CR 038 Serial Reader Protocol

User Manual

1. Technical Specification

- Power supply: 5V, 80-100mA
- Interface: RS232 or TTL232
- Transmission speed: Default 19200 bps
- R/W distance of up to 60mm (up to 100mm with bigger antenna size), depending on TAG
- Storage temperature: -40 ºC ~ +85 ºC
- Operating temperature: 0 ºC ~ +70 ºC
- ISO14443A ISO14443B ISO15693

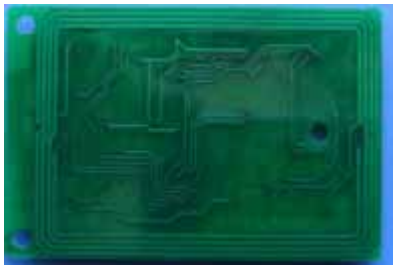
3. Communication setting

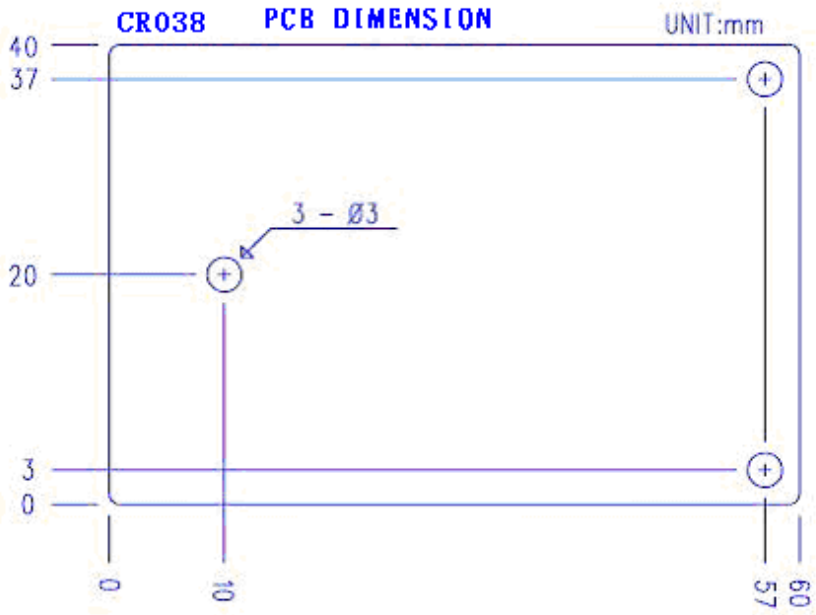
The communication protocol is byte oriented. Both sending and receiving bytes are in hexadecimal format. The communication parameters are as follows,

Baud rate: 19200 bps
Data: 8 bits
Stop: 1 bit
Parity: None
Flow control: None

4. Dimension

PHOTO





Connector pin assignment

NO	Define
1	Reserve
2	Reserve
3	VCC(+5V)
4	GND
5	RX
6	TX
7	VCC(+5V)

5. Character

Parameter	Min	Type	Max	Units
Voltage	4. 5	5. 0	5. 5	V
Current (include antenna)		90		mA
Initialization time	100		500	MS
Opertating temperature	−25		+85	℃
Storage temperature	−40		+125	℃

6. Protocol

Transmission rate	Default 19200, N, 8, 1					
Data format	Binary HEX “hexadecimal”					
Data package						
Head	Length	Node ID	Function Code	Data …	XOR	

COMMAND :

	Data length (Byte)		X O R	S U M
Head	02	Fixed: 0xAA , 0xBB		
Length	02	There are several effective bytes that including XOR follows this column.	FF	00
Node ID	02	Destination Node Address Number. xx xx: Low byte first 00 00: Broadcast to each reader.	X	S
Function code	02	It will be transmission ability of each different command . Low byte frist	X	S
Data	00~D0	Data length is not fixed, according to its purpose.	X	S
XOR	01	XOR each byte from Node ID to Last Data byte with 0xFF.		S

REPLY DATA FORMAT :

	Data length (Byte)			
Head	02	Fixed: 0xAA , 0xBB		
Length	02	There are several effective bytes that including XOR follows this column.		
Node ID	02	Destination Node Address Number. xx xx: Low byte first 00 00: Broadcast to each reader.		
Function	02	It will be transmission ability of each different		

code		command . Low byte frist		
Status	1	Reply result , if succeed is 0 ,other fail .		
Data	00~D0	Data length is not fixed, according to its purpose.		
XOR	01	XOR each byte from Node ID to Last Data byte		

NOTE: if from “Length” to “XOR ” have a data is “AA” then should follow a data “0x00” ,but length don’t changed.

While a command send and after 100ms no reply then consider this command failed .