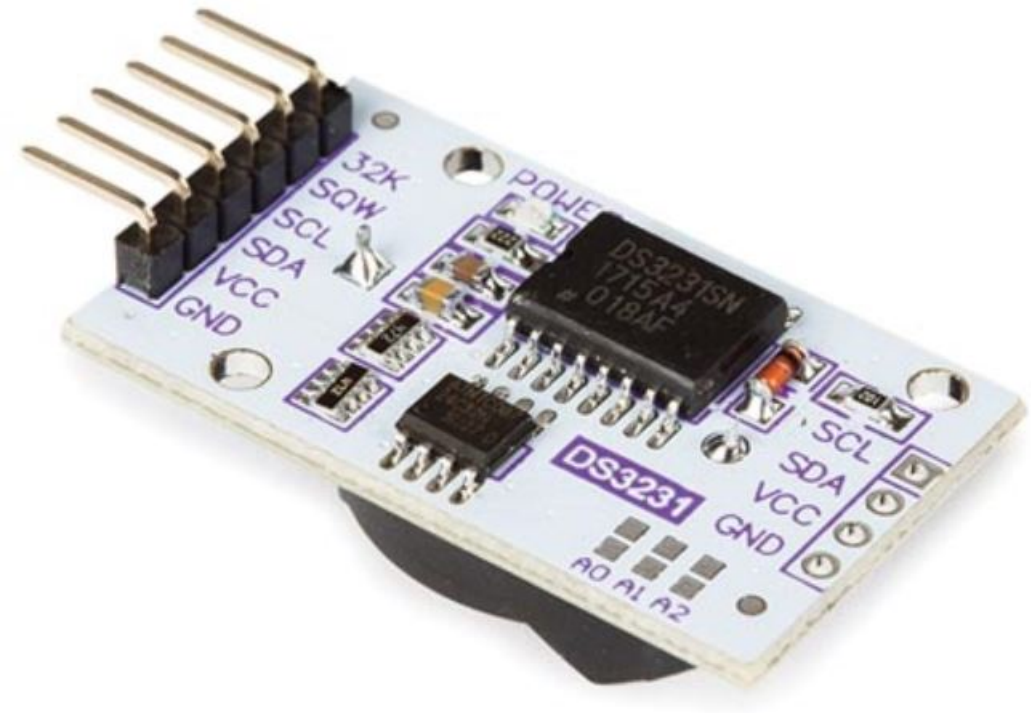
WHADDA WPM352 Module With Minimum Fuss Instruction Manual

Contents

WHADDA EXCITING ELECTRONICS

WHADDA WPM352 Module With Minimum Fuss



Product Information

- **Product Name:** RTC DS3231 MODULE WPM352
- **Manufacturer:** Whadda
- **Website:** whadda.com

Product Usage Instructions

1. Read the manual thoroughly before using the device.
2. If the device was damaged during transit, do not install or use it. Contact your dealer for assistance.
3. Ensure you understand and follow all safety instructions and signs before using the appliance.
4. This appliance is designed for indoor use only.
5. Refer to the product overview, specifications, and wiring description for a better understanding of the device.
6. Download the ZIP file from the Code menu on the website.
7. Install the DS3231 library using the Arduino Library manager. Go to Sketch > Include Library > Manage Libraries…, search for “DS3231”, and click Install.
8. Connect your Arduino compatible board and ensure the correct Board and connection port are set in the tools menu.
9. Upload the program to your Arduino board.
10. Open the serial monitor by clicking the serial monitor button. Set the baudrate to 9600 baud.
11. Follow the on-screen instructions to program the current time into the RTC module.
12. Open the display_time example and upload it to your Arduino board.
13. Open the serial monitor again and ensure the baudrate is set at 9600 baud. The current time and temperature will be displayed in the serial monitor.

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.
- Thank you for choosing Whadda! Please read the manual thoroughly before bringing this device into service. If the device was damaged in transit, do not install or use it and contact your dealer.

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 from 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 and 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 unauthorised 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 of 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

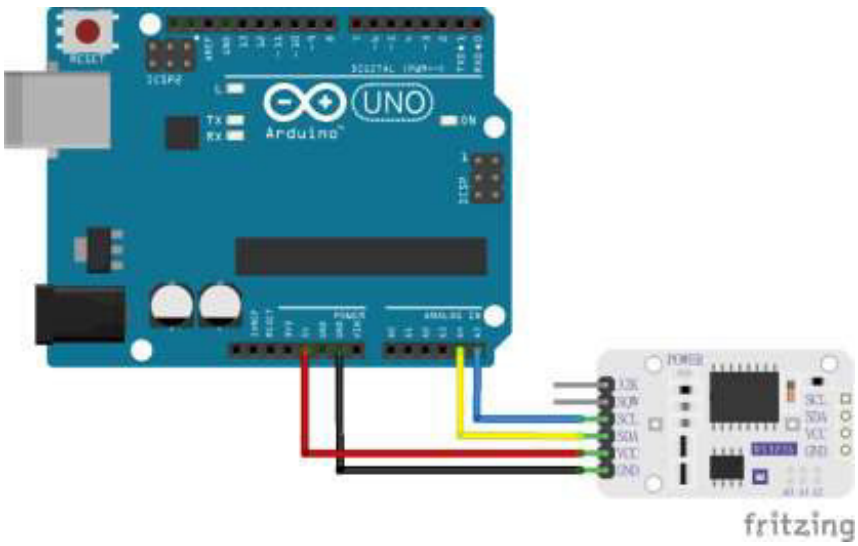
- The Whadda RTC DS3231 module is a real-time clock that enables accurate timekeeping with minimum fuss. It uses a DS3231 IC, an extremely accurate RTC chip with a built-in 32 kHz crystal oscillator. The chip also features a basic temperature sensor and alarm clock capability.
- The RTC module uses a standard I²C interface and can easily be interfaced with various developments boards (such as an Arduino® compatible board).

Specifications

- **Supply voltage:** 3,3 – 5 V DC
- **RTC IC:** DS3231
- **RTC accuracy:** ± 2 ppm (from 0 °C to +40 °C)
- **Temperature sensor accuracy:** ± 3 °C
- **Maximum I²C bus frequency**: 400 kHz
- **Backup battery:** CR2032
- **Dimensions (W x L x H):** 43,2 x 22,4 x 14,7 mm

Wiring description

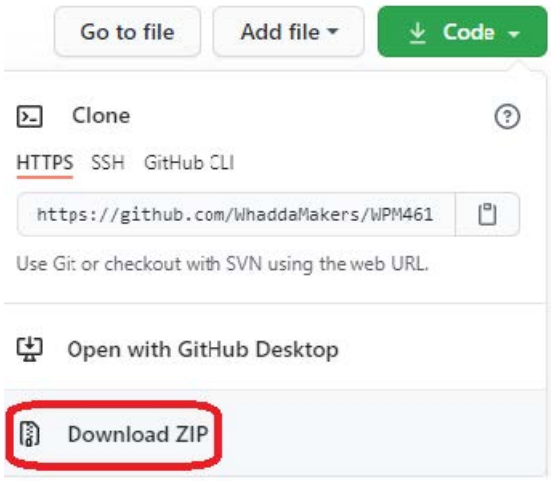
Pin	Name	Arduino® connection
GND	Ground	GND
VCC	Supply voltage (3,3 – 5 V DC)	5V
SDA	I²C Data line	I²C SDA (e.g A4 on Arduino® Uno compatible)
SCL	I²C Clock line	I²C SCL (e.g A5 on Arduino® Uno compatible)
SQW	Active-Low Interrupt or Square-Wave Output	–
32K	32kHz Output	–



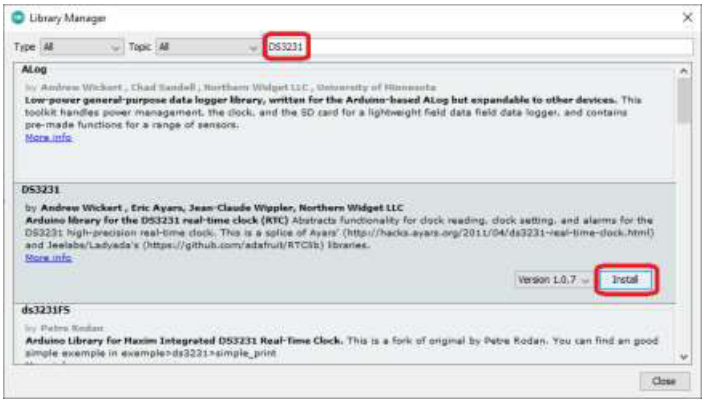
Example program

You can download the example Arduino® program by going to the official Whadda github page: github.com/WhaddaMakers/RTC-DS3231-module

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



2. Unzip the downloaded file, and browse to the set_time folder. Open the example Arduino® sketch (set_time.ino) located in the folder.
3. Use the Arduino Library manager to install the DS3231 library, by going to Sketch > Include Library > Manage Libraries… , typing in DS3231 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 
5. Open the serial monitor by clicking the serial monitor button  , make sure the baudrate is set at 9600 baud
6. Follow the on-screen instructions to program the current time into the RTC module
7. Now open the display_time example, and hit Upload 
8. Open the serial monitor by clicking the serial monitor button  , make sure the baudrate is set at 9600 baud. The current time and temperature will be printed out in the serial monitor.

whadda.com

Documents / Resources

	WHADDA WPM352 Module With Minimum Fuss [pdf] Instruction Manual WPM352 Module With Minimum Fuss, WPM352, Module With Minimum Fuss, With Minimum Fuss, Minimum Fuss, Fuss

References

- GitHub - WhaddaMakers/RTC-DS3231-module: Example code for the Whadda RTC DS3231 module (WPM352).
- Whadda - Exciting Electronics
- GitHub - WhaddaMakers/RTC-DS3231-module: Example code for the Whadda RTC DS3231 module (WPM352).