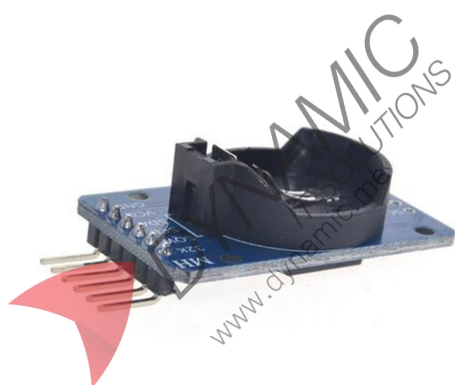


Real Time Clock DS3231 AT24C32 I2C RTC



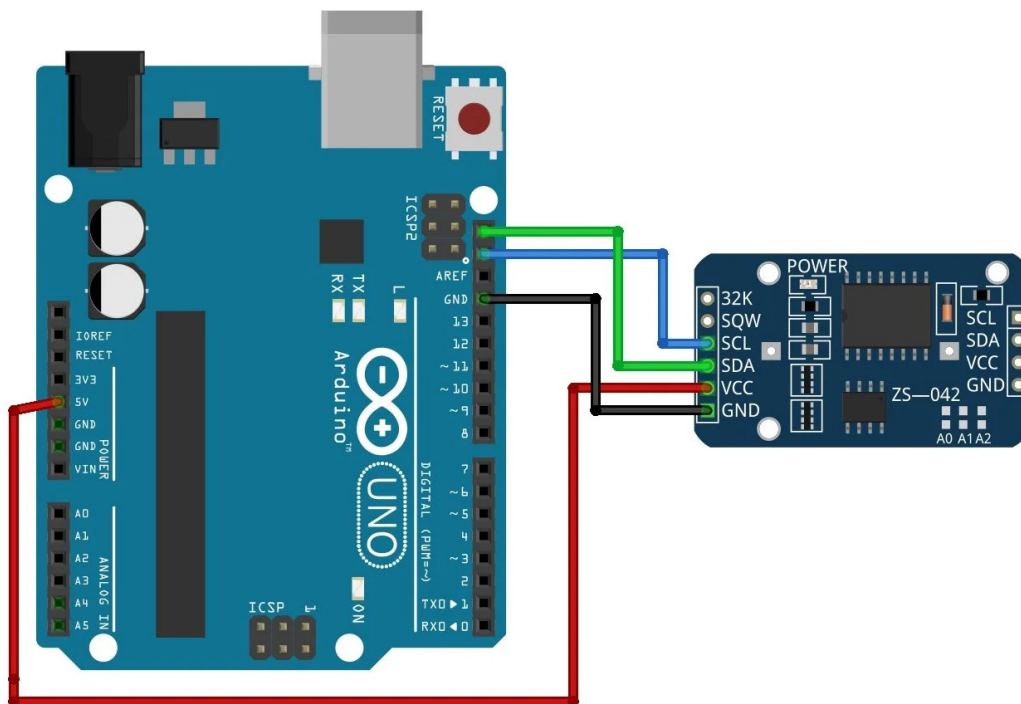
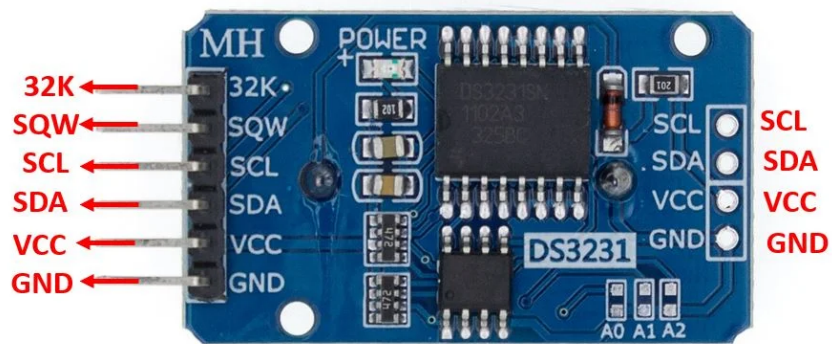
Features:

The DS3231 AT24C32 I2C RTC Module is a highly accurate real-time clock (RTC) featuring a built-in temperature-compensated crystal oscillator (TCXO) and backup battery support. It keeps track of time in seconds, minutes, hours, day, date, month, and year, automatically adjusting for leap years and months with fewer than 31 days. The module also includes the AT24C32 EEPROM for non-volatile data storage. With I2C interface compatibility, two programmable alarms, and a programmable square-wave output, this module is ideal for time-sensitive embedded applications such as data loggers, GPS systems, and automation controllers.

Specifications	
RTC Chip	DS3231
EEPROM	AT24C32 (32Kbit I2C EEPROM)
Time Format	24-hour or 12-hour with AM/PM
Timekeeping Accuracy	± 2 ppm (0°C to $+40^{\circ}\text{C}$), ± 3.5 ppm (-40°C to $+85^{\circ}\text{C}$)
Battery Backup	Yes (CR2032 or similar supported)
Alarm Functions	2 programmable alarms
Square-Wave Output	Programmable frequencies: 1Hz, 4kHz, 8kHz, 32kHz
Temperature Sensor Accuracy	$\pm 3^{\circ}\text{C}$ (digital output)
I2C Interface	Up to 400 kHz
Voltage Range	3.3 V – 5.5 V
Operating Temperature	-40°C to $+85^{\circ}\text{C}$
Module Dimensions	38 mm $\times$ 22 mm
Use Cases	Clock/calendar modules, GPS timekeeping, data loggers, industrial timers, automation systems

Pinouts:

Pin Name	Type	Description
VCC	Power Input	Power supply input (3.3 V – 5.5 V)
GND	Power Ground	Common ground
SCL	I2C Clock	I2C serial clock line
SDA	I2C Data	I2C serial data line
SQW	Output	Square wave or interrupt output
32K	Output	32.768 kHz clock output (optional use)



Product Pictures:

