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MIFARE & ISO14443A & ISO14443B IC CARD MODULE

# QM-ABCM7 IC Card Read/Write Module

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User's Manual

(Revision 1.00)

Quick Ohm Küpper & Co. GmbH

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Please read this manual carefully before using. If any problem, please mail to: [kontakt@quio-rfid.de](mailto:kontakt@quio-rfid.de)

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# 1 Product introduction

QM-ABCM7 is a modular circuit that reads and writes non-contact IC cards by sending commands from users.

The RF antenna and module of QM-ABCM7 adopt an integrated design. The impedance analyzer is used to adjust the RF circuit and the antenna to match the impedance, which can achieve very good read and write performance and very good stability.

QM-ABCM7 has many functions, supports a variety of international standards for contactless IC cards, and supports cards from many different suppliers. The designer has classified and integrated the commands of the non-contact IC card, so the commands issued by the user to the module are relatively simple, but it can complete the comprehensive operation of various non-contact IC cards.

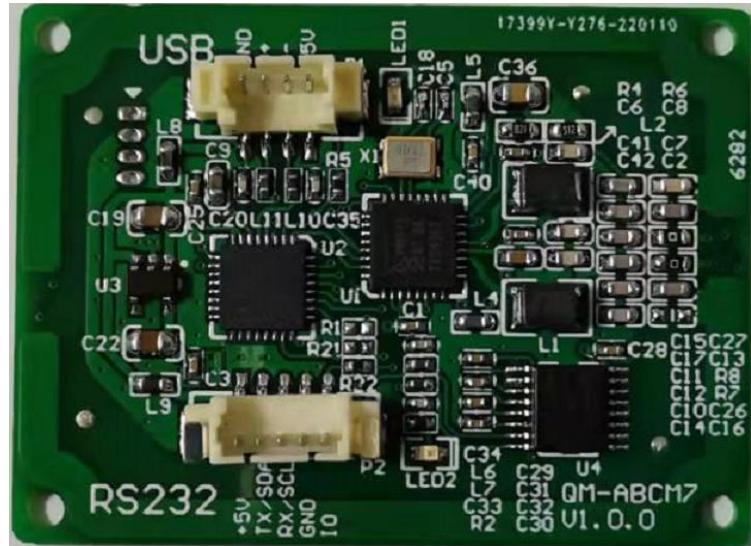
QM-ABCM7 supports full-featured NFC, including card mode and peer-to-peer mode. Active mode and passive mode in peer-to-peer mode are also supported.

# 2 Technical parameters

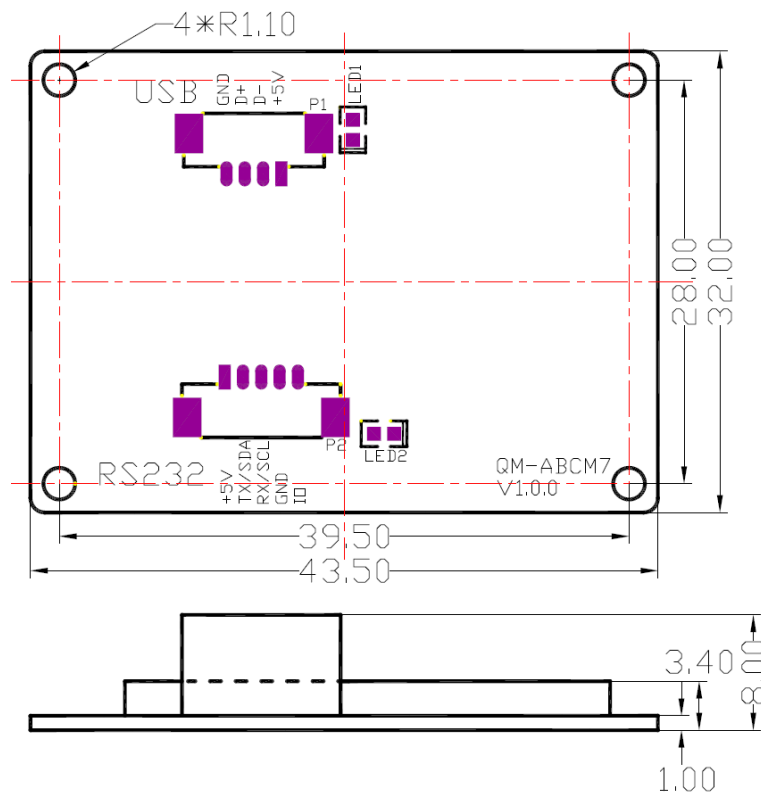
- PCD type: PN512
- Working frequency: 13.56MHz
- Supported standard: ISO14443A, ISO14443B, ISO18092
- Card supported: Refer to: [module function configuration table](#)
- Anti collision ability: Full function anti collision; be able to set multi-cards or single card
- Auto detecting card: Supported, default OFF, could be set
- Power supply: DC 5V ( $\pm 0.5V$ )
- Interface: CCID or RS232C+USB HID (book, when ordering)
- Communication speed: RS232C 19200bps/9600bps/38400bps/57600bps/115200bps  
USB USB 2.0 HID or CCID
- Max. command length: JCP04 253 bytes  
JCP05 510 bytes
- Power consumption: 100mA
- Operating distance: 0-50mm (depending on card quality)
- Dimension: 43.5 (W) \*32 (L) \*8 (H) mm
- Weight: About 10g
- ISP: Compliant
- Operating temperature:  $-25 \sim +85$  °C
- Storage temperature:  $-40 \sim +125$  °C
- RoHS: Compliant

### 3 Physical parameter

#### 3.1 Photo



#### 3.2 Dimension



### 3.3 Pin configurations and pin outs

P1 (USB)

PIN	Function	Type	Description
1	VCC	Power	VCC (DC5V)
2	D-	Input / Output	USB D-
3	D+	Input / Output	USB D+
4	GND	Power	GND

P2 (RS232)

PIN	Function	Type	Description
1	VCC	Power	VCC (DC5V)
2	TXD	Output	RS232C TXD
3	RXD	Input	RS232C RXD
4	GND	Power	GND
5	IO	Output	External I/O

### 3.4 Module function configuration table

	QM-ABCM7P	QM-ABCM7
PCD	PN512	PN512
PC/SC	●	
JCP04通讯协议		●
JCP05通讯协议		●
MIFARE 1K	●	●
MIFARE 4K	●	●
MIFARE Ultra Light	●	●
MIFARE Ultra Light C	●	●
MIFARE Mini	●	●
DESfire分立指令	●	●
MIFARE Plus	●	●
T=CL TYPE A	●	●
SR176		●
SRI512		●
SRI1K		●
SRI2K		●
SRI4K		●
SRIX4K		●
T=CL TYPE B		●
Data Flash	512 bytes	
Interface	CCID	HID+RS232C

## 4 Communication Protocol

The physical interfaces of module are various. But the data link layer protocols are in accordance with JCP04 & JCP05. Please reference “QM-ABCM7 Series IC Card Module General Technical Manual V6.21”. For convenience to test the module, we supply PC software: Transport to users. We have interface program source code to help users also. They are KELL projects in C51 or ASM51 format.