



RFWORLD

Documents Version: 1.10

Document No. 2012-0037-E

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RF Module (WM4432B)

USER GUIDE



RFWORLD

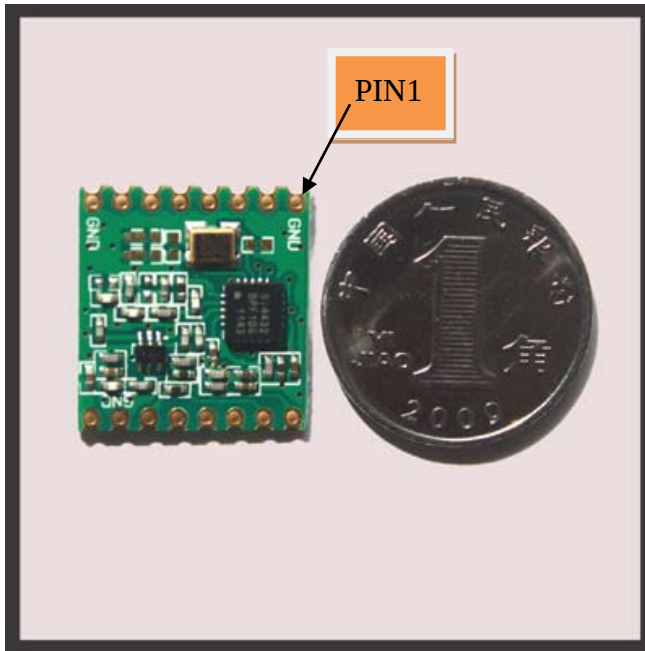
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Summary:

The WM4432B Based on the Silicon Labs SI4432 radio sub 1G transceiver chip. The designer can use this part as a drop-in subsystem component, and never has to care about things like impedance matching or soldering fine pitch devices.



Features

- Integrated bit synchronizer.
- Integrated IF and data filters.
- High sensitivity (type -118dBm at 1.2kbps)
- Programmable output power 1 dBm~19dBm
- Operation temperature range : -40°C ~ +85°C
- Operation voltage: 1.8-3.6Volts.
- Available frequency at : 315,433,868,915M
- Digital function for package format
- Range about 1000m

Applications

- Car security system
- Remote keyless entry
- Garage door controller
- Home security
- Automation system
- AMR system

PIN Description :



PIN#	Pin name	Pin type	Description
1	GND	Ground	
2	SDO	Digital Output	Serial configuration interface data Output
3	SDI	Digital input	Serial configuration interface, data input
4	SCLK	Digital input	Serial configuration interface, clock input
5	nSEL	Digital input	Serial configuration interface ,chip select
6	nIRQ	Digital Output	Interrupt
7	SDN	Digital input	Power Down Input
8	GND	Ground	GND
9	Antenna	I/O	Antenna interface
10	GND	Ground	GND
11	TXON	Digital input	TX Enable Pin
12	RXON	Digital input	RX Enable Pin



13	VCC	Power	3.3V
14	GPIO0	I/O	Connect to TXON
15	GPIO1	I/O	Connect to RXON
16	GPIO2	I/O	

In order to make sure the frequency is accurate, please write the value of 0x68 into 0x09 Register.

Electrical Specification

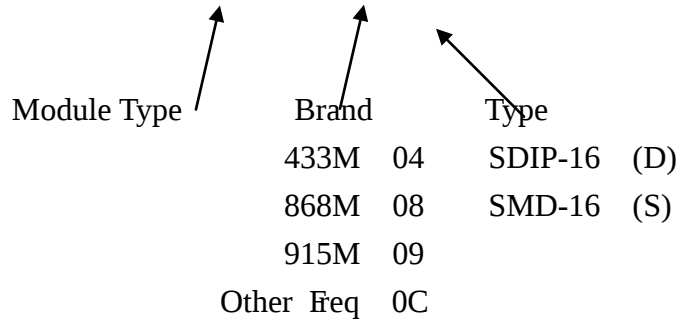
Tc=25°C ,RFMOD_VDD=3V if nothing else stated

NO	Parameters	Min	Typ	Max	Unit	Condition
1	Supply					
1.1	supply voltage	1.8		3.6	V	
2	Current consumption					
2.1	power down mode		1		uA	
2.2	Rx states		18.5		mA	
2.3	Tx states		100		mA	@20Dbm
3	Transmitter Part					
3.1	Tx data rate	0.123		256	Kbps	
3.2	Frequency range					
	433M	428	433	438	MHz	
	868M	863	868	873	MHz	
	915M	902	915	930	MHz	
	Other	470		510	MHz	
3.3	Output power	1		19	dBm	
4	Receiver Part					
4.1	Receiver sensitivity		-118		dBm	@data=1.2kbps,Fdev=30kHz

Order Information

Part Number=module type—operation band—package type

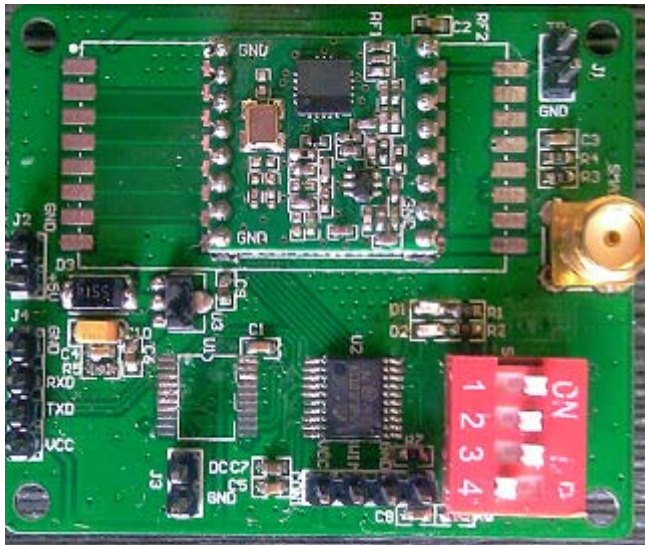
WM4432B-04---I



Model Numbers	Frequency Ranges	Descriptions
WM4432B_04_D	433 MHz	433M , DIP
WM4432B_08_S	868 MHz	868M , SMD



Test Tool



WM4432_TEST is used for test the basic performance of WM4432B and WM4432LP02. For example, It can be used to test distant by choosing the option of switcher. There are 2 version here , One is the 51 version , we can provide the download programmer for updating the firmware after modifying firmware; the other one is ST8MS version, customer need to prepare the relative himself.