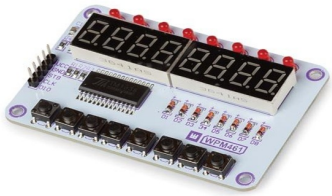
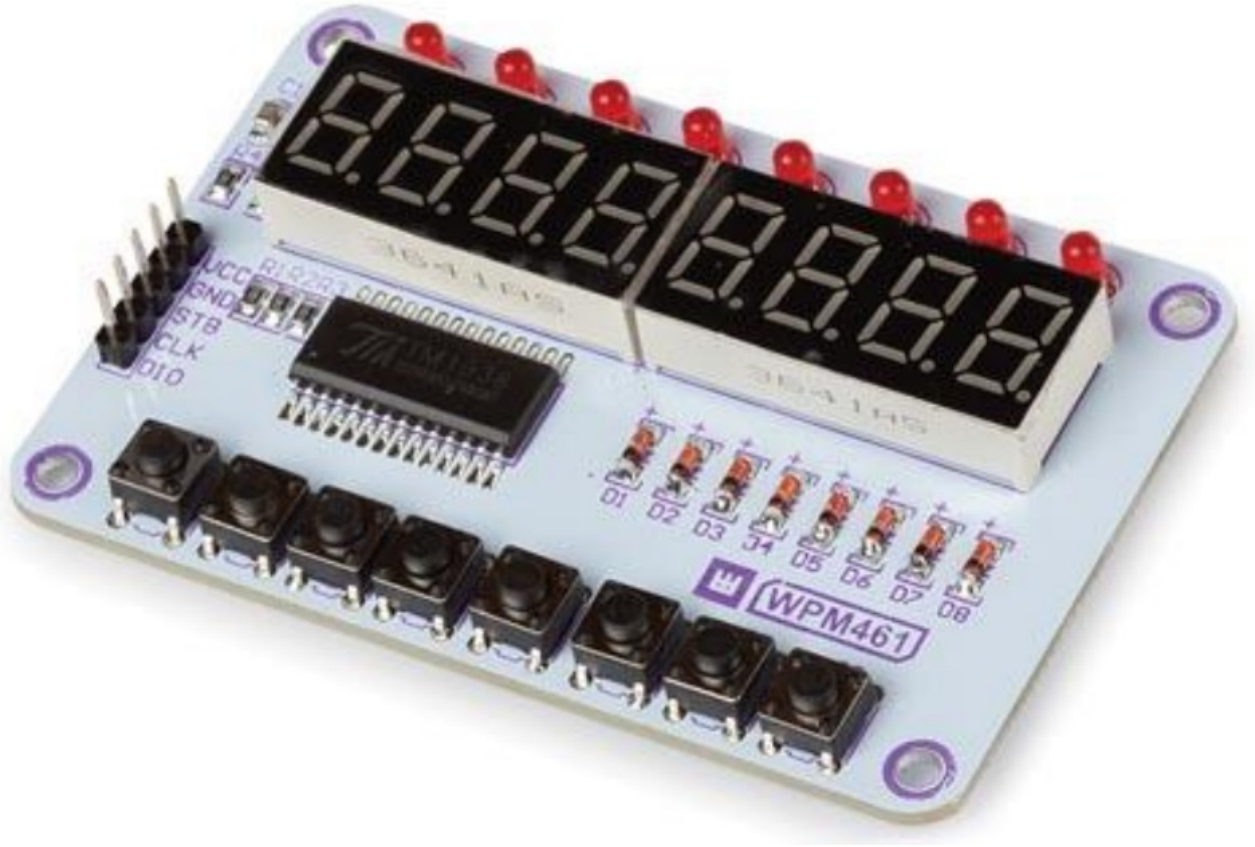


velleman WPM461 Chip Key Display Module User Manual

EXCITING ELECTRONICS

MANUAL
HIP KEY DISPLAY MODULE
WPM461



whadda.com

Contents

Introduction

To all residents of the European Union

Important environmental information about this product

This symbol on the device or the package indicates that disposal of the device after its lifecycle could harm the environment. Do not dispose of the unit (or batteries) as unsorted municipal waste; it should be taken to a specialized company for recycling. This device should be returned to your distributor or to a local recycling service. Respect the local environmental rules.

If in doubt, contact your local waste disposal authorities.

Safety Instructions

 Read and understand this manual and all safety signs before using this appliance.

 For indoor use only.

- This device can be used by children aged 8 years and above, and persons with reduced physical, sensory, or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the device in a safe way understand the hazards involved. Children shall not play with the device. Cleaning and user maintenance shall not be made by children without supervision.

General Guidelines

- Refer to the Velleman® Service and Quality Warranty on the last pages of this manual.
- All modifications of the device are forbidden for safety reasons. Damage caused by user modifications to the device is not covered by the warranty.
- Only use the device for its intended purpose. Using the device in an unauthorized way will void the warranty.
- Damage caused by disregard of certain guidelines in this manual is not covered by the warranty and the dealer will not accept responsibility for any ensuing defects or problems.
- Nor Velleman nv nor its dealers can be held responsible for any damage (extraordinary, incidental, or indirect) –of any nature (financial, physical…) arising from the possession, use, or failure of this product.
- Keep this manual for future reference.

What is Arduino®

Arduino ® is an open-source prototyping platform based on easy-to-use hardware and software. Arduino ® boards are able to read inputs – light-on sensor, a finger on a button, or a Twitter message – and turn it into an output – activating a motor, turning on an LED, publishing something online. You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so, you use the Arduino programming language (based on Wiring) and the Arduino ® software IDE (based on Processing). Additional shields/modules/components are required for reading a twitter message or publishing online. Surf to **www.arduino.cc** for more information

Product overview

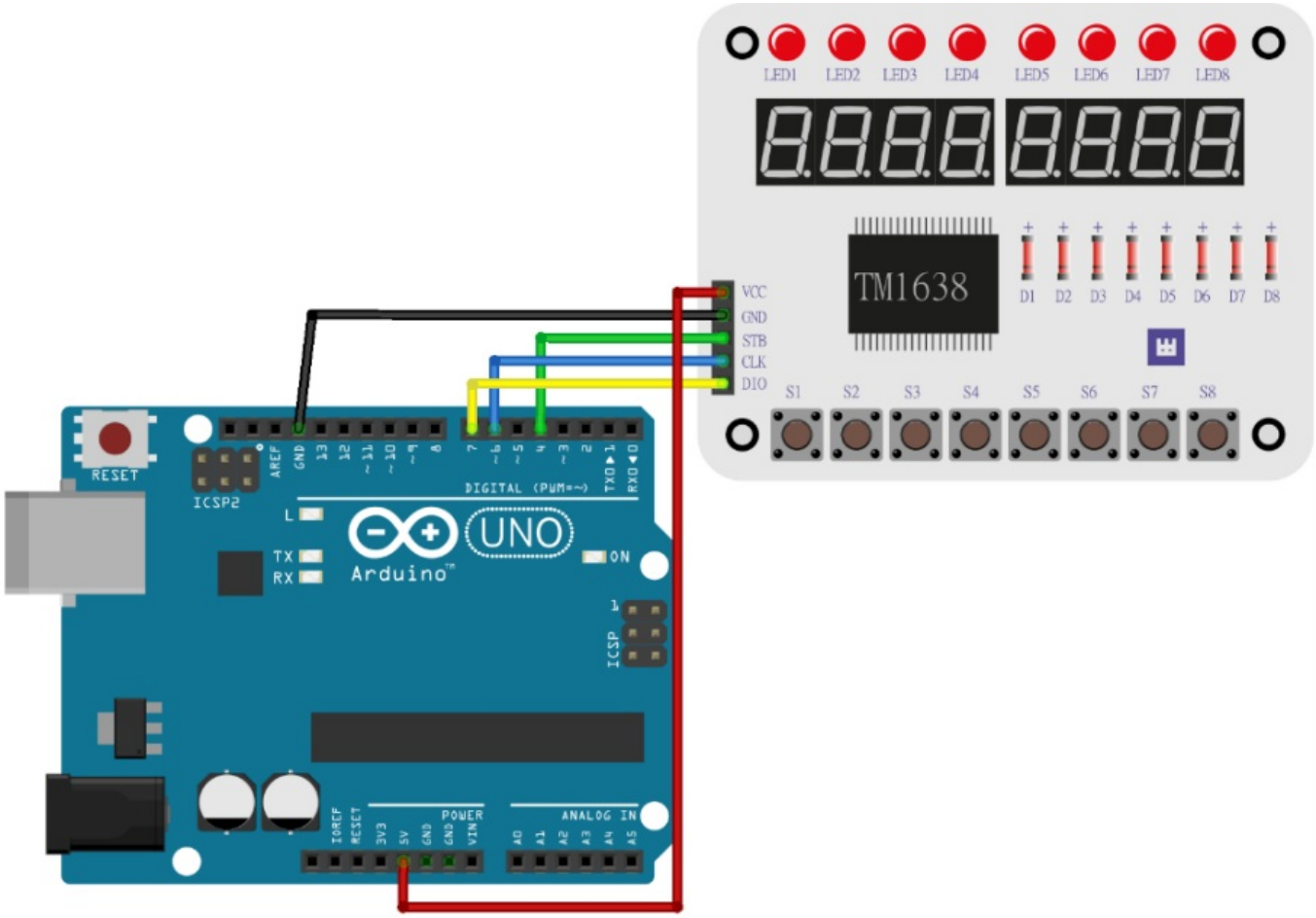
The Whadda chip key display module features a combination of eight 7-segment displays, eight red LEDs, and eight push buttons making it ideally suited for making simple user interfaces.
All of the LEDs and buttons are driven and/or read by a TM1638 LED controller IC. This driver chip uses a simple 3-wire serial interface to communicate with your Arduino® compatible board.

Specifications:

Driver chip: TM1638 LED controller
Supply voltage: 5 V
Number of LEDs: 8
Number of 7-segment displays: 8 (with decimal point)
Number of pushbuttons: 8
Weight: 28 g
Dimensions (W x L x H): 76.2 x 50.2 x 10.6 mm

Wiring description

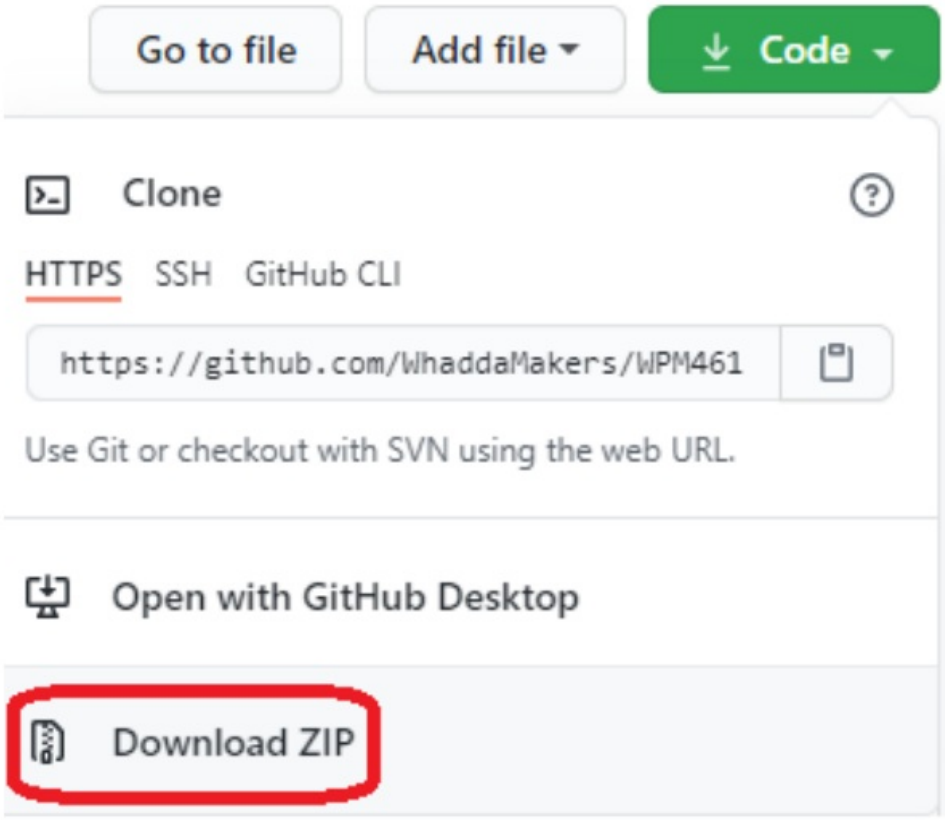
Pin	Name	Arduino® connection
VCC	Supply voltage (5 V DC)	5V
GND	Ground	GND
STB	Chip selection input	Digital Pin 4
CLK	Clock input	Digital Pin 6
DIO	Serial data input	Digital Pin 7



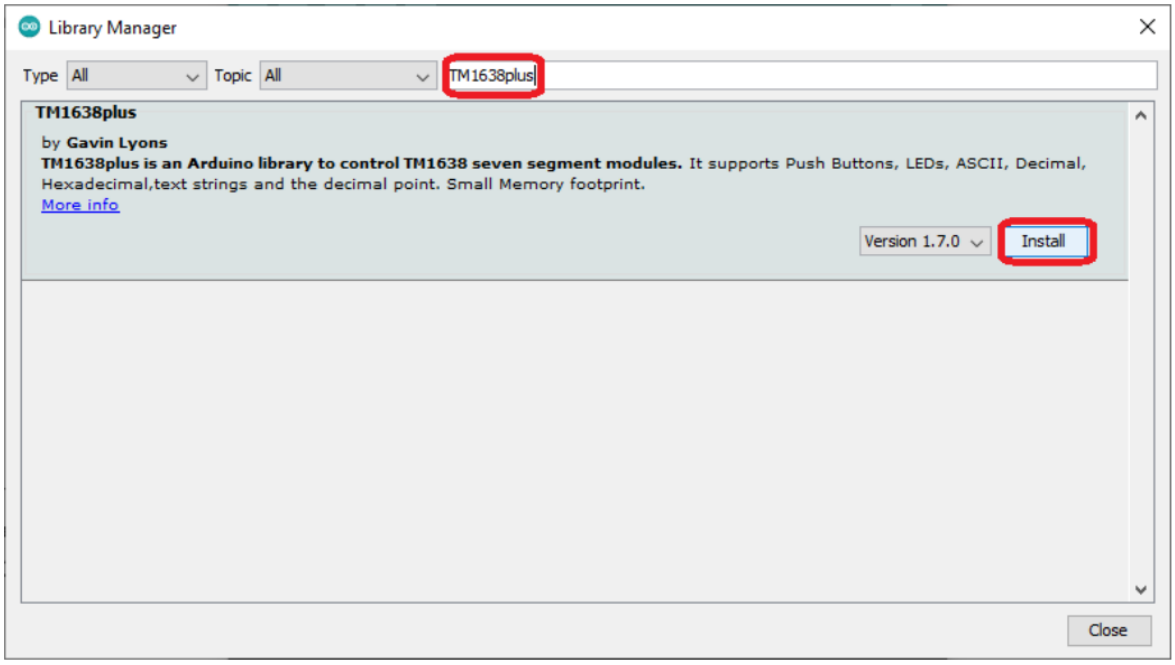
Example program

You can download the example Arduino® program by going to the official Whadda github page:
https://github.com/WhaddaMakers/TM1638-Chip-key-display-module

1. Click the **“Download ZIP”** link in the **“Code”** menu:



2. Unzip the downloaded file, and browse to the WPM461_example folder. Open the example Arduino® sketch (WPM461_example.ino) located in the folder.
3. Use the **Arduino Library manager** to install the **TM1638plus library,** by going to Sketch > Include Library > Manage Libraries…, typing in **TM1638plus** in the search bar, and clicking "**Install**":



4. Connect your Arduino compatible board, make sure the correct Board and connection port are set in the tools menu and hit Upload 

The example program will cycle through various display sequences, which includes showing "Velleman" and "Whadda" on the 7-segment displays, turning on and off all of the red LEDs, showing a number sequence on the 7-segment display, and displaying the number of milliseconds since the last reset on the display.
Check the comments in the example code for more information on what each function does.

whadda.com

Documents / Resources

	velleman WPM461 Chip Key Display Module [pdf] User Manual WPM461, Chip Key Display Module

References

- Whadda - Exciting Electronics
- Arduino - Home
- GitHub - WhaddaMakers/TM1638-Chip-key-display-module: Example code for the Whadda TM1638 chip key display module (WPM461).