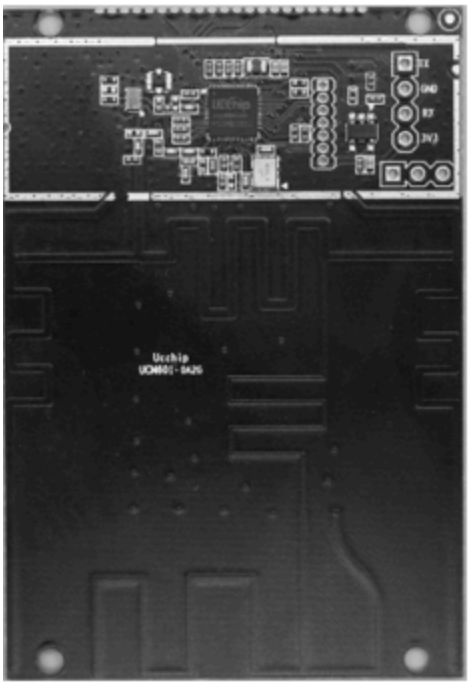
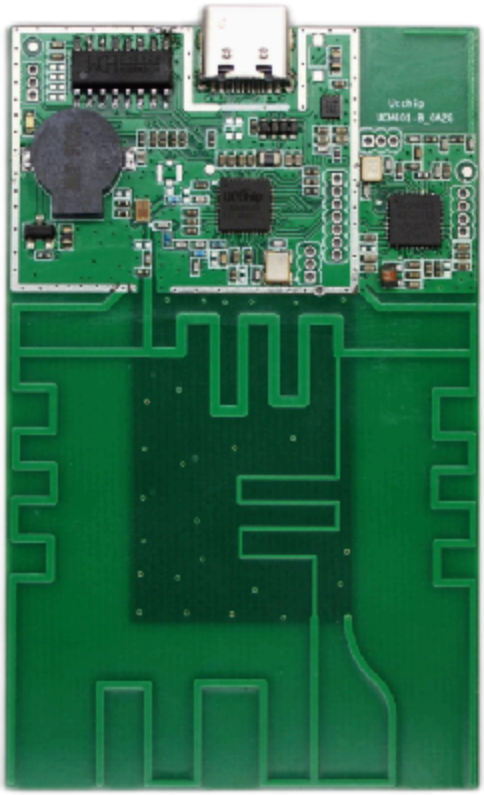
UCM601/601B Introduction

UCM601 Introduction

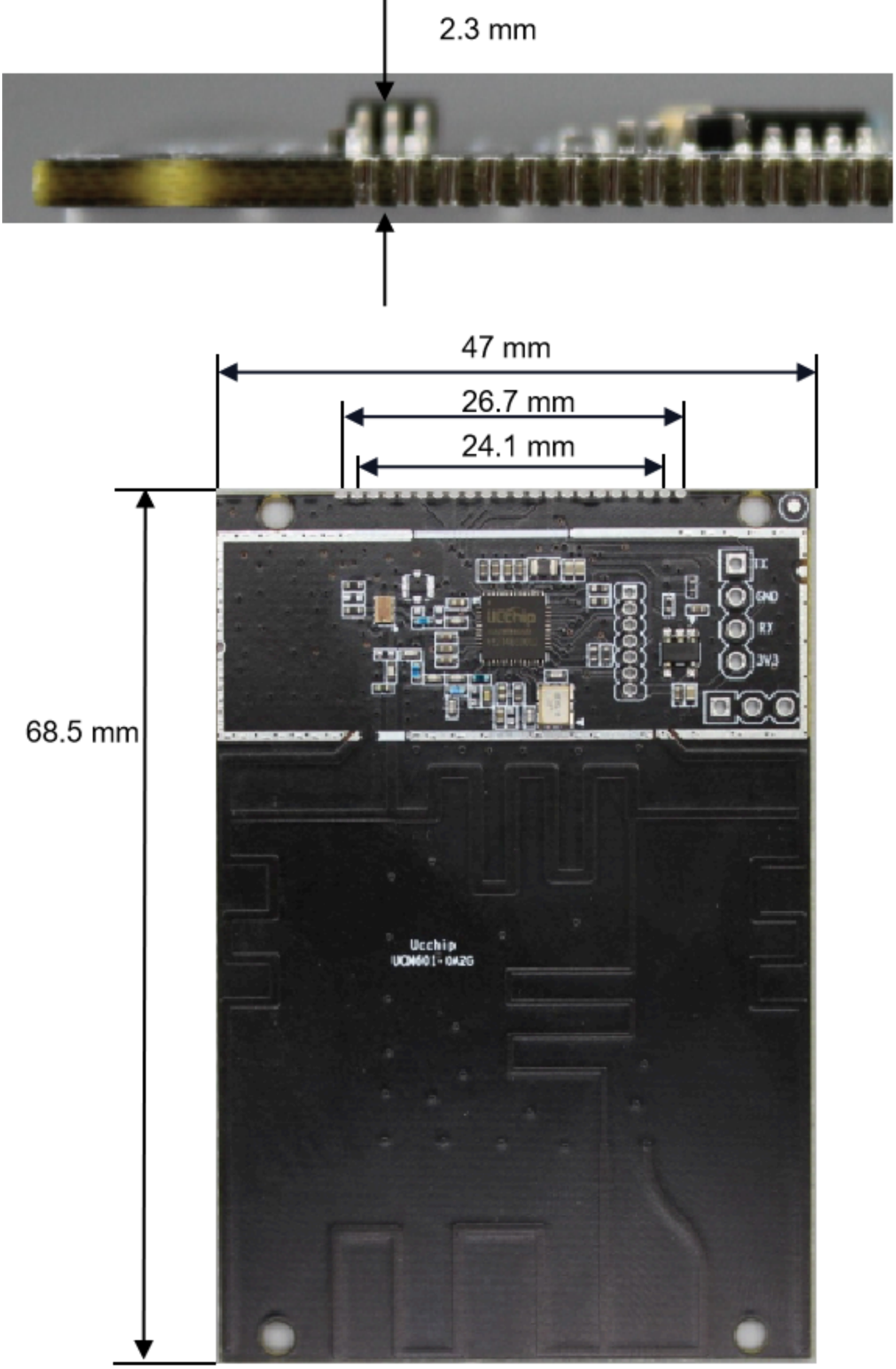




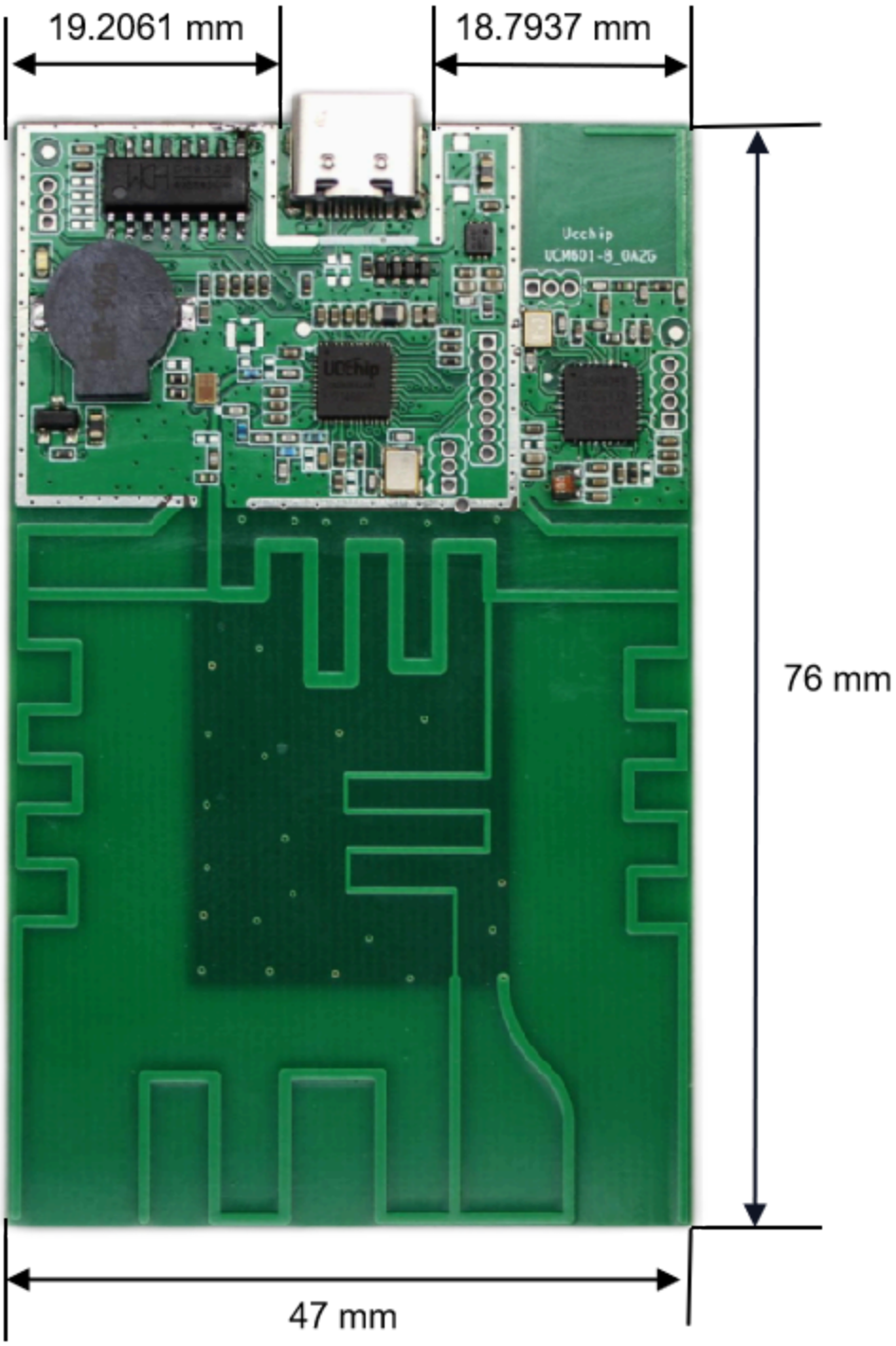
UCM601 is a highly integrated, low-cost UHF RFID reader/writer series module developed by Yuxinwei based on the self-developed chip UC8688 with a fully independent IP core. It has a built-in onboard antenna and includes two different specifications: UCM601 and UCM601B. UCM601B integrates a HID chip and is suitable for desktop applications. It can be connected to a mobile phone to meet the portability requirements; it supports mainstream protocols including EPCglobal UHF class 1 Gen 2/ISO 18000-6C and the national standard GB/T 29768-2013. It provides a cross-platform open SDK to support secondary development of customer programs. It is suitable for scenarios with fewer tags and close-range identification, reading and writing, high security requirements, and supports reading and writing of Yuxinwei's self-developed temperature measurement tags. It has broad application prospects in various industries such as logistics, retail, and identity recognition.

UCM601/601B Dimensions

UCM601



UCM601B


19.2061 mm
18.7937 mm
76 mm
47 mm

UCM601 Pin Description

PIN Definition

PIN	definition	illustrate	PIN	definition	illustrate
1	GND	land	13	GPIO1	General purpose GPIO
2	3.7V-5V DC		14	GPIO2	General purpose GPIO
3	SPI_CS	SPI chip select	15	GPIO3	General purpose GPIO
4	MISO	SPI master data input slave data output	16	Power_EN	High level enable
5	MOSI	SPI master data output slave data output	17	GPIO4	General purpose GPIO
6	SPI_CLK	SPI Clock	18	RSTN	Module reset
7	UART1_RX	For testing only	19	SDA	I2C Data
8	UART1_TX		20	SCL	I2C Clock
9	WAKEUP	Wake up from Sleep mode	twenty one	GPIO5	General purpose GPIO
10	AUDIODAC_OUT	For testing only	twenty two	GPIO6	General purpose GPIO
11	UART_RX	TTL level			
12	UART_TX				

UCM601/601B performance parameters

UCM601 is a highly integrated, low-cost UHF RFID reader/writer series module independently developed by Yuxinwei. It integrates the RFID UHF reader/writer chip UC8688, built-in onboard antenna, HID chip, and supports mainstream protocols including EPCglobal UHF class 1 Gen 2/ISO 18000-6C, and national standard GB/T 29768-2013. The system is based on the UC8688 single chip, taking into account system control and physical layer transceiver links to ensure system identification and read and write efficiency.

Features

Read and write characteristics

- Self-interference elimination circuit
- Anti-collision algorithm
- Support multi-tag identification, reading and writing
- Output power: 3~20dBm
- Output power consumption accuracy: 1dB
- Output power flatness: ±0.2dB
- Receiving sensitivity: -67dBm
- Peak counting speed: 30 sheets/second
- Tag buffer: 100 @ 96bit EPC
- Tag RSSI: Support
- Chip temperature detection: support

Air interface protocol

- EPCglobal UHF Class 1 Gen 2
- ISO 18000-6C
- GB/T 29768-2013

UCM601 operating frequency band

- GB 920~925MHz
- FCC 902~928MHz

UCM601B operating frequency band

- GB 920~925MHz
- FCC 902~928MHz

Interface parameters

- 601 communication interface: TTL Uart interface
- 601B communication interface: HID optional
- Maximum communication baud rate: default 115200bps, configurable
- Antenna: built-in onboard antenna

Power parameters

- Working voltage: 3.3V~5V

- Standby power consumption: <20mA
- Sleep power consumption: <5uA
- Normal operation: 95mA~190mA@5V

Physical parameters

- Product size:

68.5mm x 47.0mm x 2mm (UCM601)

76mm x 47mm x 3mm (UCM601B)

- Product Weight:

About 11g (UCM601)

Approx. 23g (UCM601B) - Protection level: IEC IP51

Environmental parameters

- Working temperature: -40℃~70℃
- Storage temperature: -40℃~85℃
- Relative humidity: 10%RH~95%RH

Safety

- Support national encryption SM7 algorithm
- Provide external encryption interface, scalable

Document Download

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