

# Atom QRCode

SKU:K041



## Description

**Atom QRCode** is a scanning module kit capable of recognizing and reading 1D/2D barcodes. It includes an Atom-Lite host, supports 6 types of 2D codes and 19 types of 1D codes, and features built-in illumination LEDs for easy recognition even in dark environments. The green LED aids in focusing and aiming, while the high-resolution CMOS imaging ensures effective recognition accuracy of up to 5mil. The module offers multiple scanning modes, allowing you to switch between automatic continuous triggering and manual triggering as needed. It comes with a built-in buzzer that provides different sound prompts for various states. Additionally, the module supports adding custom prefixes and suffixes to data, defining multi-country keyboards, data editing, and many other functions. The module uses TTL for communication, making it easy to transmit data via a serial port. Whether you're using Arduino or UIFlow for programming, you can easily get started. You can use the ESP32 built into the Atom-Lite to send scanned data to a receiving end for processing, either wired or wirelessly.

## Features

- Based on ESP32, supports Wi-Fi
- Compatible with Atom-Matrix/Atom-Lite
- Supports Arduino, UIFlow, MicroPython
- Built-in illumination and focus LED
- UART/TTL communication
- Manual and automatic scanning modes
- Light and sound reminders

- Multiple output formats
- Data pre-editing and hiding
- Rich custom commands
- Supports raw data/GBK/Unicode encoding
- 2D Codes: QR Code, Micro QR, Data Matrix, PDF417, Micro PDF417, Aztec
- 1D Codes: EAN, UPC, Code 39, Code 93, Code 128, UCC/EAN 128, Codabar, Interleaved 2 of 5, ITF-6, ITF-14, ISBN, ISSN, MSI-Plessey, GS1 Databar, Code 11, Industrial 25, Standard 25, Plessey, Matrix 2 of 5

## | Includes

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- 1 x Atom-Lite
- 1 x Atomic QRCode Base
- 1 x M2 Hex Key
- 1 x M2\*8 Cup Head Screw
- 1 x USB Type-C Cable (20cm)

## | Applications

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- Cashier scanning
- Barcode entry
- Warehouse inventory

## | Specifications

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| Specification           | Parameters                                                                                                                                                                                           |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensor                  | 640x480 CMOS                                                                                                                                                                                         |
| Illumination            | White LED                                                                                                                                                                                            |
| Focus and Aiming        | Green LED                                                                                                                                                                                            |
| Supported 2D Codes      | QR Code, Micro QR, Data Matrix, PDF417, Micro PDF417, Aztec                                                                                                                                          |
| Supported 1D Codes      | EAN, UPC, Code 39, Code 93, Code 128, UCC/EAN 128, Codabar, Interleaved 2 of 5, ITF-6, ITF-14, ISBN, ISSN, MSI-Plessey, GS1 Databar, Code 11, Industrial 25, Standard 2 of 5, Plessey, Matrix 2 of 5 |
| Recognition Accuracy    | ≥5mil                                                                                                                                                                                                |
| Reading Range           | EAN-13: 50-200mm (13mil), Code39: 40-90mm (5mil 10 bytes), QR Code: 25-240mm (20mil 16 bytes), Data Matrix: 50-90mm (10mil 20 bytes), PDF 417: 30-130mm (6.67mil 7 bytes)                            |
| Contrast                | ≥25%                                                                                                                                                                                                 |
| Scanning Angle          | Rotation 360°, Tilt ±55°, Skew ±55°                                                                                                                                                                  |
| Field of View           | Horizontal 34°, Vertical 28°                                                                                                                                                                         |
| Communication Interface | UART/TTL                                                                                                                                                                                             |
| Voltage/Current         | DC 3.3V/170mA, Standby 10mA                                                                                                                                                                          |
| Housing Material        | Plastic (PC)                                                                                                                                                                                         |
| Product Size            | 48 x 24 x 18mm                                                                                                                                                                                       |
| Product Weight          | 17g                                                                                                                                                                                                  |
| Package Size            | 55 x 55 x 20mm                                                                                                                                                                                       |
| Gross Weight            | 37g                                                                                                                                                                                                  |

## Learn

The scanning module is pre-configured at the factory. The Atom-Lite does not come with built-in programs, so you need to flash the following example programs into the Atom-Lite. If you need to change the configuration, please refer to the user manual and scan the QR code for configuration. If you restore the factory settings, make sure to scan to confirm that you are in TTL communication mode and that the baud rate is set correctly. Some 1D and 2D codes require scanning a QR code to enable recognition.

## PinMap

| PIN     | LEFT | RIGHT | PIN |
|---------|------|-------|-----|
| 3V3     |      | 1     |     |
| UART_RX | 2    | 3     |     |
| UART_TX | 4    | 5     | 5V  |
| TRIG    | 6    | 7     | GND |
| DONE    | 8    | 9     |     |

## Datasheets

- [QR Module Serial Command Table](#)
- [User Manual QR Module QR Code Command Instructions](#)

## Softwares

### Arduino

- [Atom QRCode Button Control Example](#)
- [Atom QRCode UART Control Example](#)

### UiFlow1

- [Atom QRCode UiFlow1 Docs](#)

```

Setup
uart1 set tx 19 rx 22 baud 9600 use uart 1
Init pin0 Pin 23 mode OUT Pull PULL_UP
Init pin1 Pin 33 mode IN Pull PULL_DOWN
set pin0 HIGH
Loop
if A is pressed
do
set pin0 LOW
else
set pin0 HIGH
if Get pin1 Value == 真
do
if uart1 remain cache
do
print decode uart1 read all

```

### EasyLoader

| Easyloader             | Download Link            | Notes |
|------------------------|--------------------------|-------|
| Atom QRCode Easyloader | <a href="#">download</a> | /     |

## Video

[Atomic\\_QR.mp4](#)