



Fermion: DS3232 Precise RTC (Breakout)

SKU:DFR0821 Brand:DFRobot Reward Points: 120

\$12.00

In Stock

Quantity Based Price

Categories: All Products Modules RTC Modules
Topic: Arduino Fermion

QTY	DISCOUNT
3-4	\$11.60
5-9	\$11.40
10+	\$11.00

* Model:

Quantity: Maximum Quantity: 2

[BUY IT NOW](#)

[ADD TO CART](#)



Frequently Bought Together

+
 \$24.90 +
 \$12.90 +
 \$39.50 +
 \$14.90 =
 You have chosen: 0 Total amount: \$0 [BUY IT NOW](#)

INTRODUCTION

This real-time clock module (RTC) uses the DS3232 chip that integrates a crystal resonator and a temperature compensator, which improves the long-term accuracy of the module. In the range of -40°C to +85°C, the accuracy of DS3231 remains at ±3.5ppm (±0.3024 seconds/day).

The DS3232 integrates 236Byte SRAM storage that can store data with extremely low power consumption, and it also can be used in scenarios such as low power consumption collection of the Internet of Things.

The device incorporates a battery input and maintains high precision timing when the main power to the device is interrupted. The RTC provides information of seconds, minutes, hours, week, day, month, and year, and it can automatically adjust the date at the end of the month, including corrections for leap year. The clock operates in either the 24-hour or 12-hour format with AM/PM indicator. Two programmable time-of-day alarms and a programmable square-wave output are provided. In addition, the RST pin can be used as a push-button input for microprocessor reset.

Note: Due to the latest air cargo regulations, the transport audit of special items such as batteries, magnets, and liquids will become very strict, so the RTC module does not come with batteries anymore, please purchase them locally. The button cell model that goes with the module is CR1220.

[Fermion: DS3232 Precise RTC \(Breakout\)](#)

[Connection Diagram](#)

[Fermion: DS3232 Precise RTC \(Breakout\)](#)

[Board Overview](#)

DS323X Selection Guide

Product Name	Fermion: DS3231M MEMS Precise RTC Module	Fermion: DS3231 Precision RTC Module	Fermion: DS3232 Precision RTC Module
SKU	DFR0641	DFR0819	DFR0821
Storage	None	None	236Byte
Integrated Resonator	MEMS	XTAL	XTAL
Timing Current	2000nA	840nA	1500nA
Timing Precision	±5ppm (±0.432s/d)	±3.5ppm (±0.3024s/d)	±3.5ppm (±0.3024s/d)
Operating Voltage	3.3V-5.5V	3.3V-5.5V	3.3V-5.5V
Operating Temperature	-45°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C
Introduction	Integrated MEMS resonator, reducing the risk of mechanical failure, suitable for use in strong and frequent vibration.	A RTC module with integrated crystal resonator, featuring a higher precision and a lower power consumption, suitable for use in the occasion in demand of high precision and low power.	A RTC module with integrated crystal resonator, equipped with 236Byte SRAM storage inside, enabling it to store data at an extremely low power consumption, suitable for low-power IoT applications requiring real-time clock.

FEATURES

- Internal integrated crystal resonator, small deviation
- Internal integrated temperature compensator, small temperature drift
- Complete clock calendar function
- Two programmable Time-of-Day alarms
- 236Byte SRAM integrated internally

APPLICATIONS

- Event reminder
- MCU external wakeup source
- Clock and alarm output
- IoT data collection and storage

SPECIFICATION

- Power Supply Voltage: 3.3V-5.5V
- I2C Address: 0x68
- SRAM : 236 Byte (0x14~0x1F)
- Timing Range: 1970 ~ 2100
- Working Temperature: -40°C ~ +85°C
- Timing Accuracy: ±3.5ppm (±0.3024 sec/day)
- Product Size: 22.5*21mm / 0.89*0.83 inch

DOCUMENTS

- [Product wiki](#)

SHIPPING LIST

- Fermion: DS3232 Precise RTC (Breakout) x1
- 2.54-7P Black Single Row Connector x1

REVIEW

FAQ

0 Comments [DFRobot](#) [Disqus' Privacy Policy](#) [Login](#)

[Recommend](#) [Tweet](#) [Share](#) [Sort by Best](#)

Start the discussion...

LOG IN WITH

OR SIGN UP WITH DISQUS [?](#)



Be the first to comment.

[Subscribe](#) [Add Disqus to your site](#) [Do Not Sell My Data](#)

DISQUS

Sign up for exclusive offers!

[→](#)

Like us on

