



RM7803

- LoRa™ Module
- 433/470 MHz
- Low power long distance transmission module



RM7803 Module is a Low power long distance transmission module, Adopted Semtec's High performance spread spectrum RF chip SX1278, for ultra long distance spread spectrum communication, Strong anti-interference and high receiving sensitivity over - 142dBm. At the same time, STM3210 low-power MCU is embedded in the module to minimize the current consumption.

RM7803 Module is small volume, the size is 22*28 mm, It can be used in many design schemes. At the same time, long-distance transmission, ultra-low power consumption and high receiving sensitivity solve many problems that cannot be solved in the traditional design.

RM7803 Module have multiple channels to choose from, and the Transmitting power can be set according to the demand, the default is 17dbm.

Model: RM7803						
Item	Index description	Index			Unit	Test conditions
		mini value	Typical value	Max Value		
Output	frequency	410	470	510	MHz	
	Transmitting power		17		dBm	Set transmit power =17dBm
Power characteristics	Power supply voltage		3.3		V	
	Current in sleep mode		2		uA	
	Current in receive mode		12		mA	
	Current in emission mode		120		mA	
Input	Receiving sensitivity			-142	dBm	spread spectrum factor =12, bandwidth =125KHz
environment condition	working temperature	-40		85	℃	



1. Parameters

Table 1: Electrical Characteristics

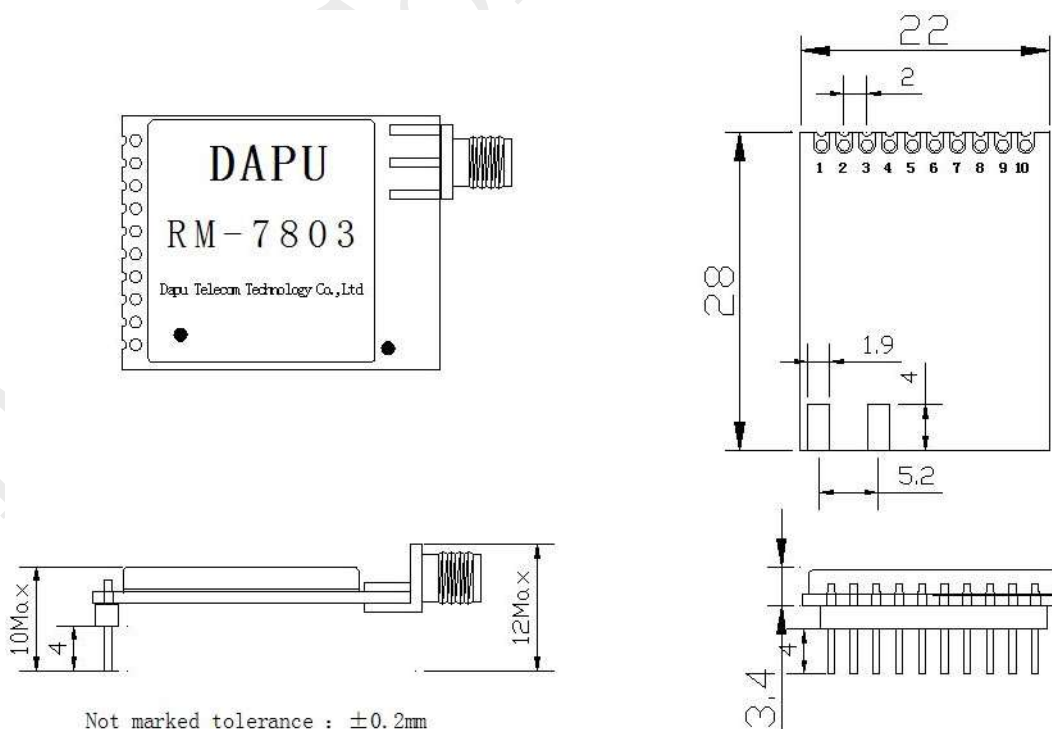
2. Pin Description

Table 2: Pin definition

Pin No.	Name	Type	Description
1	VDD	—	Supply voltage 3.3V
2	GND	—	Ground
3	SWDIO	Input	Download and debug port (suspended in normal use)
4	SWCLK	Input	
5	RXD/PA10	Input	Serial input port, TTL electrical level
6	TXD/PA9	Output	
7	PB6	—	Digital I/O
8	PB7	—	Digital I/O
9	PB0	—	Digital I/O
10	PB1	—	Digital I/O

3. Product Size

RM7803 default is plug-in form. The dimensions are as follows:





4. Software Introduce

RM7803 The serial port pass-through function is realized.

Table 3: Serial communication configuration table

Baud rate	9600 (default)
	115200 (Customizable)
wake-up pin	PB0
wake-up type	Low electrical level awaken
Low electrical level duration	$\geq 30\text{ms}$
RX	RXD
TX	TXD
Data bits	8
Parity bit	None
Stop bit	1
Flow control	None

Note: when connected with PC, need electrical level conversion chip