

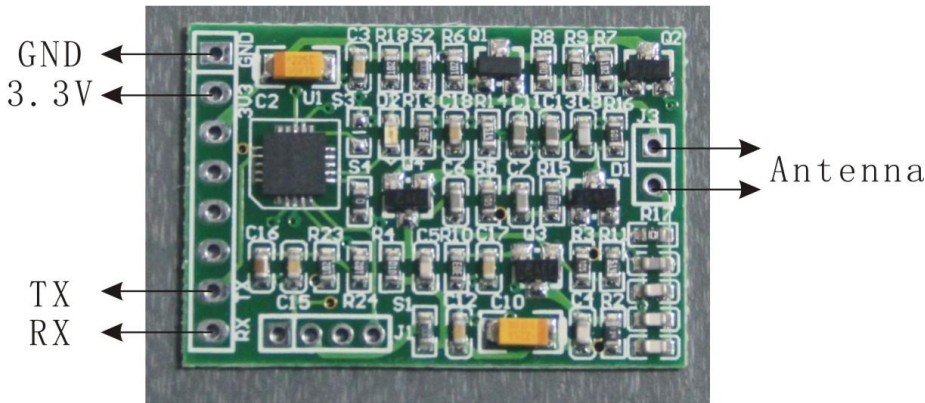
134KHz Reader

D-Think_M30Z134

1

DataSheet

Version 1.0
Nov 2013



Baud Rate: 9600
Output modes: active

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1 GENERAL INFORMATION

M30Z134 module is the D-Think Technologies,Inc. developed 134.2KHz LF read-only module, Product Support comply ISO11784/11785 protocol animal tag and compatible tag.

M30Z134 module communicate via UART baud rate 9600,1 BIT start bit, 8 BIT data, 1 BIT stop bit. Users only need to send via UART simple commands can be finished to read the tag information.

Compact size, simple operation and low power consumption make the module ideal for embedding into the PDA and other handheld devices.

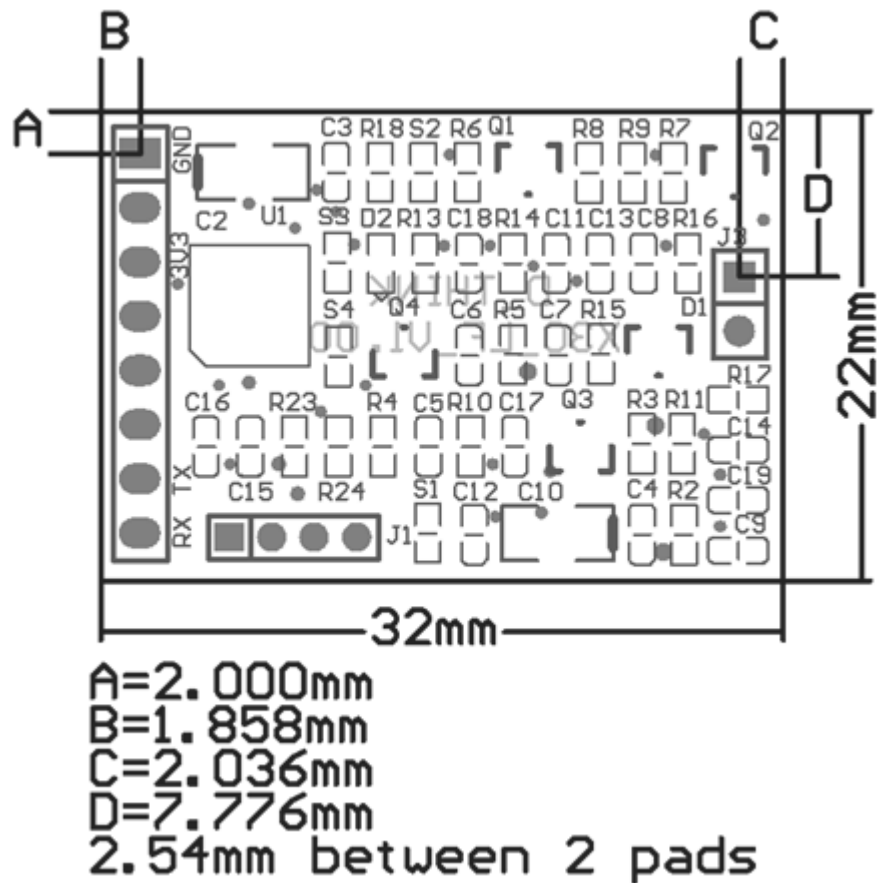
Operating voltage: 3.3V

Operating Current: ANT Open 45mA, ANT off 10mA, Sleep 3 mA

Reading distance: 30mm diameter animal electronic ear tag 4 ~ 7CM

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2 Hardware dimensions



3 Communication Protocol

3.1 Receives the command format (host to send)

Header + Length + Device identifier code + Command + Parameters + Checksum

Header: 2BYTE, 0xAABB

Length: 2BYTE, Identification from the device identifier code to check word, The first byte is valid, Second byte is reserved 0

device identifier code:

2BYTE, 0x0000

Command: 2BYTE, Identifies the coding command functions

Parameters: Command packets (can be empty)

Checksum: 1BYTE, Device identification to the parameter byte by byte XOR

Note: In addition to the command header and checksum word outside, if the data in a byte 0xAA, and thereafter shall be followed by a 0x00, length word unchanged.

3.2 Back Command Format (host receives)

Header + Length + Device identifier code + Command + Status + Parameters + Checksum

Header: 2BYTE, 0xAABB

Length: 2BYTE, Identification from the device identifier code to check word, The first byte is valid, Second byte is reserved 0

device identifier code:

2BYTE, 0x0000

Command: 2BYTE, Identifies the coding command functions

Status : 1BYTE, 00 = Command OK, Nonzero = Command failure

Parameters: Command packets (can be empty)

Checksum: 1BYTE, Device identification to the parameter byte by byte XOR

Note: In addition to the command header and checksum word outside, if the data in a byte 0xAA, and thereafter shall be followed by a 0x00, length word unchanged.

Status Description:

00: Command OK

E1: Undefined command

E2: Undefined parameters

E3: No tag

4 Detailed command

4.1 Command List

No.	Code	Explanation
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1	0101	Get RF_READER type and product snr
2	0102	Manage LED
3	0103	Manage the antenna
4	0104	Read ID
5	0105	Sleep or wake

4.2 Detailed command

1.Get RF_READER type and product snr

Command code:0x0101

Parameters:NONE

Answer data: RF_READER type and product snr

2. Manage LED

Command code: 0x0102

Parameters:00=LED ON

01=LED OFF

Remarks: Power on LED has a short process from light to destroy, then LED commands from outside.

Answer data: NONE

3. Manage the antenna

Command code: 0x0103

Parameters: 00=ANT ON

01=ANT OFF

Remarks: The antenna in a closed state after power on.

Answer data: NONE

4. Read ID

Command code: 0x0104

Parameters: NONE

Remarks: Please make sure that the antenna has been opened before to send command

Answer data: 12 bytes of data.

1 to 5 bytes: National ID, 38 bits, High 2 bits as invalid data.

6 to 7 bytes: Country ID,10 bits, High 6 bits as invalid data.

8th byte: Data Flag, 1 bit,High 7 bits to retain data. If the Data Flag = 1, additional data is valid; otherwise, additional data is invalid.

9 bytes: Animal Flag, 1 bit,High 7 bits to retain data.

10 to 12 bytes: additional data.

5. Sleep or wake

Command code: 0x0105

Parameters:00=Sleep

01=Wake up

Remarks: After hibernation, antennas, LED turn off, MCU sleep. Exit hibernation, LED, antenna restore the state before sleep. Any serial data will wake from hibernation module.

Answer data: NONE

4.3 Command Example

Host send command:Open ANT

Header	Length	Identifier	Command	Parameters	Checksum
AABB	0600H	0000H	0103H	01H	03H

Command operation successful return

Header	Length	Identifier	Command	Status	Parameters	Checksum
AABB	0600H	0000H	0103H	00H	NONE	02

Revision history

Version	Date	Author	Modify description
V1.0	2013-11-21	jin	Create