Shenzhen Titan Micro Elec) TM1650 technical specifications, attributes, parameters and parts with similar specifications to TM(Shenzhen Titan Micro Elec) TM1650.

Type	Parameter		
Package / Case	SOP-16_150mil	Packaging	Tube-packed
RoHS Status	RoHS Compliant		

TM1650 Internal Block Diagram



TM1650 Internal Block Diagram

TM1650 Features

- Two display modes: 8-segment × 4 digits and 7-segment × 4 digits
- Segment drive current is greater than 25mA,
- Provide 8-level brightness control
- Keyboard scanning: 7×4bit internal integrated **transistor** driver
- High-speed two-wire serial interface
- The built-in clock oscillation circuit
- Built-in power-on reset circuit
- Support 2.8V-5.5V power supply voltage
- Provide DIP16 and SOP16 packages

TM1650 Applications

Display drivers for household appliances such as set-top boxes, air conditioners, DVD/VCD, etc.

TM1650 Equivalents

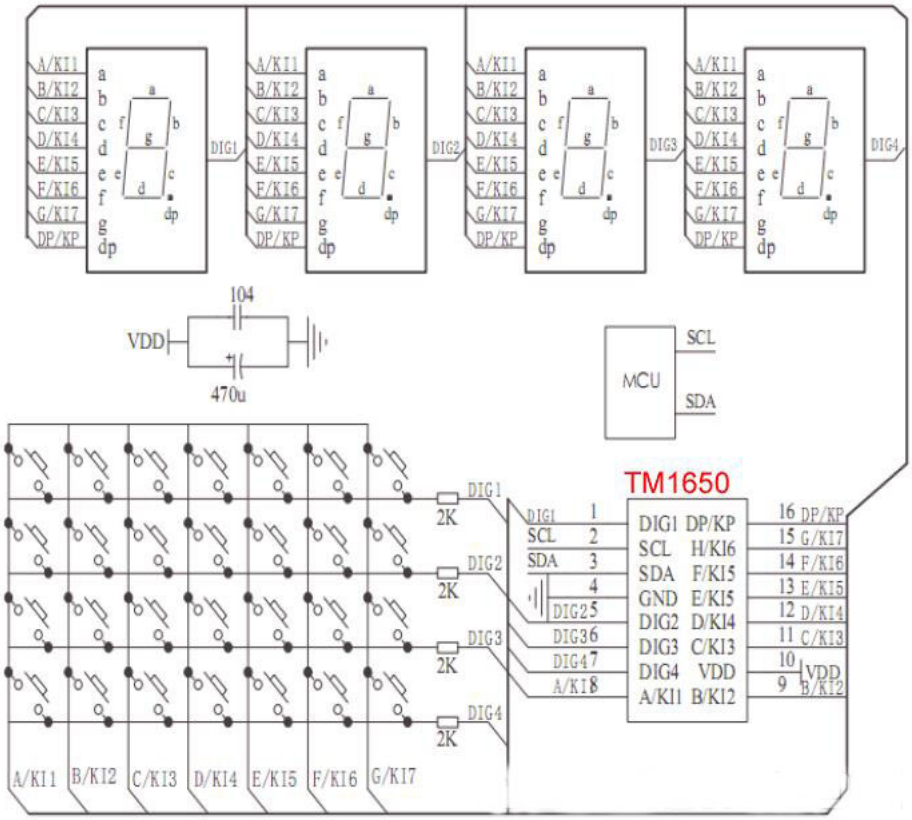
MBI5026GD, CD4511, MAX6945, MAX7221

Where to Use TM1650

This is a very inexpensive and adaptable device that may be used for a variety of purposes. The devices contain a 150A low-power shutdown mode, 8 channel brightness control, a scan-limit register that allows the user to display from 1 to 8 digits, and a test mode that forces all LEDs on.

How to Use TM1650

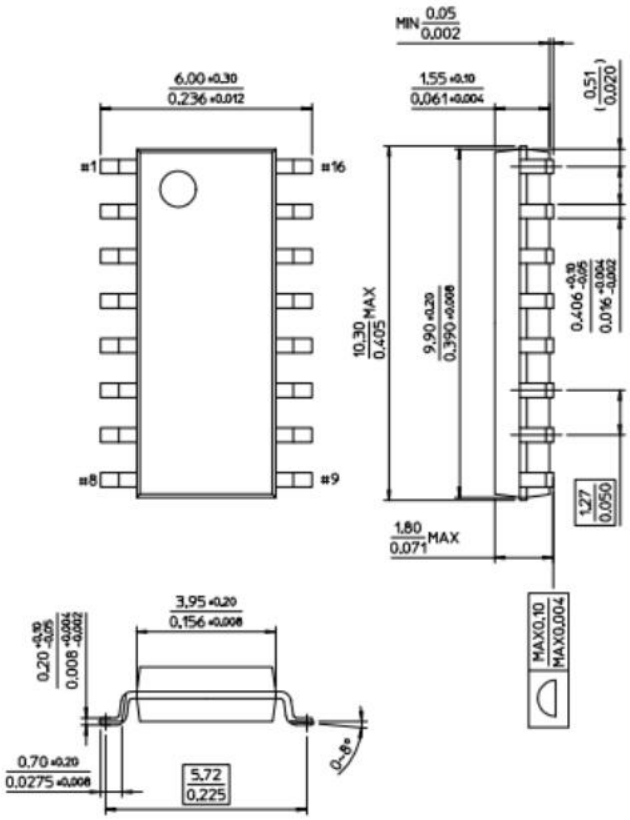
Although the datasheet indicates that it uses an I2C interface, this IC can be driven without one, and it is recommended that you do so because this IC does not provide any I2C addresses, which means you cannot drive more than one I2C device on the I2C bus. A basic schematic of the TM1650 with a keypad is shown below.



TM1650 Schematic

As you can see, this gadget is designed to be controlled using a matrix keypad to operate the TM1650 IC. Aside from that, you may control the TMS1650 IC with an Arduino by using the TM16XX library by maxing-rd from GitHub. This library allows you to control the TMS1650 IC with any Arduino pin.

TM1650 Package Dimensions



TM1650 Package Dimensions

TM1650 Manufacturer

Shenzhen Titan Micro-Electronics Co., Ltd. was established in 2003, is headquartered in Shenzhen Nanshan District high tech Industrial Park North violet information port, day micro is to **integrated circuit** (IC) design, integrated circuit package, **semiconductor** packaging and testing equipment manufacturing, industrial marketing characteristics of the fully synthetic enterprise. Micro day around customer needs continuous innovation, there are more than 3000 customers in the use of micro integrated circuit products, including data converter, LCD driver, radio frequency (RF) IC, power management products, and other types of sensors and signal processing products. Customers are throughout the country, Europe, Southeast Asia, and other countries in the region.

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Frequently Asked Questions

Does TM1650 need to add segment resistance?

TM1650 is a 4-bit 7-segment LED nixie tube driver chip with an I2C serial port. It does not need to be programmed, but the single-chip microcomputer used to control it needs to be programmed.

How to control the brightness of tm1650?

It is controlled by PTM. TM1650 is a very cost-effective chip. A single chip can drive a 4-digit 8-segment digital tube and key scanning.

What is the program of 51 single-chip microcomputer to drive TM1650?

TM1650 is an 8-segment × 4 digits led driver, the segment drive current is greater than 25mA, the bit drive current is greater than 150mA ，it provides 8-level brightness control, and also has a 7×4 keyboard scan function.

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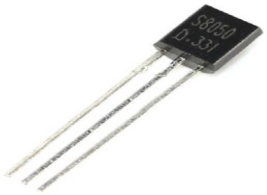

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17 November 2021 68814

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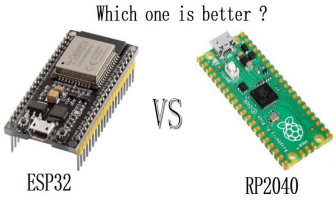

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05 November 2021 44455

LR44 is an alkaline manganese battery. This article will introduce LR44 battery equivalents, specifications, applications, and compare LR44 with 357 Battery to let you make a difference. Furthermore, there are huge in stock. Welcome your RFQ!

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