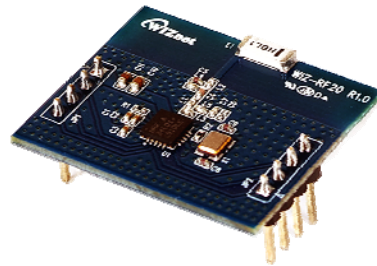


WIZ-RF20 Datasheet

(Version 1.0)



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Document Revision History

Date	Revision	Changes
2010-09-01	V1.0	Official Release

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Table of Contents

1. Introduction.....	1
1.1 Features.....	1
1.2 Specifications	2
2. Hardware Specification.....	3
2.1 Dimension	3

Figures

FIGURE 1. WIZ-RF20 DIMENSIONS (UNIT: MM)	3
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Tables

TABLE 1. SPECIFICATIONS.....	2
TABLE 2. PIN HEADER CONNECTOR PIN-ASSIGNMENT.....	4

1. Introduction

Module WIZ-RF20 provides only RF-communication. The user can use RF-communication function easily by using SPI interface on the MCU that is being used. Since module WIZ-RF20 has the optimal circuit composition for communication, no other analog circuit composition is required for RF-communication.

1.1 Features

- Worldwide 2.4GHz ISM band operation, 126 RF channels
- Ultra low power, compact and low cost RF transceiver
- Up to 2Mbps on-air data rate
- Enhanced ShockBurst™ hardware link layer
- Selective auto acknowledgement with payload
- Embedded Chip ANT for efficient radiation
- Dynamic payload length and Auto retransmit
- Auto packet transaction handling
- Embedded Chip ANT for efficient radiation
- Support 6 data pipe MultiCeiver™ for 1:6 star network
- Support SPI command (up to 8Mbps)
- Compact design 30mm x 25mm x 11.6mm (L x W x H)
- RoHS Compliant

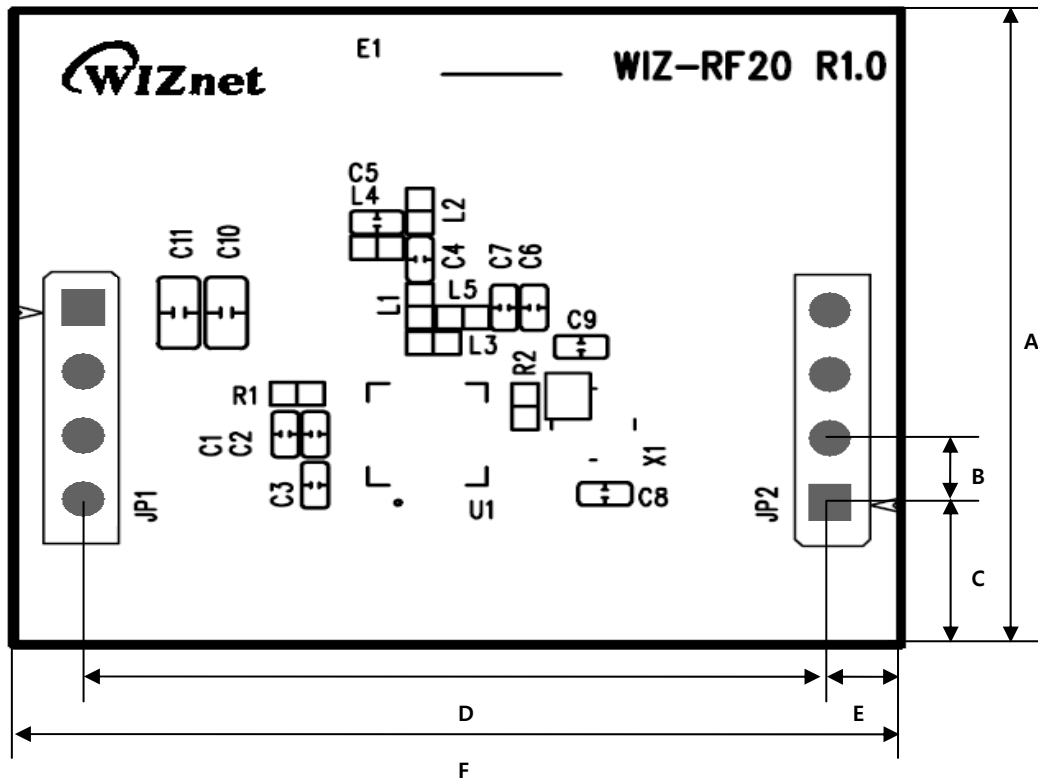
1.2 Specifications

General RF Conditions	Radio Frequency	2.400 ~ 2.4835GHz
	Crystal Frequency	16MHz
	Frequency Deviation@2MHz	±30ppm
	Air Data Rate	250 ~ 2000kbps
	Non-overlapping Channel Spacing @2MHz	2MHz
	Modulation	GFSK
	Sensitivity(0.1%BER) @2MHz	-82dBm ※ Chipset
Internal Comm. Interface	Interface	SPI
	Signals	SCK, CSN, MOSI, MISO
	Parameters	8bit command set <Command word : MSBit to LSBit(one byte)> <Data bytes : LSBit to MSBit, MSBit in each byte frst>
	Speed	0 ~ 8Mbps
Power on reset	1.6 ~ 10.3ms(Power ramp up time : MAX. 100ms)	
Dimension	30mm x 25mm x 11.6mm (Include connector size)	
Connector type	2.54mm Pitch Pin-header, 8pin(1*4, 2EA)	
Input voltage	1.9V ~ 3.6V	
Power consumption	Active mode(Tx, 0dBm) : 11.3mA Active mode(Rx,2Mbps) : 13.5mA Stanby - II mode : 320uA Stanby - I mode : 26uA Power down mode : 900nA	
Temperature	-40°C ~ +85°C	
Humidity	10 ~ 90 %	

Table 1. Specifications

2. Hardware Specification

2.1 Dimension



A	B	C	D	E	F
25.00	2.54	5.50	25.40	2.30	30.00

Figure 1. WIZ-RF20 Dimensions (unit: mm)

2.2 Connector Specification

JP1

REF.	Pin .	Signal	Description
JP1	1	VCC	System Power Input(1.9V ~ 3.6V)
JP1	2	CE	Chip Enable Activates RX or TX mode
JP1	3	CSN	SPI Chip Select
JP1	4	SCK	SPI Clock

JP2

REF.	Pin .	Signal	Description
JP2	1	MOSI	SPI Slave Data Input
JP2	2	MISO	SPI Slave Data Out
JP2	3	IRQ	Maskable Interrupt pin. Active low
JP2	4	GND	System Ground(0V)

Table 2. Pin Header Connector PIN-Assignment