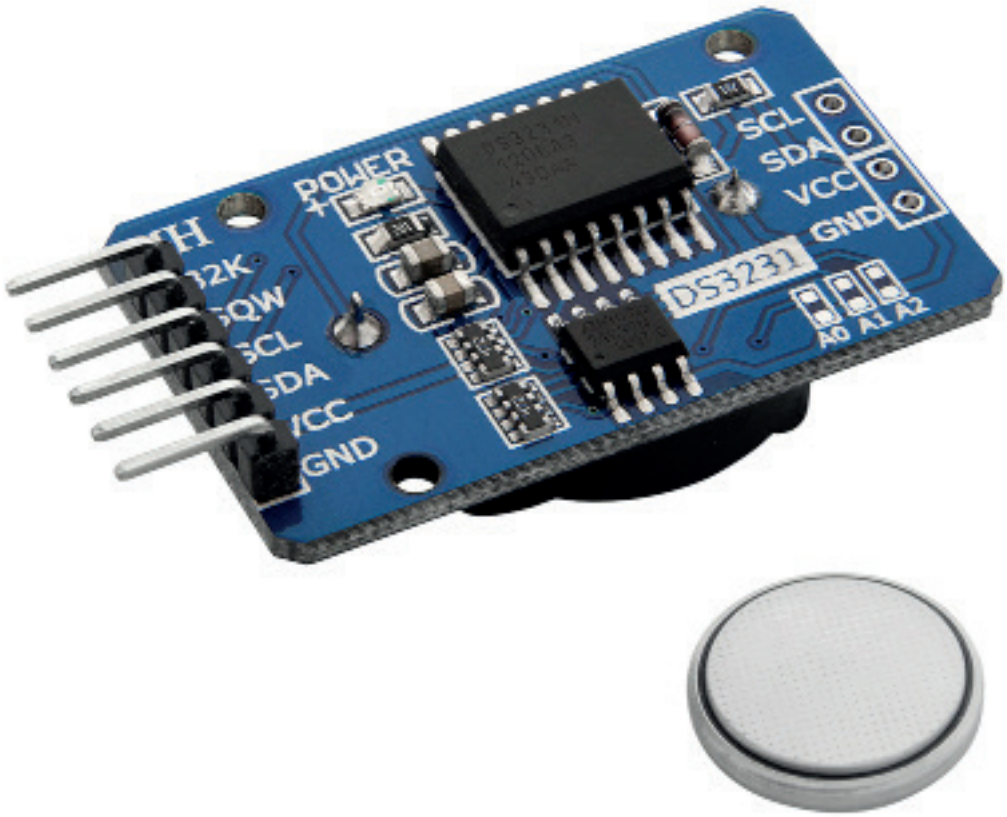
DS3231 Real Time Clock
Datenblatt



Content:

1. Specifications

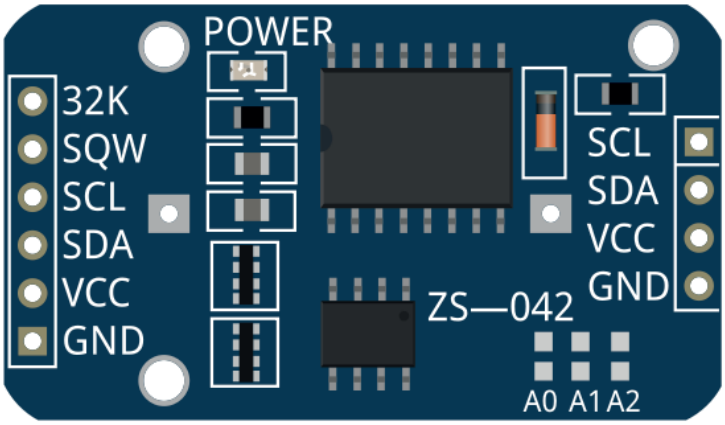
Power Supply Voltage	3.3V
Operational Temperature	From 0 to +70 °C
Communication Interface	I2C
Battery Backup	One 3V Coin Cell Battery Batter holder
Digital Temp Sensor	±3°C Accuracy
Programmable Square-Wave	32kHz [Output]
Time of Day Alarms	2
Low Power Consumption	Less Than 1mA
Dimensions	34mm x 23mm x 18mm [1.3in x 09in x 07in]

The module consists of a DS3231 RTC Clock chip and Atmel AT24C32 EEPROM chip. The AT24C32 has memory storage capacity of 32kB and uses the I2C bus interface with 0x57 address which can be modified. It has a capability of setting the time and date, checking and clearing alarms and logging data with a timestamp.

The module has a battery holder for one 3V coin cell battery and the battery is included with the module. The battery serves as back-up power supply for the module. When external power supply is turned OFF, the automatic detection on-board chip switches to battery back-up.

2. Pinout

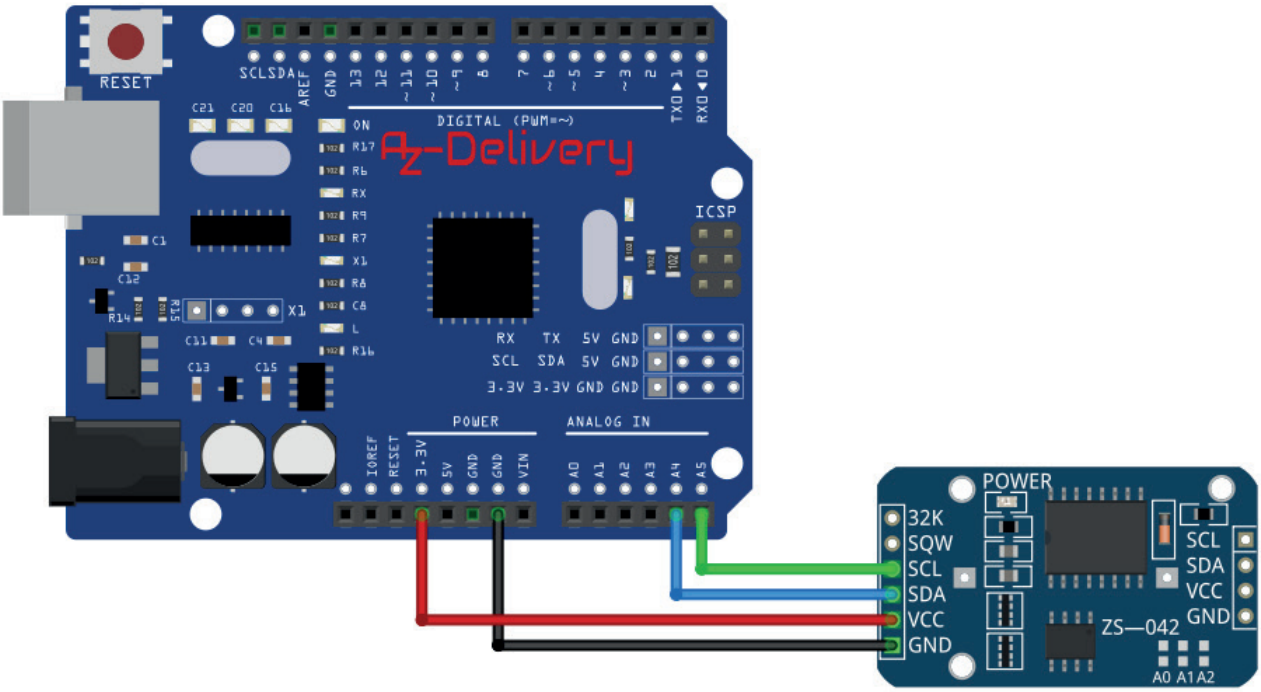
32kHz Output - 32K
Square Wave Output - SQW
I2C Serial Clock Link - SCL
I2C Serial Data Link - SDA
Power Supply - VCC
Ground - GND



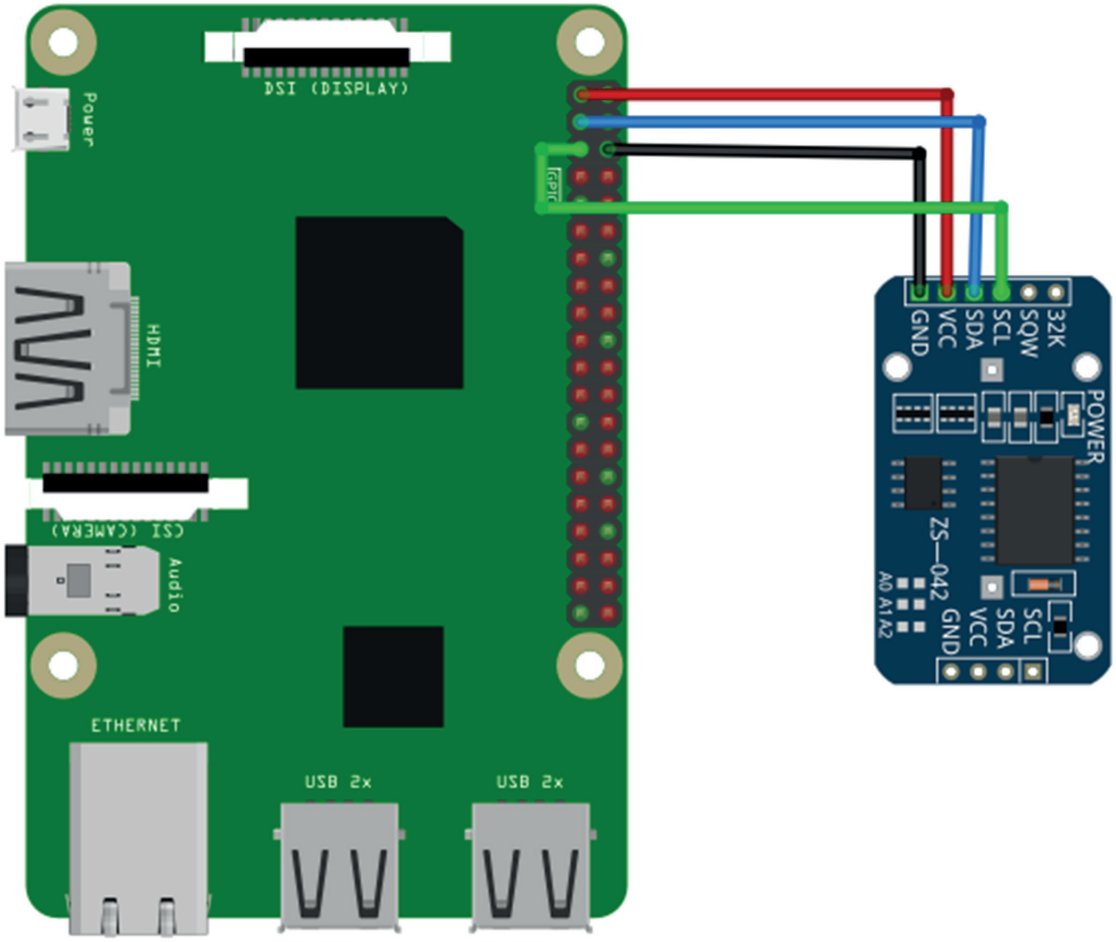
The DS3231 RTC module safely operates on 3.3V Voltage.
The 32K output pin is a crystal controlled oscillator output pin. It provides a 32kHz square-wave signal and it can be used to feed the reference signal for other devices. It may be left floating if not used.

The SQW pin can provide either an interrupt signal due to alarm conditions or a square-wave output signal.

3. Connection Diagram



Module Pin	Microcontroller Pin	Wire Color
SCL	A5	Green Wire
SDA	A4	Blue Wire
VCC	3.3V	Red Wire
GND	GND	Black Wire



Module Pin	Microcontroller Pin	Physical Pin	Wire Color
VCC	3V3	1	Red Wire
SDA	GPIO2	3	Blue Wire
GND	GND	6	Black Wire
SCL	GPIO3	5	Green Wire